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Original Articles.

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Disease in the Tropics.* Four Lectures.

By CREIGHTON WELLMAN, M. D.,

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PREFATORY NOTE.

The following addresses constitute part of a series of lectures first prepared and delivered at the University of Nebraska on invitation of Professor Henry B. Ward, late Dean of the medical

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school of that university. While presented in the first instance before the medical and general science faculties and students of the University of Nebraska at Omaha and Lincoln (the last lecture of the series being before a special university convocation), other requests led to similar groups of talks before various other universities and scientific bodies. The substance of two medical and two popular lectures of the series is now printed, consisting largely of the original notes or abstracts of the addresses actually given to which have been added passages from stenographic reports. The author hopes that tropical men in reading over the following pages will keep in mind the circumstances of their delivery and their distinctly occasional character, as none of the lectures were prepared for an audience of tropical experts or even for one composed entirely of medical men. The general aim has been rather to stimulate interest, both within and without the medical profession, in the important subject with which they attempt briefly to deal.

Lecture I.

Insects and Human Disease in the Tropics.

I cannot better begin this lecture than by relating that Sir Lauder Brunton once made the remark in an address before the London School of Tropical Medicine that "the study of tropical diseases is becoming to a great extent identified with the study of the insects which transmit them." I conceive that no line of medical and biological research is more interesting or significant to-day than investigation in the rapidly widening field indicated in the title of the present lecture. But it is of prime importance that the man coming to such research should bring with him an adequate training in the biological sciences. I can think of no phrase more fitting to emphasize this point than a quotation from Sir Patrick Manson who has remarked that "The student of medicine must be a naturalist before he can hope to become a scientific epidemiologist or pathologist or a capable practitioner." Not only is it discouraging to stand before medical students who lack the broad foundation in biology to enable them to correlate and appraise much of the data which teachers lay before them, but even in the ranks of our profession there obtains too little realization of Sir Patrick's re-

mark. It is humiliating for instance to see an audience of zoologists smile at the utterances of even some of our distinguished medical men when the latter venture on subjects touching the bionomics or systematics of organisims other than the human species. While indexing the literature which deals with the subject of this lecture in the Army Medical Museum in Washington, D. C., I found that hundreds of papers with good clinical and pathological data were useless for my purpose because the species, genus or even family of arthropods discussed are not given, or given so carelessly as to preclude any sort of accuracy in citation. Some bionomic or systematic treatment of one or more groups of organisms ought to be given every medical student as an integral part of his medical training, particularly if he contemplate research work of any sort. No more fascinating field could be suggested in this connection than a study of any one of the important arthropod groups which subserve human disease in the tropics. It is in the hope of increasing any interest already existing in this important subject that I have ventured to address you on this occasion.

My remarks do not profess to be an exhaustive discussion of the subject announced. I shall attempt only to illustrate the principles involved in its study by referring briefly to a few typical species of insects *(sensu latiore),* and shall confine myself largely to those forms which I have studied at first hand in West Africa. I should also add that when we speak here of insects of pathological interest not only are meant those species which disseminate pathogenic bacteria or protozoa, but also all those which give rise to pain or discomfort in man.

Taking up first the Arachnida we will glance at the mites, ticks, spiders, scorpions, etc.

Mites.—The itch mite has been well studied and is familiar to pathologists. All the cases of the so-called tropical disease known as Craw-Craw which fell under my notice in West Africa were found to be scabies, some of the cases, however, being almost incredibly severe and neglected. When last in Europe I was shown a case of "Craw-Craw" from the lesions of which certain constant, oval, homogenous bodies staining deeply with basic stains had been observed under the microscope. By means of a hand lens and needle I was able to demonstrate *Sarcoptes*

scabei and then by obtaining and staining the feces from the mites to show that these were the supposed spores of fungi which had been predicated as the cause of the disease.

The so-called harvest mite or red bug *(Leptus* spp.), is well known to European and American authors. I found one species of these larval Trombidiidae in Africa, but was unsuccessful in my attempts to determine the adult. I have in my collection a number of other West African mites, chiefly Gamasidae and Tarsonemidae, which are parasitic, either on insects or higher animals. In America we have various species of these creatures, such as *Trombidium tlalsahuate* and *Tetranychus molestissimus,* which would repay further study.

Ticks.—A study of the ticks of West Africa throws much light on the general subject of tick-carried diseases. Perhaps the most common species throughout the colony are *Ornithodoros moubata, Amblyomma hebraeum* (which bites human beings, both in its immature and adult stages, and leaves a most painful wheal), *Boophilus decoloratus* and *Rhipicephalus coriaceus* (a new form possibly peculiar to the district). The first of these, *O. moubata,* is the only form actually convicted of causing disease there, although some of the others are interesting because they bite man and cattle. *O. moubata,* which was first described by Murray as "oblong, coriaceous, coloured something like a shark's skin, or slate colour, speckled with white spots or granulations all over it," is a veritable pest and infests the camps and huts of the natives in great numbers. I have found as many as a hundred in an hour in an old native hut. Their habits and method of biting are something like the bed bug's. In addition to being disgusting vermin they are the disseminators of *Spirochaeta duttoni* the cause of African relapsing fever. This spirochete is transmitted from man to man not only through the bite of the adult ticks, but the spirochetes are able to pass into the eggs and larvæ so as to enable the mature ticks of the succeeding generation to be infective. By using hammocks and wrapping the suspending ropes with a band of cotton wool dusted with insect powder we were able in Angola to control and stamp out a small epidemic of tick fever among coolies.

I also found that under some circumsances the embryos of

Filaria perstans develop to a certain point in this species of tick. Whether or not it is an entirely efficient host and the carrier of *Perstans* filarias is still an open question.

It has been suggested that ticks are the transmitters of black-water fever (which is suspected by some to be a piroplasmosis analogous to the red-water fever of cattle), yaws, leprosy and other diseases, but of these we cannot speak here.

American ticks well worth careful investigation and closely relate to *O. moubata* are *Argas persicus, Ornithodoros turicata, O. talaje, O. megnini,* etc. The spotted fever of the Rocky Mountains is an interesting tick-carried infection recently proven by Ricketts to be transmitted by one of our indigenous species (*Dermacentor occidentalis*).

Spiders.—In West Africa I found some of the large species of *Nephila* or round bodied spiders (*N. senegalensis, N. pilipes,* etc), to be feared by the natives. In America we have the tarantulas (these differ among other features from other spiders by the fact that their mandibles work vertically instead of horizontally) which bite severely.

Scorpions.—The scorpions of Angola are justly avoided. The two commonest species in my collection are *Uroplectes occidentalis* and *Parabuthus afer.* The sting of the latter is sometimes a serious matter. The scorpions of other parts of Africa (*e. g. Androctonus funestus*) are even more formidable.

A common species in the southwestern part of our own country is *Buthus carolinianus,* but its bite is not serious.

Linguatulidæ.—These are Arachnoid parasites, and one genus *(Porocephalus)* occurs in Africa, although I have neve rseen a case.

Myriapods.—I must mention the Centipedes. The larger of these creatures bite savagely. In West Africa we have *Scolopendra morsitans* and several species of *Cormocephalus,* all of which do not bear handling with impunity. The effects of their bite seem to be somewhat more severe than the stings of large Hymenoptera. Among the Millipedes I may appropriately mention two genera of African Julidæ, namely, *Spirostreptus* and *Odontopyge.* These are greatly feared on acount of the intense smarting and burning which they leave in their wake if they crawl over the body of man. The track looks like a burn from a hot iron drawn across the skin.

The poisonous secretion is probably from the *foramina repugnatoria* which are at the sides of the segments and look like tracheal stigmata. The real stigmata are on the ventral surface of the segments and are so minute as to be easily overlooked. I have recently learned with interest that Woolley and Wherry have confirmed the above statements by observing the Millipedes of India and Siam.

Myriapods have been mentioned among the hosts of tape worms (*Hymenolepis nana*).

We may now take up the insects proper, at the main groups of which we will glance.

Orthoptera.—It will surprise some of my hearers when I mention this order as of possible pathogenic importance. In doing this I do not refer to the fact that various Orthoptera serve as intermediate hosts of organisms inimical to man. The Gordiacea (of which there are some forty or fifty reported cases of pseudoparasitism in man) develop often in these insects. The suggestion has been made that the germ of beri-beri may be dependent for its development on cockroaches. A tape worm (*Davainea*) is also thought to be disseminated by cockroaches. But I would like to call especial attention to a giant earwig which represents a new genus and species and which has recently been described under the name *Dacnodes wellmani*. This powerful insect, which is from an inch to an inch and a half long, is capable of drawing a large drop of blood with its pincers, and as it lives in refuse heaps it has earned the name among the natives of West Africa of causing severe results (doubtless due to the introduction of septic matter under the skin of the victim) by its "bite". I was at first disposed to view this idea with suspicion but Commander Walker, R. N., has pointed out since that another giant earwig (*Anisolabis colossea* from Australia) has similar habits and enjoys a similar evil reputation. Another member of this last genus (*A. annulipes*) is said to harbor a cestode (*Hymenolepis diminuta*).

Before leaving the Orthoptera I should not omit to mention that one member of this group (*Hemimerus talpoides*) is a true parasite on the large West African rat (*Cricetomys gambiense*), and it is therefore not impossible that a similar insect may eventually turn out to subserve directly some mammalian disease.

Bugs.—This group is one of the largest and most important of

insect pests. The bedbugs, of which there are several species, are of great significance in connection with the spread of relapsing fever, Leishmaniasis, and doubtless of other affections. Captain Patton has written me some interesting facts regarding the distribution of the various species of the genus *Cimex* in India, and I found also that the "bed bug" of Portuguese West Africa was not *C. lectularius* as has been supposed, but an entirely different species. My specimens are now in the hands of a specialist and will probably prove to represent a new form. The suggestion that plague is directly transmitted from man to man by bugs, as well as from rodents to man by fleas, while not yet confirmed, is interesting, as is the recent finding of acid-fast bacilli, probably lepra bacilli, in bugs in Hawaii. Lice, too, deserve attention. The dog tape worm is stated to be carried by a louse (*Trichodectes canis*). Daniels' ideas regarding lice and the spread of Beri-Beri deserve careful consideration. Observations on the lice of lower animals suggest the importance of a closer study of the human parasite. It may be worth while to mention here that while I found both the head and body louse among West African natives the crab louse *(Phthirius inguinalis)* was absent. Among other bugs the so-called "Kissing bugs," or Reduviidæ, deserve mention. One South American form *(Conorhinus renggeri),* is called "the Great Black Bug" of the Pampas and is mentioned by Darwin in his "Voyage of the Beagle." It sucks human blood with avidity. We have several species with interesting habits here in the United States. Among these are the masked wheel bug (*Opsicaetus personatus*), which preys on bed bugs and occasionally bites man, and *Prionotus cristatus,* which shares this habit. Perhaps the cone-nosed blood-sucking bug of the southwestern states (*Conorhinus sanguisugus*) is our most formidable species. The bite of this animal gives rise to severe effects which are reported in rare cases to cause serious symptoms lasting over months and even years and in some cases even to produce death. The descriptions of the effects set up by the insect point strongly to an infection of some sort, and reports from the tropics even more strongly suggest this. Of the various species with which I am familiar by far the most interesting is *Phonergates bicoloripes.* This bug I have proven to prey chiefly if not exclusively on *Ornithodoros moubata,* the tick which transmits relapsing fever and possibly filariasis and

other diseases in West Africa. I have many notes on this bug's habit of mulcting these pathogenic ticks of their ingested blood. *P. bicoloripes* also bites man and gives rise to severe effects. The question at once comes up as to the possibility of a double cycle of development of some germ which may have been taken up originally by the biting bugs, ticks, etc., upon which the Reduviidæ prey, the latter in turn sucking the blood from the parasitic arthropods and allowing the organism to enter upon some yet unknown cycle of development, finally being possibly conferred upon a different host or even reinoculated into the same host. This may sound improbable but some of the very complex biological life cycles which have been demonstrated during recent years forbid our considering anything of this sort as impossible on *a priori* grounds.

Other groups of bugs, notably Lygaeidae also come to mind. Those of you who are interested in our tropical American bugs are recommended to look through the literature for reports on such species as *Rhodinus prolixus* from Colombia and Venezuela, *Arilus carinatus* from Brazil, etc., which are said to suck human blood.

Flies.—This group (including the fleas) is certainly the most significant of all from the view point of our lecture. There are two great divisions in the group, the first of which may be typified by the mosquitoes and the second by the common house fly, the fleas forming a closely allied but very specialized section.

We will first mention the genus *Phlebotomus,* one species of which (*P. Papatasii*) has within the last year been incriminated as the carrier of the "three-day fever" of Dalmatia, etc.

Without entering upon a detailed discussion of the mosquitoes I should not fail to state that the study of these insects is highly important, although the very chaotic condition in which the systematics of the family is unfortunately at present makes such a study very difficult.

In Portugese West Africa the most dangerous malaria carrier is *Myzomyia funesta.* I have found this species to show sporozoites in its salivary glands to the extent of 13 per cent of mosquitoes caught at random in one of the towns. In one military barracks I even found 23 per cent. *Pyretophorus austeni* is another of our dangerous forms. Of the culicines *Danielsia*

wellmani and *Mansonia uniformis* may be mentioned as having to do with the spread of filariasis.

In America the malarial and yellow fever mosquitoes are of the greatest importance to the sanitarian and these are fortunately well known and easily determined species.

Before leaving this group of insects I should say that various other kinds bite man. The black flies *(Simulidæ)* are a pest in parts of this country. In Portugese West Africa one species *(Simulium wellmani)* is a veritable scourge, driving people from whole districts during part of the year.* Chironomidae (*Ceratopogon)* and the owl midges (Psychodidæ, *Phlebotmus)* also share these habits and are therefore deserving of study by the pathologist.

Coming now to the flies proper we may first mention the house fly. This pest is of such importance, not only in the tropics, but here in America, that its eradication deserves the co-operation of every citizen. The interesting researches of Grassi regarding the house fly as a carrier of the ova of intestinal worms deserve mention. The convincing work on the subject of the house fly and tuberculosis by Lord and others is of deep significance. The spectacle of flies going from virulent tubercular sputum to our food is not pleasant to meditate upon, and the persistence of viable bacteria in the feces of the flies is rather terrible to contemplate. The question of flies and typhoid fever is no less important. The number of cases of typhoid fever in many of the larger cities for last year was far too great for the population, and while money is constantly being expended for sewers and water supply, how much is being done to eradicate the house flies?**

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* Austen. Illustrations of African Blood-Sucking Flies, p. 30.

** The principles of fly extermination are simple and easily understood, and the details are within the reach of any community. City ordinances regarding livery and boarding stables and other animal industries within the city limits should be passed and all animal excreta (in which the fly largely breeds) should be collected often and removed from the city or placed in dark fly-proof receptacles until it can be removed. Streets should be kept free from all horse excreta, and no dumping places should be allowed in or near a city. Such simple regulations as these (the infraction of which should be provided against by adequate penalties) would do much to lower the consumption and typhoid curve. The condition of slaughter-houses and manufactories should be rigidly inspected from the standpoint of breeding places of flies. The screening of houses and public buildings should not be neglected. The formula of a good sticky fly paper should be printed and distributed among the poor. Merchants who sell screens, traps, fly paper, etc., should be helped, in wording their advertisements, so as to catch the popular eye, and the newspapers should be made use of in educating the public to the need for protecting food from flies. Many other devices might be mentioned.

It is not the house fly alone which is to be watched as a cause of human suffering and disease. Half a dozen other flies live in houses and act as disseminators of disease in much the same manner. The bottle flies and blow flies need mention. In tropical countries there are various species of *Chrysomyia, Dermatobia, Ochromyia,* etc., which invade the skin of man, their larvæ causing what is known as cutaneous myiasis. One American species, the so-called screw-worm (*Chrysomyia macellaria*), burrows in the deep tissues causing terrible lesions and even death. In some experiments carried out in goats I produced similar destructive myiasis with two species of West African flesh flies (*Sarcophaga africa* and *S. albofasciata*). Another fly observed was *Auchmeromyia luteola*, the larvæ of which do not invade the tissues but which have biting mouth parts something like a gadfly and suck blood in the manner of ticks and bugs. The possibility of such a creature carrying pathogenic bacteria or protozoa of course immediately occurs to one. Another of our West African species is *Cordylobia anthropophaga,* the larvæ of which ensconce themselves in the tissues as warble flies do in cattle. I have often squeezed these larvæ (which may give rise to boils and also severe ulcers) from the skin of man and other animals. This last species often occurs in babies and dogs in Angola. Another fly from that region and not heretofore convicted of causing myiasis is *Anthomyia desjardensii,* which I found in the intestines of a negress.

I cannot leave this discussion without speaking of the tse-tse flies. Those are muscid flies showing certain highly specialized characters and their study is of the greatest importance to those interested in the fate of the native Africans as well as of the big game and domestic cattle of their country. Eight different species are described and I am informed by Mr. Austen, our best authority, that specimens representing another species are in the British Museum collections. *Glossina palpalis* is the species concerned in the dissemination of sleeping sickness. In Portuguese West Africa a new subspecies (*Glossina palpalis wellmani*) takes the place of the typical form. The great secret of escaping infection with *Trypanosoma gambiense,* the flagellate protozoan which causes this terrible disease, is avoidance of the "fly belts." On one occasion by resurveying a road and running it

700 yards farther from the river bank, crossing a mile farther up stream and thus avoiding a fly belt, we were able in West Africa entirely to avoid the introduction of new infections into a large and populous district.

Tabanidæ or gadflies are another important group which has been too little studied. One species has been shown to carry the trypanosomiasis of camels in Algeria, others are suspected of subtending *Filaria loa* and the family might well be investigated further. In Angola many species, especially *Tabanus wellmani* and *chrysops wellmani,* with numerous members of the genus *Haematopota* (mostly new to science) bite man severely and greedily. There are other flies which are as worthy of mention as those we have chosen, some of the most interesting belonging to Tropical America.

Fleas.—These animals have assumed great importance not only from the fact that they have been proven to transmit parasites of lower animals, but especially since bubonic plague has been found to be carried by them from rodents, in which it is endemic, to man. So much has been written on this subject and the leading facts are so well known that I do not need to enter into any exposition of them at this time.

In West Africa I found that of the many species (some of them new), which I collected, two *(Lemnopsyllus cheopis* and *Pulex irritans)* are among the most common in dwellings. Curiously enough, plague has never in historical times visited that part of the world, although there is an endemic focus of the disease, discovered by Robert Koch, in East Africa.

Perhaps the most interesting of all fleas is the very abundant and ubiquitous form known in Africa as the "Chigger" (*Sarcopsylla penetrans*). This strange animal was brought to Angola about thirty-five years ago by Portuguese from South America, spread right across the continent and is steadily making its way around the world, having already been reported from India and even Cochin China, where it has doubtless been carried by coolies returning from East Africa. It bites all warm blooded animals, including man, in the same manner as do other fleas, but in addition the pregnant female bores and ensconces herself in the subcutaneous tissues and there swells up to the size of a pea and matures her eggs. I was able to follow through the life history

and to show that the accepted ideas concerning it were incorrect. A specially interesting point brought out in these studies was that the "chiggers" have a predilection for the under side of the toes of man at the web of the foot and by causing a long-continued irritation give rise, by virtue of the inherent fibrogenetic tendency of the blacks, to the spontaneous amputations known as ainhum.

In this country there are many species of fleas, and a high significance is to be attached to their presence since Wherry has demonstrated that plague is endemic in the ground squirrels *(Otospermophilus beecheyi)* of the Pacific Coast. These animals together with their allies extend right across the continent as far as Nebraska, and it has been proven that the commonest fleas they harbor *(Hoplopsyllus anomalus* and *Ceratophyllus* acutus*)*, bite man also.* We have in consequence all the ingredients, namely, plague, rodents, fleas and man, essential for a possibly interesting situation, not only in the Pacific slope States, but also in the Middle West. One of our States, California, has thus taken rank with Southern Manchuria, Yunnan, China and Uganda, East Africa, and shares the distinction of being one of the four endemic plague centers of the world, from which at any time an epidemic may spring which might demand the graphic pen of another Defoe. I commend this picture to you as a subject for profitable meditation.

I might also point out before passing on that part of the life history of a common cestode (*Dipylidium caninum*) is stated to occur in fleas and that at least one Trypanosome *(T. lewisi)* has been experimentally transmitted from mammal to mammal through these insects.

Beetles.—I fancy I can detect an attitude of incredulity among you when I mention this order of insects as being of possible interest to us as pathologists. But the larvæ of our common *Blaps mortisaga* have often been reported as pseudo-parasites in man, and Daniels, a most careful observer, has mentioned a beetle larva occurring in an abscess of a man from Demarara.

Two beetles (*Acis spinosa* and *Scaurus striatus*) are said to be the intermediate hosts of tapeworms. Von Stein has found bladder worms in the larvæ of *Tenebrio molitor.* Braun states that

* Since this was written, the wild wood rat of California *(Neotoma anectens)* has also been found to be infected in nature by plague.

Blaps mucronata is the intermediary host of *Echinorhynchus moniliformis.* I myself found larvæ of beetles *(Drilus and Tetralobus)*, in Angola, which possess poisoned spines upon which the barefooted natives sometimes accidentally tread. When these spines enter the flesh they set up inflammation, at times so violent in type as to end in gangrene. The deadly arrow poison of the Bushmen is prepared from the grubs of a Chrysomelid beetle (*Diamphidia locusta*). Some of the large African Carabidæ (*e. g. Anthia calida)* eject with great force a strong smelling liquid from the posterior part of the abdomen, which gives rise to a severe irritative conjunctivitis should it reach the eye.

It should be remembered, too, that a coleopterous insect (*Platypsylla castoris)* is a natural parasite of mammals (beavers). It is dangerous therefore to exclude on *a priori* grounds this order of insects from the interest of the pathologist.

Lepidoptera.—A long list might be given of these insects which give rise to violent urticaria through the irritating substances contained in their spines and scales. In Africa I studied a large number, chiefly belonging to the Arctiidæ, Limacodidæ and Liparidæ. One very troublesome species is *Natada amicta.* A patient was even forced to return to Europe because of excessive susceptibility to this urticaria. There is a large literature on this subject, and the pathology of the condition has been well worked out. Many offenders from other parts of the tropics have been reported. In Europe the so-called processional caterpillar is familiar to all and here in America I personally know of one gentleman who was forced to resign from a scientific commission organized to study the brown tail moth in Massachusetts for no other reason than the suffering which contact with the insect produced in his case.

A moth (*Asopa farinalis*) has been stated to be a secondary host of at least one common cestode. I should mention, too, that one, if not two moths, are normally parasitic upon mammals. In South America we have *Cryptoses Cholœpi,* which lives on the great sloth. We cannot therefore exclude the possibility of it or other similar forms assuming importance to parasitologists.

Hymenoptera.—The stings of these insects are familiar to us all. In Angola large pugnacious bees (*e. g., Xylocapa rufa*) and large stinging ants *(Paltothyreus tarsatus* et al.) deserve mention.

Huge wasps of the genera *Scolia* and *Salius* are also feared. The poison of these is by no means a negligible thing*.

Fatal cases of bee sting have occurred in this country and Europe, while wasp and hornet stings are often reported in medical literature.

The only case that has come to my attention of a Hymenopteron acting as a possible carrier of disease was reported some years ago from Cyprus by Williamson. He suggested that anthrax in that island was disseminated by a species of velvet ant (Mutillidæ), which was found under the carcasses of animals dead of the disease and which was often handled, especially by children. Both the insect and the disease are called by the natives sphalangi.

Lecture II.

The Diseases of Portuguese West Africa.

In our last lecture we discussed the general subject of insect disseminators of human disease in the tropics, and to-day we take up a consideration of the diseases themselves which occur in a small portion of the tropical world. We can hope to do no more than deal with a single phase of it as it stands printed on the announcements, and perhaps a better title for this lecture would have been "Some of the More Interesting Medical Diseases of Portuguese West Africa."

Malaria. This is by far the most important infection seen in Angola. I can do no better than to give a brief resumé of a previous report on the subject. My observations were made at a point represented by Lat. 12° 13′ 30″ S. and Long. 16′ E., the altitude being 4,761 feet above the sea, and the mean temperature for a year registering 65.85° F.

The frequency of the disease is difficult to pronounce upon, yet by employing the spleen index, microscopical blood examinations and *post mortem* examinations of viscera I was able to reach some tentative conclusions, which I here give. In both blood examinations and spleen tests I employed good series (about 500 individuals in each group) and confined my statistics to cases which had never received treatment. This diagram shows that (after

* For a few of the writer's observations on the medical entomology of West Africa, see *Deutsch. Ent. Zeitschr.*, 1907, pp. 17-20, 199-200,377-8, 584, etc.; *Bull. Soc. Ent. Fr.*, 1908, pp. 76-79; *Ent. News*, 1906, pp. 64-7, 294-302; 1908, pp. 26-33, 224-30; *Ann. and Mag. Nat. Hist.*, 1906, pp. 242-4; *Polytechnia* (Lisbon), 1906, pp. 2-7, 204-6; 1907, pp. 3-7, etc., etc.

FIGURE 1.
Blood Examinations of 531 Untreated Natives.

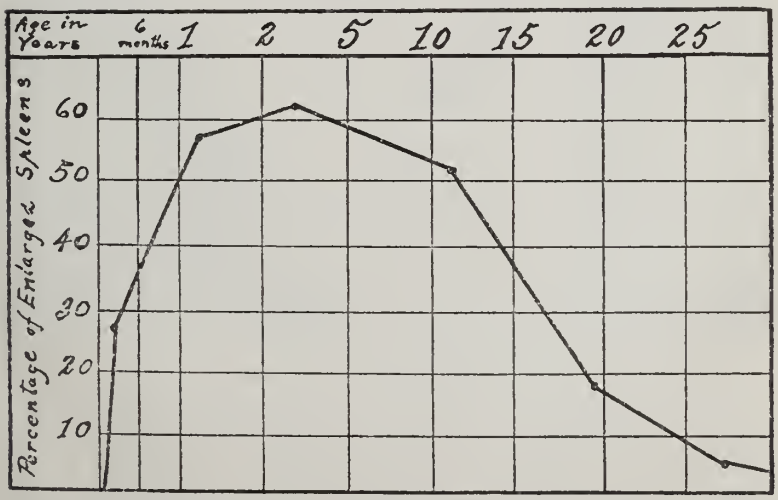
Total Number of Examinations	FORMS OF PARASITE				Large Mononuclear Leucocytes 20% or over	*Filaria Perstans*	Trypanosomes
	MALIGNANT TERTIAN			Quartan			
	Small Intra Corp. Rings	Crescents	Rosettes in Blood				
531	272	12	1	14	153	4	3

taking account of 18 instances of double infection which this form of statistics does not show) the percentages of blood infections were, in round numbers, as follows:

Infection with small malignant forms..... 51 %
" " crescents 2¼
" " quartan parasites 2½%
" " benign tertian ..... 0 %
Count in which large monouclears exceed 20%.. 29 %
Apparently normal individuals..... 17%

A glance at Figure 2 shows the percentage of enlarged spleens. It is apparent that over 60% of the population become seriously

FIGURE 2.
Spleen Index of Untreated Natives (351 Children and 162 Adults).



infected after the third year. Taking this in connection with the fact that 83% of all examined are found to harbor parasites or other evidence of malaria in their blood, I conclude that moderate

* *Atti della Società per gli Studi della Malaria*, Vol. VI, pp. 29-58.

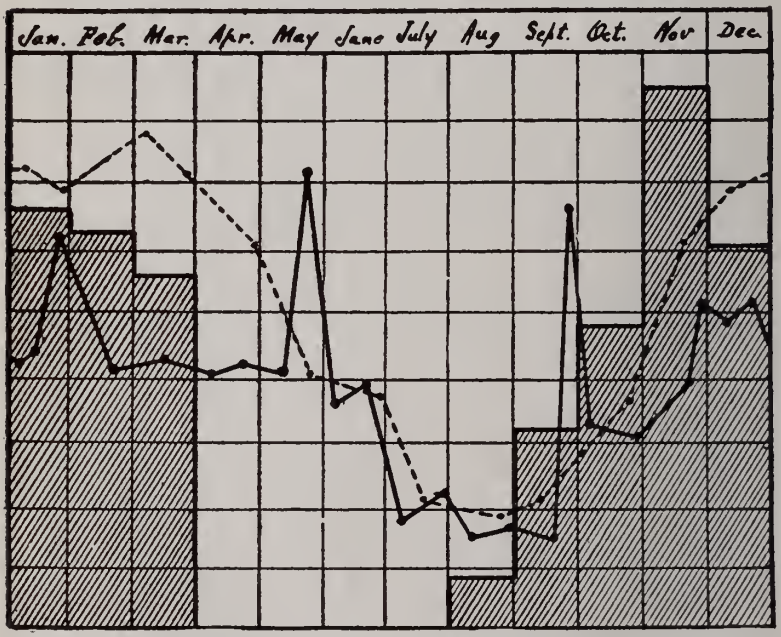
infection is almost universal and that at least half of the individuals are at times heavily infected.

The economic importance of the disease is considerable, as it necessarily interferes with service and lowers the value of the black as a workman.

I found the principal malaria-bearing mosquito of the region we are considering to be *Myzomyia funesta,* which I found infected in as high a proportion as 13% in one locality. I also demonstrated *Pyretophorus austeni* to be a carrier of the disease, about 1% of the specimens taken in one district showing parasites. I invite your attention for a moment to Figure 3, which brings out the interesting coincidence between rainfall, anopheline

FIGURE 3.

Showing the Relation Between the Amount of Rainfall, Number of Anopheline Mosquitoes Taken, and Percentage of Malarial Fevers Among the Natives of One Station in Bihé District, Angola, for One Year.



Shading Indicates Rainfall.
- - - - - - - - - - Indicates Comparative Number of Anophelines Taken.
———————— Indicates Comparative Number of Fevers Among Natives.

NOTE.—The epidemics of fever in January, May and September are probably to be accounted for by sudden changes in the weather stirring up latent malaria in the natives.

mosquitoes and malaria, and is from the records of a hospital once in my charge. The mosquitoes were always collected from a certain amount of wall space, and only the number of cases actually proven to have malaria were counted in making up this chart.

It has already been said that the ordinary benign tertian, which

is so common in temperate lands and in many tropical climates, e. g., in Manila, was never seen in West Africa. The behavior of so-called tropical malaria or infection with the malignant tertian type has been well and carefully studied in Africa and voluminously described. So I will not weary you with a discussion of it. But no one has closely worked out the results of quartan infection in the tropics. I may therefore be forgiven for bringing before you some charts which set forth some observations made on an untreated case of this form of fever.* From Figure 4 we see the pulse and temperature for the week during which the

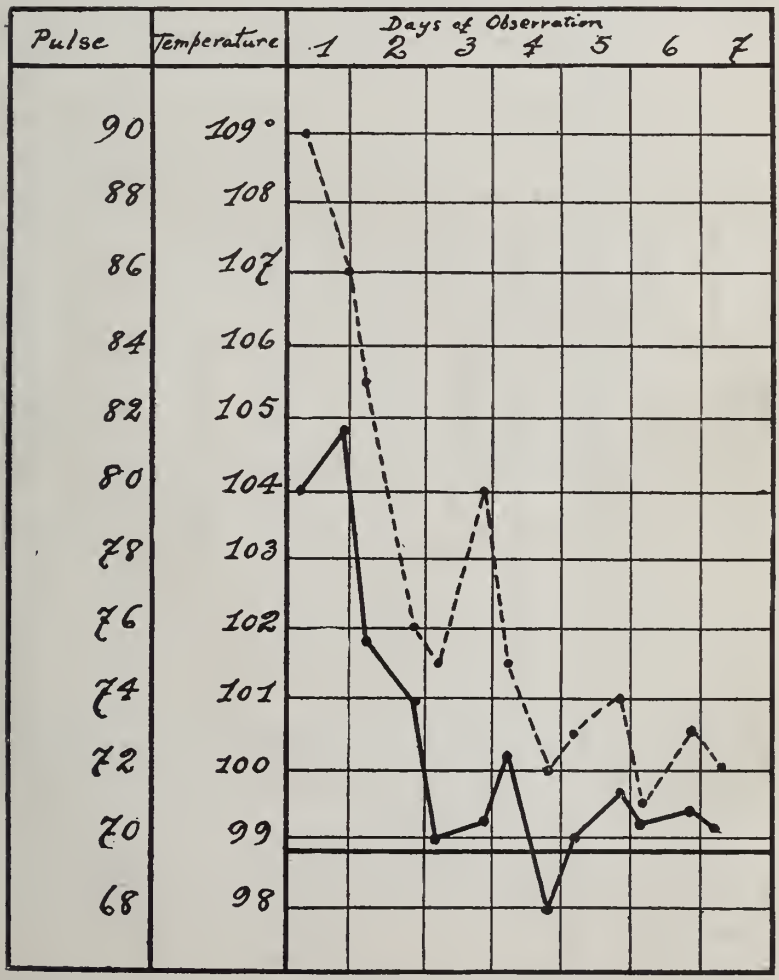


FIGURE 4.
Pulse and Temperature Chart of an Untreated Case of Quartan Fever in a Native.
EXPLANATION OF CHART.
———— = Degrees of Temperature in Mouth (F).
- - - - - - - - - = Number of Pulse Beats per Minute.

* Cf. Wellman. *Medical Record*, 1908, pp.1-7.

patient was under surveillance. In the next we see a graphic representation of the sporulation of the parasite in the patient's blood during the period.

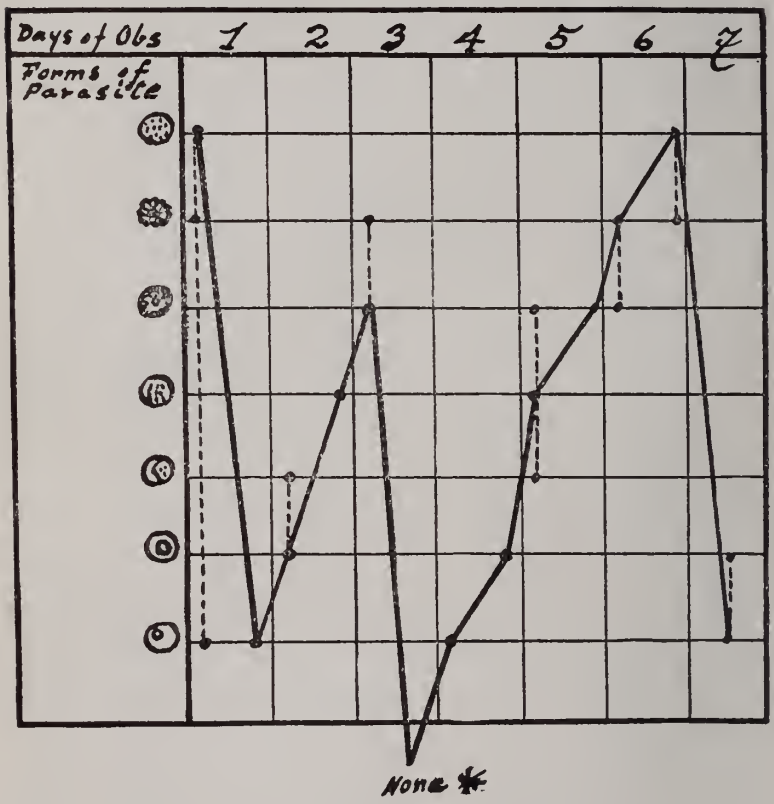


FIGURE 5.

Quartan Fever—The Stages of the Parasite Seen in the Blood at Different Times.

EXPLANATION.—The line representing the parasites refers to the developmental stages observed, and not to their abundance in the blood. The forms of the parasite are shown at the left of the chart.

* A few parasites (stage unrecognizable) were found on the evening of the third day in a thick film preparation stained with Romanowsky.

Figure 6 shows the comparison of the red and white cells at different stages of the disease and also the amount of haemoglobin present.

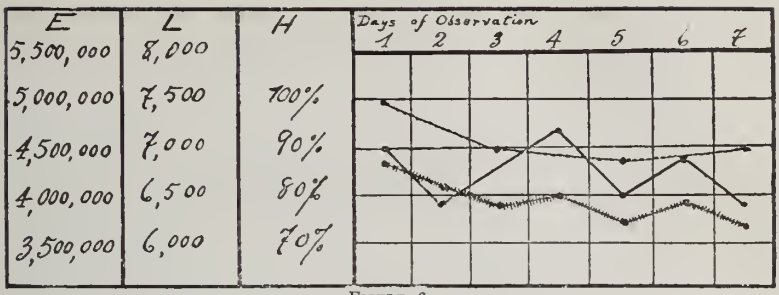


FIGURE 6.

Comparative Numbers of Erythrocytes and Leucocytes with Hæmoglobin Index.

EXPLANATION.

———— = Erythrocytes (E).
- - - - - - - - - - - - = Leucocytes (L).
:|:|:|:|:|:|:|:|:|: = Hæmoglobin (H).

Figure 7 shows the comparative numbers of the different types of leucocytes.

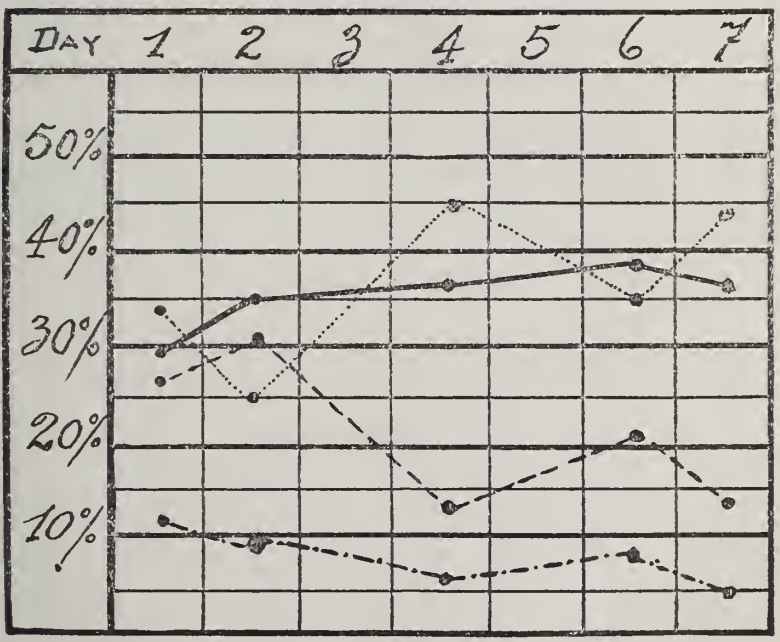


FIGURE 7.
Results of Differential Leucocyte Counts.

EXPLANATION.

. . . . . = Percentage of lymphocytes.
———— = Large mononuclears.
- - - - - - - - - - = Polymorphonuclears.
— · — · — · — = Eosinophiles.

About 500 cells were counted each time. N. B.—The "Transitionals" were always counted with the polymorphonuclears.

Figure 8 shows the change in body weight and likewise the amount excreted by the patient during the period.

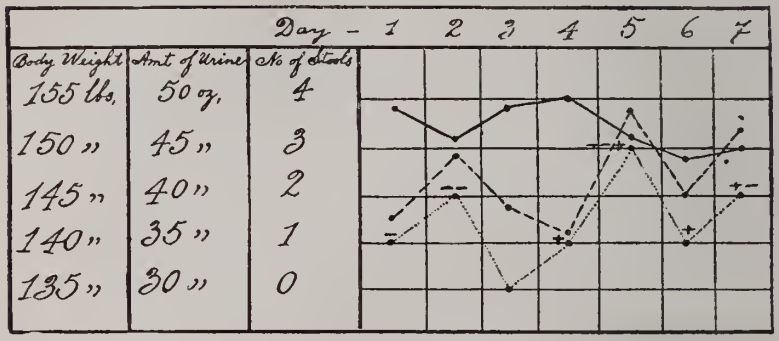


FIGURE 8.

The Change in Body Weight Compared with the Amount of Urine and the Number of Stools Passed During the Period.

EXPLANATION.

———— = Body weight in pounds.
— — — — — = Number of ounces of urine passed in 24 hours.
..... = Number of stools in 24 hours (+ = large stool, — = small stool.)

Figure 9 gives the food and drink taken by the patient.

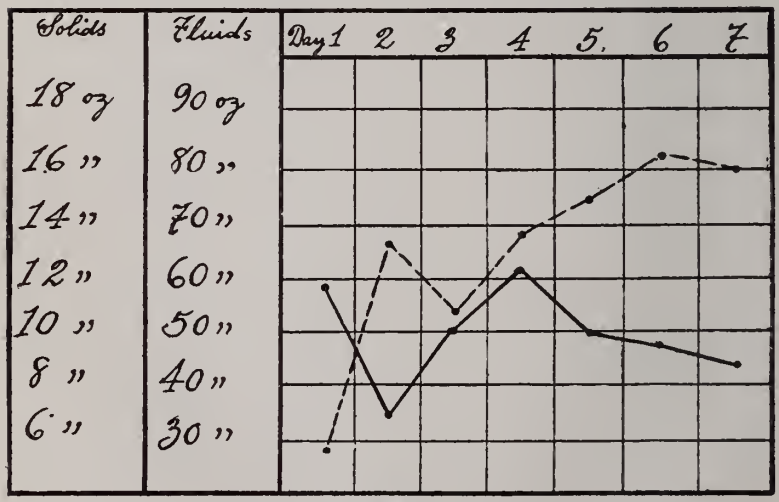


FIGURE 9.

Comparative Amounts of Fluids and Solids Ingested During each 24 Hours of the Observation.

EXPLANATION.

———— = Fluids in ounces.
— — — — — = Solids in ounces.

From these charts it appears that quartan fever, which in America gives rise to quite severe symptoms, is a comparatively negligible factor in West African negroes, who have acquired sufficient immunity to live with comfort in districts swarming with malignant malaria.

Malarial infection is followed by many complications and evil consequences. One of these is abscess of the spleen.

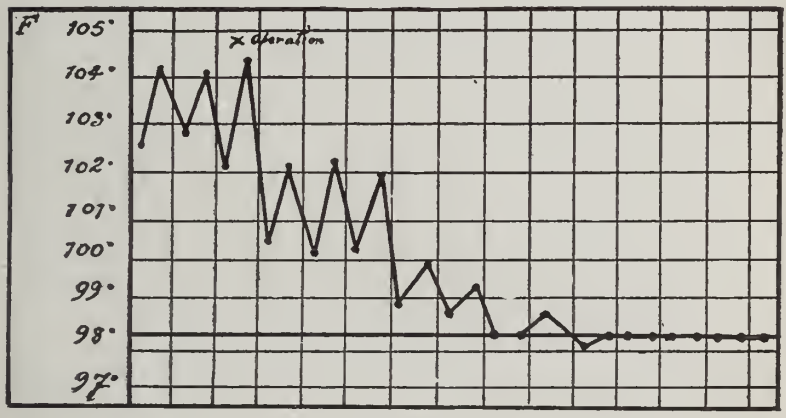


FIGURE 10.

Temperature Chart of Case of Malarial Abscess of the Spleen, Operation, Recovery.

Figure 10 shows the temperature chart of one case.

Blackwater Fever. This is the gravest disease of Europeans in Africa. Without pronouncing upon the question of the supposed relation of the disease to malaria, I may say that the principal carrier of malaria in West Africa, *Mysomyia funesta,* severe malarial fever and blackwater fever closely coincide in their distribution over the colony studied by me. Any depressing influence such as fatigue, exposure to cold, excesses of any kind, etc., may precipitate an attack of Blackwater fever or it may occur during the course of another disease. Figure 11 chart shows an instance of this.

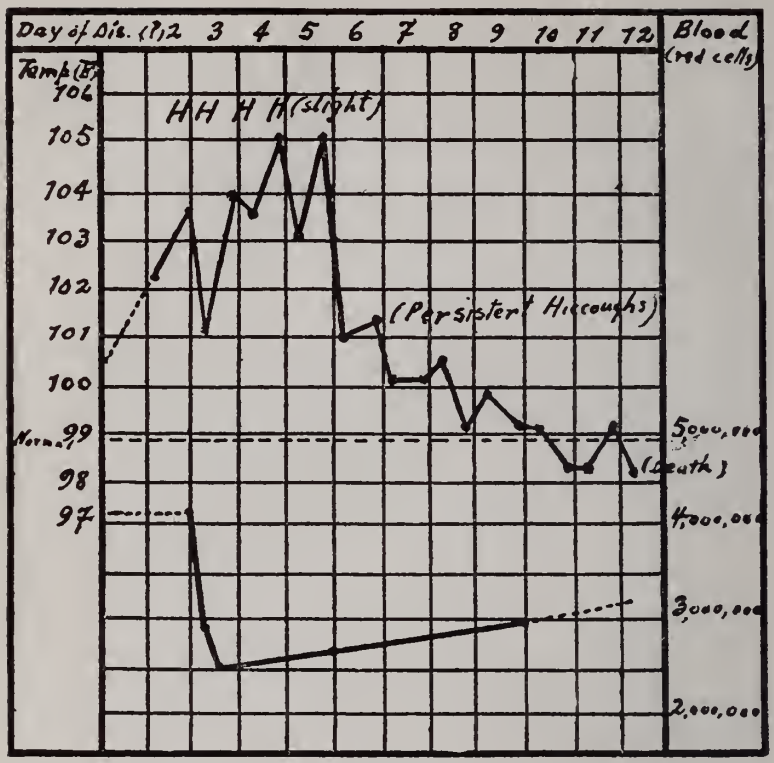


FIGURE 11.

Combined Blood and Temperature Chart of Fatal Case of Blackwater Fever Complicated with Amebic Dysentery, and Showing Malarial Parasites in the Blood.

H = Hemoglobinuria.

The sulphates are also said to predispose to hemoglobinuria, e. g., sulphate of quinin causing it, while the hydrochlorate does not. In West Africa the prognosis is of great importance. Roughly speaking, the danger increases in geometrical ratio with the number of attacks. My rule was to invalid home after each of the two first attacks and to refuse to pass a man to go out to the coast after the second. The treatment is symptomatic and unsatisfactory. I found intravenous saline injections of value in moribund cases with anuria. I have elsewhere suggested treating the patients in the earliest stages of the disease with serum obtained from immune natives living in very severe endemic blackwater districts.

Trypanosomiasis. Trypanosome infection, both of man and other animals, is exceedingly common in some parts of Angola.

In a report on these parasites I have especially studied the following species: *Trypanosoma gambiense* in man (*Homo sapiens*), *T. lewisi* in rat *(Mus natalensis), T. aivum* in dove *(Treron calve), T. Mega* in toad *(Rana tuberculosa).* We will speak to-day only of the human parasite. Some of these cases showed practically no symptoms even while the trypanospomes were abundant in their circulation. One case was watched for about two years and from an apparently healthy condition went through the entire gamut of trypanosome fever into typical sleeping sickness. On inoculation into dogs the parasites appeared in the circulation after about a week and small pear-shaped developmental forms were numerous in the blood. Goats seemed to be immune to this trypanosome. Samples of atoxyl were sent out from Europe, but circumstances forbade the thorough testing of this form of arsenic as a therapeutic agent.

Regarding the important matter of prophylaxis, general rules cannot be laid down, but each district must be studied and suggestions drawn from the local conditions. The following preventive measure recommended by me for one district are illustrative of what be aimed at in drafting such regulations:

(1) The native camps at Esupua (the principal station on the way from the port to the interior and within a fly belt) to be moved farther away from the river and kept there by police.

(2) Squads of soldiers, etc., to be passed through the fly belts at night.

(3) Native quarters in the city of Catumbella (constantly visited by native caravans from the interior and partly within a fly belt) to be moved as fast as possible from the river to the hills north of the town.

(4) The government not to permit sleeping sickness cases and suspected cases of trypanosome fever brought from the endemic districts north of the Coanza River (or other parts of Africa) to be landed at Benguella or Lobito (the ports of the district to be guarded).

(5) Care to be taken not to allow such recognizable cases as already exist in the district to be transported (either from the coast to the interior or *vice versa*) through the fly belts.*

Uncinariasis. This infection is a frequent cause of anemia and death. In one district investigated 13% of the population were

* Cf. Wellman, *Rev. de Méd. et d'Hyg. Trop.,* 1907,pp. 1-3.

affected. In addition to the Old World hookworm (*Uncinaria duodenalis*), I found in my district the New World form (*Necator americanus*) as well. This last form seems to be almost cosmopolitan, as it was sent me from East Africa and Rhodesia and has been reported from South America, Australia, the Philippines and other parts of the Far East, as well as from the United States and Europe. I found other species of hookworm in various animals, but these are not of special interest here. I should say that in one human case (infected with *U. duodenalis*) I observed the larvæ free and escaping from the eggs in recently passed feces, which is, so far as I know, a novelty. The embryos were typical and not to be mistaken for *Strongyloides* or other worms. In West Africa ground itch is not uncommon in the districts where uncinariasis occurs. The native black is the most often affected, but suffers less from the disease than does the European. The symptoms of the disease are well known and I will not detail them. In tropical Africa they are nearly always aggravated by malaria.

Dysentery. As is well known, the group of symptoms regarded as characteristic of dysentery may arise from one of several causes. It may be due to bacterial, protozoal or helminthal infection. In West Africa we had three principal forms of dysentery, namely, epidemic dysentery, probably due to Shiga's bacillus, endemic dysentery of amœbic origin and sporadic malarial dysentery. The first-named variety is by far the most fatal to the natives and carries off large numbers of troops, porters, etc., from time to time. Amœbic dysentery is not uncommon in whites, although, strangely enough, liver abscess is rare. A considerable per cent of apparently healthy natives have amœbæ in their stools. Dysenteric symptoms from malarial poisoning clear up quickly under quinin. Other forms of the disease resulting from protozoal infection are said to occur in the tropics. I have often seen an infusorian (*Balantidium coli*) in the feces, as well as various flagellate protozoal organisms, especially in conjunction with amebæ, but in my own clinic was not able definitely to connect them with the diarrheal condition sometimes existing in the patient.

Leprosy. Leprosy is quite common in Angola, but is not specially feared by the natives. Some searching in the historical records of the colony brought to light statements indicating the comparatively recent introduction of the disease among the indi-

gencs. If it be true that the anesthetic form, or "nerve leprosy," is typical of races which have long suffered from the disease, one can postulate an opposite view from the received one, because in Angola this form of leprosy is very much more common than the nodular variety. The pathology of the disease is intensely interesting, due partly to the fact that the germ invades practically all of the tissues of the body and has a special predilection for the parts less richly supplied with blood, such as the nerves. The histological architecture of the lesions mark them as belonging to the so-called infectious granulomata and in patients where the system is inclined to react strongly to the invasion I have been able, by feeding, fresh air, cleanliness, surgical treatment of foci of sepsis and large masses of bacilli, and especially by the use of cod liver oil in generous quantities, to effect marked amelioration in many cases.

Tick Fever. This disease, first mentioned by Livingstone, has been long known in Africa, but has only recently been scientifically studied by Ross, Milne, Dutton, Todd, Novy and others, including myself. I was probably the first to show that the temperature and presence of spirochætes in the blood conform in some instances to typical cases of relapsing fever at home. The following combined blood and temperature chart of one of my cases shows this

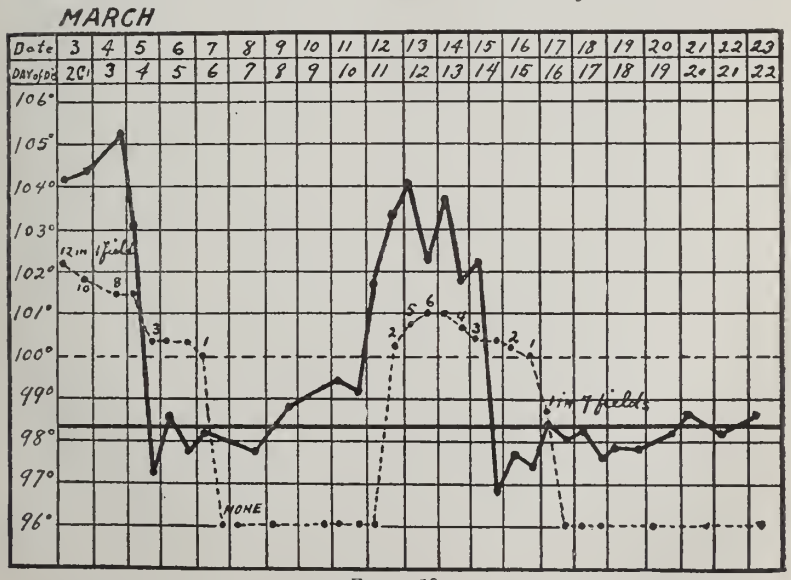


FIGURE 12.
Combined Blood and Temperature Chart of a Case of African Tick Fever.

DESCRIPTION OF CHART.—The Temperature is represented in the usual manner by an unbroken line. The dotted line represents the comparative abundance of the parasites in the blood during different stages of the attacks, taking the line marked 100° as representing the average of one parasite in each field. Thus, 101° would mean six parasites in each field, 102° eleven parasites, etc., etc.

well. The elucidation of the etiology of this disease is sadly linked with the name of Dutton, who lost his life from it while studying on the Congo. I was able by changing soldiers, etc., from beds to hammocks, the suspending ropes of which were wrapped in cotton, to protect them from the tick (*Ornithodoros Moubata*) which carries the disease and thus to stamp out a little epidemic in one district. In my capacity as medical officer I made several recommendations looking toward prophylaxis. The most important of these were:

(1) The tick in question should be regularly destroyed in crowded centers by disinfecting native houses, barracks and other permanent quarters and by burning old camps, huts, etc.

(2) Soldiers, laborers on plantations, etc., should be made to keep their houses clean and to sleep in hammocks or beds well raised from the floor and away from the wall. Natives should never be allowed to sleep in or near the quarters of the Europeans.

(3) Soldiers, porters, servants, plantation laborers and other controlable bodies of natives should be compelled to observe regulations regarding regular bathing and washing of clothes.*

Filariasis. The species of human filariæ found by me in Angola are as follows: *Filaria loa* Cobb., *F. bancrofti* Cobb., *F. perstans* Mans., *Filaria sp.,* and an undetermined embryo nematode in human blood (probably not a *Filaria*). The descriptions of the manner in which the adult *F. loa* wanders through the tissues, including the eyeball, has been known for a long time. The curious fact that the eye remains uninjured by this process is probably to be explained on the basis of the possibility of passage of one colloid body through another leaving no trace of its course, this possibility being due to certain ratios of surface tension between the two bodies.** It is thus we explain the passage of certain micro-organisms, e. g., spirochetes, from the anterior chamber of one eye to the anterior chamber of the other, or of bacteria through the walls of the alimentary tract.

The question of *Filaria bancrofti* and its relation to *Elephantiasis arabum* may be mentioned here. Manson's theory is the usually received one. On this hypothesis the adult female *Filaria* must be injured sufficiently to cause her to abort, but not to die; in other words, she must extrude eggs instead of developed em-

* *Vid.* Wellman, *Journal of Hygiene,* 1906, pp. 237-45.
** Cf. Fischer, *Jour. A. M. A.,* 1908, p. 833.

bryos. These eggs are, unlike the young worms, larger than the lumen of the capillaries, and hence are unable to pass through the lymphatic glands, so a lymph stasis due to embolism of the lymphatic glands by these ova is predicated as the cause of tropical elephantiasis. This theory is ingenious, but is open to objections, one of which is that in West Africa I found districts in which infection by *F. bancrofti* was common, but where elephantiasis was rare, and other districts where elephantiasis abounded, but where the worm could be found but rarely or not at all among the population of the region.

Pathologically elephantiasis is a chronic edema associated with a connective tissue hyperplasia. The origin of this connective tissue overgrowth may well be sought in the chronic inflammatory condition which lies at the bottom of the elephantiasis. The causes for this inflammation may lie in the first instance in the chemical products of filarial infection aggravated subsequently by further infection by various bacteria. The theory which attributes the development of the edema to interference with lymph circulation is certainly inadequate, for ligature of all the lymphatics coming from a trunk limb is known to be incapable of producing an edema of that limb. I am more inclined to find the explanation of the origin of elephantiasis in the theory of edema advanced by Martin H. Fischer.* This author holds that the cause of edema rests primarily in the tissues. In consequence of various disturbances (circulatory, various poisons, etc.), chemical or physico-chemical changes are produced in the tissues which confer upon their colloids an increased affinity for water and so swell. An increased absorption of water by the tissues therefore constitutes the edema. In applying these ideas to the question of elephantiasis we would have to say that through various agencies (of which filarial infection is one**) poisons are produced in the limbs or scrotum or other part of the body through which, by direct, or more probably indirect, means (acid production), the normal affinity of the tissue colloids for water is increased.

The causes operating to produce the edema are lasting and asso-

* Martin H. Fischer, Physiology of Alimentation, New York, 1907, p. 268; *Jour. M. M. A.*, 1908, 51, p. 830; Kolloidchemische Beihefte, 1910, 1 Heft 3, where detailed reference to previous publications may be found.

** I have seen a man, who had never been out of England, with typical elephantiasis of the leg. v. Transactions of the Society of Tropical Medicine and Hygiene, p. 19.

ciated with chronic inflammatory changes (deposition of connective tissue); as this is produced it, too, becomes involved, so that the final picture of elephantiasis is that well known to everyone, a chronic edema associated with an inflammatory connective tissue hyperplasia, itself edematous.

So it seems to me that the increase of lymph is not to be regarded as the cause, but as the effect of the edema; in other words, the attempt of nature toward resolution of the difficulty. And I am inclined to the belief that bacterial infection plays a great part in elephantiasis. Where ulcers abound in West Africa elephantiasis is also common. The strains of micrococci isolated from these ulcers showed high virulence and I have suggested that the same groups of organisms may be responsible for both affections, which are often seen together in the same patient.

Goitre. I investigated a notorious goitre district in West Africa and reached some conclusions regarding the disease. The goitre of warm climates is no doubt identical with that of temperate countries. We seem to get the same enlargement of the glands, with and without hyper, and hypothyroidism. I consider the usual parenchymatous goitre (together with the colloid form which is only a different type of the same process) as entirely distinct from the Graves-Basedow disease which may result in exopthalmos and other serious disturbances. Even in the most intense goitre areas the latter disease was absent. Cretinism also was extremely rare. The hypotheses advanced to account for goitre in the tropics are for the most part the same as those advanced for the disease in temperate climates. Among these are the following: That it is due to strong emotion or nervous excitement; that it is due to malaria; that it is caused by altitude and climbing; that it comes from living on calcareous soil, etc. I was able to exclude all these supposed causes and the half dozen other ones which have been advanced by the study of a single goitre infested district. In this district goitre was amazingly common while outside of it the disease was almost unknown. The region was peopled with men and women no more emotional than their neighbors, was freer from malaria than the districts surrounding it, had a lower altitude than several goitre free contiguous neighborhoods and was underlaid with a primary system of granite and sandstone, with absolutely no calcareous soil over the entire region. Several other less

reasonable etiological hypotheses could be as definitely disregarded as those named. This observation bears out the well-known belief that parenchymatous goitre is a "place disease" like beri-beri.

Milk Pox. This scourge is closely allied to the small pox with which we are familiar in the United States and Europe. Thousands and thousands of natives are carried off by it every few years. Ordinary vaccine from London was efficacious against it, and we succeeded in creating among the aborigines a widespread demand for such prophylaxis. According to the native reports, an epidemic of milk pox is always immediately preceded by one of chicken pox. I saw this on two occasions myself. Other epidemics are known and dreaded. Two of these I identified as mumps and whooping cough, respectively.

Onyalai. This is probably a separate disease, although the cause is yet unknown. My original description was later followed by Massey, Mense, Feldmann and others. The disease is very fatal. Pathologically, its most striking features are purpura and peculiar hemorrhagic infarcts in the viscera. These infarcts are bacteriologically sterile. The disease possibly may be due to a protozoon.

Akatama. I first described this affection in 1903. Some of the cases suggest a modified Raynaud's disease. It is probably a mild peripheral neuritis. It may be malarial in origin although blood examination in a series of cases contraindicated this. The disease has been recently discussed by Balfour. Several other conditions first described by me may be mentioned in this connection. One is what I long considered an angiospastic neurosis signalized by pain in the upper chest. It is called "vonulo" by the blacks and "Bihê asthma" by the colonists. It has nothing to do with asthma or heart disease, and I now think it is probably due to osteo-arthritic exostoses (originating likely from the absorption of the products of digestive disturbances set up by intestinal parasites), which cramp the spinal nerves at their point of exit from the vertebræ.* Another widely known disease, by the blacks called "ochimumusu" and by the whites "land scurvy," has no relation to scurvy, but I demonstrated peculiar spirochetes different from the ordinary mouth spirochetes in the marginal ulceration of the gums which are the distinguishing mark of the affection.*

* *Vid. Jour. Trop. Med.*, 1903, pp. 267-8; 1904, pp. 52-6; 1906, pp.1-4; *The Practitioner*, 1906, pp. 246-51.

Epilepsy. This affliction is very common, nearly every village having its epileptics. The disease is considered by the native blacks to be very contagious.

Yaws. This disease is a common complaint. I have already mentioned our discovery of the spirochete,* and that I consider it distinct from syphilis.

Helminthiasis. Uncinariasis and filariases have already been discussed. Other round worm infections are common. I have secured 90 ascarides from a child two years old, the result of a single dose of santonin and castor oil. Infection with these worms is almost universal in West Africa natives. *Trichocephalus trichiuris* and *Oxyuris vermicularis* are also common. Tape worms are not rare. *Dibothriocephalus latus, Taenia saginate, T. africana, Taenia sp. incert., Hymenolepis sp.* and several undetermined forms were seen. Flukes are also not rare. *Fasciola gigantea, F. angusta, Schistosomum haematobium, S. mansoni* and an unidentified species were found.

Myiasis. I sufficiently dealt with this question in my lecture on insects and disease. Several flies not before suspected of pathogenic significance were proven to attack man in West Africa.

Gonorrhea and *Syphilis.* These diseases were absent from Angola until imported by the members of a European Christian nation. Syphilis is known in the vernacular as "soldier's disease." I have mentioned in another lecture how both diseases are very atypical in the indigenes.

Craw-Craw. I have already said that this disease is really atypical scabies. Various other cutaneous diseases, e. g., ringworm, leucoderma, etc., are also common in West Africa.

Beri-Beri. A common and serious disease. In the island of St. Thomas and Principe I examined many cases during the epidemics there several years ago. Thirty thousand cases were said to be in the islands. I have seen numbers of white soldiers and officers in the colonial hospital at Lisbon who had been invalided home with the disease from West Africa. Both the "wet" and "dry" forms are seen. The most helpful treatment is prompt removal from the infected locality.

Pneumonias. The disease in the sense we usually speak of it is, so far as I know, almost unknown; but a terminal pneumonia

* See Wellman, Arch. f. Schiff, Trop. Hyg., 1907, XI, p. 545, cf. Also, Woolley, *Internat. Clinics,* IV. p. 263.

from various secondary bacterial invaders is not seldom seen. A true malarial pneumonia is not uncommon, and clears up like magic under quinin. I particularly mention these facts because in Angola cases with labored respiration from high temperature or other cause are often erroneously diagnosed as pneumonia.

Bites of Venomous Creatures. The bites of insects have been sufficiently discussed in a previous lecture. Snake bites were common in Angola. The most dreaded species is the puff adder *(Clotho arietans),* which is found from Egypt to Cape Colony. In one case of bite from this snake I observed loss of coagulability of the blood after passing through the tissues at the seat of the wound, vomiting of blood, violent nose bleed (all, doubtless, from the direct action of the venom), and a remote action of the poison resulting in a peculiar jerky respiration. There was also sloughing of the site of puncture and the stirring up of a latent malarial infection.* Other poisonous snakes are the horned viper (*Bitis cerastes*), the house cobra (*Naja nigricollis*), etc. Many perfectly harmless snakes and lizards are considered by the blacks to be deadly.

Poisoning. The toxic agents employed by the natives of West Africa present a fascinating field for research. Many of these drugs are both obscure and potent, and a veritable reign of terror obtains in some regions from the machinations of the witch doctors and medicine men. I spent much time and effort while in Angola collecting and identifying the substances used as love philtres, therapeutic agents, arrow venom, ingredients in the poison test, etc., and give you to-day but a bare hint of the store of facts I accumulated.* I mention the plants under their native names. "Utata" (*Securidaca longipedunculata-Polygalaceæ*) is used by the native women to commit suicide. I gave four grams of what was said to be this plant in 30cc. of water to a large monkey (*Cynocephalus porcarius*) and produced death in 48 minutes, "Okalembe" *(Tephrosia vogeli-Legwminosæ)* is the widely used fish poison. "Okapilingau" (*Burkea africana-Leguminosæ*) is a favorite aphrodisiac. "Ombambu" (*Erythrophloeum guinense-Leguminosæ*) is the principal ingredient of the poison test by which thousands of natives perish in Africa every year. The bark of the aforementioned tree in small doses produces

* Cf. *Am. Med.*, 1906, pp.94-9; *Medicine*, 1906, pp. 1-11.
* *Vid. N. Y. Med. Jour.*, 1906, pp. 1-4.

vomiting and purging; if powdered and inhaled it causes sneezing; the aqueous extract when injected under the skin of animals sets up vomiting, irritates and afterwards paralyzes the vagus nerve, causing the heart to slow and finally to stop. I administered a piece of the bark two inches square and one-half inch thick, ground up and mixed with soup, to a small dog. Its limbs were paralyzed in 21 minutes and it died in about an hour. "Nakanganga" (*Plumbago zeylanica-Plumbaginaceæ*) is administered to make an enemy sick and is thoroughly efficacious in this respect. "Ochimbinga" (*Strophanthus lanosus-Apocynaceæ*) is the plant, the milky juice of which is used, with *Euphorbia arborescens* (Euphorbiaceæ), *Hæmanthus toxicaria* (Amaryllidaceæ) and various animal substances, i. e., grubs of beetles (*Chrysomelidæ*), snake venoms, etc.— as arrow poisons. "Epangue" (*Cannabis sativa-Urticaceæ*) is "hashish, and is used—as is tobacco and cola (*Sterculia acuminata*)—for its pleasant effects.

Other common disease conditions encountered in Angola are gundu, ainhum, keloids, "climatic" buboes (which I traced by means of cultures to coccic infection of small wounds in the lower limbs), multiple nodules, umbilical hernia and ulcers. Some diseases, such as enteric and liver abscess, are rarer than one would expect from the general health conditions of the colony. I failed to find a number of diseases, among which are typhus, scarlet fever, cholera, yellow fever, plague, Malta fever, pellagra, scurvy, anthrax, glanders (in man), *Arthritis deformans,* and gout.

LECTURES III AND IV TO FOLLOW.

Hemorrhage from the Genitals of the Female Newborn.*

By M. A. SHLENKER, M. D., New Orleans.

Impressed by the anxiety of mothers, especially the younger ones, occasioned by the bleeding from the genitals of the female infant, I decided to investigate the causes of this unusual condition. Not having had the experience of observing a great many such cases, but knowing such conditions did occur, I was surprised upon investigation to find, even in our most recent books on pediatrics and obstetrics, only brief mention made of same. Both Holt and *The American Text Book of Obstetrics* mention the twenty-three cases

* Read before the Orleans Parish Medical Society, May 9, 1910.

collected by Cullingsworth in 1876. Upon inquiring as to the etiology of same, there is little to be gleaned, as the majority of cases are without complication, and arrest of the hemorrhage takes place very shortly without any serious result.

The most plausible explanation for this condition is that offered by Dr. Camerer of Langenau (quoted by Cullingsworth). He says "Those infants who are attacked by melæna closely correspond with those who become the subjects of genital hemorrhage." Bednar says that occasionally intestinal and genital hemorrhage occur simultaneously in the recently born child. The hypothesis of Camerer is most reasonable and is as follows:

He thinks by the ligature of the umbilical cord being affected while the vessels still pulsate, and the pulmonary circulation is consequently not thoroughly established, the blood, which up to this time has been streaming from the iliac vessels into those of the umbilical cord, is necessarily urged downwards into the pelvis, and, owing to the circulation being not yet duly regulated and active, there is in the pelvis a local plethora. If, by chance, the blood collected there in abnormal quantity fails to become carried off in the general circulation, it seeks an outlet for itself, which, in the female, is furnished by the pouring out of a certain quantity from the organs of generation. How, then, does nature deal with corresponding condition in the male, seeing that here, too, the umbilical cord is occasionally tied too early, with presumably similar results? Dr. Camerer does not overlook this question. He makes the very interesting suggestion that the phenomenon of a discharge of blood from the bowels, which is sometimes observed, may help to an answer.

Whence comes the hemorrhage? According to the observations of Billard, point to the lining of the uterus as the real source of the discharge. St. Hillaire, and others, say that in some cases it appears to have a sinister meaning, for in some cases it has been noticed in infants dying shortly after birth—especially in the premature.

Hirst, page 819, dismisses the subject by saying that it is not very rare, and remarks that the condition is analogous to the breast change in the new-born—showing an activity of the sexual organs. He further states that the blood comes from the uterus and has been demonstrated in infants who died from intercurrent affections.

Doleris looks upon such cases as examples of a general infection of doubtful origin, and in one instance found a pericardial effusion—from which he cultivated staphylococci. I have observed, during the past ten years, a number of cases of muco-sanguinolent discharge from the vagina of full-term healthy children.

Rilliet and Barthez state that they find that boys are more frequently affected with melæna than girls.

Edgar, page 875, says, "In many instances the phenomenon appears to be physiological, and more than once has foreshadowed precocious menstruation and an early sexual development."

Eross found blood in the uterine cavity and an apparent condition of hemorrhagic metritis.

Pfaundler and Schlossman, Vol. 4, page 104, quotes Schulkowski, who observed in 10,000 new-born female children thirty-five cases of hemorrhage from the genitals. It was nearly always scanty, seldom abundant, and never appeared before the fifth day—and generally the sixth. They refute the contention that in these cases the hemorrhage was a precocious menstruation. Nor does he believe that it can be ascribed to asphyxia, breech presentation, or instrumental delivery; but believes the cause to be a physiologic hyperæmia of the abdominal organs, which is present at birth.

Zapport believes, as a result of his examinations, that the cause of the hemorrhage is a physiological irritation of the uterine mucosa.

Cotton, page 181, says: "Comparatively frequent and of slight importance unless associated with other evidence of hemorrhagic tendencies." Nagele does not hesitate to say that he regards these cases as those of precocious menstruation, yet the condition is not to be regarded as such, owing to the absence of any evidence of puberty, and the return of the flow with any regularity.

Then what is the discharge to be regarded? The character of the discharge is typically that of the menstrual secretion. The general health of the patient is rarely affected, except perhaps a little fretfulness during the period. The organs of generation are, as a rule, found normal, but sometimes the labia are found to be swollen, and the clitoris and nymphæ prominent. On separation of the labia a bloody-mucous fluid is seen to slowly flow, varying in quantity at different times coincident with the condition. The

breasts are frequently swollen and at times exude a milky fluid. In the case herewith reported the breast symptom did not appear with the flow from the vagina, but was present a few days later.

I. N. W. Family history negative, both parents of healthy ancestors and free from syphilis, tuberculosis and blood dyscrasial diseases, with the exception, perhaps, that the menstrual function of the mother had been always irregular, which I attributed to obesity, menstruating at intervals of two to four months. This infant, the first child, a female, was born on Saturday night, February 12, 1910, at 9:30. Confinement was normal in every way. Though weighing only four and three-fourths pounds, it presented a normal appearance in every way. The cord was rather long and the pulsation was of short duration and did not bleed after ligation, and separated on the eighth day. The placenta was perfect. The accouchement was normal in every respect. Temperature at all times normal (99° F. in rectum). On the fourth day a bloody discharge was observed on the napkin and gave the nurse a bit of alarm. It was characteristic of the menstrual fluid, being blood mixed with a thick mucus. This flow lasted from the 16th until the evening of the 17th. After the flow ceased I noticed the breasts become enlarged and a milky secretion could be forced out. During the period of the discharge the child was cross, or irritable, which I attributed at the time to lack of nourishment, the mother's breast not having the opportunity to secrete sufficient to satisfy her. The external genital organs seemed to be slightly congested, and on separating the vulva a bloody mucous fluid exuded, the quantity varying at times, the total amount being in the neighborhood of three drams.

The child has thrived nicely and has had no evidence of its return, thereby precluding any evidence of precocious menstruation.

The Nose, Throat and Ear in Influenza.*

By ARTHUR I. WEIL, M. D., New Orleans.

Influenza is essentially a disease of the upper air passages. It is here that the organism gains entrance to the body and here that the local manifestations are mostly to be found. Analogous to diphtheria, which also finds in this region the vulnerable spot

* Read before the Orleans Parish Medical Society, May 9, 1910.

enabling it to successfully attack the healthy organism, and which in these areas unfolds its most characteristic lesions, it is followed likewise by a secondary train of symptoms and deleterious influences spreading throughout the body as the result of the subsequent general toxæmia. Influenza, then, may be considered a disease of the nose and throat, accompanied by secondary toxæmia, affecting other regions, often so profound as to relegate the primary infection and local lesions to the background. This view of the disease, however, must be modified by the recollection that other organs, notably the lungs, but also the joints, meninges, etc., much more frequently than is the case with diphtheria, may be the object of direct attack from the invading bacilli as well as sufferers from the secondary toxemias. But even in such cases the point of entrance is usually the nose, throat or both.

The mucous membrane attacked by the influenza bacillus is characterized by redness, swelling, congestion and disturbances of the secretion, either hyper or hypo-secretion—usually the former—the excessive secretion being as a rule at first watery, then mucoid and finally muco-purulent in character. Accordingly as these changes occur in the nose, throat or larynx and trachea they may cause various disturbances and give rise to different sequellæ depending upon the location. It may perhaps add to clearness and brevity if these regions are considered separately.

When the nose is the point of attack the onset is usually with an acute coryza. Often the first symptom is an attack of violent sneezing. This is perhaps not so much the case now as in the earlier epidemics. Some of us can remember how in the first great pandemic outbreak of the disease in the late '80s and early '90s a perfect storm of sneezes swept the country. In those days, when less was known about the disease than at present, especially among the laity, sneezing held the foreground in the symptom picture, nor did they consider an attack of grippe possible unless prefaced by such a paroxysm. So much was this the case that the newspapers of those days were filled with cartoons picturing sneezing mankind. With or without that premonitory symptom, the influenza bacillus attacking the nasal mucus membrane gives rise as a rule to an acute rhinitis. There is swelling of the turbinates, more especially of the inferior, blocking of the nostrils and congestion of the mucous membrane of the nose, the congestion extending into the several accessory sinuses and causing often

a dull headache or a more acute neuralgia. This is followed in from twelve to twenty-four hours by a watery discharge, changing gradually in character to a mucoid and then a muco-purulent rhinitis. Occasionally there may occur spontaneous bleeding from the nose in the early part of the attack, caused, doubtless, by the coincidence of congestion and erosion of the mucous membrane. There is, to be sure, nothing characteristic in this picture. It is the picture of any ordinary acute rhinitis. Doubtless many acute colds are loosely termed grippe by the laity and even by medical men, in which the Pfeiffer bacillus plays no part at all, the coryza being caused by any of the numerous organisms which may infect these parts. Grippe is a term much too carelessly applied. If every case of so-called grippe were due to a true infection with the influenza bacillus, it would not be the trivial disease it is now generally regarded. With true influenza there is usually high fever, pronounced constitutional reaction, marked depression and more or less pulmonary involvement. In a few days the fever declines, the nasal inflammation subsides and the mucous membrane gradually assumes its normal condition. But the pulmonary abnormalities and the nervous and physical depression is apt to recede much more slowly, leaving many troublesome symptoms which may last for weeks or months.

Were the nasal mucous membrane confined to the nasal cavity alone and the inflammation limited to this area, the usual attack of influenza would pass off harmlessly enough as far as the nose is concerned. Unfortunately, however, the mucous membrane of the nose is continuous with that of the accessory cavities, an inflammation of the one leading by direct continuity to involvement of the other, with the result that where there is a grippal infection of the Schneiderian membrane the sinuses are practically always more or less involved. Anatomical circumstances are such that whereas a purulent inflammation of the nose permits of perfect drainage and a consequent spontaneous cure within a few days, with respect to the accessory cavities the reverse is the case. Each cavity drains into the nose through a small opening, and the frontal sinus even more disadvantageously for drainage through the narrow naso-frontal canal. With the onset of the infection the mucous membrane becomes swollen, contracting the naturally small openings and in some cases blocking them entirely. The pus discharged from the lining membrane of

the several cavities has no means of escape; it is gradually accumulated in the cavities under more or less pressure, this very pressure exerting unfavorable influence upon the mucous membrane and aggravating the condition. The result is an acute empyema of one or more cavities. The sinus most frequently affected is the frontal, as is naturally to be expected from the narrow naso-frontal canal which constitutes its opening. The next most frequently affected is the antrum, due not so much to the narrowness of its opening as to its disadvantageous position with respect to drainage, being high up near the roof of the cavity. The outlets of the other cavities are better placed for drainage, and they are not so frequently affected, though they are by no means immune. I have seen recently a case of influenza in which every one of the accessory sinuses on both sides were involved in an acute empyema and where when proper drainage had been established an almost incredible quantity of pus was discharged into the nose and throat.

A culture of the pus almost always shows a mixed infection, the Pfeiffer bacillus being accompanied by the usual pus-producing organisms or the pneumococcus. In rare instances the influenza bacillus is present alone. In such cases the discharge of pus is slight and an empyema, even if suspected from the symptoms, is apt to be overlooked except after repeated and painstaking examinations. The absence of pus in the nose does not always preclude the possibility of an empyema. It may be masked by the above circumstance or by the fact that the openings of the cavities are so tightly occluded by the swollen mucous membrane as to prevent absolutely the escape of pus into the nose. It is only after the turgescence has been carefully reduced that pus may be seen trickling down in the region of the hiatus semilunaris. On the other hand, I have occasionally seen cases in which the diagnosis of grippe was only made after a sinus empyema had been demonstrated. I have one case in mind of a patient who had suffered for a week or ten days with a general depression, a feeling of prostration and low fever, in which no diagnosis could be made. Finally headache, which at first had been slight and only an incident, became very severe, accompanied by facial neuralgia. The patient was referred to me for a nasal examination, and an acute empyema of the antrum was discovered. It was only then that the previous trouble was recognized as grippe.

A discussion of the diagnosis of acute empyema of the sinuses and the various methods of treatment would take too much space and would be of too little interest to this audience to warrant its inclusion in the present paper. It may, however, be worth while to speak a word of warning concerning the headache which so often accompanies or follows an attack of influenza. Neuralgia, it is commonly called by the family physician, facial, supraorbital or what not, depending upon the location of the pain. It is treated as such with aspirin, phenacetine and similar analgesics, the pain gradually subsides and the patient is discharged without further thought of the headache. It is this perfunctory treatment of a very important symptom which, to my mind, is the most fruitful source of chronic empyema. After the acute stage subsides the headache is naturally mitigated, but the suppuration has by no means ceased in every case. There often remains a subacute inflammatory condition, to be exaggerated by every fresh cold, until finally there results the typical chronic empyema. Neuralgia accompanying influenza is always suggestive of accessory sinus involvement. Hajec, with all his large experience, goes so far as to say that he has never seen a case of neuralgia complicating influenza that did not rest upon a basis of sinus inflammation. While this may be a somewhat exaggerated view, it is nevertheless a fact that there exists a sufficiently intimate causal relation between influenza, neuralgia and sinus suppuration to warrant a painstaking investigation of the sinus status in every such case of neuralgia. Where sinus involvement is discovered early and properly treated, it usually subsides quickly without the necessity of an operation or the danger of a subsequent chronic empyema. Spontaneous cures, on the contrary, are by no means the rule, though they often occur.

Since the chief causative factor in these cases of sinus suppuration is the occlusion of the cavity openings by the swollen mucous membrane, it is well to guard against this factor as far as possible. Simple precautionary measures consisting of frequent cleansing of the nose with a mild alkaline antiseptic followed by a spray containing adrenalin, preferably in oily solution, would if used as a routine treatment in every case of nasal grippe go far toward reducing the percentage of sinus complications.

The manifestations of influenza in the throat are somewhat

different from those of the nose. Where the throat is attacked we have an acute faucitis or pharyngitis replacing the acute rhinitis. At the onset there is often intense dysphagia and dryness of the throat. The mucous membrane is red and swollen. Dry at first, it soon becomes bathed with a watery or mucoid secretion. As mentioned by Dr. Elliott at the last meeting, the uvula is sometimes markedly red and boggy. Usually, however, there is involvement of the whole pharyngeal membrane. Besides the dysphagia, there is as a rule high fever and marked constitutional symptoms. Sometimes the tonsils alone are involved, in which case we have about the same picture as in an ordinary acute follicular tonsilitis, though the exudate is frequently more profuse, at first sight suggesting a diphtheritic membrane. The disease usually runs its course in from four to eight days, i. e., the throat symptoms disappear in that time, though, as is the rule with grippe generally, the toxic symptoms last much longer. Local complications are not numerous or serious. Occasionally there follows a peritonsillar abscess, though this is not common. Retropharyngeal abscess is said sometimes to occur, though I have seen no such case that could be attributed to this cause.

The larynx and trachea are seldom the seat of a primary attack, but they are not infrequently implicated by extension from above. Curiously enough, the trachea is frequently more involved than the larynx, the affection taking the form of an acute tracheitis. The tracheal mucous membrane is red and swollen, dotted sometimes in places by a fibrinous-looking exudate, rather tenacious, grayish in color and often difficult to differentiate from adherent mucus. There is a persistent hacking, irritative cough, a burning sensation in the region of the trachea and tendency toward hoarseness where there is laryngeal involvement. This condition is rather persistent, usually lasting from one to two weeks in spite of treatment, often longer. It may be from this seat that a certain proportion of the pulmonary cases have their origin by extension downwards. There may also occur acute grippal laryngitis without involvement of the trachea. It might be mentioned in passing that the present epidemic has been richer in the tracheal and laryngeal type that previous ones. This tendency of the several epidemics to conform more or less to some particular type is a well known peculiarity of the disease.

The local treatment of these cases, as well as of the grippe pharyngitis, is very much along the same lines as inflammations caused by other organisms. In the general treatment aspirin and salol administered internally are of greatest benefit, along with catharsis, stimulation when necessary and stimulating feeding.

The ear, from its intimate connection with the throat through the eustachian tube, is, as is naturally to be expected, a frequent seat of infection by extension from the naso pharynx. In the ear it takes the form of an acute exudative catarrh or, much more frequently, an acute suppurative otitis. The most characteristic point of the influenza otitis is its virulence and the frequent participation of the drum membrane in the inflammation. The drum often presents blood vesicles which may also appear upon the wall of the canal close to the annulus tympanicus. They usually take the form of large bluish black bullæ in the posterior inferior quadrant of the drum, which when incised discharge blood and pus. The suppuration in the middle ear is exceedingly virulent and spontaneous rupture of the drum takes place early. Though the discharge may seem profuse, the spontaneous opening is usually not large enough to provide adequate drainage. The family physician often makes the mistake of supposing that since drainage has been established no further interference is necessary. It is in these cases, if any, of acute otitis, that a very free paracentisis is necessary, extending throughout the whole diameter of the drum, even if spontaneous rupture has already occurred. The myringotomy should be repeated as often as there is a tendency to close before the suppuration has subsided. This is especially true in grippe otitis, since it is so prone to cause mastoid involvement with rapid destruction of bone. An ice bag to the back of the ear often helps to avert or abort impending mastoid involvement. There is usually high fever and excessive pain accompanying the aural complications. The fever persists for several days, sometimes a week or longer even after perfect drainage is provided. Where the mastoid operation is absolutely indicated it is well not to delay too long, as the bone destruction once it begins progresses very rapidly. On the other hand, conservative measures properly carried out may obviate the necessity of more radical surgical procedure.

In addition to the inflammatory conditions, a great variety of

affections referable to the ear, nose and throat are dependent upon the toxic effects of the disease upon the nervous system. They should be classed as sequellæ and are analogous to post-diphtheritic paralysis. Paralyses of the soft palate and of the various laryngeal nerves occur in this category. Peripheral neuritis of the nerves throughout the body is one form which it frequently takes. Where the fifth nerve is chiefly affected, causing facial neuralgia, toothache, etc., it sometimes so closely simulates the neuralgias resulting from accessory sinus involvement that only careful and repeated nasal examinations can establish the diagnosis. Like post-diphtheritic paralyses, these symptoms may not arise for a week or several weeks after apparent complete recovery from the original infection.

To similar intoxication of the nerve trunks doubtless can be attributed those rare cases of intense otalgia and severe and long-continued tinnitis without evidence of inflammation in the middle ear. Neuritis of the auditory nerve causing complete deafness which is sometimes permanent is uncommon, but unquestionably occurs. A similar condition of the olfactory or chorda tympani nerves affecting the senses of taste and smell have likewise been reported, but the impairment of these senses is more apt to be due to swelling of the nasal and pharyngeal mucous membrane. These nervous phases of the subject will doubtless be discussed more at length and more expertly in the paper devoted to the neurological side of this symposium.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

The Aftermath.

Considerable interest was excited a few years ago at the efforts of the now defunct *Morning World* in educating the public to the evils attending the patronage of advertising physicians. The efforts of the *World* were stopped by the demise of the paper, but the movement so begun established the interest of the Federal authorities, with the result that three notable instances of advertising specialists have been convicted and sentenced for using the United States mail with intention to defraud.

The ban of the medical profession has been laid at all times against persons following the practices common to the advertising practitioner of medicine, particularly where pretentious claims are made to the accomplishment of results which are doubtful, to say the least.

The general public has been slow to appreciate their victimization, and it has required the interference of a paternal Government to justify the attitude of the medical profession.

The lines of least resistance are not always those which are either the most honest or those of the best policy, and sooner or later the evil-doer is liable to be overtaken. All urban communities are afflicted with too many advertising practitioners of medicine who submerge the professional instinct in the desire for gain, and it is to be hoped that the incident of Federal action in the case of the New Orleans specialists may serve as a precedent to quicken the action of the authorities in other communities.

The Report of the Carnegie Foundation on Medical Education.

Considerable turmoil has arisen in many parts of this country consequent upon the appearance of the report of the Carnegie Foundation upon the status of medical education in the United

States. Few centers have escaped criticism, and even schools of recognized standing have been discussed with a view to their improvement.

It was to be expected that any honest review of medical education in the United States must be critical, when it is a matter of common knowledge that at this time the whole scheme of educational standards is in a state of transition. The last ten years have demonstrated a revolution in ideas of medical education, all tending to a better recognition of the scientific side of medicine.

The purposes of the report of the Foundation are evidently twofold. First, the worthy desire to standardize the preliminary equipment of an intending medical student, and, second, the recognition of the necessity for the survival of medical schools with equipments sufficient to satisfy the needs of a medical education. How far the report may reach in serving these purposes is debatable, and already a strong cry has come from the independent medical schools aiming at the preparation of practitioners without due regard to the laboratory side.

One of the most interesting features in the report is the comparative statement showing the expenditures and receipts of various institutions. With many schools this information is not complete, but in nearly all instances where the information is tabulated the expense of educating the single student is far in excess of the receipts from the students themselves. This is particularly true with the leading institutions in the country.

The Medical Department of the Tulane University does not suffer in the report, and it may be said that the statements made concerning this institution are as fair as they are true.

The St. Louis Meeting.

Over four thousand members and delegates attended the recent session of the A. M. A. held at St. Louis, thus making it the third in point of attendance, having been surpassed only by Chicago and Boston in the order named.

The weather was pleasant, in the main, although some of the functions were somewhat interfered with by rain.

The arrangements were excellent, and great credit is due the committee for its intelligent and efficient work.

The addresses at the general session were above the average, especially noteworthy being that of Governor Hadley, which denoted a sympathetic understanding of the medical profession, its aims and ideals. Dr. Welch, the President, was felicitous in expounding the purposes of the Association.

Good attendance and earnest attention characterized the sessions of the various sections. While nothing epoch-making was presented, a number of valuable papers were read, and, in many instances, ably discussed.

The business end was expeditiously handled by the House of Delegates. Among the noteworthy steps taken were the organization of a Council on Health and Public Instruction, which is to include medical legislation, preventive medicine, the instruction of the public in hygiene and sanitary matters. Also the creation of a new section on Genito-Urinary Diseases, which had been hanging fire several years, and which was urged through the petition of one hundred and forty members. The request for two other sections, on Hospitals and on Physical Forces, respectively, was turned down. The design for a new Association button was adopted in order to eliminate the Geneva Cross, so as to give the good example in restricting this emblem to the Red Cross Societies. There was an interesting contest between Los Angeles and Buffalo for the next meeting, which was decided in favor of the former by a majority of only two votes.

The entertainments were on a large scale, and the privileges of various clubs were extended to the visitors. Among the alumni dinners, that of the Tulane was quite a success, nearly fifty being in attendance and enjoying the reunion up to a late hour, the principal addresses being made by Dr. McMurtry, of Kentucky; Dr. Evans, of Illinois, and Dr. Reed, of Ohio. Dr. Hy. J. Scherck, now of St. Louis, and a former resident of New Orleans, had charge of the creditable arrangements.

The editors make grateful acknowledgment of many courtesies and much hospitality, and cannot refrain from specially mentioning Drs. Fischel, Tuholsky, Deutsch, Engman, Floyd Stewart, Robertson and Henry Scherck among the many to whom they are indebted.

Fourth of July Injuries.

While in the South, owing to weather conditions, fireworks are not used very extensively during the celebration of our national holiday, yet it can be noticed that there is a tendency to an increased burning of gunpowder. It may not be amiss, therefore, to remind our readers of two things: first, that serious results may follow from comparatively trivial injuries caused by toy pistols, blank cartridges, or small cannon, through infections, especially with the tetanus bacillus; second, that the safe way of handling these traumatisms is to secure asepsis, drainage, and immunity against the poison through preventive doses of antitoxin or antitetanic serum.

All physicians who are at all likely to handle these cases should be prepared to use the antitoxin promptly, as it is well established that its value is as a preventive essentially, its curative properties being much less pronounced or reliable.

Abstracts, Extracts and Miscellany.

Department of Nervous and Mental Diseases.

In Charge of Drs. P. E. Archinard and R. M. Van Wart, New Orleans.

Cerebral Physiology and the Education of Abnormal Children (J. K. Love, *Glasgow Medical Journal*, April, 1909).

Love discusses the cases of Laura Bridgman and Helen Keller and gives a short study of aphasia with the related conditions of word deafness and word blindness, which not only helps to the understanding of the mechanism of speech, but throws light on the management of a small class of extremely difficult, but also extremely important, cases among backward children, as well as helping in the understanding of the difficulties of the deaf and blind. Love lays down the following general principles:

1. It is useless hammering along a ruined tract or along a sound tract toward a ruined center in the hope of imparting knowl-

edge to a really deaf and blind child. It is better to use a circuitous though less used route.

2. When the remains of sight and hearing are considerable—when in the deaf they serve for the discovery of vowels, consonants and words; in the blind for what under favorable conditions of light, etc., is written on a notebook or a blackboard—these should be used to the utmost.

3. When a circuitous route is necessary education should be directed so that Broca's center, the hereditary center for the memory of words (spoken), is used.

4. When a boy is clever with his hands and good in his games, when the difficulty is chiefly with his acquisition of language, word-deafness and word-blindness should be sought for.

5. In the teaching of aphasic children who are not mentally deficient Broca's convolution on the right side, unless the defect is bilateral, may be made to take up the work of the hereditary speech center of the left side. When failure shows that the defect is probably bilateral, education may proceed by the help of writing and the manual alphabet.

6. Mentally deficient children offer a different problem to the educator. The great need of the movement is to recognize their limitations.

Having due regard to physiologic indications present, the teacher should be left as free as possible in selecting the method and ordering the education of the abnormal child. The author, however, lays down the following physiologic indications with regard to the education of the orally taught deaf:

(*a*) As signs are used very extensively in the education of the hearing child—during his first and second years of life—there is no physiologic reason for suppressing them at the beginning of the school education of the deaf child. They should be used just as they are with hearing children, and excluded, as in the case of the latter, as soon as the more accurate equivalent has been learned.

(*b*) During the early years of school life the acquisition of articulate speech should be the chief business of the deaf child. As soon as may be, a vocabulary of common words should be so thoroughly learned that its use in speech becomes automatic. .

(*c*) In the education of the deaf, drawing should follow speech and precede writing.

(*d*) Until speech has become automatic no finger-spelling should be known to a deaf child. A combined method in which the combination is that of finger spelling and speech is, from the physiologic standpoint, to be condemned.

(*e*) The difficulty of procuring automatic speech in the deaf-born, while necessarily limiting the speech by these children, does not mean that it is not worth while teaching them speech.

VAN W.

ATYPICAL FORMS OF TUBERCULOUS MENINGITIS IN CHILDREN. E. GAUJOUX and A. JUSEPHOVITCH. (*Annales de Medecine et Chirurgie Infantiles,* Paris, April 1, No. 7.)

Gaujoux classifies these abnormal forms as the acute, apoplectic or fulminating type, those characterized by local symptoms depending on the seat of the tuberculous neuro-meningeal process, and those characterized by the predominance of a single sypmtom such as somnolency or delirium or a cluster of symptoms with apparently no causal connection, suggesting influenza, indigestion or typhoid, or combined with some intercurrent affection. He reviews the literature of these atypical forms, citing examples of each. In Hutinel's case the syndrome was at first that of bilateral sciatica, with numbness of the limbs followed by paralytic impotence. The temperature then began to go up, and the child died with symptoms of basilar meningitis. In Gaujoux's own experience, a typical case of the spinal form of tuberculous meningitis was accompanied by retention of the urine, abolition of the knee jerks and ankle clonus. The principal varieties in the third group are the somnolent, the delirious and the gastro-intestinal forms. The somnolent form may be observed in children of all ages, and may or may not be accompanied by headache, vomiting, constipation, spasm of the larynx, hemiplegia or diarrhea. In one case the somnolency was the only symptom for a month before the general rigidity was observed, which proved transient, but the somnolency continued and the child died with scarcely any other characteristic symptoms. The mental form may present merely delirium or hallucinations, and the typhoid form may simulate the early stages of typhoid fever. In one such case, a girl of 13 died in eight days after the onset of typhoid symptoms, malaise, the typhoid expression, coated tongue, distended abdomen, temperature 104° F., and pulse 120, with bronchitis rales and diar-

rhea. Autopsy revealed entire absence of typhoid lesions, but unmistakable signs of typical tuberculous meningitis.

VAN W.

OPTIC ATROPHY RESULTING FROM THE ADMINISTRATION OF ATOXYL. PADERSTEIN (*Berliner Klinische Wochenschrift*, 22, 1909) has collected 14 cases of eye disturbance resulting from the use of this drug. The smallest amount producing symptoms was 3/10 gram, administered during 10 days; in this case the patient recovered completely. In the other cases, the amount of the drug varied from 50 grams, administered during 7 months, to 3.6 grams administered during 15 days. In all but two of the cases the symptoms were acute, and in most of the cases a permanent defect in vision remained. The ages of the patients in all cases varied from 30 to 73. The collection of these cases is of considerable importance, as the drug is being somewhat extensively used, and practitioners should be aware of the possibility of this action of the drug. In all of the cases he reported the drug was administered hypodermically. VAN W.

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

MINUTES OF THE THIRTY-FIRST ANNUAL SESSION. HELD AT NEW ORLEANS, LA., MAY 3-5, 1910.

MONDAY, MAY 2, 1910—3:45 P. M.

HOUSE OF DELEGATES.

The House of Delegates met May 2, 1910, at 3:45 p. m. Dr. Charles McVea, President, in the chair, and Dr. E. M. Hummel, Secretary, at his desk. Delegates present:

Avoyelles, T. A. Roy, Mansura; Bienville, J. M. Mosely, Arcadia; Bossier, H. E. Atkins, McDade; Caddo, Oscar Dowling, G. W. Robinson, J. J. Frater, Shreveport; Claiborne, L. T. Waller, Haynesville; East Baton Rouge, C. F. Duchein, Baton Rouge; Grant, W. A. Fletcher, New Verda; Jefferson, C. F. Gelbke, Gretna; Lafourche, S. A. Ayo, Thibodaux; Livingston, Montgomery Williams, Walker; Orleans, George S. Bel, Charles Chas-

saignac, Homer Dupuy, E. L. Leckert, W. H. Seemann, John Callan, E. Denegre Martin, B. A. Ledbetter, A. B. Brown, William M. Perkins, F. W. Parham, New Orleans; Plaquemines, H. L. Ballowe, Buras; Sabine, W. E. Tatum, Converse; St. Charles, V. Lehmann, Hahnville; St. James, George H. Jones, Lutcher; St. John, S. Montegut, Laplace; Tangipahoa, H. G. Norris, Kentwood; Vermilion, A. Landry, Delcambre; West Baton Rouge, F. H. Carruth, Lobdell. Total, 31.

Also, the following officers: Dr. Charles McVea, President; Dr. E. M. Hummel, Secretary; and Drs. E. J. Graner, Allan Eustis, P. E. Archinard, J. C. Willis, Thomas Ragan, and R. O. Simmons, Councillors. Total attendance, 39.

On motion of Dr. Carruth, reading of minutes of last meeting of previous session was dispensed with.

Dr. E. J. Graner, Chairman of the Council and Special Councillor on Revision of Constitution and By-Laws, submitted revised draft which had been drawn by the committee. After some discussion the revised document was adopted, after a few amendments had been made.

Nominations for officers of the House of Delegates were then taken up.

Dr. John Callan was nominated for President by Dr. E. D. Martin. Carried.

Dr. Joseph D. Martin was nominated for Secretary by Dr. Ledbetter. Carried.

Dr. McVea, President of the Society, read the following annual report:

President's Report.

To the House of Delegates of the Louisiana State Medical Society:

Gentlemen—We have accomplished little during the year in the way of organization. There were a great many reasons for this; the principal one was owing to the general depression in business everywhere. There was a want of interest shown in many quarters, but I believe it was all due to this general depression, and I know that there is a better time coming.

I accepted every invitation and attended every meeting to which I was invited in the parishes, and I found the societies doing good work. The attendance was large, but might have been greater in each instance, except in one parish, my old

home Parish of East Feliciana, where the attendance was 100 per cent. This, however, was due to the indefatigable efforts of the Secretary, Dr. R. P. Jones, who was so persistent in his efforts that he had in attendance two gentlemen who had ridden twenty miles, each in buggies, and both of whom had long passed the sixtieth mile post in their lives.

On April 20 I mailed to all white physicians practising medicine in the State, outside of New Orleans, a personal appeal urging them to attend this meeting. I did not write to the physicians in New Orleans because I knew there were a great many irregulars and I could not run the risk of inviting them, and I did not know where to draw the line.

I am in favor of District Societies. I believe where two or more parishes join to form a society, they can accomplish more along medical lines provided they meet quarterly. I attended such a meeting of the Atakapas Society held at New Iberia in June, and I assure you it was an eminently satisfactory meeting.

I heartily commend the policy recommended by the American Medical Association of inviting one or two men of medical ability from some other point to read some special paper. This infuses new blood into the members, and it also acts as a good drawing card to increase the attendance. I do not think, however, that the local men should give all their program over to the invited guests.

I heartily recommend the holding of public meetings once a year, held, if need be, in conjunction with some civic body, and believe on these occasions we should have an outsider as a drawing card.

On April 12 I attended a meeting of the St. Landry Parish Medical Society, held in the court house in Opelousas. There were eighteen physicians in attendance. That afternoon we held a public meeting, which was largely attended, and at night we enjoyed a most delightful banquet, with not only the members of the profession, but some thirty ladies present. It was a most delightful entertainment. You of the country parishes could learn a good lesson here from St. Landry. This banquet emphasized the social feature of our meetings, and it certainly goes a long way to cement our friendship.

Dues.—Our fiscal year should be from January to January. The dues should be paid and forwarded to the Treasurer immediately after our January meeting. This would save any amount of work on the part of the Secretary, would put the funds in his hands when he needed them most, because the money is expended during the first four months of the year.

Honorarium.—Our Secretary and his assistant have done excellent work. I have nothing but praise for them. This Society

is growing, the work is increasing, and it requires time and lots of it to keep things in shape. We are behind other organizations in this respect. We should have two Secretaries, one to look after the scientific part of the meeting and the other to look after the work of the House of Delegates. These men should be paid salaries.

Legislative Committee.—To the gentlemen who will compose the Legislative Committee let me say, do not accept service on this committee unless you fully intend to pack your grip and go to Baton Rouge if called on. This work is important. It has been generally left to two or three members of the committee; it should be looked after by a dozen, not by two or three. Many a time those of us who are on guard almost gave up in despair. Two or three men cannot remain in Baton Rouge all the time when legislation is pending. When the Legislative Committee is called on it should respond, and respond promptly. You who have not been to Baton Rouge during the passage of one of our bills do not know how important it is to have some one on guard at all times.

Women Physicians.—Now, gentlemen, I am going to say something that I know will not meet with the approval of all, but it is my firm belief that we should recognize the reputable women in the profession. We are too far behind the other States in this respect. We should lend a helping hand to these women; we should not shut them out of our councils. They would be better women and we would be better men. It is our duty. There must be some way to recognize them.

Owen Bill.—There is before the Congress of the United States a bill introduced by Senator Owen, of Oklahoma, to create a Department of Health. On April 18 I mailed to each member of our Louisiana delegation in Congress a petition, with a note earnestly requesting each member of our delegation to support this bill. I have received replies from every member of the Louisiana delegation save one, and I herewith append these letters:

Now, gentlemen, I want you to wire to-day officially the request of this Society to the members of the Louisiana delegation, requesting their support of this bill. And I also suggest that a committee take up the matter at once and try to get the signature of every member present, with his postoffice address, and forward a memorial to our Senators and Representatives in Congress, urging them to use their every effort to get this bill through. I say write them because I believe by to-morrow each member of this Society can and will attach his signature to the document, and I will tell you, gentlemen, if they will read the signatures of the men composing this body they will sit up and take notice.

Necrology.—Since our last meeting twelve of our workers in the cause of medical education have crossed over into the great beyond. Our ex-President, Dr. C. J. Ducoté, of Cottonport, Avoyelles Parish, died on the 26th of October, 1909, full of years and of honors. You will all remember him, how happy he was during our last meeting of the Medical Society, when he came to New Orleans to celebrate with the members of the Avoyelles delegation his recovery from a long spell of illness.

On the 27th day of December, 1909, Dr. John J. Archinard, our first Vice-President, departed this life. He was known to you all and had never missed a meeting of this Society. Impulsive to a degree, yet kind and gentle and always ready to fight or die for a friend.

Dr. Gordon King, whose tragic death was chronicled in the newspapers on the 27th day of March, 1910, was young in years, but had achieved more honors in the short time allotted to him than most men obtain in their threescore and ten.

It was my good fortune to have known all three intimately. They had all risen to the height of professional ability and their influence extended far beyond their local sphere.

The following members of our Society have also been called to their eternal reward since our last meeting:

1909: June 26, Quitman Kohnke, Covington; June 30, Frederich Loeber, Jr., New Orleans; July 3, J. R. M. Dillon, New Orleans; December 6, E. F. Painchaud, Klotzville; December 7, C. Z. Williams, Covington.

1910: March 19, E. H. Smith, New Roads; March 5, Jules Lazard, New Orleans; January 9, W. D. Harelson, Comite; April 23, S. C. Weeks, New Orleans.

Conclusion.—Now, gentlemen, I want to take this occasion to express to those of the numerous medical societies I visited my heartfelt appreciation of their kindness to me on these visits. I enjoyed myself and learned something at each and every meeting. I feel that the attendance at these meetings can be improved by a persistent effort on the part of the secretary. We must have all of the reputable physicians in our parish societies, and a good secretary can accomplish this better than any one else.

And now I want to thank each and every member of this body for the honors they have conferred on me. I have worked side by side with you for eighteen years, you have honored me on numerous occasions. With the close of this meeting I return to the ranks, and there I hope to be of service to you wherever and whenever you need me.

[*Minutes to be Continued in the August Number.*]

PARISH SOCIETY MEETINGS.

East Feliciana Parish Medical Society Meets.—The regular June meeting of the above parish society was held in Clinton June 1st, in the office of Dr. R. P. Jones. There were fourteen members present, and the meeting, on the whole, was a very interesting one. Dr. E. D. Fenner, of New Orleans, was to have been present, but was unavoidably detained, and while his presence was missed, his place on the programme was filled by one of the members. Dr. W. B. Singletary, of Wilson, read a most interesting paper on Pellagra, with report and photos. of five cases in one family, while Dr. A. J. Roberts, of Olive Branch, recalled his experience with pneumonia during the last forty-two years. The doctor is, in point of years and time in practice, the oldest member of the Society, but right up to date, with a mind as keen as the younger men. After a most bounteous dinner the Society adjojurned to meet at Clinton August 3.

Ouachita Parish Society Meeting.—At the last regular meeting of the Ouachita Parish Medical Society, held in Monroe May 27, the following physicians were present: Drs. Adams, Gladden, Casby, O'Donnell, Slaughter, Faulk, Blackman, Gray, and Bennett. No scientific paper having been prepared, clinical reports were called for. Dr. Cosby reported a case of cancer of the pylorus, with unusual clinical manifestations. Drs. Faulk and Blackman reported unusual types of nephritis. Dr. Slaughter was appointed to read a scientific paper at the next regular meeting. Dr. Gladden earnestly requested the physicians to attend to the matter of reporting vital statistics. Motion made and carried that at all future meetings each member answer roll call by his report on vital statistics for the preceding month. Meeting adjourned.

(Signed) F. C. Bennett, *Secretary.*

Medical News Items.

American Society of Tropical Medicine.—This Society held a most interesting meeting at the Medical Department of the University of St. Louis, in St. Louis, on May 11. Colonel Wm.

C. Gorgas presided and a number of valuable papers were contributed.

The Washington University Holds Annual Banquet of Medical Alumni.—A large gathering of alumni of the Medical Department of the Washington University enjoyed a delightful evening at the Planters' Hotel in St. Louis on June 6. Short addresses were delivered by Prof. Welsh, Col. Gorgas, Chancellor Houston, Dr. Tuholsky, Dr. Dock, Dean Lyons, of the St. Louis University, and Dean Dyer, of Tulane. The plans of the proposed rehabilitation of Washington University were announced by the Chancellor and enthusiastically received.

The American Hospital Association announces its twelfth annual conference to be held at the Planters' Hotel in St. Louis on September 20 to 23, 1910.

The Henry Phipps Institute has selected the University of Pennsylvania to carry on the work of this philanthropy, for which a fund of over $5,000,000.00 has been provided. Three different departments are to be established, covering the laboratory work, the sociological department and the relief and control of tuberculosis. For these departments Dr. Paul Lewis, of the Rockefeller Institute has been selected for the laboratory; Dr. Alexander M. Wilson, for the sociological department, and Dr. H. R. M. Landis for the clinical department. In addition, an Advisory Council has been created, with the following personnel: Dr. Samuel G. Dixon, Harrisburg, Pa.; Dr. S. McC. Lindsay, New York City; Dr. William H. Baldwin, Washington, D. C.; Dr. Hermann M. Biggs, New York City; Dr. William H. Welch, Baltimore, Md.; Dr. Theobald, Smith, Boston, Mass.; Dr. Gideon Wells, Chicago, Ill.; Dr. Simon Flexner, New York City; Dr. James A. Miller, New York City; Dr. Lawrence Brown, Saranac, N. Y.; Dr. Henry Baird, Favell, Chicago, Ill., and Dr. James Pratt, Boston, Mass.

The Fifth International Congress on Medical Electrology and Radiology will be held at Barcelona from September 13 to 18, 1910, under the patronage of the King of Spain. A preliminary program has been issued. All interested may address the Secretary, Dr. C. Comas Llaberia, (Calle Cortes, 613 principal, Barcelona).

The Trustees of the American Medical College, of St. Louis, have decided to conduct it in future as a regular college of medicine, and the thirty-eighth annual session will open September 5, 1910, and continue for nine months.

The Louisiana Veterinary Medical Association met on June 10 in the Agricultural Building at the State University, with eleven members present. The officers are Dr. W. H. Dalrymple, Baton Rouge, President; Dr. H. D. Patterson, New Orleans, Vice-President; Dr. E. P. Flower, Baton Rouge, Secretary-Treasurer. This meeting is the regular semi-annual meeting held in the rural districts, the regular annual meeting being held in New Orleans. The meeting was devoted to general discussion of veterinary subjects and the good of the profession in the State.

The State Board of Veterinary Examiners met in Baton Rouge on June 10, 1910. Those presenting themselves for examination were Dr. Laughlin and Dr. Douglas, of New Orleans; Dr. Eichelberger, of Shreveport; Mr. Landrum, of Eros; Mr. Demare, of New Roads.

The Parish Health Board of Clinton met on June 14 for organization, and Dr. H. Johnson, health officer, was elected chairman. Strict laws were laid down, to be complied with under penalty of law.

The Cornerstone of the Meridian Masonic Hospital was laid on June 2, in the presence of a large gathering of Masons and others. The hospital, with all its furnishings, is the gift of Past Grand Master Harry T. Howard, of Biloxi. It is built on the grounds of the State Masonic Widows' and Orphans' Home, and is considered quite an addition to Meridian.

Ninety-Three Pass Examination to Practice Medicine in Louisiana.—The Louisiana Board of Medical Examiners announced that of the 122 students who took the examination May 19 and 20 to practice medicine in the State, but 29 failed. Three physicians were granted certificates to practice medicine on the reciprocity plan. They were Dr. J. C. Sorter, Dr. J. S. Moore and Dr. M. R. Bruin. Also 28 women were granted certificates to practice midwifery. Before the meeting of the Board adjourned there was an election of officers. Dr. F. A. Larue's resignation as secretary and treasurer was accepted. He had been an officer of the

Board for twelve years. In recognition of his services Dr. F. M. Thornhill, who was re-elected President, presented him with a handsome gold watch fob. Dr. E. L. McGehee was appointed to fill the vacancy of Secretary and Treasurer, and Dr. J. G. Martin, of Lake Charles, was appointed Vice-President in place of Dr. McGehee. Those who passed the examination of the Board were: H. W. Culpepper, S. O. Turner, T. P. Bell, J. H. Page, J. C. Baskin, B. W. Hole, W. S. Rutledge, H. S. Trico, R. C. Kory, N. A. Lischkoff, H. T. Moore, W. G. Gill, C. S. Miller, T. H. Odeneal, J. A. Walkins, C. J. Barker, J. T. Nix, Jr., J. M. Hountha, J. P. Kennedy, J. L. Chiasson, G. C. Terrell, J. H. McClendon, G. B. Adams, E. C. McGehee, R. B. Austin, Jr., H. C. Feagin, M. Neuhauser, B. P. Evans, P. E. Parker, F. B. Luckett, J. G. Mitchell, O. L. Wise, C. C. de Gravelles, H. J. Dauterive, J. O. Segura, W. G. Allen, V. F. Carey, Amede Mary, A. H. Lafargue, C. K. Olivier, A. C. Carter, P. W. Oden, E. B. Todd, P. F. Murphy, J. C. Buckley, C. E Tynes, L. D. Bryan, W. E. Miller, E. R. Yancey, D. T. Langston, N. H. Foster, N. W. Talbert, A. D. Mangham, A. O. Keller, J. C. Cole, L. C. Anderson, R. B. Wallace, J. C. Patterson, W. F. Guillotte, Louis J. Dyler, J. W. A. Smith, E. M. Roberts, Jr., H. W. Roeling, Jr., E. F. Salerno, H. J. Lindner, M. J. deMahy, H. W. E. Walther, J. B. Benton, W. L. Patterson, M. S. Stephens, S. E. Graham, C. A. Bell, Leroy Lambert, E. B. Cook, W. A. Fuqua, E. M. Clark, T. J. Glascock, D. I. Payne, J. D. Killgore, C. E. McConnell, W. McL. Hayes, B. J. Cole, A. M. Lisenber, A. G. Heath, L. Mitchell, J. W. Lanford, O. P. Daly, Jr., J. E. Baylis, W. L. Williamson, R. T. Fuller, W. F. Ashley. Also two negroes, R. J. Coker and W. H. Wethers. The following were granted certificates for midwifery: Mmes. W. J. Robe, J. D. Reynolds, R. Michel, George Hurley, H. N. Weinman, A. B. Furlong, Katherine Doerr, A. Vallon, A. Decters, M. Waltzer and J. Ehrlicher, and the following negro women: P. Carmine, O. Williams, M. L. Evans, M. L. Fornhill, D. Spaun, L. Jones, N. Moore, W. Callion, A. Ramona, M. Crawford, E. Harrison, R. Whitons, E. Thomas, E. Crowden, M. L. Nelson, E. Bolds and C. Baker. The next examination will be held in New Orleans, October 18 and 19.

Tulane Alumni at A. M. A.—The Alumni of the Tulane Medical Department in attendance at the St. Louis meeting of

the A. M. A. held a most successful banquet at the Jefferson Hotel on the night of Tuesday, June 7. There were about forty-five present, including several guests. Dr. L. S. McMurtry, of the class of '78, acted as toastmaster, and encouraged the interest of all present by his reminiscences of old days. Other speeches were by Dr. W. Evans, of Chicago; Dr. C. A. L. Reed, of Cincinnati (a guest); Drs. Morgan Smith, of Arkansas; J. B. Shelmire, of Dallas; J. S. Warren, of St. Louis; I. I. Lemann, Chas. Chassaignac and I. Dyer, of New Orleans.

Commencement Exercises of New Orleans Sanitarium.—At the annual exercises of the New Orleans Sanitarium, May 27, Dr. Charles Chassaignac, President of the Training School Department, presented diplomas to the following: Misses Henrietta Giesler, New Orleans; Lodiska Latimer, Clarksville, Texas; Adeline McDonald, Yazoo City, Miss.; Mary Taylor Smith, New Orleans; Ophelia H. Gourrier, Pontchatoula, La.; Emma Odendahl, New Orelans; Beulah R. Roth, Jackson, La.; Ophelia McMains, Jackson, La.; Mattie McKendrick, Jackson, La.; M. Archie Kemp, Jackson, La., and Mmes. Myra E. Cline, Baton Rouge, and Ida Fuller, New Orleans. Dr. Chassaignac took the occasion to announce his resignation as President of the New Orleans Sanitarium.

Graduation Exercises, Fort Worth University.—A class of twenty-eight received diplomas at the annual commencement exercises of the Medical Department of Fort Worth University.

The Fifth Congress of the Association of French Physicians of North America will be held in Sherbrooke, Quebec, on August 23-25, 1910.

New Hospital Building for Post-Graduate Medical School.—Work has been commenced on the new building for the New York Post-Graduate Medical School, which is to cost $600,000, making the institution's capacity about 400 beds.

Doctors Convicted of Defrauding United States Mail.—Dr. R. Register, Dr. A. S. Dyar and Dr. Hale were convicted of using the mails for purposes of fraud, and sentenced to the Federal prison at Atlanta. Hale was given eighteen months and fined $5,000; Dyar thriteen months and $1,000, and Register thirteen months and $100.

Charity Hospital Doctors Play a Real Ball Game.—A unique baseball game between the visiting and resident staff doctors, for the benefit of the Charity Hospital candidate in the Working Girls' Contest, was played on June 10 at Pelican Park. Almost every doctor in town, with his family and friends, was in attendance. A downpour of rain at the second inning put a stop to the game, with the score of 6 to 3 in favor of the visiting staff team.

Dr. Amèdée Granger Awarded Patent.—On June 14, 1910, Dr. Amèdée Granger was awarded a patent for an X-ray apparatus, which presents the following advantages: 1. The operator and patient are afforded adequate protection against the X-ray. 2. With the apparatus fluoroscopic, radiographic and radiotherapeutic work can be done. It combines in one the usefulness of two or more apparatuses. 3. All the manipulation is done from the operator's side of the table without having to reach over to the side of the patient and while the X-ray tube is in action.

Personals.—Dr. H. P. Jones has returned from Kansas City, where he testified in the bleached flour suit.

Dr. A. Herold, of Shreveport, has been visiting friends in this city.

Mr. J. E. Scott was elected President of the Louisiana State Pharmaceutical Association at its last meeting.

Dr. A. F. Barrow, of St. Francisville, was in the city for a few days.

Dr. F. A. Larue resigned as Secretary-Treasurer of the Louisiana Board of Medical Examiners, after twelve years' service. He was presented with a gold watch fob by the other members in appreciation of his work.

Dr. C. E. Edgerton and Dr. W. A. Boylston, of Coushatta, La., had the misfortune to lose some buildings by fire on June 16, which were not covered by insurance.

At the St. Louis meeting of the American Medical Association thirty-seven doctors registered from Louisiana.

Dr. J. T. Moor, of Houston, was elected President of the Texas State Medical Society, and Amarillo selected for the 1911 meeting.

The Chemical Society held its annual meeting and dinner last month in New Orleans. Dr. Philip Asher is President.

Removals.—Dr. T. H. Madden, from Aycock, La., to Fisher; Dr. M. Williams, from Denham Springs, La., to Walker; Dr.

John F. Bogard, from Camden, Ark., to Mena; Dr. J. J. Gill, from Dodson, La., to Eros; Dr. J. F. Jones, from Arbula, Tex., to Emory; Dr. R. L. Self, from Florion, La., to Converse.

DIED.—On May 27, 1910, Professor Robert Koch, the famous bacteriologist, at Baden-Baden.

MARRIED.—On June 16, 1910, at Columbus, Miss., Dr. S. H. Anderson to Miss George Lucile Bayliss.

At Natchez, Miss., June 1, 1910, Dr. E. M. Campbell to Miss Lucille Cordill.

On June 16, 1910, Dr. John Osgood Bush, of Mobile, to Miss Mathilde Baquie, of New Orleans.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

International Clinics. Volume II. Nineteenth Series. 1909. J. B. Lippincott Company, Philadelphia and London.

As all the articles appearing in this quarterly are, justly, reputed as first class, perhaps not a few in quest of special information will be glad to know the contents of this volume, viz.: Immunization against typhoid fever, mineral waters in the treatment of syphilis, diagnosis and treatment of pneumonia in children, psychasthenia, tuberculous serofibrinous pleurisy and its treatment, some remarks on hyperchlorhydria, congenital familial splenomogaly with chronic acholuric jaundice, diabetes, congenital idiopathic dilatation of the colon, surgical pneumothorax as a treatment for phthisis, the present status of the Commidge reaction, the treatment of abscess in hip disease Kraurosis vulvae, diagnosis of pelvic disease in women, intra-ocular tumors, refrigeratory facial paralysis—how is it produced?—anorectal fistula and its treatment, illustrations of the advantage of psychometric methods in diagnosis, prognosis and treatment of cerebral disorders, perithelioma testis, the pathogenesis of spontaneous cerebral hemorrhage. E. M. D.

Bacteriology for Nurses, by ISABEL MCISAAC. The MacMillan Company, New York, 1909.

This is a useful handbook for trained nurses. The text-books that the nursing sisterhood have at their disposal have grown into a small library, and constitute a valuable aid in disseminating a knowledge of practical, sensible science. Miss Isabel McIsaac has several other works for nurses to her credit. She has a way of handling things without gloves

that is very striking. We commend her remarks about educating women on the venereal diseases and showing them how to protect the innocent against accidental infection. McSHANE.

International Clinics. Edited by HENRY W. CATTELL, A. M., M. D. Vol. I. Twentieth Series. 1910. J. B. Lippincott Co., Philadelphia and London, 1910.

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Some Alleged Effects of Sodium Benzoate and Benzoic Acid; The Action of Sodium Benzoate and Benzoic Acid on the Human Organism, by C. A. Herter, M. D.

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MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.

For May 1910.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	5	.....	5
Intermittent Fever (Malarial Cachexia)	.....	3	3
Smallpox	.....	.....	.....
Measles	19	1	20
Scarlet Fever	6	1	7
Whooping Cough	1	.....	1
Diphtheria and Croup	4	1	5
Influenza	3	3	6
Cholera Nostras	1	.....	1
Pyemia and Septicemia	1	.....	1
Tuberculosis	45	46	91
Cancer	27	3	30
Rheumatism and Gout	.....	.....	.....
Diabetes	1	1	2
Alcoholism	2	.....	2
Encephalitis and Meningitis	5	2	7
Locomotor Ataxia	.....	.....	.....
Congestion, Hemorrhage and Softening of Brain	12	9	21
Paralysis	3	.....	3
Convulsions of Infants	2	4	6
Other Diseases of Infancy	5	9	14
Tetanus	.....	4	4
Other Nervous Diseases	.....	.....	.....
Heart Diseases	27	24	51
Bronchitis	2	3	5
Pneumonia and Broncho-Pneumonia	26	33	59
Other Respiratory Diseases	2	3	5
Ulcer of Stomach	1	.....	1
Other Diseases of the Stomach	2	1	3
Diarrhea, Dysentery and Enteritis	67	30	97
Hernia, Intestinal Obstruction	3	.....	3
Cirrhosis of Liver	16	3	19
Other Diseases of the Liver	2	2	4
Simple Peritonitis	2	.....	2
Appendicitis	5	1	6
Bright's Disease	34	23	57
Other Genito-Urinary Diseases	4	5	9
Puerperal Diseases	3	3	6
Senile Debility	8	3	11
Suicide	8	.....	8
Injuries	11	11	22
All Other Causes	57	28	85
TOTAL	422	260	682

Still-born Children—White, 25; colored, 12; total, 37.

Population of City (estimated)—White, 272,000; colored. 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 16.50; colored, 32.25; total, 20.84.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.02
Mean temperature 74.00
Total precipitation ..... 4.65 inches.
Prevailing direction of wind, southeast.

New Orleans Medical and Surgical Journal.

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Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Stools in Infancy.*

By JOHN LOVETT MORSE, A. M., M. D.,

Assistant Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician to the Children's and Infants' Hospital, Boston.

It hardly seems necessary to emphasize the importance in relation to both diagnosis and treatment of the examination of the infant's stools in disturbances of digestion. It seems self-evident that the treatment cannot be carried out properly unless the cause of the disturbance is known, and in no other way can the cause be as accurately and as quickly determined as by the examination of the stools. The examination of the stool is, nevertheless, unless I am much mistaken, often entirely neglected, or, if not neglected, carried out hastily and imperfectly. I am sure that the stools would be examined more often and more carefully if the importance of the examination was thoroughly appreciated.

The character of the stools depends primarily on the composition

* Read before Louisiana State Medical Society, May 3-5, 1910.

of the food, the digestive power of the individual infant and the amount and rapidity of the absorption of the products of digestion, the latter being dependent, in turn, upon the rapidity of the passage of the intestinal contents through the intestinal canal. The character of the stools is also modified materially by the intestinal bacterial flora of the individual infant. The influence which this flora has depends to a large extent on the digestive power and rapidity of absorption, as the bacteria have much more opportunity to act when the digestive powers are feeble and the absorption slow. The bacterial flora depends in a great measure, moreover, on the nature of the food. It is evident, therefore, that it is more difficult to draw conclusions as to the processes going on in the digestive tract from the examination of the stools than would at first appear. It is possible in most cases, however, to determine whether any given food element is properly digested and assimilated or not, and in many diseased conditions to tell what element is at fault. Experience shows, moreover, that diminishing or withdrawing the element which is not being digested has an immediate effect on this character of the stools and upon the course of the disease.

The stools differ normally according to whether the infant is taking human milk or cows' milk, and whether starches or other carbo-hydrates are added to the cows' milk.

The Stools of Breast-Fed Infants.—The breast-fed infant has, during the first few weeks or months of life, three or four movements daily of the consistency of pea soup, of a peculiar golden-yellow color, with a slightly sour or aromatic odor, and with a slightly acid reaction. The number of stools diminishes later to two or three in the 24 hours and the consistency becomes more salve-like, the other characteristics remaining the same. The golden-yellow color is due to bilirubin, which passes unchanged through the intestinal tract because of the rapidity of the passage, the relatively low proteid content of the milk and the low reducing power of the infant's intestine. The odor is due to a combination of lactic and fatty acids. The acid reaction is due to the relative excess of fat over proteid in the milk.

It is not uncommon, even when babies are doing well on the breast, for them to have a larger number of stools of diminished consistency and of a brownish color. In such instances examina-

tion of the breast milk usually shows that the proteids are high. It is also not unusual to find numerous soft, fine curds and sometimes mucus in the stools of healthy breast-fed babies. While such stools are undoubtedly abnormal, it is unwise to pay too much attention to them, if the baby is gaining and seems well. The breast-fed infant will often go weeks or months without a normal stool and yet thrive perfectly, while if it had such stools when it was taking cows' milk it would not thrive and would show distinct evidences of malnutrition. It is, therefore, unwise to wean a baby simply because the stools are abnormal, if it is doing well in other ways.

THE STOOL OF INFANTS FED ON COWS' MILK.—Infants that are thriving on cows' milk mixtures have, in my experience, fewer movements in the 24 hours than breast-fed babies and these movements are of firmer consistency. Slight constipation is not uncommon after the first few months and is not of pathological significance. The color of the stools is a lighter yellow, probably because of the relatively larger amount of proteid, and because some of the bilirubin is converted into hydrobilirubin. When the relative proportions of fat and proteids in the mixtures are approximately those of breastmilk, the odor and reaction of the stools are essentially the same as when the infant is taking breastmilk. When infants are given whole cows' milk or simple dilutions of cows' milk, so that the proteids are equal to or greater than the fat, the odor is slightly modified toward the fecal or cheesy because of the action of bacteria on the casein. The reaction becomes alkaline for the same reason.

Skim-Milk Mixtures. When infants are fed on skim-milk or on mixtures very low in fat and high in proteids, the stools have a slightly brownish-yellow color, a slightly cheesy or foul odor, and a strongly alkaline reaction because of the longer stay of the casein in the intestine and the consequently greater opportunity for bacterial action and for the change of bilirubin to hydrobilirubin. In some instances the stools have a peculiar salve-like appearance like those from buttermilk.

Whey and Whey Mixtures. When infants are fed on whey or whey mixtures low in fat, the stools have essentially the same characteristics as those from skim milk, except that they are usually browner. Whey has a laxative action in many instances and sometimes has to be omitted for this reason.

Starch Mixtures. When starch is added to cows' milk mixtures the color of the stools becomes more distinctly brownish and the reaction tends toward the acid. The odor is more aromatic. The character of the starch has, in my experience, but little effect on the number of movements, in spite of the common belief that barley starch is constipating and oatmeal starch laxative. The action, if there is any, seems to vary with the individual infant. In this connection it must not be forgotten that most starch flours contain small brownish specks which are the remains of the husks. These specks pass through the gastro-intestinal tract unaffected and appear in the stools.

Malt Sugar Mixtures. The addition of malt sugar to cows' milk mixtures changes the color of the stools to a distinct brown, tends to make the reaction acid and to increase the acidity of the odor. Malt sugar usually has a laxative influence, but sometimes constipates. When malt sugar or the malted foods are given without milk the stools are dark brown, sticky, acrid in odor and acid in reaction.

Buttermilk and Buttermilk Mixtures. The stools of infants fed on buttermilk and buttermilk mixtures are of a peculiar shiny, salve-like appearance, grayish-brown in color, alkaline in reaction and have a very characteristic acrid odor.

Animal Food. When beef-juice or broth are added to the infant's diet the color is changed to brown, while the odor becomes fecal and the reaction alkaline from the action of bacteria on the proteids.

The Starvation Stool.—The starvation stool is made up of bile, the intestinal secretions and bacteria and resembles the meconium. It is usually small, sometimes constipated, sometimes loose, brownish or brownish-green in color and has, as a rule, a stale odor like that of starch or paste. In some cases it has the odor of acetic acid as the result of the action of micro-organisms.

Reaction of the Stools.—The reaction of the normal stool depends on the relation between the fat and proteids in the food. When there is a relative excess of fat the reaction is acid; when there is a relative excess of proteid the reaction is alkaline, the reaction depending, in the one case, on the products of the decomposition of fat, in the other on the products of the decomposition of proteids. The carbohydrates have no effect on the reaction

of the normal stools. When the carbohydrates are in excess, or when there is fermentation of the carbohydrates as the result of bacterial action, the acidity of the stools is markedly increased. Stools which irritate the buttocks are invariably acid in reaction, and in most instances this excessive acidity is due to the decomposition of carbohydrates. Frothy stools are usualy acid in reaction, and due to the same cause, but sometimes the frothiness is caused by gases formed during the decomposition of proteids. The reaction of the stools is, however, of comparatively little importance from the clinical side. It is best tested by placing wet red or blue litmus paper on, not in, the stool.

ODOR OF THE STOOLS.—The odor of the stools depends on the composition of the food, the rapidity of the absorption of the products of digestion and the degree of the bacterial activity. The fats give the odor of butyric or lactic acid to the stools. The carbohydrates, if thoroughly utilized, do not affect the odor; if not utilized, they give the odors of lactic, acetic or succinic acids. The proteids give cheesy odors of various sorts, sometimes those of skatol, indol and phenol.

The odor of the normal stool and the influence of variations in the diet upon it have already been mentioned. The stools of fat indigestion have a strong odor of butyric acid, those of proteid indigestion various cheesy or putrefactive odors as the result of the decomposition of the proteids by bacteria. When several elements of the food are improperly digested the odor is a combination of those resulting from the decomposition of the various elements. The stools of cholera infantum are almost odorless. Stools composed almost entirely of mucus have a peculiar aromatic odor, resembling that of wet hay. When there are deep ulcerative or gangrenous processes in the intestine, the stools have a putrefactive or gangrenous odor.

COLOR OF THE STOOLS.—The normal variations in the color of the stools according to the composition of the food have already been mentioned. Abnormalities in the color are very common. The color of the stool must not be judged from the outside, as it may change very rapidly from drying and exposure to the air. The stool must be broken up or smoothed out and the inside examined.

Green. The most common abnormal color is green. The shade

of green may vary from a very delicate light grass-green to a dark spinach green. In a general way, the darker the green the greater its significance. A very light grass-green color in a stool which is otherwise normal is of no practical importance. The change from yellow to green after the stool is passed is not abnormal. The green color is, in the vast majority of instances, due to the change of bilirubin to biliverdin. There is much doubt as to the cause of this change. It is probable that it may be due to either excessive acidity or alkalinity of the intestinal contents or to the presence of some oxidizing ferment. The green color is not characteristic of any special type of disease. In some instances it is due to the action of the bacillus pyocyaneous. If it is due to bacterial action, the addition of nitric acid decolorizes the stool. If it is due to biliverdin, the addition of nitric acid gives the characteristic colors of Gmelin's test.

Gray. The next most abnormal color is gray. This is due, as a rule, to the absence of bile and the presence of some form of fat in the stool. It must be remembered, however, that there may be bile in the stool even when it is gray, the bile pigment being in the form of the colorless leucohydrobilirubin. It is never safe, therefore, to conclude that there is no bile in the stool without a chemical examination. The easiest and most satisfactory test is that with corrosive sublimate. When the stools are gray at birth, or become so within a few days after birth, the lesion is usually a congenital obliteration of the bile ducts. When the gray color appears later, and especially when it is associated with large amounts of mucus, the trouble is usually in the duodenum.

White. The white stools are due to the presence of undigested fat in the form of soaps. These may be soft, looking much like curdled milk, or, more often, hard and dry, resembling the stools of a dog which has been eating bones.

Black. The black stool, while in rare instances due to the presence of changed blood, is usually due to the action of some drug, ordinarily bismuth, sometimes iron. In this connection it is well to remember that when there is no sulphurated hydrogen in the intestine bismuth may pass through the intestinal tract without changing color. The administration of a grain or two of sulphur in the 24 hours will turn the stools black. Whether or not this is of any advantage is questionable.

Blue. The stools are sometimes of a slaty-blue color. This color is due to some change in the bile pigments and is of no more significance than the green.

It is very common to see a pink stain on the diapers about a stool which is otherwise normal, or nearly so. This pink stain is of no especial significance and is due to some unknown change in the bile pigment.

ABNORMAL CONSTITUENTS.—*Curds.* The most common abnormal constituents are curds. Judging from the literature of the subject, there is a great deal of confusion as to the composition and significance of the curds in infants' stools. The matter is, however, a simple one. There are two kinds of curds, one primarily composed of casein, the other composed mainly of fat, mostly in the form of fatty acids and soaps. The small amount of fat in the casein curds and the small amount of proteid in the fat curds are merely incidents. The casein curds vary in size from that of a bean to that of a pecan nut. They are usually white, sometimes yellow, in color. They are firm and tough, cannot be broken up by pressure and sink in water. When placed in formalin they become as hard as rocks; they are insoluble in ether. The fat curds are small, varying in size from that of a pinhead to that of a small pea. They vary in color from white to yellow or green, according to the general color of the movement. They are easily broken up by pressure and, when shaken up in water, tend to remain in suspension. They are soluble in ether to a considerable extent after acidification and are unaffected by formalin.

Mucus. Mucus can be detected in small amounts under the microscope in the majority of normal stools, and is almost invariably present in abnormal stools. It is never present macroscopically in normal stools, but is very common in the abnormal. It does not denote any special form of disease, merely an excessive secretion of the mucous glands of the intestine from some cause. When thoroughly mixed throughout the stool it usually comes from the small intestine; when in combination with a clay-colored stool, from the duodenum; when on the outside of a constipated stool, from the rectum. Stools composed mainly or entirely of mucus and blood indicate either severe inflammation of the colon or intussusception. Undigested starch is often mistaken for mucus. They can be distinguished by the addition of some preparation

of iodine, which stains the starch blue, but does not affect the mucus. The suspected material should be taken off the diaper in order to avoid possible confusion from the presence of starch on the diaper.

Blood. Blood on the outside of a constipated stool indicates a crack of the anus. Blood mixed with mucus indicates either severe inflammation of the large intestine or intussusception. Blood in infancy is seldom due to hemorrhoids.

Pus. Pus indicates severe inflammation of the large intestine. It is usually not present early in the disease, but appears later. When the infants survive the acute stage it persists into convalescence. Pus can be found with the microscope in nearly every case of inflammation of the colon, but is of no special significance unless visible macroscopically.

Membrane. Membrane indicates very severe inflammation of the large intestine and is rarely seen, the patients usually dying before membrane appears in the stools.

Other abnormal constituents are undigested masses of food, foreign bodies which have been swallowed, and worms.

Microscopic Examination of the Stools.—The macroscopic examination of the stools affords data sufficiently reliable for clinical work in the great majority of instances. It may, however, lead to erroneous conclusions, especially with regard to the amount of fat and undigested starch. Fatty and starchy stools sometimes appear perfectly normal macroscopically, and microscopical examination will alone prevent mistakes. It is advisable, therefore, in all but the plainest cases to examine the stools microscopically as well as macroscopically. The microscopical examination of the stools is not a difficult procedure and can be carried out in ten minutes or less by anyone accustomed to it. Controls of the microscopic examination by chemical examination of the stools have shown that it gives results sufficiently reliable for clinical purposes. A certain amount of experience is necessary, however, in order to recognize the normal variations in the microscopic picture. The stools normally show a certain amount of fat in some form or other, but never show unchanged starch. The chief difficulty in the microscopic examination is to learn to recognize the normal variations in the amount of fat.

The feces, if hard, are first rubbed up with a little water. Other-

wise they are thoroughly mixed, and three small portions placed on a slide. The first is crushed out very thin under the coverglass and examined in the fresh condition. In this portion any undigested tissues or pathological elements, such as blood, pus and eggs of parasites, can be differentiated. A preliminary estimation of the amount of neutral fat, fatty acids, soaps and starches can also be made.

The second portion is stained with Lugol's solution (iodine 2, potassium iodide 4, distilled water 100) and examined for starch. The starch granules stain blue or violet. Certain microbes also stain blue. These, the so-called iodophilic bacteria, are associated with faulty carbohydrate digestion and, when found alone without other symptoms, are suggestive of an early disturbance in the digestion of the carbohydrates. Before concluding that undigested starch is present, all possibility of contamination with baby powders must be eliminated.

The third portion is stained with a saturated alcoholic solution of Sudan III. The neutral fat drops and fatty acid crystals stain red. Soap crystals do not stain with Sudan III. After this specimen is examined and the microscopic picture is clear, a drop of glacial acetic acid is allowed to run under the coverglass, is thoroughly mixed in, and then heated until it begins to boil. This process turns the soap into neutral fat and fatty acids which will appear as large stained drops and upon cooling crystallize. They usually retain the red stain. Any increase in the amount of fat after the addition of acetic acid indicates the presence of a corresponding amount of soaps. An excess of neutral fat indicates that the digestion of fat is not carried on normally; an excess of fatty acids and soaps that the digestion is normal, but assimilation is abnormal.

It is well to examine the specimen first with a low-power objective and later with a No. 7 objective in order to bring out the detailed structure.

BACTERIOLOGIC EXAMINATION OF THE STOOLS.—Our knowledge of the bacteriology of the disturbances of digestion and of the various inflammatory diseases of the intestine is so limited at present that no conclusions of clinical importance can be drawn from the microscopic examination of the stools, the only exception being, possibly, the presence of large numbers of iodophilic bac-

teria, which, as already stated, point to disturbance of the digestion of the carbohydrates.

The Stools of Different Types of Indigestion.—It may be well, perhaps, to sum up the characteristics of the stools in some of the more marked types of indigestion. The stools of the various inflammatory conditions are familiar to everyone and hardly need further description.

The Stools of Fat Indigestion.—Undigested fat may show itself in the stools in the form of small, soft curds, by giving a greasy, shiny appearance to the stool, or by giving a gray or white color. The small curds are, of course, easily recognized. The presence of undigested fat may be shown roughly by rubbing some of the stool on a piece of smooth, soft paper. If there is an excess of fat, the paper will have, when dry, the appearance of oiled paper. When there is an excess of neutral fat the stools are often of a creamy consistency. If the fat is largely in the form of soaps, the stools are usually clay-like or very dry and crumbly. The reaction is highly acid; the odor rancid, like that of butyric acid. Microscopically these stools show a large excess of fat in various forms.

The Stools of Carbohydrate Indigestion.—The character of the stools of carbohydrate indigestion depends on whether the disturbance is in the digestion of starch alone without bacterial action or in the digestion of either or both starch and sugar with bacterial fermentation. When the disturbance is solely in the digestion of starch and bacterial fermentation is not marked the stools are brown or golden-yellow in color, and salve-like in consistency. They may, as already stated, appear macroscopically normal. In rare instances they are very dry and brittle. The reaction is acid. The odor is acid, the character of the odor depending on the form of acid present. The iodine test will macroscopically often show the presence of undigested starch. Microscopically these stools show undigested starch by the iodine test, and an excess of iodophilic bacteria.

When bacterial fermentation is added to the disturbance of digestion of either starch or sugar the stools are loose, green and frothy. The reaction is acid from the presence of lactic, acetic or succinic acid. The odor is acid, the character of the odor depending on the form of acid present. These stools often cause excoriation of the buttocks and genitals.

THE STOOLS OF PROTEID INDIGESTION.—The presence of large, tough curds in the stools is, of course, evidence of proteid, or rather, casein indigestion. In general, however, the stools of proteid indigestion are loose, brownish in color, alkaline in reaction and with a foul odor, the odor in some instances being fecal, in others cheesy, in others a combination of the two. The stools of proteid indigestion are more likely to show an excess of mucus both macroscopically and microscopically than are those of either pure fat or carbohydrate indigestion.

MIXED FORMS OF INDIGESTION.—Mixed types of stools as the result of mixed types of indigestion modified by bacterial fermentation and decomposition are far more common than the pure types alone and are often very difficult to interpret.

CONCLUSIONS—It seems safe to draw the following conclusions regarding the examination of the stools in infancy. The stools in infancy are not examined as often as they should be. The examination of the stools gives information regarding the digestive processes which cannot be obtained in any other way. Without such examination treatment is always unscientific and often irrational. The macroscopic examination of the stools affords information of the greatest importance, but in many instances will lead to error unless the miscroscopic examination is also made. The microscopic examination is a simple one and requires but little time. The results obtained from it are, for practical purposes, as reliable as those obtained from the chemical examination.

Disease in the Tropics.

By CREIGHTON WELLMAN, M. D.,

(CONCLUDED FROM JULY JOURNAL)

LECTURE III.

Why the Physician in Temperate Climates Should Study Tropical Diseases.

I should be glad if the present lecture could be deemed in a large measure a work of supererogation, as the intimate trade relations now existing between the United States and tropical and semitropical countries and the still more intimate relationships that will grow out of the opening of the Panama Canal, ought to render

unnecessary any special arguments concerning the necessity of the study of tropical diseases in America. Not only is it important that many physicians should have opportunities to become trained in tropical diseases, in order that they may meet the health problems confronting the native and the white man in the tropics, but tropical diseases are fast becoming a serious menace to the white man in his own country. Several of these already exist endemically in America, and others are constantly being imported, and, unless properly handled by trained men, they threaten danger not only to the communities in which they now exist but to the United States in general. But I am afraid that the warnings and exhortations which I plan to give at this hour cannot justly be deemed unnecessary. In other countries the activity along this line is gratifying. The establishment of schools of tropical medicine in London, Liverpool, Paris, Hamburg, Lisbon and other centers, the founding of journals of tropical medicine in England, France, Germany, Portugal and elsewhere, the inauguration of European institutes of tropical research in Africa, India, China, Japan and other parts of the Far East and other like projects, together with the enormous literature dealing with this department of medicine, all emphasize this activity. In America, while something is being done (both at home and in our colonies), which is excellent so far as it goes, we have not much to be proud of so far as general education of the profession and public in tropical medicine is concerned. In the hope of interesting you in this very important matter, I submit to you a few of the many reasons why the physician in the temperate climates should study tropical diseases.

1. *Because there are no tropical diseases.* I do not mean this statement as a pert paradox, but wish merely to emphasize the fact that tropical medicine is an integral part of general medicine. This term "tropical medicine" has been justly objected to, and, while a convenient designation, is apt to be misleading to those whose interest in and knowledge of the subject is slight. Scientific medical men of course know that there are almost no tropical diseases in the strict interpretation of that term. In short, it is just as allowable to speak of tropical zoology or tropical botany as of tropical pathology—really, one might almost as well say tropical chemistry. All pathology is one, be it "temperate" or

"tropical." Still the term has done good. It has been a watchword, it has stood for a fine type of specialization, and it has served as the expression of a point of view from which various important diseases new and old have taken on a different meaning, the practical outgrowth of which has in not a few instances meant the physical betterment of millions of human creatures. As a fortunate result of this, the time is fast coming when no one can claim to be *au courant* with the science of general medicine without an appreciative acquaintance with the leading facts of "tropical" pathology. To return to our paradox, we must not forget that many of the tropical diseases were once cosmopolitan and might become so again. Take, for instance, leprosy, which is commonly spoken of as a tropical disease. Three important endemic centers of this disease are still Iceland, Norway and Canada, none of which could be called tropical, to say the least. In Sir Patrick Manson's classical work on Tropical Diseases I find such affections as malaria, relapsing fever, dengue, etc., discussed, and rightly, notwithstanding that these diseases are common both to tropical and temperate countries. In the same book we may read descriptions of less known diseases, namely, yellow fever, pellagra, Rocky Mountain spotted fever, dysentery and uncinariasis, which either have been or are now endemic in our own country. The ancient devastations of civilized countries by plague and yellow fever may possibly be at an end, but the fact remains that we are at present impotent to drive at least two tropical diseases from our land, namely, pellagra, which is heralded as a "menace" in the glaring headlines of our daily papers, and hookworm disease, of which our best authority, Stiles, states that it is in some parts of the South reducing the laboring capacity of the people 60 to 70 per cent, and is therefore one of the most important factors in the inferior mental, physical and financial condition of the poor white population of that region. In matters of national health "eternal vigilance" is truly "the price of liberty." If we are to keep out of our land yellow fever, relapsing fever, plague, cholera, dengue and a dozen other diseases "once triumphant throughout Christendom, but which have been practically ousted from Europe and the temperate parts of America by the spread of civilization and the improved hygiene that has followed in its train" (Manson), we must bestir ourselves

to study and meet these scourges. They have by no means died out, but persist in our tropical and sub-tropical possessions, from whence they constantly seek another foothold in the land of their defeat. The advantages for spread that modern transportation devices give these diseases cannot be overestimated.

2. The medical man in temperate climates should study tropical diseases *because the educated physician can afford to neglect no part of the science he follows.* Many illustrations of this statement might be adduced. Professor Scheube a few years ago wrote to all the best known workers in the tropics for data regarding venereal diseases in hot climates. Syphilis is probably the most interesting disease in the world, both clinically and pathologically, and the new facts and side lights on the disease brought out by this enquiry, which Scheube digested and published as a monograph, were highly important. I know of almost nothing of greater value to the syphilographer than a perusal of this brochure, which has been practically forgotten except by tropical enthusiasts. Even more valuable to the syphilographer would be independent study of tropical influences on the disease. Why, for instance, is it milder and more typical in the negro in West Africa while the opposite is true of the affection in the negro in South America? Many other equally engrossing problems await the interest and endeavor of workers who patiently turn over barren ground and rehash well-known facts about the disease as it occurs in their own State or country. Again, we take the closely allied disease known as frambesia or yaws. The clinical manifestations and histological architecture of this disease ally it closely with syphilis, which view is enormously strengthened by the finding in the lesions, independently by Castellani and myself, of a spirochæte morphologically almost indistinguishable from *Treponema pallidum.** Yet yaws is not a venereal disease, and no one who has studied the two processes side by side can escape the conviction that they are distinct, though analogous, entities. How much use is made by the syphilographer of so rare and fortunate a circumstance for the purpose of widening his horizon and grasping more intelligently the facts and relations which compose his field of research?

Let us now turn to a disease which, next to syphilis, is perhaps of as great intrinsic interest as any we know, besides having a spe-

* *Vid.* Wellman, Arch. f. Schiffs-u, Tropen. Hyg.. 1907, pp. 545-7.

cial appropriateness as a subject of study because of its analogy to the plague of our race, tuberculosis. I refer to leprosy. In leprosy we have a disease the specific bacillus of which has been found in all the tissues of the body except the muscles. Imagine, then, the engrossing interest presented to the pathologist by the processes thus set up! And I believe that the treatment of the disease offers far more hope to the therapist than is generally conceded. While cases are constantly being imported, and imported foci of the disease exist in North America, yet the study of the whole question is relegated to specialists and tropical experts, or, what is far more illogical, to dermatologists. This is only one instance of such neglect. The shibboleth of American endeavor is in too great a degree immediate practical utility. One cannot be a physicist, he must be a teacher or an inventor. One cannot be an entomologist, he must be an "economic" entomologist. It is not to our credit that the American devotee of pure science must, if dependent on his work for a livelihood, usually expect to starve. This spirit, unfortunately, largely invades medicine. Let us not forget that the great "practical" discoveries that have blessed mankind have been in large part the incidents or by-products of purely scientific research, and in our profession, above all, let us not brand as "academic" or "impractical" the study and investigation of these too little known but highly important questions of tropical medicine, the lure of which may possibly lead some of my hearers to endeavor as great as that of a Manson or a Laveran.

3. Another reason why tropical diseases have a claim on our attention is that *a goodly part of recent medical research has been done in the tropics.* All are familiar with the brilliant work of Laveran, Manson, Ross, King, MacCallum and the Italians on the etiology of malaria. The same may be said of the demonstration by Finlay, Reed, Carroll, Lazear and their associates of the means by which yellow fever is transmitted. I have heard this work referred to as one of the most brilliant and conclusive investigations in the history of pathology.

The observations of Castellani, Bruce, Dutton, Todd on sleeping sickness, with those of Leishman, Donovan, Rogers and half a dozen more on tropical splenomegaly might also be mentioned. The excellent work of Fritz Schaudinn on spirochætes, that of our own countrymen in the Philippines on amebic dysentery, the clas-

sical researches of Manson and Low and their followers on filariasis are all excellent illustrations of how the science of general medicine is being carried forward in the domain of "tropical" medicine. In fact, it is almost dangerous to single out for mention any small selection of names from the splendid army of those who have advanced and are advancing human knowledge in this great field. A glance at such works on tropical diseases as those of Corre, Roux, Davidson, Scheube, Manson, Mense, etc., make vivid to us a sense of the obligation we are under for the large additions to our general knowledge which they chronicle. Let us, then, as students learn more, and as instructors teach more of this new heritage of medical information.

4. A more distinctly practical reason why the physician in temperate climates should study tropical diseases is because *disease in the tropics throws light on vexed problems of disease at home.* I have already pointed out the close analogy between yaws and syphilis and how a study of the former throws light on the latter. The different behavior of the malarial parasites in hot climates from its actions here at home is an instance in point. It is a well-known fact that in hot climates the crescent-shaped gametocytes of the malignant form are very rare in the peripheral circulation. On the other hand, there is never any difficulty in demonstrating them in appropriate cases of malaria contracted in the tropics and afterwards invalided home.* The physical well-being of the patient in a healthy climate and the scarcity of appropriate mosquitoes, forces, so to speak, the parasite into a different sort of regime.

If you will forgive a personal reference, I wish to mention again that by studying in West Africa—a district heavily infected with goitre and entirely surrounded by goitre-free districts, I was able to exclude all the etiological theories yet advanced to account for the disease, including the drinking water hypothesis. I might also point out in this connection how the study of the tick fever of Africa has added materially to our knowledge of the relapsing fevers. In fact, many instances might be brought forward were it necessary further to point our moral.

5. The most immediately interesting and practical reason why the physician in temperate climates should study tropical diseases

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Cf. Wellman, *Deutsch. Med. Woch.*, 1906, p. 2

is because *these diseases are constantly being introduced into his own country.*

In the United States we are continually threatened from Mexico, the West Indies, South America and the Orient. Plague has secured what threatens to become a permanent foothold among the small rodents of California, and human outbreaks may, in spite of our best efforts to hold the disease in check, be expected in that State at any time.* The public knows of the outburst of cholera this last year in Russia, and no one can say how far one of these diseases introduced from the tropics may travel if once firmly introduced on our soil.** Leprosy is already a naturalized disease in the United States, and several cases, one of domestic origin, are at the present time under my observation. John D. Long, of the U. S. Marine Hospital Service, has collected in San Francisco a long series of cases of amebic dysentery occurring in individuals who have never been out of California. Uncinariasis, a disease imported from Mexico, or possibly with slaves from Africa, is one of the great problems of the day, as pellagra (another tropical disease) already exists among us as a scourge;*** yet these known diseases which threaten us may be as nothing compared to the unknown ones which wait an opportunity to attack us. Just as measles in Fiji, malaria in Mauritius and trypanosomiasis in St. Thomas Island, finding new and susceptible soil, nearly decimated the inhabitants, so some still unknown tropical disease now slumbering in a corner of one of our island possessions could be imported to bewilder our sanitarians, upset our cherished commerce and decimate our ranks. I do not say this is a probability, but it is a possiblity, and as such demands consideration from students of disease and from the public at large.

I hope I have convinced you that we need education in tropical medicine. I have several times been asked to place myself on record with definite suggestions as to how to carry on such a propaganada and I intend to do so to-day. I propose the following:

a. The establishing of *a course* (with laboratory facilities) *in tropical medicine in every medical school* in the United States. This course need not be very elaborate or detailed, but should in-

* Since this lecture was delivered I have seen in California three cases of human plague within a few weeks, two cases coming from a rural district where infected ground squirrels are numerous, and the third case following closely upon the eating of some infected squirrels by the patient.

** Since this was written, cholera has been reported in Germany.

***I have recently seen a case of this disease in Oakland, California.

clude what every properly trained physician should know of the subject.

b. One or more *schools of tropical medicine* adequately endowed should be founded. Such may or may not be affiliated with a university or universities. In these the student who intends to live in the tropics or is specially interested in tropical disease should be able to find instruction in all that is known regarding tropical medicine. The staff of such a school should consist of a pathologist, a protozoologist, a helminthologist, an arthropodologist, a bacteriologist, a clinician and a surgeon. One of these should have general charge of the laboratories. In addition to laboratory and hospital work, lectures, demonstrations, recitations and written and oral tests should be held, the geography and epidemiology of disease receiving considerable attention. Scholarships by which promising students could secure a "wanderjahr" among the tropical schools in Liverpool, London, Hamburg, Paris, etc., would be needed, and prizes for research of a high order should be offered.

c. Selected students should be given opportunity to enjoy the facilities of *American research laboratories* already established in our tropical possessions and provisions secured by which these students would be admitted to similar institutions belonging to other countries. I have been assured that such an arrangement would be welcomed abroad.

d. Research expeditions to the tropics for the clearing up of specially interesting or immediately important problems should be sent out from time to time under the direction of the school.

e. A *journal* devoted exclusively to the publication of matter connected with tropical medicine should be founded in connection with the school.

f. Popular addresses and matter for newspaper publication should be provided when advisable by the school for the education of the public.

g. A *tropical section* should be opened by the American Medical Association at its meetings, where appropriate subjects may receive adequate discussion and through which any needful and legitimate influences on beneficial national legislation may be exerted.

A man of wealth could build himself no better monument than to establish and endow some such plans as these I have outlined,

and to such a man his country would in turn be lastingly indebted.

LECTURE IV.

The Health Problems for Caucasians in Tropical Colonization.

The subject for to-day is not of my own choosing, but one upon which I have been asked by the University to present my views this afternoon. Were I speaking to an audience composed entirely of medical men I should doubtless emphasize the scientific problems in the tropics which are crying so loudly for solution. I might allude to the very incomplete state of our knowledge of the geographical distribution of disease, the inexplicable absence of some diseases from the tropics, the peculiar form which some cosmopolitan diseases assume in warm countries, the tropical ailments, the etiology of which is yet shrouded in uncertainty, the intermediate hosts which subserve various parasites and some of the myriad other questions which call our attention to the fact that the scope of tropical medicine is practically unlimited and its development still in its infancy. But I deal with a mixed audience in addition to the medical contingent for whom I originally came to this University. It seems best, therefore, to try to present a more general discussion than any yet attempted—a discussion of principles, in other words, and what technical details we find it necessary to introduce will, I am sure, be regarded as illustrative only.

Climate per se is not, as a rule, the problem to be faced in the tropics. With the exception of a few minor conditions, high temperature is not in itself the direct cause of any tropical disease. The causes of death and ill health in warm regions are rather to be sought in the endemic diseases which flourish in such countries and which may be only indirectly the outgrowth of a tropical climate.

I. Let us consider first *the problems which are presented by the diseases already endemic in tropical countries.* Many of the diseases rife in the tropics are caused by animal parasites. Now an animal parasite, be it a protozoan, a worm or what not, is usually dependent for its propagation upon two hosts, in one of which it develops and in the other of which it reproduces its kind. It is when one of these hosts happens to be a human be-

ing that the parasite becomes interesting to us as students of the diseases of man. The protozoan cause of malaria for example, develops in man and reproduces itself in the mosquito, that of filarial disease (small worms in the blood), develops in the mosquito and reproduces itself in man. It is obvious that if man is to protect himself from such enemies, he must be able to avoid or destroy the host which in common with himself is necessary to the existence and dissemination of the disease producing parasite. Many of these parasites are carried by insects, using the term in its widest sense. Such are, for example, malaria, sleeping sickness, relapsing fever, yellow fever, dengue and filarial disease. The continued existence of all these depends on animal parasites and all have been shown to be conferred upon man through the bite of insects. A striking example of how important a part insects play in the matter of health in the tropics is afforded by the American occupation of Cuba and the Panama Canal zone. By systematic destruction of mosquitoes and their breeding places yellow fever has been eradicated from these places, once hot beds of the disease, and malaria vastly decreased. It has been said that a large part of the French failure at Panama was due to a lack of proper sanitary measures, just as a generous portion of the credit for American success is due Col. Gorgas and his staff for their energy and enthusiasm in protecting the health and lives of those employed in the actual canal work. At Ismaila, on the Suez, Ross and his assistants practically eradicated malarial fever through scientific mosquito destruction. The work of Malcolm Watson at Klang in the Federated Malay States was hardly less successful in lowering the malarial fever curve in his city. Once in West Africa we prevented the introduction of sleeping sickness into a district simply by changing a caravan road which ran through a hot bed of tse-tse flies, and we stamped out a small epidemic of relapsing fever (carried from man to man by the bite of a tick), by replacing cots, up the legs of which the ticks could crawl, with hammocks in which the ticks could not reach the sleepers. Those who proceed to the tropics or deal with them should understand above all the *principles* involved in the prevention of the diseases endemic there.

It is often as important to avoid contact with the native races as it is to avoid the insect disseminator of disease. In the

case of a malaria, yellow fever, hook worm disease and other affections the dark-skinned native is a sort of *tertium quid* in the situation. He harbors without much inconvenience to himself a parasite which, if conveyed to a white man, causes serious disease and death. The natives of West Africa go about in comparative health, even though their blood may be teeming with malarial parasites. If a proper species of mosquito bites such a native and then a white man the illness or death of the latter may follow. Thus we see how in laying out towns and designing dwellings in the tropics the indigenous peoples, as well as indigenous insects, must be taken into account by the white settler. It would of course be ideal if we could make the tropics a healthy abode both for the native and the white, but this is at present impracticable except in small areas. The question of personal phophylaxis thus becomes a problem to every white man proceeding to a hot climate. Without going into details let us say that four special rules should be kept in mind by anyone who would reside with impunity in the tropics.

a. The central nervous system should be protected from the actinic rays of the sun by suitable means such as wearing, while out of doors, a red or orange lining in ones hat and a strip of the same sewed into the back of ones jacket or shirt to cover the spine. In a helmet lead foil answers the same purpose.

b. Contact should be avoided as far as possible with native people and native animals. This is necessary to escape tropical ringworms, various intestinal parasites and other serious infections.

c. Only recently cooked food and drink should be consumed. This is the only way to avoid dysentery and other grave intestinal diseases.

d. The visitor or resident should above everything be protected from the bites of insects. Enough has already been said regarding the reasons for this rule. A "bell" mosquito curtain which tucks in under ones mattress is aboslutely indispensable, and every known device to kill and drive away household insects should be employed.

I have said nothing especially about the problems to be met in making the tropics more habitable for the indigenous people among whom we go and to whom we owe help and advice in

such matters. The principles already laid down, however, apply to the black, yellow or brown man as well as to the white and since in the end we must be the teachers of the natives let it be borne in mind that nothing is so potent as example.

II. The second group of problems which claim our attention consists of those *created by the introduction into the tropics of new diseases.* It is a fact well known to students of the geographical distribution of disease that various diseases have invaded and become endemic from time to time in new territory. A disease common to one part of a country, but unknown in other parts, may suddenly appear in an entirely fresh district. This phenomenon has also taken place and is constantly taking place in the tropics, due principally to improved methods of transportation introduced by the white man in the course of his opening these regions of civilization. Thus we find malaria following the railroads in India and creeping higher and higher up the slopes of the Himalayas from year to year. Sleeping sickness has recently followed the trade routes in Africa from the west coast clear across the continent at the sacrifice of thousands of human lives. A striking illustration of the moving of a disease from one tropical country to another is the introduction of malaria into Mauritius. This beautiful island was until recent times free from malaria, when either the proper mosquito or the proper strain of malaria germ was introduced by ships from India. The disease swept in a raging epidemic over the island leaving in its wake a frightful mortality. The Seychelles and many islands in the Pacific are yet free from malaria, but the danger of infecting these healthy spots, so to speak, is constant and imminent. A still more alarming possibility and one which, Manson has declared, should be made a subject for international consideration is the possibility that yellow fever may, on the opening up of the Panama Canal, be transferred to Asia, the South Seas and East Africa. While ships must round Cape Horn or the Cape of Good Hope to reach these countries from Brazil and the West Indies (the home of yellow fever), the danger is nil because the cold latitudes to be traversed destroy the germs of the disease or the mosquito which carries them. When the canal is opened the entire voyage from the Antilles and the east coast of South America will

be within the torrid zone and thus this dire possibility looms large before us.

Just as diseases may migrate from one part of the temperate world to another (for instance we have syphilis probably introduced from the New World to the old and small pox from the Old World to the new), or from one part of the tropics to another, so the diseases of temperate countries may be transported to the tropics and there gain a foothold. There are many examples of this. Measles, whooping cough, tuberculosis, leprosy and other diseases have within recent times been introduced from northern countries into the Pacific Islands. In our own country measles is regarded as a more or less trivial incident of childhood, but when it is introduced into the Fiji Islands the mortality was terrible, in some districts half the population dying. The explanation of this, and of the great mortality from malaria in Mauritius and sleeping sickness in Central Africa, is that when a disease is introduced into a new country it finds an exceptionally favorable soil for its propagation. Among races where it has existed for ages the processes of natural selection have resulted in a sort of racial immunity which is entirely lacking in these new victims who thus succumb by wholesale to its onslaught. And it is not only the immediate excessive mortality which is to be taken into account when a new disease is introduced into a country. Ross from his researches in Greece believes that the decline of the commerce, culture and importance of that country coincides with and is largely due to the introduction of malaria from Asia. So a subsequent prolonged and sad racial deterioration may also result from the establishment in any region of an alien disease. Another thought which must not be passed by is that when a new disease is once started on its wanderings no one can prophesy when it will stop. In a former lecture I mentioned the chigoe (*Sarcopsylla penetrans*), which, originally from South America, has invaded and entirely traversed Africa, entered India and has even been reported from Cochin China, and is evidently on its way round the world. This parasite gives rise to pain, mutilation and sickness, and is a capital illustration of how diseases due to animal organisms spread in these days of steamships and railroads.

III. This last group of problems, which I shall only allude to, contains *the problems which arise from tropical diseases which may gain a foothold in temperate climates.* To take one recent instance, you have doubtless all read of the epidemic of cholera which swept through part of Russia this last year, reaching even to the arctic circle, and which is now invading Germany.

In times past we have had here in America a taste of what diseases brought from the tropics mean to a nation, and this class of diseases exists among us to-day in far greater abundance than is generally suspected and new seed is constantly being introduced.

Now, to come to the crux of the whole matter, namely, the solution of these problems which I have outlined before you, what shall we say? Let us accept as our first axiom the statement that the solution depends on a better knowledge of the subject. What we need in this country is more study of tropical medicine. From an economic standpoint alone the matter demands attention. Let us premise two or three statments which can hardly be disputed, as follows:

a. The successful settlement of the tropics is of very great importance to the world.

b. Such settlement depends in no small measure on the solution of various hygienic and epidemiological problems there obtaining.

c. In the absence of this knowlege an enormous extra expenditure of lives and money is certain to ensue.

d. The problems in question can best be studied and met by trained observers working at first hand, in other words by scientific medical men living in the tropics.

If these statements, which seem to me self evident, be accepted as true, there is no need for me to dwell on the necessity for adequately equipped pathologists, clinicians and sanitarians, specially trained in the lines along which their investigations will run, to take up the enormous task awaiting them. It is little less than a cardinal sin to send a poorly trained man to the tropics, for even the inestimable advantages of being on the ground in the midst of fresh material cannot confer the ability to observe accurately. Institutes of research like those, for example, in the Federated Malay States, Manilla, and at Khar-

toum are steps in the right direction and are worthy of all praise, but the earnest individual worker need not hastily despair of adding his quota to the advance of knowledge in this great field. Granted the capacity for work and achievement, neither complicated apparatus, skilled assistants, nor unreasonable effort are necessary for the study of some of the most pressing problems which are being forced to our notice in the tropics. And as a career nothing offers finer prospects to the properly trained investigator. Manson has well said that the tropical worker "enjoys opportunities for original research and discovery far superior in novelty and interest to those at the command of his fellow enquirer in the well worked field of European and American research."

Turning finally to the possibly more selfish side of the question namely our own self protection here at home, the need of the situation is the same—more education, in this case not only of special students fitted for research, but of the whole rank and file of the medical profession, especially undergraduates in our medical schools (our future physicians), not omitting the laity, for every one is more or less a physician and a sanitarian in his own house. The fact that an increasing number of cases of serious tropical disease are constantly occurring, often undiagnosed and hence improperly treated and guarded, in our midst is not alone the fault of our medical practitioners but also of our medical schools. I have already in this course advocated that laboratories and instructors devoted exclusively to the subject of tropical medicine be inaugurated in our schools and universities. In my recent tour, including such diverse points as Washington, D. C., Omaha, New Orleans and San Francisco, I found no place where material for such instruction was wanting. I have in a previous lecture outlined somewhat in detail a plan for better education in the matter of tropical medicine and shall not repeat myself to-day, but would like to close with the suggestion that the medical school of this university be one of the pioneers in this great movement.

The Value of Transfusion in Pellagra.*

By GILMAN J. WINTHROP, M. D., and H. P. COLE, M. D., Mobile, Ala.

The formulation of therapeutic measures in a condition whose etiology is so much a question of hypothesis, as is that of pellagra, must be largely based on symptomatology and empiricism.

The establishment of a specific therapy antedating the discovery of the causative agent of a disease is to be noted throughout medical literature. We have but to mention the introduction of quinin, as a specific for malaria, two hundred and fifty years prior to Laveran's discovery of the malarial plasmodium; the empirical treatment of syphilis with mercury years before Schaudinn's finding of the Spirochæte pallidum or the successful employment of vaccination by Jenner against a disease whose cause is still theoretical.

The employment of any agent, as a remedial measure, is warranted if based on even presumptive scientific grounds until the determination of the *raison d'etre* of the malady permits of a truly rational correlation of cause and remedy.

Lavinder[1] has summarized the theories as to the etiology of pellagra as follows: "Broadly speaking, we may divide the theories as to the etiology of pellagra into two large groups, viz., those of the Zeists, who think that there is some definite etiologic relation between Indian corn and pellagra and those of the Anti-Zeists, who oppose this view. In the latter group there is really but one body of students, and that is composed largely of the French school, who deny that pellagra is a morbid entity and regard it only as a symptom complex occurring in alcoholics, insane persons, and in persons in other depressed states. This idea, for our present purpose, may be disregarded. The Zeists include nearly all students of the disease, but their view are by no means harmonious. Putting it in a general way, their various ideas as to the etiology may be placed in three general divisions: (1) That it is an intoxication (toxico-chemical); (2) that it is an auto intoxication (toxico-infective); (3) that it is a specific infection either by bacteria, moulds or protozoa."

Most students in this country, we believe, side with the Zeists and consider pellagra as a pathologic entity, a specific intoxication. Whether the specific toxic substances arise from the decomposi-

* Read before Florida Medical Association, April 6, 7, 8, 1910.

tion of maize per se and are of a chemico-toxic nature, or from bacterial life-true bacterial toxins, or are of protozoan origin and analagous to syphilis, etc., must be held *sub judice* until further research affirms or negates them. Our present attempts at a therapy must needs be directed towards combating an intoxication whose exact genesis is still undetermined.

The numberless purely chemical remedies which have been vaunted as chemical and physiological antidotes for pellagrous poisoning and the seemingly poor results obtained from their use forces us to look for aid to the extensive field of biologic antagonist or antibodies. The growing importance and extended use of these natural remedial agents—antitoxins, precipitins, agglutinins, etc., formed, by the body cells, for self-protection against morbid processes, naturally leads to an inquiry as to the biologic action of the toxins of pellagra and fosters the hope that in the pellagrin himself we may find the prophylaxis and cure of pellagra.

While at present the existence of specific toxins in pellagra and the formation of antitoxic substances cannot receive a categorical answer, there is considerable evidence that such are present.

Lombroso[2] claims to have produced, by the administration of extracts of spoiled maize, symptoms analogous to pellagra and, in animals, with suggestive post mortem findings.

Babes[3] and others have, conversely, demonstrated the presence of bodies in pellagrous blood which are antagonistic or antidotal to such extracts of spoiled maize. These antagonistic bodies are probably of an antitoxic nature.

Further, by injecting pellagrous blood into animals, Tizzoni[4] has produced typical pellagrous manifestations.

These experiments, we believe, warrant the tenet that the poisons of pellagra are of a specific nature and that their presence in the blood and tissues of pellagrins give rise to the symptoms of the disease.

That the inherent protective agencies of the body should attempt self-protection by the formation of antitoxic pellagrous bodies not only suggests itself, but is supported by much experimental and clinical work.

Antonini and Gatti[6] demonstrated distinct precipitative properties in pellagrous blood and showed that it possesses a hemolytic action much above normal. D'Omea[6], working independently, likewise concludes that pellagrous blood contains specific antibodies.

Finally, Antonini and Marianni[5] have noted cures in several cases of pellagra following the administration of serum from recently recovered typhoid cases of the disease. Lombroso, in a personal letter, states that the serum is of undoubted value in the treatment of pellagra.

From these experimental and clinical studies we feel justified in proposing the following conclusions:

1. Pellagra is an intoxication.
2. The toxic principles of pellagra exist in the blood of pellagrins and will produce pellagrous symptoms when transferred to other animals.
3. Pellagrous serum exhibits definite precipitative, hemolytic and antitoxic properties.
4. An active immunity exists in cured pellagrins and an immunity can be artificially produced in animals.

Our employment of transfusion in pellagra followed a series of laboratory experiments on blood transfusion in surgical shock in animals and was undertaken with the idea of combating the severe anemia noted in terminal pellagra cases, and, perhaps of transferring specific antibodies. The results obtained in this first transfusion, performed at the Mt. Vernon Hospital for the Insane,[7] were so gratifying that we were led to try its value in other cases.

The histories of twelve cases so far transfused are briefly cited below. We would note that in a number of these cases we have been unable to secure donors recovered from pellagra and healthy individuals; usually close relatives have been employed. We believe that these non-pellagrous donors, chosen from individuals living under the same environment, eating the same food and subject to the same possibilities of contagion, probably possess a certain amount of natural or acquired immunity.

CASE REPORTS.

Case 1—Colored female, age 25. Acute pellagra for three weeks. Patient shows characteristic dermatitis on hands, face, arms and legs. Stomatitis, severe emaciation, asthenia and fecal incontinence. Seemingly in moribund condition. Hb. 70 per cent.

Transfusion August 4, 1908. Donor a well nourished negro woman, recovered from a severe attack of pellagra one year ago.

The patient showed marked improvement both in mental and general condition, within 24 hours after operation. Four days

after the transfusion she was up and walking. This case went on to rapid recovery and has no symptoms of recurrence now, 20 months after the transfusion.

Case 2—White female, age 22. Chronic pellagra of four years' duration. Patient has had attacks of stomatitis, diarrhea and indigestion for several months each spring during the past four years. Fourteen months ago, dermatitis appeared over the dorsum of both hands and wrists. Stomatitis and diarrhea, of moderate degree, for past four months. Lately nervous mental symptoms have appeared and are increasing. Patient markedly anemic and emaciated. Weight 60 pounds. Hb. 70 per cent.

Transfusion July 3, 1909. Donor, a strong, healthy adult (brother of patient), has never had pellagra.

Within four days the patient showed marked improvement, the mental symptoms had largely disappeared, the skin lesions began to desquamate and the stomatitis cleared up. Three months after operation the patient had gained 15 pounds, was strong and had had no recurrence of symptoms. She has steadily improved for the ten months since operation.

Case 3—White female, age 42. Chronic pellagra of one year's duration. One year ago had an attack of diarrhea lasting six months and, at the same time, an indefinite rash over dorsum of both hands. Was weak and anemic. At present there are noted indefinite signs of a desquamative dermatitis on dorsum of hands, reflexes are increased, there is a marked degree of anemia and weakness. Patient very nervous and excitable. Has lost 30-40 pounds in weight in the last year.

Transfusion, July 18, 1909. Donor, the patient's husband (non-pellagrous), is a healthy, robust individual.

Three days after transfusion patient showed definite signs of improvement. Twelve weeks after transfusion, she had gained 15 pounds and the nervousness and anemia had in large part disappeared. She has remained apparently cured now for 9 months.

Case 4—White female, age 27. Acute pellagra of six weeks' duration. An erythematous rash appeared on the backs of both hands six weeks ago. This dermatitis rapidly spread to the forearms and elbows. Face and neck became similarly affected. Lately she has developed severe stomatitis, nausea, profuse diarrhea and increasing asthenia. She has marked nervous symptoms.

Examination shows the patient to be in almost a moribund condition. An ulcerating, pigmented eruption covers dorsum of hands and forearms and sides of neck. Feet and legs are pigmented. Lips dry and ulcerated. Tongue swollen and black. There is a slimy, fetid discharge from the mouth. Anemia and emaciation marked. Incontinence of bowels and frequent emesis. Pulse 150-160.

Transfusion, July 11, 1909. The first donor used in this case

was an adult female who had seemingly recovered from an attack of pellagra a few weeks ago. This first donor furnished a fair flow of blood for ten minutes, when she showed signs of syncope and the transfusion was stopped. A second donor (patient's husband) was prepared and furnished a good flow of blood for 15 minutes.

The patient died three hours after the operation. She showed no signs of reaction to the transfusion.

Case 5—White female, age 53. Chronic pellagra of two years' duration. Patient has had persistent diarrhea for two years. One year ago an eruption appeared on the backs of both hands and went on to desquamation. This eruption reappeared about six months ago. Lately she has developed nervous and mental symptoms.

On examination patient shows signs of previous dermatitis on hands and forearms. Emaciation and asthenia are marked. There are constant involuntary muscle tremors, increased reflexes and the mental condition is that of persistent delirium and at times a muttering delirium. Weight 70 pounds.

Transfusion July 17, 1909. Donor a healthy, non-pellagrous, adult male, patient's son.

Improvement in the mental conditions was noted 24 hours after the operation. The patient gained 8½ pounds in the first week and progressed to a rapid recovery. Eleven weeks after operation she had gained 34 pounds, the mental symptoms had cleared up and no symptoms of pellagra persist. Patient has shown no symptoms of recurrence.

Case 6—White female, age 50. Chronic pellagra of two years' duration. The patient has had attacks of diarrhea for two years. Four months ago had an attack of diarrhea lasting two weeks and followed by severe and persistent stomatitis. A pellagrous eruption appeared on hands and extended to forearms. Face and legs also show eruption. Marked nervous and mental symptoms for six weeks, at times bordering on acute delirium. Incontinence of bowels for last week. Examination shows a most marked state of anemia and emaciation. Hands, arms, face and legs show pellagrous eruption. Severe stomatitis, incontinence of bowels, fetid discharge from the mouth and marked mental symptoms.

Transfusion July 22, 1909. Donor (patient's husband), a plethoric, arterio-sclerotic individual. Only a small amount of blood was transfused due to the difficulty of affecting an anastomosis of the donor's markedly atheromatous artery.

Patient showed no improvements after operation and was again transfused August 17, 1909—26 days after the first operation. At this second transfusion the patient's daughter, who had apparently recovered from an attack of pellagra two years ago, was used as donor. The patient received a good transfer of blood for 25 minutes. The recipient showed no signs of improvement, except par-

tial clearing up of the stomatitis, and died four weeks after the second transfusion.

Case 7—White male, age 30. Subacute pellagra of six months' duration. An erythematous rash followed by pigmentation appeared six months ago. Later there developed severe diarrhea, mental deterioration and marked anemia and emaciation.

On examination there is noted a desquamative dermatitis on dorsal surface of hands and forearms, slight stomatitis and pronounced motor and sensory nervous disturbances.

Transfusion July 25, 1909. Donor (patient's nephew) is a lad of fourteen, non-pellagrous. The operation was not very successful, due to the restlessness of the boy, and the patient received but little blood.

This patient showed practically no improvement and died 26 days after the operation.

Case 8—White female, age 30. Chronic pellagra of one year's duration. About twelve months ago the patient had an attack of severe diarrhea, associated with sore mouth and marked nervous and mental symptoms, but with no skin lesions. This attack lasted two months. The present attack was ushered in, three weeks ago, by an erythema on backs of hands and wrists. The stomatitis and mental and nervous symptoms reappeared.

On examination one notes signs of a former dermatitis on hands, wrists, forearms and elbows. Stomatitis and mild diarrhea persist. Patient has lost about 40 pounds and there is present a marked degree of anemia and emaciation.

Transfusion July 25, 1909. Donor (patient's husband) is a healthy, non-pellagrous adult. A good transfer of blood for 15 minutes was obtained.

Patient showed improvement in the nervous and mental condition within 24 hours after the operation. Ten weeks later she had gained 20 pounds in weight, the dermatitis, stomatitis and diarrhea had disappeared and the nervous and mental symptoms were greatly improved. Now, nine months after the transfusion, the patient has gained 33 pounds, has had no signs of recurrence and is seemingly cured.

Case 9—White female, age 36. Chronic pellagra for six or seven years. For past six or seven years patient has had attacks of severe diarrhea each spring. Eighteen months ago an eruption appeared on backs of hands, lasted one month and went on to desquamation without pigmentation. At the same time she suffered with stomatitis and salivation. Four months ago the patient had another attack of diarrhea with marked nervous symptoms. Four weeks ago she again developed diarrhea, stomatitis and an erythema affecting back of hands and forearms. Nervous symptoms were prominent and there developed a mild grade of dementia.

Examination shows a desquamative dermatitis over hands and

forearms. Severe anemia, emaciation and asthenia. Nervous and mental symptoms marked.

Transfusion, October 18, 1909. Donor (patient's husband) is a healthy adult, who never had pellagra. There was a good transfusion of blood for 30 minutes.

One week after operation the patient had gained 7½ pounds, the mental symptoms had disappeared and the general condition was much improved. This patient continues to improve.

Case 10—White female, age 43. Acute pellagra of two months' duration. Began wlith intractable diarrhea two months ago which was followed by stomatitis and a pellagrous eruption over backs of both hands. Progressive anemia and emaciation. Ten days ago mental symptoms appeared.

Examination shows patient to be profoundly anemic and emaciated. Pellagrous rash is noted on dorsal surface of hands and forearms. Stomatitis, severe diarrhea, mental depression and at times delirium. Reflexes increased.

Transfusion November 3, 1909. Donor, non-pellagrous. Good flow of blood was obtained. Recipient showed no improvement and died 7 days after the operation.

Case 11—White female, age 51. Chronic pellagra of 8 months' duration. Eight months ago the patient complained of indigestion. She showed progressive loss of weight and anemia, profuse diarrhea. Four months ago stomatitis appeared and shortly after this a pellagrous eruption on backs of hands. Her mental condition had progressed to a depressive melancholia.

On examination the patient showed marked emaciation and asthenia and remains of the pellagrous rash noted above. Reflexes are increased. Moderate degree of myocarditis. Mentally the patient is much depressed. Hb. 60 per cent.

Transfusion December 22, 1909. Donor, non-pellagrous. This patient showed no improvement and died 9 days after transfusion.

Case 12—White male, age 42. Chronic pellagra of 2½ years' duration. For some 2½ years has had diarrhea and gastric symptoms more or less constantly. Nervous and mental symptoms gradually appeared. Case diagnosed as pellagra at the Johns Hopkins Hospital, Baltimore, in August, 1909. For the past ten weeks has been confined to bed. Weight 88 pounds. Average weight, 120.

Examination shows an emaciated, anemic man. There is stomatitis and salivation. Reflexes increased. Pigmented, desquamating skin lesions on both the flexor and extensor surfaces of hands. There is general tenderness and rigidity of upper abdomen, suggesting the possibility of tuberculosis or malignancy of the peritoneum or abdominal viscera, but such a diagnosis could not be substantiated.

Transfusion February 28, 1910. Donor (brother-in-law of pa-

tient) a healthy, non-pellagrous adult. Good transfer of blood for 23 minutes. There was slight immediate improvement, but this did not continue and the patient died about one month after operation.

These cases show that of 12 cases transfused, 6 are dead and 6 are apparently recovered for periods of from 5 to 20 months. It must be considered that in these transfused cases every possible medicinal measure had been fully tried and only continued downward course finally impelled transfusion. A mortality of 50 per cent. in such cases we consider low. It may be noted that of the six fatal cases, Nos. 4, 6 and 11, were evidently hopeless before transfusion. The seemingly remarkable results obtained in some cases have led us to attempt the operation in all cases, even though considered hopeless. We believe that earlier employment of transfusion would yield decidedly better results, at least it would furnish more reliable data on which to base an opinion as to the true value of transfusion.

Feeling that *transfusion in pellagra is as yet in an experimental stage,* we make no claims as to its final value.

Our clinical and experimental experience suggests the following permanent recovery.

1. A serum therapy will finally be established in pellagra. Until the perfection of this serum therapy transfusion may be offered to combat the existing anemia and possibly may be the means of transferring a degree of natural or acquired immunity.

2. In certain selected cases, not benefited by medicinal agents, transfusion has been followed by immediate temporary and possibly permanent recovery..

3. Without a thorough knowledge of the technique and dangers of the operation, or if the procedure is applied without careful selection of cases and donors, it will certainly be brought into an undeserved ill-repute.

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The Diagnosis of Syphilis by the Method of Complement Fixation. A Review of the Value of the Wassermann Reaction with a Consideration of Some of the Modifications.*

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The role played by spyhilis as a direct and indirect cause of serious or fatal disease in man has stimulated scientific and clinical observers during the past decade in the elaboration of more precise methods of diagnosis. Schaudinn's discovery of the treponema pallida in the lesions of the disease, especially since the more simple methods of demonstrating the organisms such as the silver impregnation method of Levaditti, the dark field illumination and the India ink procedure have been elaborated, has proved of inestimable value. The demonstration of the spirochete is, however, only adaptable in the diagnosis of certain lesions, more especially the initial sore and the secondaries. There is, nevertheless, a difficulty even in these lesions of finding the organism in cases which have received even a limited amount of treatment, so that in many instances this method cannot be utilized.

For several reasons a precise diagnosis is of value, in particular, perhaps, in order that as a result of definite scientific proof of the presence of syphilis prolonged treatment may be insisted upon. A question of probably even greater importance than the diagnosis of contraction of the disease is that of regulation of treatment. If it be possible to judge the efficacy of treatment and to prove the disappearance of active disease from the body by means of some specific reaction a tremendous advance will have been made in our ability to apply rational therapeutics in dealing with this too prevalent malady. The absence of the treponema pallida is, of course, of no value as regards the sufficiency of medication.

In 1906 publications appeared almost simultaneously by Wassermann, Neisser and Bruck, and Detre. Their communications dealt with a method of diagnosing lues by means of a serum reaction. This reaction consists in the ability of some body present in the blood of syphilitics when treated with certain antigens to fix complement.

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METHODS OF CARRYING OUT THE REACTION.—In order to understand the reaction it is necessary to be acquainted with some of the phenomena of immunity and in particular the complement fixation reaction of Bordet and Gengou. In 1904 these two last mentioned authors described a method of determining the presence of specific antibodies in blood from individuals or animals suffering from infection by various micro-organisms. These antibodies called amboceptors act only in the presence of another body known as the complement, which, if a combination is entered into, is said to be fixed.

The presence or absence of the fixation of complement is determined by means of the treatment of the reagents with corpuscles and a specific amboceptor against such corpuscles present in the blood of some animal. It is found, for instance, that if a rabbit be injected at intervals with corpuscles from a sheep, a specific body is produced in the blood of the rabbit so that if the serum from such an animal is placed in vitro along with washed sheep's corpuscles, lysis or dissolution of the corpuscles will take place, resulting in a reddish clear fluid. If, however, the rabbit's serum be heated for one-half hour and then added to the suspension of sheep's corpuscles no change will occur. If to this mixture normal sheep's serum be added the reaction will go on as in the first instance.

Two things are evident from these experiments: In the first place that there is no body present in sheep's serum which will destroy sheep's corpuscles, also that some body in the rabbit's serum is destroyed by heat which is essential for hæmolysis to take place. This thermolabile substance which is necessary to complete the reaction is called the complement. The specific thermostaple body, such as that produced by the inoculation of the rabbit with corpuscles, is an amboceptor. Serum which has been heated in order to destroy complement is said to be inactive—upon the addition of complement in other serum it is said to be reactivated. The material against which the specific amboceptors are produced is known as antigen.

To prepare the amboceptor a rabbit is inoculated upon from 3 to 7 times at intervals of 6 days with washed corpuscles of from 3 to 10 c. c. of blood. It is important that the action of the amboceptor be potent with the smallest possible amount of rabbit's

serum, as other substances in the serum are liable to inhibit the reaction.

Bordet and Gengou showed that this method of complement fixation might be applied to the diagnosis of various diseases due to bacteria, e. g., if the blood of a patient suffering from typhoid fever is treated with an extract of typhoid bacilli in the presence of complement this last mentioned body is bound so that when corpuscles along with a specific inactive serum are added no hemolysis results.

Wassermann's[1] publication reported a series of cases of syphilis. He found that when serum from a syphilitic person is treated with an extract prepared from the liver of a congenital luetic which, as is well known, is filled with enormous numbers of spirochætæ, in the presence of complement this last mentioned body is fixed so that upon the addition of a hemolytic series minus complement no reaction ensues. About the same time Detre[2] produced similar findings, his method differing only in that corpuscles from the horse and a specific body against such corpuscles were used in the hæmolytic series.

Wassermann's technique is as follows: One part of chopped liver is shaken up along with sand in 5 parts of physiologic salt solution, to which one-half part of 5% carbolic acid solution has been added. The precipitate is allowed to settle and the supernatent fluid used as an antigen in the performance of the reaction. To this antigen a certain amount of inactivated patient's serum is added, along with a measured quantity of complement which is derived from normal guinea pig's blood. Owing to the fact that complement is a very unstaple body, this material must be procured fresh. The measuring of the complement is carried out by means of preliminary tests of the serum containing amboceptor against corpuscles in the presence of varying amounts of serum from the guinea pig. In a similar way, having once determined the amount of complement which may be used, the serum containing amboceptor is also standardized.

Wassermann uses sheep's corpuscles in the immunizing of his rabbits and for the carrying out of his hemolytic tests. In carrying out the reaction he uses .2 c. c. inactive patient's serum, to which is added .2 c. c. of the extract along with .1 c. c. of complement. This mixture is placed in the incubator at 37° C. for one

hour and then a mixture of amboceptor and blood corpuscles is added. When the test is performed with serum from an individual suffering from syphilis at the end of two hours at 37° C. no hemolysis will take place. If the serum from a normal individual or from an individual suffering from a disease other than syphilis is used, owing to its inability to fix complement complete destruction to the corpuscles will result, a transparent fluid, reddish, being the end product. It is essential, in order that the results may be of value, that the various steps of the reaction be carefully controlled, also the serum from normal and syphilitic individuals be tested upon each occasion that serum is tested for diagnostic purposes.

Since Wassermann's original work was published an enormous amount of investigation has been carried on by observers in many parts of the world. In general his claims have been substantiated.

Owing to the fact that the reaction, as first published by the originators, is somewhat complicated and necessitates a good deal of preliminary preparation, numerous modifications for carrying out the reaction have been brought forward. Many of these differ in practically no essential feature from that of Wassermann, differing rather in the amount of serum, etc., or the percentage of corpuscles used in the hemolytic series. Many are, however, definite simplifications, and for this reason will receive somewhat more than passing attention.

It has now repeatedly been shown that the treponema present in the syphilitic liver are by no means essential to the carrying out of the reaction. Extracts from other tissues are of similar value, in particular those prepared from human or guinea pig heart. The substance, whatever it may be, upon which the efficacy of the antigen depends, has been shown to be soluble in alcohol, alcoholic extracts, therefore, owing to their simplicity of preparation and greater permanency, are now in general use. The studies of Noguchi[3] and others have demonstrated that in all probability the body essential in the antigen is one of the lecithin substances. The material joining with it is related, apparently, to the euglobulins. The best results are obtained when only those bodies extracted from tissue, preferably the heart, which are soluble in alcohol and ether and insoluble in actone are used as antigens. This material is largely composed of phosphatids, has a

high antigenic power, is not hemolytic and contains no anti-complement. If, in the preparation of the antigen, a small amount of tissue, 1 cm. heart muscle is extracted with 50 gms. of alcohol 95% phosphatids will be present in larger quantities than the inert or harmful substances.[4]

The reactions, as mentioned above, are usually carried on at 37° C. in the incubator. If the water bath be used, owing to the fact that the fluid is more quickly raised to the temperature of the surrounding medium, the time may be shortened, especially if the water bath be regulated to a slightly higher temperature, e. g. about 40° C. Lessar, whose results have been particularly reliable, allows 30 minutes for the first stage of this temperature and 15 minutes for hemolysis to take place. Of course, the potency of the amboceptor must be thoroughly tested as to its ability to carry out the reaction in this time.

Of the modification of the original reaction, as described by Wassermann, those of Bauer, Stern, Hecht, Tschernogubow[5] and Noguchi[6] deserve special attention, as in each of these methods a more or less important alteration in technique from Wassermann's original system is made. Bauer's method differs from that of the original in that amboceptor against sheep's corpuscles in the serum from an immunized rabbit is dispensed with, the normal anti-sheep amboceptor in human blood being utilized, otherwise the reaction is similar in that complement is added from fresh guinea pig serum. Hecht and Stern dispense with the addition of complement from the guinea pig utilizing the normal complement in the patient's serum.

Tschernogubow, practically, makes use of the simplifications of both these methods, excepting that instead of sheep's corpuscles being washed guinea pig's corpuscles are made use of in the hemolytic series. The method of Tchernogubow, then, consists merely in the addition of fresh active human serum to the syphilitic antigen. This mixture is incubated for one hour at 37° C. after which a measured quantity of guinea pig's corpuscles are added and the whole incubated for two hours.

As is readily seen, in order that any of these modifications may be trustworthy either the amboceptor in the normal serum or complement or both these bodies must be considered as being present in human serum in a constant degree. This experience has shown

that it is not uniformly the case. In the serum from certain individuals there is an insufficient amount of amboceptor against both sheep and guinea pig's corpuscles; this is constantly the case in infants. In certain debilitating diseases, too, the amount of complement present in the serum may be definitely lessened. It is thus seen that for universal use neither Tschernogubow's method nor that of Bauer or of Hecht can be depended upon. If, however, the presence of complement and amboceptor are both accurately tested for in each individual case, and thus the reaction controlled these methods, especially that of Tschernogubow, will be found to be very serviceable; their value, of course depends upon the simplicity of the reaction and the time saved in preparation of the reagents, as well as the economy in rabbits and guinea pigs. Morgenrath and Sachs[7] have demonstrated that the amount of complement and amboceptor necessary varies inversely, hence both these bodies may be tested for at once.

Noguchi[6] of the Rockefeller Institute has published a method for which he claims increased delicacy. The essential feature of his modifications is that he makes use of a smaller quantity of patients' serum than in the original Wassermann,; this serum, too, is used active, although he does not depend upon the complement in this serum for permanence of the reaction.

In addition he uses a human hemolytic series. The human hemolytic series is better than that of the sheep, since there is normally present in the human serum a certain amount of amboceptor against sheep's corpuscles. Since the amount of complement necessary to complete hemolysis varies inversely with the amount of amboceptor present it may occasionally happen that, if sheep's corpuscles are used, although an amount of complement be fixed sufficient to give a positive reaction hemolysis may result, owing to the excess of amboceptor. Again, by this method it is not absolutely essential that the patient's serum be used perfectly free from red blood cells, since human red blood cells are to be added in any case. Noguchi's method in some respects is similar to that of an earlier method advised by Tschernogubow, which, however, is insufficient in that he used the same quantity of patient's blood to supply syphilitic amboceptor, if it be present, also the complement and corpuscles. It is difficult to procure an amboceptor from the rabbit sufficiently concentrated in amount to produce

the hemolysis of so many blood cells in the presence of such a small amount of complement.

Noguchi's method in making use of active blood is, apparently, more delicate than others. Boas, as quoted by Fox,[8] has shown that in a large number of diseased conditions other than lues are capable of producing bodies potent to bind complement in the presence of ordinary syphilitic antigens if active blood is used. The possibility, however, of this error is reduced to a minimum on account of the small amount of blood used by Noguchi, namely 1 drop. Inactive blood may also be used, but four times the quantity is necessary. Positive reactions can be procured by employing a smaller amount of complement or a less active amboceptor than that determined upon experience as the proper amount. It is thus evident that in itself an increased delicacy in any method is not of paramount importance. The appreciation of this fact is of very great importance if the reaction is to be of service clinically. The reaction is quantitative, not qualitative. The neglect to consider this fact has resulted in the adverse criticisms of the reaction, which, however, have been few in number. The various ingredients, therefore, must be so proportioned that a sufficient amount of complement is bound to inhibit the hemolytic series only in these cases that are truly syphilitic. It is, in all probability, for this reason that individual observers have procured better results when using modifications of their own devising or one which they have first become accustomed to use.

Noguchi also suggests for medical men who have not the opportunity of working in a bacteriological laboratory the use of dry syphilitic antigen complement and human corpuscle amboceptor. The preparation of the reagents is carried out by saturating filter paper with the various materials and allowing them to dry. Dried powdered preparations of the various reagents except complement are also prepared by Merck, in Germany. For bacteriologists working in a thoroughly equipped laboratory these stock materials are of much less value than the freshly prepared sera. As I will endeavor to point out later in this paper, the reaction at present is one applicable for use only in the hands of an observer accustomed to the phenomena of immunity reactions, and in its present complicated forms cannot, readily, be applied by the general practicing physician.

In my experience practically identical results are obtained, no

matter what so-called modification is used. When possible, I prefer the latter method of Tschernogubow[5] with the active fresh serum, when this is impossible, owing to difficulty in procuring material and in children, I have used practically Noguchi's method, except that the serum is first inactivated.

SIGNIFICANCE OF THE REACTION.—Whatever method be employed, it is essential that the greatest care be exercised in controlling the various steps of the procedure. When such care is exercised practically all authors are unanimous in stating that the reaction is of the greatest possible value as an aid to diagnosis. In primary lesions for the first 2 or 4 weeks the reaction is usually negative. During this time, however, the demonstration of the treponema in the serum from the chancre obviates the necessity for another diagnostic aid. From the fifth to the eighth week the reaction gradually increases in intensity.

Different authors vary in their statements with regard to the number of positive results in secondary lesions; the majority, however, consider that it is between 95 and 100%. In tertiary lesions, in which an active disease is apparently in process, almost as high a percentage of positive reactions is procured. Among cases of parasyphilitic conditions general paresis gives the reaction in over 90% of cases; tabes in about 70% of cases; congenital syphilis gives a positive reaction in about the same percentage as cases of secondary lues. In general paresis the spinal fluid also gives the reaction, thus offering a means of differential diagnosis between the disease and the cerebral lues.

Treatment usually influences the reaction, various authors differing, however, as to the amount of treatment necessary to cause the disappearance of the complement binding power of the serum. The disappearance of the reaction cannot be considered, however, as being proof of the cure of the patient, as in most cases the reaction reappears again in from two weeks to two months following the cessation of treatment. Occasionally the most energetic treatment does not result in the overcoming of the reaction, although unquestionably the more energetic the treatment the earlier the disappearance. In general, authors are satisfied that in cases of active syphilis the reaction is positive.

If the reaction is to be of very great value it must be determined that other pathologic conditions do not produce a similar

result, or if other diseases do bring about such a result, in utilizing the reaction for diagnostic purposes, a knowledge of these conditions is of paramount importance. A few conditions have now been determined as giving the reaction in a certain proportion of cases. Leprosy appears to give the reaction in about 40% or 60% of cases, especially with certain antigens.

I have up to the present examined but one case which gave an absolutely negative reaction by two methods. Sera from scarlet fever also reacts in a definite per centage of cases. Handel and Schultz[9] in 48 cases got complement binding seven times with liver antigen, the action disappears early from the blood. Korschum and Leilifried[10] found that of the sera from 50 cases of recurrent fever 28 possessed the ability to fix complement in the presence of syphilitic liver extracts, the same cases producing also fixation of complement when liver from recurrent fever cases was used. A comparatively large proportion of cases of pellagra also fix complement in the presence of lecithin as an antigen. Bass[11] found that eight out of twelve cases in which syphilis was apparently excluded gave the reaction. Bass' results in making use of liver extract heart were not so marked. In addition to these diseases, writers have reported from time to time isolated conditions in which a positive reaction was procured making use of various antigens. However, with the exception of those conditions already mentioned, as compared with the enormous numbers of cases reported, practically, no diseases have shown themselves to be sufficiently liable to produce the reaction to lead to mistakes in diagnosis.

It is impossible in this paper, nor is it necessary, to make an effort to review the results in detail of all the multitude of observers who have published reports on the use of the reaction. A small number will be referred to in order to accentuate the constancy of the reaction in different hands. In a second report by Wassermann[12] published shortly after his original communication he notes that in 156 cases of non-syphilis none were positive and that in 108 cases of suspected syphilis 74% responded with a positive reaction. Forty-three cases of tabes gave positive results in 79%.

Neisser, Bruck and Schucht[13] report 82 positive reactions in 87 cases of suspected syphilis. Eichelberg[14] examined twelve run-

dred sera and three hundred and fifty specimens of cerebro-spinal fluid. His conclusions are interesting and state conservatively his opinion. His conclusions are: 1. "The reaction is interesting and although the cause is not yet discovered its meaning must be accepted. 2. It occurs frequently, if not constantly, in the serum of individuals who have had or have syphilis, also in paretics and tabetics. In the latter two conditions, as in syphilitic meningitis, it is also present in the C. S. fluid. 3. A differential diagnosis between general paresis and tabes cannot be made. 4. it is invaluable in the diagnosis of lues and helpful in the diagnosis of general paresis and tabes."

Stühmer[15] reports 158 cases, of fifty-four syphilitics, fifty-two were positive, the two negative cases being under treatment; of sixty-seven non-luetics the serum of three found complement, two cases of malaria and one of scarlet fever. Cases of diagnosis, twenty out of thirty-seven were positive. Howard Fox[8] examined 210 cases, including twenty-three controls, all of which latter were negative. Of 77 definite syphilitics 67 were positive with the original Wassermann and 72 with the Noguchi modification. Of 32 cases classed as probably tertiary lesions 23 were positive with the Wassermann and 27 were positive with the Noguchi method. This comparison of the two methods is, however, hardly justifiable, since different antigens were used in the two tests, in the former a variety of extracts were utilized, but in no case heart extract; in the latter an antigen prepared by Dr. Noguchi, whose experience in the preparation of the material is very extensive. There is no doubt but, whatever "method" be used, granted that the observer is sufficiently familiar with the technique, the determining factor is in the use of a proper antigen. Matson[16], using the Noguchi method in 145 healthy controls, found no positive reactions. His statement of the value of the reaction is: "For practical purposes the Wassermann reaction is sufficient, as positive reactions are found only with the serum of a syphilitic person." He draws attention to the well established fact that early in the disease and following treatment the reaction is not present.

A careful review of literature dealing with the first appearance of the reaction in primary syphilis is given by Pedersen. In general these results are similar, the majority of authors obtaining positive results in from 60% to 80%. Records, however, to be

of value, must state the length of time from the onset, otherwise the mere positive or negative finding is of little value. Rhinehart, quoted by Pedersen[17], found 58-56% positive in the third and fourth week, his total positive tests for chancres was 55%. Pedersen himself found that of sixteen cases of about one month's duration only one was negative. My observations have resulted in a smaller percentage of positive reactions; this is, however, probably due to the "blood medicine" which had been taken by several of the cases. The reaction is never marked during the first stage, and a small amount of mercury seems capable of affecting it.

During the past four months I have performed the reaction in the Touro Infirmary 140 times upon 116 patients, making use of the Noguchi method in 37 and the Tschernogubow modification in 103 cases. The results obtained by both methods have been uniform and agree with those reported by other observers. The following brief summary* gives an idea of the value of the reaction, which, I think we are justified in saying is now out of the experimental stage and should be a routine practice in all hospitals equipped with a pathological laboratory and one without which the practitioner should not institute treatment in the absence of other positive evidence nor discontinue the mercury until the Wassermann has been negative for at least nine months without treatment.

Total reactions	140
Positive	64
Negative	76

Composed of cases which may be grouped as follows:

	Positive.	Negative.
Primary syphilis	1 (6 weeks)	4
Secondary syphilis	13	2*
Tertiary syphilis, active	19	8*
Syphilitic history, inactive	15	
Parasyphilitic (general paresis and aneurism)	6	
Congenital	10	1*
Cases for diagnosis (probable luetics)	(17)	
Cases for diagnosis?	(7)	20
Cases for diagnosis (not luetics)		23
Control negative cases		18
	64	76

* All luetics giving a negative reaction had been under active treatment during a period of six weeks or longer except two. These two last cases occurred while using an insufficient antigen; no negative results in syphilitic cases have been procured since making use of a well-prepared antigen from human heart muscle.

Cases in these groups have been grouped under their appropriate headings in the upper part of the table.

It is thus seen that with the two exceptions mentioned, in so far as we can judge, all syphilitics not under treatment, as well as those under mild administrations of mercury, have given positive results, whereas no negative case has given the reaction. It is, naturally, impossible to be absolutely certain that the cases handled fall into one or the other category with reference to infection, the above clinical diagnoses have, however, been made in conjunction with the clinical observers of the results of treatment, nature of lesion, history, etc., having all been taken into account. Briefly, as mentioned above, the serum from all cases of active syphilis, after the first month, gives the reaction, whereas, on the other hand, only a certain number of diseases which are now well established have the power to bind complement and then only with certain antigens.

That the Wassermann reaction is of inestimable value in the diagnosis of lues is now accepted. Of greater interest, however, than the simple diagnosis of the disease is the probability that the reaction can be made use of in determining the efficacy of treatment. The administration of mercury undoubtedly weakens and comparatively quickly causes the disappearance of the reaction entirely.

The time necessary for the complete disappearance of the reaction varies with the amount of mercury given and the method by which it is administered. Hypodermically and by inunction the result is much quicker than by methods of giving the drug through the gastro-intestinal tract. By both of these former methods not only does the reaction disappear more quickly but remains absent for a longer time. My own experience does not offer sufficient grounds for stating whether the disappearance of the reaction may be taken as the cure of the disease or not. Certain it is that if treatmment be discontinued immediately upon the disappearance of the reaction both the complement binding power of the blood and clinical evidences of the disease will reappear. Lessar of Berlin stated in a personal communication that, in his opinion, if the reaction remained absent during a period of nine months following the cessation of treatment the disease is apparently cured. He bases his opinion upon the fact that in cases under his observation which have not given the reaction in this period it has not subsequently reappeared, nor have clinical evidences of the disease

recurred. I would suggest that for practical purposes in the light of our present knowledge a case in which the reaction remains negative during a period of twelve months, three or four tests having been made during this period, the disease may safely be pronounced cured, or at least inactive. By treatment is meant the administration of mercury, for, although the iodides are potent to relieve the local lesion in tertiary syphilis, such medication affects in no way the strength of the reaction. This fact coincides with the clinical experience that cases treated with iodides alone are prone to develop within a longer or shorter period recurrent manifestations. In a moderate length of time after the institution of treatment, say from four to six months, if the reaction is still strongly positive it may be inferred that either method or the amount of mercury given is insufficient.

In general, the prevalent ideas with regard to the course of lues and the relationship of syphilis to the various nervous diseases, such as general paresis, tabes and of aneurism, etc., have been corroborated by the serum tests. The so-called Colle's Law, however, has been shown not to be correct. The Munich observers have demonstrated in a large series of cases that the apparently healthy mothers of syphilitic children are themselves syphilitic, thus explaining the presence of apparent immunity of mothers nursing the luetic children. Among my own cases, which are few in number, in every case examined the mothers gave a positive reaction.

Conclusions—1. It is possible by means of the Bordet Gengou reaction, namely the fixation of complement, using certain tissue extracts as antigen, to diagnose the presence of active syphilis.

2. The reaction at the commencement of the disease is absent, but gradually increases in strength, reaching its maximum in the later stages of the secondary lesion. Treatment affects the reaction, apparently, in direct relationship to the improvement in the disease clinically.

3. Continued observation will probably show that the disappearance of the reaction and continued absence for a period of nine to twelve months will be evidence of the cure of the disease.

4. Colle's Law has been disproved, the mothers of syphilitic children being shown by means of the reaction to be themselves syphilitic.

5. At present the reaction is only adaptable for use in the hands of an experienced laboratory worker.

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Anesthesia for Throat Surgery.*

By ANSEL M. CAINE, M. D., New Orleans.

Anesthesia for throat surgery has occupied the attention of specialists for years. It has assumed special importance of late since radical tonsilectomies have become the rule. Almost every anesthetic agent has been used and practically all are still used—different operators having their preferences.

Ethyl bromide has been held in great favor in New Orleans and elsewhere. It seems to work very well for tonsilotomies and adenectomies, since the available anesthesia from a single administration usually suffices for these operations. It is relatively an unsafe anesthetic agent, and I am sure will be used less in the future than it has been in the past. For prolonged anesthesia it is unsatisfactory. Ethyl chloride has also been used but has not, on the whole, proven satisfactory. Its available anesthesia is short, and it is relatively unsafe for surgical anesthesia.

Nitrous oxide, while the safest of all anesthetic agents, has not proven ideal for throat surgery, cleft palates, etc. It is without a doubt the ideal agent for one form of oral surgery, namely; extractions. With nitrous oxide it is very difficult and often impossible to abolish the throat reflexes sufficiently for the surgeon to do jus-

* Read before the Orleans Parish Medical Society, May 23, 1910.

tice to himself and to his patient. This anesthetic is being used extensively in Chicago and Cleveland for tonsilectomies, but ether is added as necessary to meet conditions. When this is done it acts very well in experienced hands. When nitrous oxide is used it is given through a special nasal inhaler which fits tightly and permits the gas to be forced through the nose when the mouth is open. Part of the gas is allowed to pass through a bottle of ether and be delivered into the mouth through the mouth-piece shown. By bearing in mind your operator's peculiarities and selecting your patient it will be very satisfactory to give nitrous oxide for tonsilectomies. We know that anesthesia which will be entirely satisfactory for one operator does not permit another man to do his best work.

Chloroform has been an agent largely used because of its available anesthesia, which is rather long, and because it is easier to keep the patient under with an "occasional whiff." Owing to its high death rate and the experience necessary to give chloroform well it has proven unsatisfactory. Since this is such a dangerous drug—and especially so in this type of cases—I think it very unwise to use it. Dr. Gwathmey of New York told me that he would never give chloroform for tonsil or adenoid work. In my opinion an anesthetist should think several times before ever using chloroform. I never use it, therefore, unless safer agents are contra-indicated, or unless anesthesia sufficiently deep cannot be obtained without it.

That leaves us ether as the agent to discuss.

As you all know ether is a relatively safe anesthetic agent. Its drawback has been the difficulty of continuing the narcosis with sufficient abolition of the throat reflexes, throughout a tonsilectomy. The available anesthesia of a single administration is usually sufficient for an adenectomy.

For ideal work it is necessary that the operator be uninterrupted in his work from the beginning of the operation to its completion. Otherwise he cannot look after hemorrhage as well as he might, nor can he do himself justice as an operator if, when he is busy separating the tonsil from its pillars or applying his snare, the patient begins to gag and swallow or coughs and expectorates.

It is sometimes possible to continue a satisfactory anesthesia with the cone over the nose. I have done this and have seen it done,

but it fails about as often as it succeeds, since the respiration is largely through the mouth, and the surgeon has to stop and let the cone be applied over the mouth as well, until the reflexes are again quieted. Another hindrance is that both of the anesthetist's hands are busy and he is unable to steady the mouth-gag and the patient's head to the surgeon's satisfaction. He always finds the need of a third hand.

Knowing all this I was especially on the lookout for assistance when visiting the clinics in Baltimore, Philadelphia, Cleveland and New York, last summer. By profiting more or less from all of these, and spending a good deal of thought on the subject I have devised a "mongrel" apparatus—only partially original—but very good in the essential point, and that is it gives satisfaction. Similar apparatuses have been described from time to time, but none exactly like this one, for it is a general mixture and has some additions.

I will now endeavor to describe the apparatus shown here:

We have (1) a foot bellows with a piece of rubber tubing attached leading to (2) a bottle. This is an ordinary quart salt-mouth stock bottle, which can be obtained at any pharmaceutical supply house, and is fitted with a double perforated rubber stopper. It is provided with two copper tubes—one long and the other short. The long one extends to the bottom of the bottle and has a copper coil attached to it. The coil is made of ordinary sheeting about ¾ to 1 inch wide and 10 to 12 inches long. This piece of sheeting is coiled and soldered to a round plate through the center of which the long tube passes. With two inches of ether in the bottle we have the equivalent of a column 12 to 14 inches high. The short tube simply perforates the stopper and curves over on the outside. To this is attached another bit of rubber tubing which connects with (3) the warmer. This is merely a piece of copper tubing several feet long, coiled in a copper tank filled with thermolite. Both ends of the tube extend outside the tank. I do not know exactly what thermolite is, but it is a crystaline substance, possibly one of the sodium salts, which when heated melts and takes up a great deal of heat. This stored up heat is given off steadily until the apparatus is cool, which will be several hours. Another piece of rubber tubing leads from the heater to (4), the mouth-piece, which is a piece of brass or copper tubing flared at one end and bent to make a retractor.

The technic is very simple. Several inches of ether are put into the bottle. The patient is first anesthetised in the ordinary way—nitrous oxide-ether sequence being the most pleasant and the safest. The gag is then inserted and the retractor placed on the opposite side of the mouth. By working the bellows, ether vapor is forced through the warmer into the little mouth-piece and the patient is kept anesthetised.

The advantages of this are apparent.

(1) The patient is kept anesthetised and the surgeon is uninterrupted in his work.

(2) The face is not covered.

(3) The cheek is retracted.

(4) The mouth gag is steadied.

(5) The chin is kept drawn forward.

(6) The head is turned at the surgeon's will by the anesthetist.

This is not a perfect apparatus, but it is the best I have seen or am prepared to present at the present time.

As to results:—I have anesthetised over 150 cases in this way for ten or twelve different operators and none of them have reported any laryngeal irritation or bronchitis. I have seen most of these cases myself after the operations and have found no bad effects. The patients have never been in a dangerous condition during anesthesia. We have had our troubles as all anesthetists do, but far less than formerly. Some few cases have been very difficult to anesthetise sufficiently to abolish the throat reflexes. One case I had, an alcoholic, although 20 ounces of ether and an ounce of chloroform were used, was never relaxed. He recovered almost immediately on the withdrawal of the anesthetic, simply remaining drunk for a short time.

Sometimes it is necessary to place the cone over the face for a few moments in order to retain a little of the expired vapor and deepen the anesthesia, but this is the exception and not the rule.

I wish to acknowledge the aid of Dr. S. G. Davis, of Baltimore, to whom I am indebted for the idea of the heater. To the Roosevelt Hospital of New York I am indebted for the bottle and coil. The mouth-piece comes with the Teter Gas-oxygen apparatus. I also wish to thank Dr. C. J. Landfried for his valuable suggestions and constant encouragement.

Relation of Case Anesthetized to the Anesthetic—Observations of over 1,000 Cases*

By LOUIS LEVY, M. D., New Orleans.

I believe that I am the first to make mention of the etherization of a thousand cases in this city, and at the time of notification of the Society, I had a word to say on this subject. I wanted to be sure I have not overestimated my number, and thereby underestimated the count. I have 1512 cases of ether anesthetization; during that period of cases, I administed 14 cases of chloroform, 11 of ethyl-chloride and 3 of ethyl-bromide.

I wish to show the Society how I came to use ether alone as an anesthetic and to give you the benefit of observation along these lines, and to show the number of subjects and operations for which this anesthetic can be used.

It was at no distant date that ether was used by the choke method which caused pneumonia, bronchorrhea and nephritis, to say nothing of real suffocation, which brought for awhile this anesthetic in disrepute.

Then came the starting with chloroform and continuation with ether; when the patients were killed with chloroform and ether got the blame. A great danger with chloroform, as with all anesthetics, is putting the patients under, in fact that is the danger with all anesthetics.

Then came the starting with ethyl-chloride or ethyl-bromide, followed by ether. To disapprove of this method, I ask you to try to keep a patient under any of these drugs longer than five minutes, and to note that the violent headache, nausea and vomiting are more than with ether and chloroform, considering the same period of time cases were anesthetized; and these, too, are dangerous drugs. Seldom or never has the pulse been watched in these cases, as we figure on short anesthetisation. The giving of ethyl-chloride and ethyl-bromide acts almost the same as sandbagging a patient and etherizing him before he recovers. I really think the same results can be accomplished with a sandbag, providing the patient was not struck on the head too hard; at any rate, watch the pulse of the next patient and you will see it become faster and then irregular, and that is about the time you stop.

* Read before the Orleans Parish Medical Society, May 23, 1910.

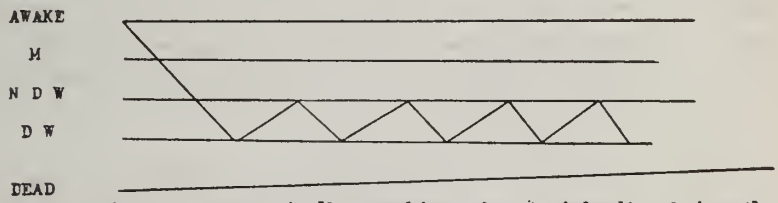
Now what had this series done for me in the way of elimination? It has taught that chloroform is just as dangerous to start with as to continue with in the entire case. The exciting stage is just as long. Ethyl-chloride and bromide are not only dangerous, but have nearly as much exciting stage and increase after nausea and vomiting and note the headache.

The anesthetic of choice in the majority of cases is undoubtedly ether with air and not ether by itself, or greatly mixed with carbon-dioxid. Of course, ether cannot be given absolutely in every case, as, for example, where slight rise of blood pressure would cause a rupture of an artery as in aneurism or in cases of cerebral hemorhage, or slight irritation of the kidneys will bring on a diffuse nephritis. Although ether is by the method used now very little more irritating than chloroform.

Now for the method of administering ether with air:

Start your anesthetic on open cone just as the method of giving chloroform, gradually paralyzing the olfactories, and the odor most complained of is lessened. During this period, the patient should be greatly assured of his well being. Do not give questions that require the patient to speak or laugh, and do not allow talking in the room other than that of self to patient. Be careful about the rattling of instruments, and if patient is held in one position, do not change this position or tamper with the dressings. Ether should be given on open cone until the patient no longer shows signs of muscular resistance. Now place a towel over the cone so that the patient gets less of air and more of carbon-dioxid with the same amount of ether; these drugs are continued until patient is deeply under. That is, to moderate dilation of pupils, loss of lid reflex. By lid reflex, I mean to determine this by the passing of the finger at the root of the eye lashes and not touching the cornea. This is a more sensitive test and the cornea is not subjected to traumatism, and the breathing is deep, slow and regular. At this point ether is stopped for periods varying from twenty to forty seconds, or even to a minute, when the respiration begins to increase and the pulse becomes faster, the pupils react slightly to light. Ether is now started and patient is put back to the point where respiration is slow and regular and pupils moderately dilated. During this process, the patient should never move his head or extremities; if this occurs, you know that your period of

stopping the anesthetic has been made too long; I believe that this is a better process than keeping them at a stationary point, that is fully under. I find less shock, less after-nausea and vomiting, by measurement less anesthetic used and after all, it is not the time that the patient is kept under the anesthetic, but it is the amount of the anesthetic that he has taken in that has got to be gotten rid of. I here submit diagram showing about how the patient should be kept, also show the amount of anesthetic used in relation to the time.



You will note geometrically speaking, the straight line being the shortest between two points, that the straight line will meet the dead line sooner than the variation between the two lines. I believe, however, it requires more skill to make these variations than it does to keep your patient on the straight line; note too that the dead line will meet any of the other lines if they are carried on to a sufficient time.

This process should be so carefully gauged that the patient should be awake within ten minutes after leaving the table and his lid reflex present before he leaves the table, no matter how long or short the anesthetic has been; my longest case has been four hours and twenty minutes. No case in this series has died on the table or died after the operation, after which the operator blamed the anesthetic.

Something about the position of the patient in these cases: It has varied from the "sit up straight" position to "Trendenlenburg" with the following effects observed:

It requires more ether to keep the patient under when the head is elevated; that is, put patient in a position where the body is parallel to the floor and after put him in a sitting position, stop the ether and he will come out much quicker than if the head is lowered. Put the patient deeply under, in an upright position, change suddenly to Trendenlenburg and he will approach the dead line.

I believe the reasons are the following:

It is the centers of respiration and circulation that are poisoned.

The ether is conveyed by the blood just as with oxygen; less blood to the brain in the upright position. More ether is taken to poison the centers; less ether then in these parts. It has certainly been observed by anesthetists, that it requires less ether in the Trendenlenburg position. I, however, observed in tonsil cases, where, for Dr. Dupuy, I sit up all cases, that I put them deeply under on a flat table and raise the body to a position used by him, and they come out much quicker than they do for the second tonsil, where they are put under for the upright position. In a great many cases the reflexes are again lessened when a patient is laid on a flat table after this operation. This brings out the question, are we justified in standing patients on their heads when they have had too much of the anesthetic?

I think that artificial respiration, sphincter dilatation should be given in the position in which the patient is anesthetized. As to stimulation: With ether, stimulants are seldom or never necessary; ether is as much of a stimulant as any patient needs for an operation. The only patients that I have had to stimulate, which have been eight in this series, are those in which there has been a great loss of blood, then saline solution accompanied by adrenalin is what is needed. I believe that stimulation in the past has been used too much; some one has justly remarked that an anesthetic outfit was a formidable looking affair, consisting of gruesome appliances and poisonous drugs; this is not necessary with ether.

The Duty of the Anesthetists to the Operator.—I believe, where we have operators who are nervous about any particular case, in keeping them at all times warned as to the condition of their patient. Where we have operators that have implicit confidence in the anesthetists there seldom should be a word passed between the anesthetist and the operator unless the patient is doing badly. No matter what the operator is doing, whether the anesthetist approves or not, he should never be told that a patient is doing badly, unless it is absolutely so.

Now, as ether is undoubtedly the anesthetic of choice, there is a caution, although labeled on every can, which is going to some day cause an accident, that is the use of ether too near a flame. In outside cases I have had lamps brought into rooms where patients were anesthetized and in hospitals the thermo-cautery is apt to creep in where it is least expected.

CONCLUSION.—Give ether alone in all cases where ether is used. Ether should be our anesthetic of choice on account of its simplicity, cheapness and least danger. Ether on open cone gives as little exciting stage as any anesthetic.

If artificial respiration is necessary, give it in the position in which the patient has been anesthetized.

Be careful as to the amount of stimulant, remembering that ether requires the least stimulant of all anesthetics.

Lastly, the anesthetist should at all times assist in keeping the operator complacent.

That 99 per cent of all cases anesthetized can take ether. I wish to call the Society's attention to a mouth appliance where ether can be used in throat and nose cases.

Etherization.

By J. D. BLOOM, M. D., New Orleans.

In accidents which alone can be charged to the anesthetic, the anesthesia being full and to unconsciousness, chloroform or ether having been used, I feel impelled to recall an individual experience in the administration of both.

I was chief officer in the surgical corps of our State Hospital in New Orleans for many years and have an advised intelligence in a measurable way.

Two years ago I visited the English Isles and whilst in Edinburgh had the pleasure of meeting Mr. Stiles, whom I learned to know. His observations regarding the use of chloroform in septic cases had been the same as my own (Vide "Septic Awakening"), but I confess I had not previously the knowledge of the immunity from this condition under ether administration.

On my returning home, imbued, as I was, by the favorable comment on ether administration with the belief in its safety and direct immunity of harm in the operative and immediate post operative showing (the clinical detail not having been otherwise mentioned), I then published my paper entitled, "Septic Contra-indications of General Anesthesia" and referred to the strong clinical evidence had by Mr. Stiles, of Edinburgh, on the safety of ether in cases to be operated upon for septic conditions as com-

pared with chloroform anesthesia. It is said that there are no contraindications to anesthetics so far as the surgical operation is concerned and that previous chloroform inhalative anesthesia gives no guarantee of safety. There is no relation between the severity of the operation and the danger, many of the deaths having occurred in minor work.

The acceptation of the term "overdose" is not the cause of death; the action of chloroform is progressive; unconsciousness deepens gradually and death may result, though infrequently, from a disregard of the plainest warning that should have had its administration discontinued. The ocular test of full anesthesia is not reliable; the confidence in the fancied harmlessness of ether is a feeling that seems to prevail in its administration.

In a very small proportion of cases is the fatality in chloroform anesthesia in the later stages of its administration. As a rule such accidents are early, occasionally within the first few minutes of its administration, there being no particular way in which death occurs. Cardiac and diffusible stimulants have been given before administration and have been followed by a like result. Its effect when unfavorable, as a rule, is sudden and unexpected, respiration and heart beat stop singly or together, and sometimes occur without warning, cessation of bleeding or pronounced pallor alone announce death.

Surgical interference during partial initial anesthesia is unquestionably a marked provoking cause of this unfortunate result.

Ether administration, so far as clinical experience goes, does strengthen the argument for its immediate safety and this experience supports the old belief that an ether death is by the lungs a chloroform death always by the heart.

It is true that an immediate death by ether differs in no particular from a typical death by chloroform and the real harm of both Anesthetics is either immediate or secondary; the effect sometimes continuing active for days and frequently producing permanent pathological changes of great severity, an awakening of or vulnerable field for germ life that results in an impaired organ associating invalidism and death.

Thos. L. Bennett says truthfully that the source of error is the statistics of anesthesia in that they are both unreliable and misleading owing to the unreported fatalities, the immediate effect

alone being considered. The cases that die subsequent to an administration and from conditions that must be attributed to the anesthetic are unrecorded, and make up the "Aspiratory Pneumonias," "Acute Suffocative Catarrh," "Pulmonary Collapse," "Atonic Cardiac Conditions," in addition, the varying renal changes of both acute and chronic nature that so annihilate the promise of a healthy aftermath, from the mere anesthetic.

Ether furnishes the greater number of these severe secondary cases and the statistics of this anesthetic are more favorable than the whole truth of the matter warrants.

I will admit that factors other than statistics may influence the selection of the anesthetic. Popular beliefs are not always based upon a sound foundation. That chronic pulmonary conditions have become active, acute disease has been followed by a tardy convalescense and tubercular pulmonary deposit occur after etherization speak for the awakening of a quiescent state following its administration, without the mention of pulmonary hemorrhage and acute pulmonary edema (acute suffocative catarrh) that, too, is so frequently occasioned. It is true that death never takes place with air too fully charged with ether as in the case with chloroform. In the aged subjects, death is more common after ether anesthesia and in the young a physiologic and clinical effect make it to be feared.

It was Dr. Emmett who first recognized the danger of ether in renal disease.

These varying and comparative frequent emergencies have me always anticipative of the secondary effect of ether administration, a condition rarely possible following the use of chloroform.

Twenty-four years in active observation upon the use of anesthetics recall two cases of serious results following chloroform, whilst in the past three years alone, in which ether has been more frequently employed, I can easily recall six cases of secondary harm that have proved serious in outcome.

That a judgment in individual cases should always be practised, that ether is not to be regarded as associating the safety that a common belief would have us believe, and that a reliable manufacture for anesthetic purposes is essential in every general anesthesia, I truly believe.

To this, the wisdom of an experience that might in an instance

be individual should ever have us mindful of the fact that the dangers of ether are very great and that full, free, and unbiased reports should assist in determining the truth.

Aptly can it be said:

"'Tis strange—but true; for truth is always strange,
Stranger than fiction."

Orleans Parish Medical Society Proceedings.

President, Dr. B. A. Ledbetter. *Secretary,* Dr. C. P. Holderith.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, Dr. C. P. Holderith, Chairman. Dr. Homer Dupuy and Dr. H. D. King.

Meeting of May 23, 1910.

Discussion of Dr. Gurd's Paper on Wassermann Reaction.

Dr. Gessner: I wish to ask Dr. Gurd a question: "How long into the life of a congenital case of syphilis does this reaction extend?"

Dr. Nelken: I have listened to Dr. Gurd's paper with interest because I have had an opportunity to follow some of his work.

Any method which makes possible the diagnosis of syphilis in obscure cases must be of greatest value.

In one of our cases where we made a diagnosis of syphilitic testicle by exclusion, the results from mercury and the iodides in large doses was negative. Yet, as the Wassermann was positive, we persisted, without any improvement, feeling certain of the diagnosis from clinical symptoms and a confirmatory reaction. Medication by mouth was stopped, and the patient put on inunctions of mercury. Improvement was immediate and rapid. This case is cited as an evidence of the untrustworthiness of the so-called "therapeutic" test.

I think, however, that the Wassermann test is too new to draw any absolute conclusions with it in making prognoses. We all

know how late after infection syphilitic lesions may become manifest, and it is a little early to make forecasts when the reaction in a known case of syphilis is negative. To begin with, we are not justified in saying, with our present knowledge, that a positive reaction means a case is not cured any more than we can say that, with a negative reaction, it is. For one thing, we do not know what influence the presence of mercury in the system has on the reaction. If, as seems possible, vigorous treatment with mercury brings on a negative reaction, we do not know how long this reaction will persist without a cure being obtained and especially we do not know how long mercury remains in the system after a vigorous course of treatment.

Dr. H. P. Jones: In experimental work along these lines I wish to know how long mercury remains in the system and its relation to this reaction?

Dr. Weil: I have been fortunate enough to follow the throat cases at Touro and with the help of Dr. Gurd all suspected cases were subjected to this reaction. Three cases were especially interesting in showing the value of the reaction during the past year. One case, interesting from the therapeutic standpoint, suffered from syphilitic nasopharyngitis, apparently tertiary. Mixed treatment was instituted. That which was supposed to be a gumma of the nasopharynx proved later to be a primary ulcer emplanted in adenoid tissue. In this case the relation was positive and the amount of medication is being controlled by the Wassermann test. Another patient, from a diagnostic standpoint, as spoken of by Dr. Nelken, was one on which the testicle as well as the larynx was the seat of the disease. Still another case, in which there was an obscure nasal condition in which the reaction was of considerable value in making the diagnosis and which has steadily improved under anti-specific treatment.

Dr. Howard D. King: I have listened with a great deal of interest to the excellent paper as presented to us by the essayist. Dr. Gurd, I believe, states that every well equipped hospital and infirmary should be provided with a laboratory in which it would be able to obtain a Wassermann reaction of every suspicious case. If the Wassermann reaction is to prove of practical benefit to humanity the cost of same must be within the reach of all. Will the cost of the Wassermann reaction be such that people of moderate circum-

stances can have the benefit of this important discovery? The practicability and success of the reaction depends, to my mind, entirely upon what the ultimate cost will be to the man who pays the bill. Is it possible that the Wassermann reaction will play the same part in the diagnosis of syphilis as does the Widal reaction in typhoid fever? From the amount of work and the great deal of technique necessary to secure this reaction I am afraid that the cost will prevent it from becoming of general value to both the physician and patient. What I am interested in primarily, at present, is the cost.

Dr. DeBuys: I wish to say a few words in corroboration of the statistics concerning this reaction in the congenital cases which came under my observation in the children's clinic at Touro, and which were reported by Dr. Gurd. In all the cases but one were obtained positive reactions, and in this one case the anti-luetic treatment had been discontinued because of the overaction of mercury.

In the matter of diagnosis this reaction is of valuable assistance. I recall a case of double chronic otitis media in a little girl which I referred to Dr. Weil. The condition was very persistent and resistent to treatment. I noticed that the mother had Hutchinson's teeth, and I suspected that probably the resistence to treatment of the otitis in the little girl might be due to something in the background. I, therefore, requested a Wassermann in mother and child, and they were both positive. The child was put on an anti-luetic treatment and rapidly recovered from her ear trouble.

Sufficient time has not yet elapsed in the congenital cases to allow of control reactions to be made. However, I believe the reaction will aid considerably in governing the treatment of these cases.

Dr. Lamothe: In the mercurial treatment does this reaction become feebler as the treatment is carried on, and also is there any relation between the strength of reaction and activity of treatment? I ask this, because I would like to know whether the reaction can be used as an index as it were, to show if the treatment is being successfully carried on.

Discussion on Symposium on Anesthesia.

Dr. E. Denegre Martin: I am very glad, indeed, that this important subject has been brought to the attention of the association, and that the discussion is so general, for I consider these the

most important papers which have been read in some time, and I am particularly well pleased at the way in which the subject has been presented. Both Dr. Caine and Dr. Levy have emphasized the importance of a thorough knowledge in the administration of ether. To-day, in operating at the private institutions of this city, I feel that my patient is safe in the hands of experienced anesthetists; at the hospital this is not always the case. Whenever the new class comes in I always operate with fear and trembling, and in justice to myself and the student, have one of my assistants stand by them until they become more familiar with the work.

I know of nothing more disagreeable than to be stopped in the midst of an operation by the vomiting of the patient, and to have to stuff the abdomen with gauze and towels until the patient is again under the anesthetic. Years ago when chloroform was used entirely, the death rate was greater, and I shall long remember losing a patient with only a dram of chloroform. To-day the anesthetic is far safer by the administration of an ether alone. The anesthetist should be familiar with every step of the operation, and know when to increase or diminish the anesthetic. In rectal or uterine dilatations, when the patient is apt to take several deep inhalations, the anesthetist should be informed that cases of sudden death at this time have occurred.

Ether was first introduced, so far as I know, in the hospital by Dr. Parham in 1890. I then administered it with the Clover's Inhaler; this we used until the bag broke, and we were forced to return to the administration of chloroform. It was about this time that I devised an atomizer for the use of chloroform, and with this apparatus reduced the amount administered from one pound to one ounce per hour. Dr. Souchon devised an inhaler for the administration of chloroform for mouth operations about the same time. Although we have made much progress in the administration of anesthetics, I still believe that the subject is one that needs careful study, and that more time should be given to it.

Dr. Weil: In doing tonsilectomies as done to-day, instead of the tonsilectomies of some years ago, it is, indeed, a comfort to have the services of a well trained anesthetist. I can testify to Dr. Caine's ability in this line, as I have had frequent occasion to make use of his services. The chief advantage of competent general anesthesia in tonsil work is that the operation can be performed with

deliberation, making possible a complete and careful dissection, uninterrupted by the exigencies of the anesthesia. In this manner also, hemorrhage is less likely to occur and can be more easily controlled when it does.

Dr. DeBuys: I should like to know which is the best anesthetic for babies in skiagraphic work?

Dr. Dupuy: The verdict is positively against chloroform in throat work, and quite a number of deaths have been recorded before the operation was begun. Ether is safer, and most operators prefer using it. I operate in the sitting posture, requiring more ether, thereby subjecting it to the severest test. I do not operate under deep narcosis, but rather want some reflexes present. Under these conditions ether has proven eminently satisfactory in my work. Dr. Caine has been kind enough to allow me the opportunity of performing several tonsilectomies by the method he has just referred to. Dr. Levy has rigged up a similar apparatus and I have had occasion to use it at the Hotel Dieu for tonsil work and for the submucous operation on the nose. It gives continuous anesthesia and thus shortens the time of operations about the head. I have not yet adopted the method exclusively, preferring to use it in suitable and selected cases. Three years' experience has greatly impressed me with the superiority of ether anesthesia in nose and throat surgery.

Dr. W. T. Patton: There has been one phase of the subject left untouched. That is, in obstetrical and gynecological practice. Chloroform is considered safer, and if so, why so?

Dr. Caine (in closing): I agree with what Dr. Levy has said, in a general way, differing with him only in a few minor points; but he has discussed the subject on general lines, while my paper is more limited. There is no doubt about ether being safer than chloroform in *practically* all cases, there being but few exceptions. No man who is at all posted will question that statement. I lost one case from chloroform and saw another (not my case) die while getting ether and chloroform. He died with symptoms of chloroform poisoning.

In giving ether by the drop method I do not use a wet towel unless the patient is in the Trendelenburg position, and saliva is liable to run into the eyes.

As to the mouthpiece, you notice we have no tube to pass

through the nose into the parynx, so that the strong irritating vapor is not thrown directly on these sensitive membranes. This prevents, in a large measure, bronchitis or irritation of the upper air passages. My first attempts were made with two small glass tubes, bent and inserted into the anterior nares, but these were discarded for the mouthpiece alone.

As to babies and skiagraphic work, nitrous oxide with oxygen is the anesthetic of choice. If this is not available, ether is the agent to use. The vapor being heavier than air prevents the probability of its becoming ignited by the spark.

The apparatus described can be used in all face and cranial work without interfering with the operator. Dr. Davis, of Baltimore, uses a similar apparatus with a Gwathmey mask, when anesthetising for Dr. Cushing.

Dr. Levy (in closing): I agree with Dr. Caine in nearly all points brought out. The dangers of chloroform are only too true. The safeness of ether has been recognized. Remember at all times chloroform is dangerous and in all practices. If chloroform is safe in obstetrical practice, the safeness of ether bears the same relation here. In this practice the odor is what is wanted, and patients like ether, by the drop method, better than chloroform. If deep anesthesia is wanted, you will note the uterus is more completely relaxed and regains its tonicing recovering from the anesthetic quicker than with chloroform.

An observation I failed to give in my paper is the fact that adrenalin is not ischemic with ether. It is a heart stimulant, and I believe many hearts have been whipped to the stopping point with this extract.

As to the introducer of open-air ether-giving, Dr. Danna was teaching this method in 1906, when I was a junior student in the hospital.

In skiagraphic work I must disagree with Dr. Caine, as I have seen the spark of the machine strike the wire part of the cone. We should be careful of the flame here as anywhere else. I would either have the cone properly insulated or give some other anesthetic. This is merely a suggestion. Ether, outside of this, is safer than any other anesthetic.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

Tropical Diseases.

While the commercial interests of New Orleans are earnestly engaged in the consideration of bringing an exposition for 1915, there are problems for the medical profession which must be worked out meantime. On every hand the more complete communication with South American and Central American peoples is growing, and New Orleans promises to be the entrepot for these countries in every way. With the study of economic questions dealing with problems of trade and commerce, the medical profession has only an indirect concern. With the questions relating to disease and the attendant ills, the medical profession has much to do.

For some years the great governments of the world have engaged in the study of tropical diseases at first hand in the countries of their habitat, and some countries have established schools at home for the study of these diseases in their intimate relations in the laboratory. This has resulted in the establishment of special schools in large centers, as Liverpool, London and at Sydney, among the English, and at Manilla for our own people. In the United States the need for such a school has been long recognized, but as yet no definite steps have been taken to create a properly equipped school for the study of tropical diseases.

It is now time for such a school, and it should arise in New Orleans as the only place in the United States where such an institution could be possible. It is fair to say that there is no city anywhere which could more logically be selected for such a school.

At the gateway of a great Republic, with hospitals ready for the reception of the sick, located in a subtropical climate, in which many tropical diseases already are endemic, enjoying a state of healthfulness as a community which is not surpassed by any city of its size, with a profession keenly active in experimental research

and investigation, and encouraged by the local existence of one of the finest medical colleges in the country, provided with laboratories and with qualified heads of these, New Orleans holds a predominating key to the situation.

All it needs to make the proposition practical is the encouragement from the philanthropic of the South, willing to devote enough money to make the laboratories equal to the extraordinary opportunities and to provide means to carry out plans easily to be made and fulfilled.

The field of research is unparalleled, and the humanitarian possibilities resulting from such research can hardly be measured in advance.

With adequate means, our own University can provide for the education of the whole profession of the seaboard of our Gulf States, qualifying health officers and local physicians so as to make them equal to every contingency that may arise in health problems dealing with our tropical correspondents and establishing throughout our Southern coast an intelligent survey of all problems of health which may arise.

Before the Panama Exposition is a realization, such a school should be established and under way—ready to demonstrate to the world which visits us that we are prepared in the fullest way to meet and combat all the conditions which may threaten us from the lands under the Southern Cross.

Conviction of Advertising Doctors.

Our readers may be interested in a brief statement of the facts in connection with the trial and conviction of two cases recently brought by the United States, one against W. H. Hale and A. S. Dyar, and the other against W. H. Hale and Roland Register, each for violation of Sections 5440 and 5480, R. S.—*i. e.*, for having used the United States postoffice in the execution of a scheme to defraud and with having conspired to commit an offense against the United States by the use of the mail in the execution of the scheme to defraud as first mentioned.

The scheme was the mailing by the defendants of a printed circular made to appear as if typewritten, addressed, in Dyar's case, to over 2,000 different persons who had been either his

former patients or who had interviewed him with the intention of perhaps taking his treatment. The Government contended that this circular-letter was designed to deceive those who received it into the belief that it was a letter specially typewritten to each of them. The deception was emphasized by the statement in each letter that the writer had been much worried by the fear that he had not cured each of the separate two thousand or more individuals. Further, by the statement that he had consulted Professor W. H. Hale in regard to each one of these individuals to whom the letter was sent, and also by the statement that Professor Hale had given the writer much light and had assured him that there was a permanent cure for each of the various persons.

The so-called Professor Hale was represented as being of London, England, just then on a visit to the United States, when, as a matter of fact, he had been for the last nine or ten years previous to the mailing of the letter in February, 1908, a resident of Jackson, Mich.

Proof was furnished by physicians of prominence in their profession in New Orleans, and especially in the branches in which Hale was represented to be an expert, that Hale was not known of by them, and that if he had been a noted expert in the branches of the profession mentioned, and *one of the greatest living specialists,* as represented in the letter, they would have known of him.

The proof in regard to Hale further showed that in 1891 he had been indicted in the United States District Court in Denver-Colo., for the crime of having devised a scheme to defraud, and used the mails in the execution thereof.

The scheme to defraud set up in the Denver indictment was that he (Hale) was practicing under the fictitious name of a celebrated Chinese doctor, namely, Dr. Gun Wa, who, by the use of Chinese herbs that he professed to have, was able to make remarkable cures.

After the indictment, Hale seems to have fled to England, for, in 1892, he was indicted in Liverpool, England, for the fraudulent practice of medicine. He was tried and sentenced to serve a period of eighteen months in the penitentiary at Walton, England.

Upon his return from England to the United States, after the expiration of his sentence in England, he was arrested in New

York under the Denver indictment and taken back to Denver, where he was convicted and sentenced to serve eighteen months in the penitentiary at Joliet, Ill.

After the expiration of his sentence he seems to have gone to New York, for, in 1895, he was there indicted for grand larceny of $1,500 from one whom Hale told that he was suffering with serious kidney trouble, from which he would soon go crazy or die, and of which he would cure him by means of what he called "Radium" cure. Under these representations, he charged $1,500 for a small vial of radium cure. Hale pleaded guilty and was sentenced to a term of eight months in the penitentiary at Blackwell's Island, New York.

At the trial here the prison-keeper from Joliet, Ill., and from Blackwell's Island, N. Y., identified the accused as the same man who had served sentences in those prisons. A copy of the indictment against Hale in Liverpool, England, certified to by the Lord High Chancellor of Great Britain and keeper of the Great Seal thereof, under the Great Seal of that Kingdom, was presented at the trial.

In addition to the above evidence, which tended very strongly to prove that Hale was not a noted expert, or one of the *greatest living specialists,* as he was represented to be in the letter, several physicians from Ohio and Michigan, two of whom were Secretaries of the State Boards of Health of Ohio and of Michigan, respectively, showed that the American Eclectic College had been investigated by these two States, and was not in good standing, and the diplomas therefrom were not recognized as authority to practice medicine, and Hale had not been for some years authorized to practice medicine in Michigan.

Of course, Hale produced physicians of his class from New York, Chicago and elsewhere, who swore to his excellent standing as a surgeon and diagnostician.

In the presentation of the case the laws of nearly every State in the Union relative to the practice of medicine showed that a person who had been convicted of a crime was not entitled to practice medicine, and such convictions authorized a revocation of any license he might have. This showed that, by reason of his previous conviction, Hale was not at the time of mailing the letter above referred to authorized to practice medicine. This, of course, negatived the representations made in the fraudulent letter.

The case against Roland Register and Hale was on lines similar to those mentioned above, an amusing feature being that the letter was identical to that of Dyar and Hale.

All the accused were promptly declared guilty by the jury and were condemned to pay a large fine and to serve terms varying from one year to one year and a half in the United States penitentiary at Atlanta. The cases have been appealed, but there seems to be no reason whatever for a change in the decisions or the sentences.

It will be remembered that the fraud was first exposed by the defunct *Morning World,* but the great credit for the successful outcome of the trials is due, first, to Mr. Charlton R. Beattie, United States District Attorney for the Eastern District of Louisiana, who prosecuted the accused, and Mr. F. J. G. Pulsipher, Postoffice Inspector, who prepared all the evidence which resulted in the convictions.

The laws of the United States and of this State are ample, in the great majority of instances, to lead to the punishment of all kinds of medical frauds, but it is necessary that energetic District Attorneys should undertake to perform their duty in such matters.

Bulletin of the Commonwealth of Virginia.

We have received from the Department of Health of the Commonwealth of Virginia its June Bulletin, which is entirely taken up by an account of the hookworm in Virginia, together with its method of cure and prevention. Virginia is the first State in which the Board of Health has worked in conjunction with the Rockefeller Sanitary Commission. A great deal of good has already been accomplished, and no doubt much of it may be credited to this Bulletin, which evidently has been written in simple style and is well illustrated in order to reach the people. It is understood that the Louisiana State Board of Health is to act on similar lines with the assistance of the Rockefeller Commission, and we hope that a Bulletin somewhat like the Virginia one will form an important item in the campaign against hookworm in this State.

Abstracts, Extracts and Miscellany.

Department of Therapeutics and Pharmacology.

In Charge of Dr. J. A. Storck and Dr. J. T. Halsey, New Orleans.

Diet in Typhoid.—Shaffer and Coleman, in the *Archives of Internal Medicine* for December and in the *J. of the A. M. A.*, Oct. 6, 1909, report with much interesting detail an extended series of observations on feeding unusually large amounts of food to typhoid patients. Very briefly summarized, the most important conclusions to be drawn from these results are as follows: by feeding moderate amounts of proteids and fats and large amounts of carbohydrates, they succeeded in keeping down to very small amounts or in abolishing entirely the loss of weight and of body proteid even during the height of severe typhoid.

A typhoid diet of two quarts of milk, fruit juices, albumen water and broths contains about:

	Grams.	Calories.
Proteids	100-120=roughly	400- 500
Fats	80- 90= "	700- 800
Carbohydrates	125-150= "	500- 600
Total		1600-1900

Very frequently the diet actually given typhoid patients represents only from one-half to three-fourths as much food value as the above, which, according to referee's observations, is rather more than most typhoid patients receive.

Contrast this with a diet of:

	Grams.	Calories.
Proteids	100=roughly	400
Fats	200= "	1800
Carbohydrates	700= "	2800
Total		5000

which is fairly typical of the diet used in some of Coleman and Shaffer's patients, and one sees the enormous difference in food

value. Such a diet was made up, in the cases under discussion, of milk, cream and eggs in varying amounts, lactose being added in amounts of from one-half to one and two-third pounds to bring the carbohydrates up to the required large amounts. Such diets were usually well borne by the patients, and loss of weight was either prevented or reduced to a minimum.

In this connection it is of especial interest to report that Dr. E. S. Matthews, of Bunkie, La., in a recent discussion with the writer, spoke of the striking benefit which in his own practice had resulted from giving to his typhoid patients sugar cane to chew. Dr. Matthews stated that his patients often chew three to five stalks a day, and that almost invariably after inaugurating this procedure the tongue clears up, diuresis increases, bowels act well and the general condition of the patient improves markedly. He is convinced that these patients do better and lose less weight than the typhoid patients whom he treats at other seasons of the year, when no cane is available.

Physiological doctrine as to the metabolism of fever and effect of proteids, fats and carbohydrates on heat production, led the writer several years ago to realize and to teach to his classes the value of increasing the amount of food fed to typhoids, and to do this chiefly by increasing the carbohydrates. Such has also been his practise for some years. Unfortunately, conditions have been such that he has been unable to make other than general observations, but those have all been in favor of the correctness of the doctrine of the benefit derived from increasing the carbohydrate element in the diet of typhoid patients.

For an average case of typhoid, a diet made up according to these principles and avoiding extremes would contain:

Milk, 6 oz.	about	1100	Calories.
Cream, 16 oz.	"	1380	"
Eggs, 3 oz.	"	120	"
Lactose, 10 oz.	"	1250	"
Cane sugar, 2 oz.	"	250	"
Total		4100	"

and would contain about 120 grams proteids, 200 grams fat, and 500 grams carbohydrate. Such a diet is unquestionably not an easy one to give, but the authors quoted above report that with

care, perseverance and skill even larger amounts of food can be given, even to very sick typhoids. They suggest giving food at two-hour intervals, either six ounces milk with two ounces cream, or ice cream made with lactose or eggs shaken up with milk and milk sugar. Further, the lactose can be taken in lemonades sweetened with ordinary sugar.

The published photographs of patients, who were given such diets during their illness, are striking arguments for the results of such forced feeding.

The writer would commend these facts and theories to you for your consideration. It is especially suggested to the readers of this journal that during the present cane season they make use of Dr. Matthews' plan of getting their patients to chew cane, not hesitating to allow them four or five pounds daily. It would also be greatly appreciated if any physician adopting this suggestion would at the end of the season report to the writer his experience and observations, giving amounts of cane chewed and of other elements of the diet. J. T. H.

Louisiana State Medical Society Notes.

In Charge of Dr. Joseph D. Martin, Secretary, New Orleans.

The President of the Louisiana State Medical Society has announced the following committees for 1910:

Committee on Publication—Dr. J. D. Martin *(ex-officio* Chairman), Dr. A. B. Brown, Dr. E. M. Hummel.

Committee on Public Policy and Legislation—Dr. John Callan (Chairman), Dr. J. E. Doussan, Dr. G. J. Gremillion, Dr. J. D. Martin.

Committee on Medical Education—Dr L. G. LeBeuf (Chairman), Dr. I. I. Lemann, Dr. J. P. O'Kelley.

Committee on Conference with the Press—Dr. W. M. Perkins (Chairman), Dr. W. H. Knolle, Dr. Isadore Dyer.

Committee to Confer with the Louisiana Bar Association—Dr. F. W. Parham (Chairman), Dr. R. Hunt, Dr. H. D. Bruns.

Committee to Confer with the Board of Health—Dr. A. F. Barrow (Chairman), Dr. H. E. Atkins, Dr. C. McVea, Dr. J. F. Oechsner, Dr. Gustav Keitz.

Minutes of the Thirty-first Annual Session. Held at New Orleans, La., May 3-5, 1910.

Monday, May 2, 1910— 3:45 P. M.

House of Delegates.

(Continued from July Number.)

Dr. E. M. Hummel, Secretary of the Society, read his Annual Report, which was received and ordered referred to a committee to be appointed by the President, who named Dr. Charles P. Gelbke, Chairman, and Drs. H. L. Ballowe and J. D. Martin.

Adjournment then took place until 4 p. m., May 3.

Tuesday, May 3, 1910—4 P. M.

The House of Delegates met May 3, 1910, at 4 p. m., according to previous announcement.

Dr. McVea, President, in the Chair; Dr. Hummel, Secretary, at his desk.

Members present: Drs. Gelbke, L. O. Clark, S. A. Ayo, White, M. Williams, Hargrove, George F. Bel, Chassaignac, Dupuy, Graner, Seemann, Callan, E. D. Martin, Ledbetter, Perkins, Sims, Parham, A. B. Brown, Dabney, Ballowe, Wilson, Newton, Lehmann, George H. Jones, Montegut, Ben. Guilbeau, Joseph, Morris, A. Landry, F. H. Carruth, Fittz, Dowling, Moseley, Robinson, Frater, Waller, Roy (38).

Also the following Councillors: Graner, Eustis, P. E. Archinard, H. C. Willis, Ragan, Sims and Simmons.

Also the following officers: Littell, Bass, Clark.

Minutes of meeting held May 2, 3:45 p. m., adopted as read.

The reports of officers and committees were next taken up.

The report of the Treasurer, Dr. Bass, showing a balance on hand of $1,080.98, was received and referred to new business.

Dr. Graner, Chairman of the Council, read the following report, which was received and referred to new business:

New Orleans, May 2, 1910.

Mr. President, Officers and Members of the House of Delegates of the Louisiana State Medical Society:

Gentlemen—As Chairman of the Council I have the honor to submit the following report:

The fifty-nine parishes in the State are divided into seven Con-

gressional Districts. Each respective District has the following number of Societies:

First District (part of Orleans)	2
Second District	4
Third District	4
Fourth Disrtict	9
Fifth District	7
Sixth District	8
Seventh District	5
	39

The following list shows the number of parishes that are not organized in the districts:

First District	1
Second District	0
Third District	4
Fourth District	0
Fifth District	8
Sixth District	4
Seventh District	3
	20

My report made in May, 1908, showed that we had 2,025 physicians in the State at large practicing medicine.

The latest report issued and compiled by the Louisiana State Board of Health, July 1, 1909, gives a total registered of 2,333.

It is of the greatest importance to our Association, to the component Society, and to the public at large, that an accurate tabulation should be obtained of the registered physicians of the State.

In gathering and compiling the information regarding the exact number of physicians in Louisiana, is met the same careless and unsatisfactory way of doing business as is met when we try to obtain the data regarding vital statistics.

We trust that the time and education are not distant when the medical profession of Louisiana, with its great Medical Society, will be able to have the desired information concerning every physician in our State.

Very respectfully,

(Signed) E. J. Graner,
Chairman of the Council.

Dr. P. E. Archinard, Councillor First Congressional District, made no report.

Dr. E. J. Graner, Councillor Second Congressional District, made the following report:

NEW ORLEANS, May 2, 1910.

Mr. President, Officers and Members of the House of Delegates of the Louisiana State Medical Society:

GENTLEMEN—My report as Councillor for the Second Congressional District is respectfully submitted as follows:

All the parishes in the District are organized. We have four component Societies—St. James Parish Society, St. John-St. Charles Bi-Society, Jefferson and Orleans Parish Medical Society.

We have in the District practicing about 730 physicians. In Orleans Parish we have 624 physicians with diplomas, regulars; 15 physicians with diplomas, homeopaths; 6 physicians with reciprocity certificates; 30 without diplomas. Total, 675.

We have had .... deaths in the District since our last session.

Our local Society now numbers 307 physicians, and our intentions are to bring into our fold the remaining brothers that are entitled to membership by showing them the importance and the benefit that they will derive by joining our Society.

Respectfully,

(Signed) E. J. GRANER,
Councillor Second Congressional District.

(*Minutes will be Continued in September Issue.*)

PARISH SOCIETY MEETINGS.

THE OUACHITA PARISH MEDICAL SOCIETY, on the date of their regular meeting, gave a banquet at the Monroe Hotel. Eleven of the regular members were present. Drs Sandel, Key, Hirsch and Calvert were present as guests of the Society. Drs. Key and Sandel are the oldest practitioners in the parish, and favored the Society with addresses on the practice years ago.

Toasts were responded to by members and others. After the banquet the regular scientific program was carried out. Dr. O'Donnell read a paper on "Dysentery." The paper was discussed by Drs. Hirsch, Sandel and others.

The meeting and banquet were in every way a great success, and a vote of thanks was extended to Host Wahren, of the Monroe Hotel, for the splendid manner in which the banquet was served.

(Signed) F. C. BENNETT, Secretary.

THE AVOYELLES PARISH MEDICAL SOCIETY met in Cottonport, La., Thursday, July 7, at 9 o'clock a. m., with the following doctors present: Dr. E. S. Matthews, E. Regard, W. P. Buck, Jr., W. P. Buck, Sr., T. A. Roy, L. Chatelain, G. L. Drouin, W. F. Couvillion, E. A. Poret, J. R. Ducotê, L. C. Tarleton, P. E. Brohic, M. E.

Saucier, S. J. Couvillion, A. T. Barbin and R. G. Ducotê. Dr. J. T. Halsey, of Tulane University, was present, and delivered an instructive and scientific lecture, which every physician present enjoyed very much. Dr. Halsey also took occasion to speak at the banquet, and said many good things for Tulane. The doctor's toast on medical education was very good, and had no trouble to prove the great advantages that Tulane offers in all vocations of life. The doctor lectured on "Some Chronic or Recurring Diarrheas; Their Diagnosis and Treatment." Dr. Halsey was made an honorary member of the Avoyelles Parish Medical Society and was asked to come again.

Dr. E. Regard reported a case of "Osteomyelitis of the Femur, Operated, Cured." Discussed by Dr. T. A. Roy.

Dr. E. S. Matthews reported a case of pellagra, the first case seen and diagnosed in this parish and in this portion of the State.

Dr. W. P. Buck, Jr., also reported a case of suspected pellagra.

Dr. J. R. Ducotê reported a case of typhoid fever. Discussed by Drs. Barbin and Saucier.

Dr. T. A. Roy read a paper on "Enterocolitis." Discussed by Dr. J. R. Ducoté.

Dr. M. E. Saucier read a paper on "Mosquitoes and Its Relation to Malaria."

This was one of the best meetings we have had.

Dr. Leonard Chatelain, of Hessmer, was elected a member. The next meeting will take place in Mansura, Thursday, October 6, at 9 o'clock a. m.

(Signed) R. G. Ducoté, M. D., Secretary.

Medical News Items.

Mansfield Board of Health Reorganized.—The City Council, of Mansfield, La., reorganized the City Board of Health, the new appointees being Drs. E. I. Persinger, H. J. Parsons, B. D. Cooper and Messrs. B. F. Jenkins and J. B. Williams, Jr. Dr. Persinger is the only member of the old board that was retained. The new board will have the active co-operation of citizens as well as the city government.

Hospitals Get Financial Aid.—By an act of the last Legisla-

ture of Mississippi the King's Daughters Hospital, of Gulfport, Miss., will be allowed $1,000 for 1910. The Charity Hospital of Biloxi will receive $500, under the acts of the Legislature of 1910.

The Journal of the A. M. A. Will Gather Fourth of July Statistics, as in previous years, and again asks the co-operation of its readers. It is hoped that each reader of The Journal will report any accidents that come to his knowledge. Complete details are particularly desired regarding all cases resulting in tetanus or death. Special blanks for such reports will be sent on application.

New Physicians in North Carolina.—Seventy-nine out of a class of ninety-five, who recently took the examination of the State Board of Medical Examiners of North Carolina, were granted licenses to practice medicine in the State. In addition to these, sixteen were granted licenses upon certificates from other States.

Spitting on Sidewalks Dangerous.—In order to show that spitting on the sidewalks is dangerous to health, an investigation has been made by Dr. John Robertson, medical health officer of Birmingham, England, which shows that 7 per cent. of the "spits" collected in public places contained consumption germs. On the other hand, the dust collected from the floors of the cottages of the Adirondack Cottage Sanitarium has been found to be free of tuberculosis germs, showing that a careful consumptive is not dangerous.

Want Markets Screened.—Mayor Behrman is in receipt of a resolution adopted by the Orleans Parish Medical Society recommending the adoption of an ordinance requiring the screening of all public markets in New Orleans. They ask that, should such an ordinance be presented, the Society be given an opportunity to appear before the committee of the Council to which such ordinance may be referred.

Free Clinic Opened.—The free clinic at the First Methodist Church, 1108 St. Charles Street, has been opened. The needy sick, who are financially unable to pay for medical attention, will be welcomed from 10 a. m. to 12 m., daily.

Changes at the University of Pennsylvania.—The Trustees of the University of Pennsylvania have announced changes in the teaching staff to go into effect at the next session.

To fill the Chair of Theory and Practice of Medicine in place of Dr. James Tyson, Dr. David L. Edsall has been transferred from the Chair of Pharmacology and Therapeutics and the vacancy in the latter will be filled by the appointment of Dr. A. N. Richards, from the Northwestern University. Dr. Alonzo Englebert Taylor, of the University of California, will be the first occupant of the Chair of Physiological Chemistry. Dr. Richard M. Pearce, of the University and Bellevue Hospital Medical College of New York, has been appointed Professor of Pathology. Dr. Allen J. Smith, the present Dean of the Medical School, will be the occupant of the new Chair of Comparative Pathology and be at the head of the newly instituted courses in Tropical Medicine.

Dr. Paul Lewis, who will have charge of the laboratory of the Phipps Institute for the Study, Prevention and Treatment of Tuberculosis, now an integral part of the University, has been elected Assistant Professor of Pathology.

American Public Health Association.—This body will meet September 5-9, 1910, at Milwaukee, Wisconsin.

American Surgeons to be Guests of Dr. Osler.—Twenty-seven surgeons, all members of the Society of Clinical Surgery, sailed for England on Wednesday, June 22, to attend the meeting of the Royal Society of Medicine, and the London Surgical Society, which was held in London the first week in July. During their stay in London the entire party will be entertained by Dr. Osler.

Clippings.—Lynchburg, Va., has a health board of which no single member is a doctor.

The parish and municipal health officers and members of the State Health Board have gone on record as being heartily opposed to further importation of babies into this State from New York.

A hospital to be devoted exclusively to cancer and nervous diseases is to be established in Philadelphia in the near future by the Quarterly Meeting House for Aged and Infirm Friends.

The Detroit doctors have purchased a permanent home for $30,000.

Personals.—The four men from Louisiana who joined the A. M. A. in June are: Drs. T. J. Dimitry, New Orleans; C. M. Jarrell, Crowville; K. W. Ney, Madisonville; R. T. Perkins, New Orleans.

Among the New Orleans doctors, who have left to spend their vacation in Europe, are: Drs. Geo. S. Bel, Otto Lerch, Paul L. Reiss, Jno. B. Elliott, W. W. Butterworth and C. W. Duval.

Dr. Frank P. Davis, of Oklahoma, is a candidate for lieutenant-governor of that State.

Dr. James Moores Ball, dean of the American Medical College, St. Louis, has announced that the trustees of that institution have obtained Dr. Frederick A. Baldwin, of Dallas, Texas, as professor of pathology and clinical medicine.

Dr. J. P. Haynes has relieved Dr. Frank Cellars as surgeon at the United States Naval Station. Dr. Cellars has been appointed surgeon of the Naval Station in Guam. Dr. Haynes came from Norfolk, where he was a surgeon at the Navy Yard.

Dr. E. H. Martin and Dr. W. E. Parker, both of Hot Springs, Ark., have been appointed members of the Federal Board of Registration of the Hot Springs reservation.

Dr. Edward Harper has been appointed by the Governor a member of the State Board of Homeopathic Medical Examiners.

Dr. George E. Blumer, professor of theory and practice of medicine, is to be the new dean of the Yale Medical School, to succeed Dr. Herbert E. Smith, who has been dean for twenty-five years.

Dr. Maud Loeber has returned from Cornell University, where she has completed her full course in medicine. She will practice in New Orleans.

Professor J. F. Y. Paine, for nineteen years professor at Galveston, becomes emeritus professor and was presented by the students with a loving cup.

Dr. N. F. Thiberge, Dr. Wm. Groetch, Dr. Wm. Wunderlich, Dr. S. Landauer, are spending their vacations in Canada and the East.

Dr. C. Horton, of Ashwood, La., is visiting in the city.

Removals.—Dr. J. C. Phillips, from Weeks, La., to Fernwood, Miss.

Dr. B. B. Dawson, from Asher, Oklahoma, to Bristow.

Dr. J. Frank Jones, from Emory, Tex., to Millergrove.

Dr. W. A. Sparks, from Savage Creek, Ala., to Ganisey.

Dr. Thomas Ragan, from Ruston, La., to Houston, Tex.

Dr. W. E. Van Zant, from Chatawa, Miss., to 8228 Oak Street, New Orleans.

Dr. W. M. McGalliard, from Donaldsonville, La., to San Matso, Cal.

Dr. H. S. Holloman, from Jonesville, La., to Harrisonburg.

Dr. John L. Kelly, from Colfax, La., to Melrose.

Dr. Ramon Guiteras, from 75 W. 55th Street, New York City, to 80 Madison Avenue.

Died.—On Thursday, July 14, 1910, Dr. August H. Borey, aged 25 years. Dr. Borey was a promising young physician of this city, and notice of his death was received with much regret.

In Coffeeton County, Missouri, Dr. Ben Winchester, aged 61 years. Dr. Winchester practiced medicine in St. James Parish for thirty-five years, and was Parish Health Officer for the last six years.

On July 12, 1910, Dr. M. K. Kassabian, at Philadelphia. Unusual attention is attracted by the sad death of Dr. Kassabian because of the fact that this was brought about by the effects of continued exposure in experimental work with the X-Ray. The doctor was one of the most prominent early experimenters with this therapeutic measure in the United States and has contributed extentively to the literature on the subject. His taking off is a decided loss to the profession, and, at the same time, another exampel to those whose daily work may place them in danger of X-Ray consequences.

Married.—On July 5, 1910, Dr. Henry S. Cocram to Miss Clifford Chaffe, both of this city.

On June 29, 1910, Dr. Gordon R. Holcombe, of Lake Charles, La., to Miss Roseina Davis, of New Orleans.

On July 23, 1910, Dr. Edith Loeber to Mr. Marshall Ballard. Both of this city.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

The Practical Medicine Series. Vol. IX. *Skin and Venereal Diseases, Etc.* Edited by W. L. BAUM, M. D., and HAROLD N. MOYER, M. D. Series 1909. Year-Book Publishers, Chicago.

As with other numbers of this worthy series of reviews, this issue covers the field of recent literature upon the subjects named in the title. Timely digests are given on pellagra, leprosy, special dermatoses and therapeutics in skin diseases. Recent advances in venereal diseases and syphilis are likewise reviewed.

A number of articles supplement the special sections, covering subjects of general interest related to jurisprudence, heredity, biology, sociology in medicine, etc. DYER.

Treasures of Truth, by DR. GEORGE F. BUTLER. S. deWitt Clough, Chicago.

A little kindly philosophy uttered by one who has lived long enough as a doctor to know the frailties and struggles of humankind is here presented between attractive covers. Essay and epigram vie in rounding phrases of optimistic thought, and a good hour may be spent over this little book—with the wish that more like it may come. DYER.

A Quiz Book of Nursing for Teachers and Students, by AMY ELIZABETH POPE, THIRZA A. POPE and others. G. P. Putnam's Sons, New York and London.

While much is set forth in this book that properly cannot come within the sphere of a nurse's office or privilege, the book is altogether an excellent text with a systematic arrangement and within the intelligence of the educated nurse. The arrangement in the form of question and answer makes each point of information more emphatic and makes the book a student's *vade mecum.* So much general information is afforded by the book, however, as to allow its endorsement for general reading and study by others than nurses.

Among the many subjects pertinent, and otherwise, to nursing, may be noted especially those on the Care of the Baby, Diseases, and Emergencies.

Altogether a worthy book, with a clear usefulness to the nurse and to hospital authorities. DYER.

Progressive Medicine. Vol. XI, No. 4.

This number of this excellent publication carries a most interesting review of the Diseases of the Intestinal Tract and Allied Orders by Dr. Edsall—covering the full field of the subject and bringing the material up to date. A number of other articles by well-known contributors are also presented, including a good review of recent therapeutic measures and remedies by Dr. Landis. DYER.

Vital Economy, or How to Conserve Your Strength, by JOHN H. CLARKE, M. D. A Wessels, New York.

A general diatribe against the miscellaneous habits of individuals accepted as customs without reason or thought. In the main, a timely discussion of health fads and practises. Alcohol is mildly condemned, while tea is tempered with a stricture on its abuse, and with a formulary for its making. Coffee is discussed in a short chapter, which is largely reminiscence. The author seems to have lived in an atmosphere of cynicism, indulged in his theories by a submissive audience. DYER.

Serum Diagnosis of Syphilis and the Butyric Acid Test for Syphilis, by HIDEYO NOGUCHI, M. D., M. Sc. J. B. Lippincott Company, Philadelphia and London.

This work is a complete demonstration of the Noguchi modification of the Wassermann test, or, more properly, the Noguchi method of the serum diagnosis of syphilis. Aside from the exposé of the method, exceeding care has been exercised by the author in defining each step, term, and application, so as to make the subject clear. It is, in fact, a guide to the study and practice of the serum diagnosis of syphilis, and as such it is admirably set forth. Illustrations and tabulated deductions are freely employed for elucidation.

This must serve as a convenient and comprehensive guide to the worker in this field. DYER.

Osler's Modern Medicine, Vol. VII. By American and Foreign Authors. Edited by WILLIAM OSLER, M. D., assisted by THOMAS MCCRAE, M. D. Lea & Febiger, Philadelphia and New York, 1910.

This volume, the last of the series, treats of Diseases of the Nervous System and contains two indices, one for the volume itself and a general index, rendering this volume a valuable part of the whole work.

The text is embellished with thirty-seven valuable plates, besides numerous other illustrations.

The Diseases of the Nervous System are presented in twenty-one chapters from the pen of sixteen contributors, men of high repute from England, Canada and America.

The contributors to this volume, and the subjects they treat, are: Lewellys F. Barker, M. D., "Introduction to Diseases of the Nervous System"; William G. Spiller, M. D., "Diseases of the Motor Tracts"; Colin K. Russel, M. D., "Combined System Diseases of the Spinal Cord"; Edwin Bramwell, M. B., F. R. C. P. (London and Edinburgh), "Scleroses of the Brain and Diseases of the Meninges"; E. Farquhar Buzzard, M. D., F. R. C. P. (London), "Diffuse and Focal Diseases of the Spinal Cord"; Joseph Collins, M. D., "Tropical Diagnosis of Disease of the Brain and Aphasia"; Henry M. Thomas, A. M., M. D., "Diseases of the Cerebral Blood Vessels"; Harvey Cushing, M. D., "Tumors of the Brain and Meninges and Hydrocephalus"; Gordon M. Holmes, M. D., M. R. C. P., "Diseases of the Peripheral Nerves"; E. W. Taylor, M. D., "Diseases of the Cerebral Nerves"; Daniel J. McCarthy, M. D., "Paralysis, Agitans, Chorea, Choreiform Affections, Infantile Convulsions"; E. E. Southard, M. D., "Acute Encephalitis and Brain Abscess"; William P. Spratling, M. D., "Epilepsy"; Bernard Sachs, M. D., "Syphilitic and Parasyphilitic Diseases of the Central Nervous System and Amaurotic Family Idiocy (Tay-Sachs Disease)"; Charles W. Burr, M. D., "Neurasthenia: The Traumatic Neuroses and Psychoses"; and Smith Ely Jelliffe, A. M., M. D., Ph. D., "Migraine, Neuralgia, Professional Spasms, Occupation Neuroses, Tetany, and Hysteria."

After reading, in the first chapter, the disturbances of the more complex physic processes, so well presented in such limited space, one regrets that the work does not include also mental diseases.

We are pleased to note the appearance of Tabes Dorsalis and General Paresis under the caption of "Syphilitic and Parasyphilitic Diseases of the Central Nervous System," where they justly belong.

In view of the fact that throughout the work modern methods of investigation and modern views on the subject treated are expressed by men of high rank in the field of neurology, this volume as a whole must prove an indispensable aid to the student of neurology and a worthy work of reference to the general practitioner. CAZENAVETTE.

Light Therapeutics, by J. H. KELLOGG, M. D. The Good Health Publishing Company, Battle Creek, Mich., 1910.

In this little volume the subject of the Therapeutics of Light is treated in a very full and comprehensive manner by the author, who has had a vast amount of experience with the use of light and other physical agents in the treatment of diseases.

As the title of the book implies, the discussion is limited to the effects and therapeutic uses of radient energy obtained from the sunlight, the arc light, and the incandescent lamps. In Chapter V the correct technique for the various applications of light is detailed. In Chapter VI the importance of combining hydrotherapy with light therapy in order to enhance the beneficial effects of the latter is forcibly brought out. This book will prove instructive and of interest to the general practitioner, and of special value to the superintendent of hospitals and sanitariums.

GRANGER.

Publications Received.

PROFESSIONAL PUBLISHING COMPANY. Philadelphia, 1910.

Practical Suggestions in Borderland Surgery, by Gustavus M. Blech, M. D.

PEACOCK CHEMICAL COMPANY. St. Louis, 1910.

An Epitome of the Diagnosis and Treatment of Nervous Diseases, Including Bromide Therapy, by Henry Irving Berger. M. D.

J. B. LIPPINCOTT COMPANY. Philadelphia and London, 1910.

International Clinics. Vol. II., Twentieth Series, 1910. By the Leading Members of the Medical Profession Throughout the World.

THE YEAR BOOK PUBLISHERS. Chicago, 1910.

General Medicine Series, edited by Frank Billings, M. S., M. D., and J. Salisbury, A. M., M. D. Vol. I, Practical Medicine Series.

General Surgery, edited by John B. Murphy, A. M., M. D., LL.D. Vol. II, Practical Medicine Series.

Eye, Ear, Nose and Throat, Vol. III, Practical Medicine Series. Edited by Casey A. Wood, C. M., M. D., D. C. L.; Albert H. Andrews, M. D., and Gustavus P. Head, M. D.

Miscellaneous.

The Evidence of Plague Infection Among Ground Squirrels, by Geo. W. McCoy, M. D. (Washington Government Printing Office, 1910.)

Report of the Board of Administrators of the Louisiana Hospital for the Insane of the State of Louisiana. Biennial Period, Ending March 31, 1910. (*The News-Advocate,* Official Journal, Baton Rouge, La.)

Studies Upon Anaphylaxis, With Special Reference to the Antibodies Concerned, by Jno. F. Anderson and W. H. Frost. (Laboratory Bulletin No. 64, Washington Government Printing Office.)

The Bleaching of Flour and the Effects of Nitrites on Certain Medicinal Substances, by Worth Hale (Hygienic Laboratory, Bulletin No. 68, Washington Government Printing Office.)

Reprints.

Bilharziasis in the New World, by Nelson D. Brayton, A. M., M. D.

Personal Observations on the Skin and Lesions of Pellagra; The Wassermann Reaction (Noguchi Modification) in Pellagra; A Case of Pellagra, by Howard Fox, M. D.

Junod's Blood Derivations, by Gustavus Werber, A. M., M. D.

Conjunctival and Other Reaction Tests to Tuberculin in Tuberculosis of the Eyeball and Its Adnexa; Cataract; Clinical Report of a Case of Herpes Zoster Ophthalmicus Involving the First Division of the Left Fifth Nerve; Transferred Ophthalmitis; George Cuvier Harlan, by Charles A. Oliver, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.

FOR JUNE 1910.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	6	7	13
Intermittent Fever (Malarial Cachexia)	1	.....	1
Smallpox	.....	.....	.....
Measles	7	2	9
Scarlet Fever	3	.....	3
Whooping Cough	1	.....	1
Diphtheria and Croup	1	.....	1
Influenza	2	3	5
Cholera Nostras	.....	.....	.....
Pyemia and Septicemia	.....	3	3
Tuberculosis	34	45	79
Cancer	18	6	24
Rheumatism and Gout	2	2	4
Diabetes	.....	.....	.....
Alcoholism	.....	1	1
Encephalitis and Meningitis	5	4	9
Locomotor Ataxia	.....	.....	.....
Congestion, Hemorrhage and Softening of Brain	20	6	26
Paralysis	3	3	6
Convulsions of Infants	.....	.....	.....
Other Diseases of Infancy	9	5	14
Tetanus	1	6	7
Other Nervous Diseases	6	2	8
Heart Diseases	35	27	62
Bronchitis	2	3	5
Pneumonia and Broncho-Pneumonia	9	23	32
Other Respiratory Diseases	3	3	6
Ulcer of Stomach	.....	1	1
Other Diseases of the Stomach	5	7	12
Diarrhea, Dysentery and Enteritis	55	34	89
Hernia, Intestinal Obstruction	2	1	3
Cirrhosis of Liver	6	5	11
Other Diseases of the Liver	3	1	4
Simple Peritonitis	.....	2	2
Appendicitis	2	.....	2
Bright's Disease	26	18	44
Other Genito-Urinary Diseases	1	3	4
Puerperal Diseases	3	3	6
Senile Debility	4	3	7
Suicide	4	.....	4
Injuries	18	14	32
All Other Causes	21	19	40
TOTAL	318	262	580

Still-born Children—White, 17; colored, 9; total, 26.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 14.03; colored, 31.12; total, 18.65.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 29.95

Mean temperature 79.00

Total precipitation ..... 9.46inches.

Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

VOL. LXIII. SEPTEMBER, 1910. No. 3

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Some Chronic or Recurring Diarrheas, their Diagnosis and Treatment.*

By J. T. HALSEY, M. D., New Orleans, La.

Among the many cases a physician meets with in his routine practice there are few which offer more serious difficulties than certain cases in which chronic or recurring diarrhea is the predominant symptom. It is for this reason that it has been decided to use this opportunity, so courteously granted, of discussing certain types of such cases, their diagnosis and treatment. Leaving out of this discussion those diarrheas accompanying or caused by such conditions as syphilis, tuberculosis, cardiac, renal, arterial or hepatic disease, there remains a large number of other cases due to various causes. Among these are a number due to intestinal parasites, of which I would mention especially the ameba, the hookworm and the strongyloides. Secondly, we find cases where the cause is to be sought in some general disease, such as secondary or pernicious

* Read before the Avoyelles Parish Medical Society, at their regular meeting, Cottonport, July 7, 1910.

anemias, or pellagra, or in a disordered state of the nervous system. As other causes we sometimes find deficient mouth or stomach digestion, faulty or abolished pancreas function, cancers and ulcers or chronic inflammation of the rectum or colon produced by a variety of pathogenic organisms, among which the various bacilli of dysentery (of Shiga, Flexner, et al.), of tuberculosis and the spirillum of syphilis are especially important. While the above list is by no means complete, I believe nothing will be gained on the present occasion by further extending it.

In many cases the diagnosis presents little difficulty, but in others all our resources will be taxed before success is attained, and at times we have, in spite of all, to content ourselves with a confession of ignorance. Passing over the matter of history, physical examination, and macroscopic examination of the stools as not profitable for present discussion, let us consider what other aids we may find available.

Four procedures are especially likely to be of value, namely: Microscopic and chemical examination of the feces, the examination of the rectum by finger and eye, the examination of the blood, microscopically and otherwise, and the examination of the stomach contents.

The ordinary examination of the blood with a differential count and hemoglobin determination so often gives either a diagnosis or a hint as to the further path to diagnosis that often this is the writer's first procedure after history, physical examination and inspection of stools have been attended to. Pernicious anemia, chronic malaria and severe secondary anemias are at once recognized or excluded, while an eosinophilia arouses a suspicion of the diarrhea being due to the presence of such intestinal parasites as hookworm, strongyloides, tenia or ameba. It must, however, be emphasized that any of these parasites may be present, although the eosinophiles are not found in abnormal numbers. Wassermann tests for syphilis, or agglutination tests with the various dysentery bacilli, will usually have to be made by laboratory experts, but, fortunately, are only rarely necessary.

The microscopic and chemical examination of the feces is a disagreeable job, and one we are too often tempted to shirk, but it is here that we most often get the sought-for information. Hookworm and certain other eggs, strongyloides, embryos and the ameba, when found, make clear the cause of the trouble, while in

other cases the finding of abnormal amounts of undigested meat fibres, of fat or of starch, or the presence, but more especially the absence, of blood, give valuable hints as to diagnosis and treatment. Several simple "stunts" make these examinations less disagreeable to carry out and more likely to give results. One is having the patient defecate directly into an ordinary screw-top preserve jar. Prior to a search for eggs, a small amount of feces should be rubbed up with a little water and strained through gauze. If none are found, this filtration should be diluted with water centrifugalized once or twice and the sediment then examined under the microscope.

Amebæ are to be sought in clumps of mucus. They are not difficult to find, and must be looked for frequently and in as fresh a stool as is obtainable. The stools following the taking of a saline purge are often especially rich in amebæ.

While the examination of the feces is disagreeable to the doctor, with the proctoscopic and digital examination of the rectum, it is especially the patient who finds it disagreeable. We all use vaginal specula freely and without hesitation, but for some reason the profession has looked on the rectal speculum as a tool for the specialist, and for him alone. This should not be. It is a simple instrument, easily used, either with electric illumination or with a head mirror and reflected light, and its employment often gives us both diagnosis and means of applying correct and efficient treatment, both local and general. Often a little mucus taken from the rectum through the speculum will be found swarming with amebæ, although repeated search of the stools has been fruitless. Especially in cases of diarrhea due to cancer will the proctoscope make early diagnosis possible. If tuberculosis or syphilis is suspected, a smear of a scraping from an ulcer may show the pathogenic organism and set all doubt at rest.

Examination of the stomach function by means of test meal and stomach tube is indicated in but few diarrheal cases, but in these few this method is invaluable, for there seems to be no doubt that in some cases a diarrhea is chiefly or entirely the result of faulty digestion in the stomach, and all treatment is unavailable until it is directed to this cause.

So much time has been occupied in discussing these methods of diagnosis that, as is so often the case, too little is left for treat-

ment, but in many of these cases we can decide on the treatment only after reaching a diagnosis.

In amebic dysentery a mild purge of magnesium sulphate should be given before starting with a course of ipecac, which is best given in freshly prepared salol coated pills, each containing five grains of powdered ipecac. The fasting patient should take of these from six to twelve, one every ten minutes, reducing the number one each day until the drug has been given for six days. At times it seems as if a magical cure had been performed, the amebæ disappearing and the stools becoming formed on the second day, and remaining normal thereafter. Other cases respond more slowly, and the treatment must be continued for longer periods. During the ipecac treatment the patient must be kept in bed, the diet should consist of broths, well-cooked gruels, buttermilk, whey, albumen water and gelatin, and should not be taken until about noon, two or three hours after the ipecac. Knowing the tendency of the amebæ to burrow deeply into the tissues, we must expect that some may not be reached by the drug and that recurrence will be not infrequent. To avoid this, if possible, I try to get my patients to repeat this cure every Sunday for one month, and then every second week for two months longer. When this routine has been followed out I have thus far seen no recurrences. Opium and other adjuvant measures may be used to control symptoms. In some cases only a certain amount of improvement follows this plan of treatment. Here the proctoscope often proves of great value, disclosing the presence of ulcers and permitting of local applications of silver or other astringent solutions. Copper sulfate enemata are highly praised by those who have used them in these cases, and quinin enemata should be given a trial if other measures fail. Careful feeding and administration of iron also appear to aid and hasten recovery in many instances.

The cases of diarrhea where strongyloides are present are a great puzzle to us in several particulars. The adult parasites are buried deeply in the wall of the upper gut, where they appear to be but slightly, if at all, affected by any medicines which we can give. However, the embryos are present in large numbers in the intestinal contents and are readily killed by a large number of substances, among which may be mentioned thymol, salol and calomel. We do not know how long the adult worm lives, but it is believed that the embryos constantly reinfect the host, either through the

mucus membrane of the intestine or, after reaching the exterior, through the skin. Our indication, therefore, is to try and prevent this reinfection by repeated small doses of the above-mentioned drugs and by careful washing of the anal region and the hands after each defecation, using a carbolic, bichloride or other antiseptic solution. Other treatment consists in proper diet and rest in bed as long as the diarrhea persists. Iron and tonics are often of value. Buttermilk or fermented milk have been of especial benefit in the writer's own cases. Astringent enemata often help.

The treatment of pellagra is again a field full of doubt and hesitation. Any full discussion would prolong still further a paper which has doubtless already taxed your patience. As to the symptom of diarrhea, however, it often yields temporarily to a mild purge of salts, calomel or castor oil.

In conclusion, brief mention should be made of those cases of so-called nervous diarrhea. In these patients the neurasthenia or neuropathic general condition is the cause of this symptom. Treatment directed towards the diarrhea alone brings at most but temporary benefit. A rest-cure, with gradually increased forced feeding, massage, hydrotherapy and psychotherapy, will almost always succeed in curing these cases, unless one be dealing with a patient whose nervous system is beyond repair. It must not be forgotten, moreover, that a diagnosis of nervous diarrhea is a diagnosis dangerous alike to patient's wellbeing and physician's reputation. All other causes should be rigidly and carefully excluded before making this diagnosis.

The "Methode Oxigenee"—A Clinical Study.

By A. DELCOURT, SR., M. D., Houma, La.

Under the heading, "Infection Due to the Bacillus Aerogenes Capsulatus," there has recently appeared in the *A. M. A. Journal* a very interesting article from two progressive and distinguished Boston surgeons, Drs. John Bapst Blake and Frank Lahey. This contribution, remarkable in many respects, offers the precious advantage of presenting, in a condensed form, all that which lays sparsely scattered in the literature on the subject, without conveying that comprehensive view so necessary to the student and the practitioner to help him out in urgent and critical emergencies. In

that respect particularly one cannot fail to acknowledge a distinct progress in the elucidation of this old and always vexed question of gaseous gangrene. It offers, furthermore, an occasion for calling once more attention to a class of surgical complications, by no means so rare in our days of asepsis and antisepsis, but on which, notwithstanding their gravity, and, at times, their dramatic features and their fearful results, the attention of the surgeons seems not to have been so closely centered as it ought to be. In this monograph the authors appear to dissent from the accepted denominations of "Gangrène Gazeuse," "Gangrène Foudroyante," "Phlegmonous Gangrene," as originally assigned to this dread complication, and would suggest to give it the name of *Bacillus* A. C. Infection, as taking its origin from the cause of the disease.

It has been always remarked, and generally accepted, that, so far as medical nomenclature is concerned, it was preferable to retain old denominations, however imperfectly they may adapt themselves to the medical conception of a disease, provided they seem to be accepted, as it were, by common agreement between scientists, and leave no room for confusion. The old denominations of "Gangrène Gazeuse," "Septicémie Gazeuse," "Gangrène Foudroyante," etc., are perfectly understood the world over to mean precisely that septic infection caused by anærobic bacilli, be they called vibrion septic of Pasteur or B. A. C. of Welch and Nuttal, and there is no possible confusion on that score. Moreover, those old denominations are more apt to picture to the sight and to portray to the mind that dreadful complication with all its results. When Maisonneuve met and described the first known case of this fateful disease it was really through a flash of genius, arising from the fulminating type he had before his eyes, that he gave it the name of "Gangrène Foudroyante," as by no other term could he express and picture the rapidity of the deadly process. And what other name to give to a case, such as it was given me to see some twenty years ago, when a man having been operated of an hydrocele by a simple puncture, that same evening a gaseous gangrene set in which rapidly invaded the abdomen. One could follow at sight, so to say, the progress of the gangrene. The unfortunate succumbed the next day. As to the treatment to be directed against such a fateful complication, the authors sum it up in one word; it is always operative. To quote from their monograph:

"Sometimes the operation will consist in the removal of stitches and allowing the wound to gape widely. Again it will require multiple incisions, and sometimes we must resort to amputations. There are other things to do in the way of treatment, but these are procedures which should be used as measures secondary or as adjuvants to the results obtained by one or more of the operative procedures.

"These secondary measures consist of frequent irrigations or sponging of the infected wound with hydrogen peroxid, the delivery of oxygen constantly into the wound from a catheter connected with an oxygen tank, or the submerging of an extremity in a constant soak, while a decision is made as to what more radical surgical treatment shall be instituted."

One of the authors, Dr. Frank H. Lahey, says he has tried to limit the extension of the process in animals by the proximal injection of hydrogen peroxid, but has done so only at the cost of the animal's life.

Such being the teachings of the American surgery, as disclosed and expounded in the monograph referred to, I would like, in the present communication, to relate somewhat in detail what has been professed and experimented in Brussels by Dr. Thiriar, professor of clinical and operative surgery at the Brussels University, and head surgeon of the St. Peter's Hospital in the same city. The world-wide reputation of Prof. Thiriar as a clinician and operator is well calculated to impart to his teachings and experiments an absolute confidence and an entire reliance on their results.

As early as 1893 and 1894 it was on record that Prof. Thiriar was experimenting, in his service at St. Peter's, with oxygen on varied suppurative and infectious surgical affections. Starting from the point that the bacillus of gaseous septicemia was essentially anaerobic, he thought that oxygen, properly administered and applied, ought to kill it. But, as this anaerobic bacillus develops itself in the depth of our tissues, at a place far removed from the oxygen of air and away from the action of our antiseptic agents, whose action is very weak and insufficient, the septic agent could not be actively combated and its deadly effects prevented or checked.

Well convinced, therefore, that oxygen only was capable of destroying the bacillus, he concluded that, to be effective, oxygen was to be injected directly through the infected tissues, while at the same time those tissues should be largely irrigated with hydrogen

peroxid, through wide and multiple incisions, as the case would require it. In injecting the oxygen through the tissues, be it noticed, the object is to create a vast oxygenated emphysema, not only in the infected region, but all around and away in the midst of the surrounding tissues. This is, summarily and briefly described, what Prof. Thiriar calls the *"Méthode Oxigénée."* He has successfully applied this method not only to the gaseous gangrene, but almost to all infectious surgical processes: infected wounds, phlegmonous abscesses, gaseous septicemia, erysipelas, tetanus, anthrax, gynecologic infections, exposed fractures, infections of serious cavities, etc., etc. The *'méthode oxigénée,'* while it attacks directly the various infectious microbes, acts mostly by imparting to the natural defenses of the organism a fresh strength and a renewed activity. Thus, on a last analysis, oxygen should be considered less as a microbicid than as an exciting agent of the defense: Phagocytosis, formation of anti-bodies. On that ground, it may be considered as an adjunct of asepsis. Born of the works of Metchnikoff, of Massard and Bordet, its chief object is to respect the natural defenses of the system, and to add to their power in their fight against infection; in one word, instead of impeding, to encourage phagocytosis.

Already J. Demoor, professor of biologic chemistry at Brussels University, has demonstrated in his laboratory researches the decisive action of the gas oxygen on cellular activity. He has showed conclusively that oxygen increased phagocytosis and possessed to a wonderful degree a power of positive chemotaxis; that he was to be considered as the purveyor of the organic defenses, while at the same time attenuating the virulence of certain microbes and destroying that of some other ones.

The clinical results agree entirely with the laboratory researches. All the local surgical infections, gaseous septicemia, phlegmonous or gangrenous abscesses, anthrax, etc., are promptly and successfully combated by the *'méthode oxigénée.'* Of course, the method needs to be applied according to certain rules. At first, Prof. Thiriar was using oxygen for too short a time, and its action on the infection was insufficient; but afterwards he used it as a permanent dressing—a rubber tube connected with an oxygen tank, a needle inserted through the tissues, and the oxygen current was kept up for several days if necessary.

As an illustration of the wonderful results obtained by the *'méthode oxigénée,'* I beg leave to report a case which has left in my already long medical career a durable souvenir.

When practicing in Brussels in 1895 I was one day summoned hurriedly for a man who had been buried under a landslip. When picked up from under a heap of limestones which covered him I found the poor man suffering from a comminuted fracture of the femur, with considerable laceration of the muscles and a profuse hemorrhage. After thoroughly cleansing the wound of the dirt and the clots of blood, and insuring as well as possible the asepsis of the parts, we applied a Scultet bandage and we exercised a slight extension by means of a long splint. Over the Scultet we managed to make a continuous irrigation of an antiseptic solution at the level of the fracture, and we watched for complications, which we knew were threatening. Everything went on satisfactorily for thirty-six hours. At the end of the second day the fever rose to 103°, and upon removing the bandage we found the limb swollen, the wound of a purplish color, with a special sweetish odor characteristic of the gangrene, and, upon pressure, a general crepitation, the bubbling of gases, and all over the surface of the thigh some greenish blebs full of a yellowish serosity.

My consulting confrère, better acquainted than I was myself with Prof. Thiriar's work on the *'méthode oxigénée,'* suggested the removal of our patient to St. Peter's. We accordingly had the patient removed to the hospital. Happily, Prof. Thiriar was at the amphitheater, and we could thus assist in the dressing of the wound. If anything, the limb was still in a worse condition than the day previous. Prof. Thiriar ordered a tank of oxygen; he inserted a large needle attached to a tube through the infected limb, and in a short while an oxygen emphysema was developed all around, while peroxid of hydrogen was applied as a dressing to the wound. The oxygen inflation was kept up for five days, without interruption; but already, on the second day, the gangrenous fetor had greatly diminished, the bluish appearance of the wound had taken on a healthy look and color, and inside of a week the limb was entirely disinfected. There was hardly any suppuration, and the patient, henceforth, pursued an uneventful recovery. If ever there was an ugly and threateningly developed case of gaseous septicemia, accumulating, as it were, all the necessary requirements for a fatal termination, this was surely one—a compound fracture, with com-

plete laceration of the flesh; an open wound with a profuse hemorrhage, which meant, besides the septic retention of blood, a momentary lack of a healthy circulation; and, to cap the climax, the untimely delay of the oxygen treatment to the third day, till the explosion of the gangrenous accidents. All this must, in all fairness, be considered as a cumulative association of adverse conditions tending to a fatal termination by gaseous septicemia.

To my knowledge, a great many cases like this one could be adduced, alike from Prof. Thiriar's service and from other hospitals, as well as from private practice. The method has been made the object of successive communications from Prof. Thiriar to the Belgian Academy of Medicine, with the full endorsement of that scientific body after a profound and prolonged discussion. The *'méthode oxigénée* has thus received the consecration of universal practice in Belgium for the last fifteen years.

But Prof. Thiriar did not limit his experiments only to the gaseous gangrene. Encouraged by his success in that line, he soon was prompted to apply the same method to various other surgical infections. After many years of observation and experimentation on a large surgical field, he had reached the conviction that the *'méthode oxigénée'* should be given a prominent place in the therapeutics of surgical accidents. He pointed out that its indications were so multiple and varied as to successfully apply to most infectious processes and to infectious wounds from whatever causes, and irrespective of the nature of the offending bacteria. Under the cover and protection of this method, time is allowed for postponing more serious surgical interventions, and at the same time for removing from the focus offending and gangrenous parts, and trusting, with some measure of security, to nature's recuperative resources.

One of the most happy applications of the *'méthode oxigénée'* was made in connection with the suppurative arthritis of the knee joint. As every one knows, such is the gravity of these surgical affections that amputation is but too often the last available resource, and that even Poncet, of Lyons, was still recently advocating, in such cases, an early resection. Notwithstanding the gravity of the cases and the necessity of large arthrotomic interventions, in a comparatively short while a cure is effected, with the preservation of the full use of the joint. The same happy results are obtained from the application of the *'méthode oxigénée'* to the infection of serous

membranes. Tuberculous peritonitis is commonly treated and cured in Prof. Thiriar's service at St. Peter's. The same applies to purulent pleurisy and purulent peritonitis, as well as to suppurative and infectious appendicitis. The permanent injection of oxygen has soon gained mastery over those dread affections.

The gynecologic cases with staphylococcic or streptococcic infections yield rapidly to the same treatment. A catheter introduced through the uterus and a stream of oxygen applied for a few hours or for a few days, as the case may be, will soon dispose of most of the infectious secretions. The gonococcus, however, resists oxygen, and requires a special treatment—sublimate, nitrate of silver or tincture of iodin. The result is particularly remarkable in cases of retention of the placenta, after the uterus has been previously curetted and disinfected with ordinary antiseptic intra-uterine injections. Women with temperatures of 104° and 105°, bearing in their features all the aggravated symptoms of infection, revive rapidly under the influence of oxygen. But the triumph of oxygen belongs to the treatment of phlegmons of the hands and fingers after free opening, and to that of furuncles and carbuncles. The same potent therapeusis obtains with other infectious affections, such as phlegmonous abscesses, gangrenous erysipelas, where the continuous injection of oxygen and the prolonged dressing with peroxid, after incision, cleansing and removing of all offending material, brings about, in a wonderfully short space of time, the complete disinfection and the healing process of all the infected areas. According to Prof. Thiriar, the *'méthode oxigénée'* seems, however, powerless, or, at least, only moderately active against generalized infections, like pyohemia and general septicemia. Nevertheless, some useful action might still be derived from intravenous injection of oxygen. Some experiments from Goertner and Marioni would tend to show, at any rate, that the intravenous injection of oxygen is absolutely devoid of danger and free from gaseous embolism, as might have been feared and anticipated.

CONCLUSIONS.—From the foregoing, and from many other observations it would be useless to report here, the conclusion may be drawn that oxygen (gas and peroxid of hydrogen) is an antispetic and an antibactericide of first order, superior to those actually used, having no odor and no toxicity. It is specially powerful and specific against infection produced by anaerobic bacteria, and represents our best, and very likely our only, efficacious

weapon against gaseous gangrene. It is, moreover, a most precious and harmless agent against common suppuration and ordinary infections, irrespective of the offending bacteria. Most of all, those common infections of the cutaneous integument, be they streptococcic or staphylococcic, vanish, as if by magic, before a few peroxid of hydrogen applications.

And now, to draw a general conclusion, one that summarizes and at the same time serves to explain up the wonderful agency of the *'méthode oxigénée,'* let us say that it completes happily and strengthens up asepsis, helping, as it does, the living organism in its self-defense, in its fight and struggle against the microbic invasion. It subserves and protects phagocytosis, and reinforces all the natural defenses of the system.

The application to biology of the laws and the methods of physical chemistry keeps in store for us the explanation of many phenomena hitherto impenetrable to our conceptions. One cannot help being led to believe, or at least to suppose, with some plausible reason, that oxygen introduced *en masse* into the body leads to increased oxidation capacity of the cells, and conduces thereby to increased phagocytosis, to the production of antibodies, hemolysins, bacteriolysins, and of that host of natural defenses which the blood carries with it through the tissues.

In this, very likely, lies the secret of the action of the *'méthode oxigénée.'*

Injuries to Nerves of the Upper Extremity*

By E. M. HUMMEL, M. D., New Orleans, La.

Having recently encountered, in consultation at the hospital, two cases of injury to nerves of the upper extremity in which the circumstances surrounding the accident were somewhat singular, and the results of the injury confusing and difficult of explanation, it occurred to me that a review of the subject of traumatism to the nerve trunks of the arm, forearm and hand, might prove of interest.

In order to discriminate correctly between loss of function in the respective nerve trunks one must, of course, have at his command perfect knowledge of the course and motor and sensory distribution of the nerves in question. This is simply a question of anatomical knowledge. However, what is perhaps more important,

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is to be able to distinguish what degree of electrical reaction of degeneration is present, for upon this rests, more than any other information, the prognosis.

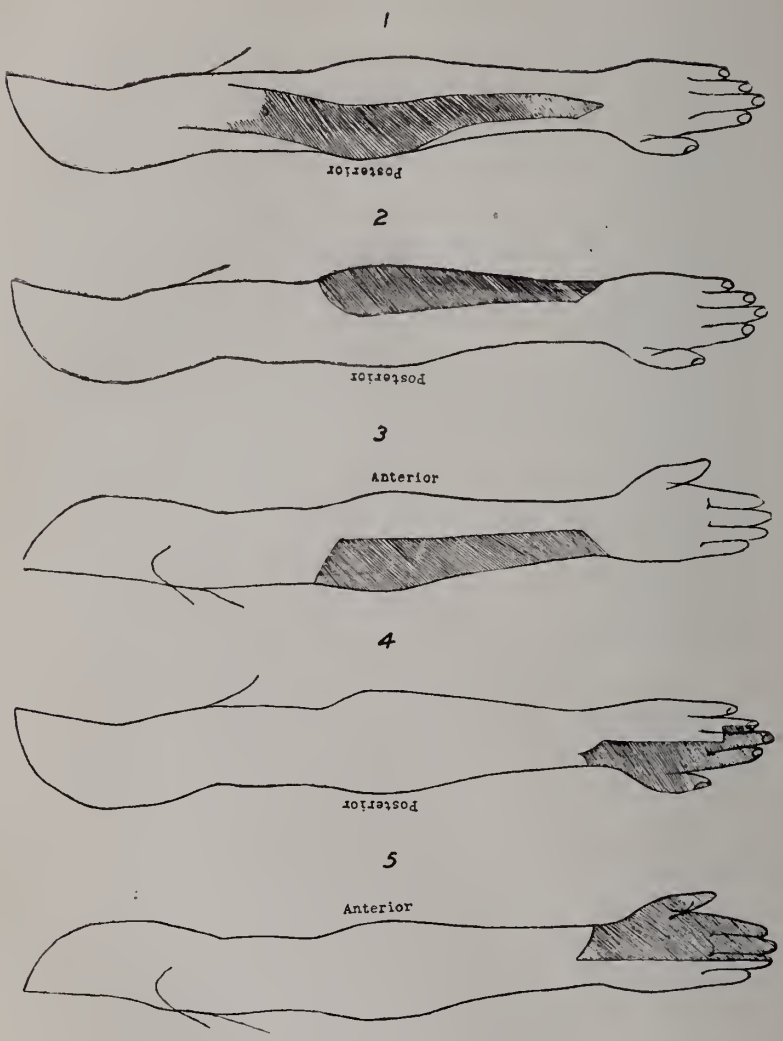
I will review the history of the first case encountered, and retrace the steps by which we arrived at the diagnosis. The patient, admitted to Ward 10 of the Charity Hospital May 16, 1910, was a mulatto man, aged 38, single, employed in a turpentine camp in a remote country district. There was nothing of any note in the previous history, except his habit of drinking all the crude whiskey he could contain on Saturday nights and Sundays, when not at work. He had been accustomed to indulge this habit for several years, but no consequent effect on the nervous system was noticeable. On April 24, while drunk, he was cut on the outer aspect of the middle third of the left arm by a companion during a little unpleasantness. The patient was so much under the influence of alcohol that he was, when examined by us, totally amnesic for what happened, except the circumstance of having been cut and later taken to a doctor a number of miles away. He remembers that when he came to his better senses on the following day the arm was somewhat swollen, numb, and totally helpless—as it has remained since. At the time I first saw him there was total paralysis to voluntary motion in the muscles of the arm, forearm and hand.

Two questions presented for solution: (1) Inasmuch as the position of the wound was such as to make it possible that the trunk of the musculo-spiral nerve was severed, this question had to be determined; and (2) whether the first supposition were true or not, might not this be a hysterical paralysis excited by trauma? Examination of sensation showed slight diminution of sense to touch and pain over the whole skin surface of the involved extremity below the junction of the upper and middle thirds of the arm. There was slight difference in the size of the two arms and forearms, the measurements being 25½ c. m. on right forearm, 24 c. m. on left, and 26½ c. m. on right arm, 24½ c. m. on left. The electrical reactions showed partial RD in all the muscles of the involved hand and forearm of moderate degree. The same difference was found in the muscles of the arm, excepting the outer head of the triceps, which was only slightly involved. The deltoid was practically normal. This convinced us that all the nerves of the extremity had been injured in a uniform way at the upper third of the arm, and that none of them had been completely interrupted

in their function. These findings at once answered the above questions in the negative. Noticing a slight pigmented mark around the arm at the junction of the upper and middle thirds, we came to the conclusion that a tourniquet had been applied above the wound to stop the hemorrhage until the man could be gotten to a physician. Later we found out, on questioning the patient, that some eight hours elapsed between the time of reception of the wound and arrival at the physician's office. The results of the electrical examination and the force of circumstantial evidence made out the case to the effect that this man had had a pressure neuritis of all the nerves of the upper extremity inflicted by the tight application of a constrictor to control hemorrhage, and that none of the important nerve trunks had been severed by the wound. The distribution and degree of the injury was put beyond question by the electrical reactions. Thus were we enabled to discard the suspicion that the musculo-spiral nerve had been severed, and to adopt proper treatment to the involved nerves, and finally to give a favorable prognosis as to recovery.

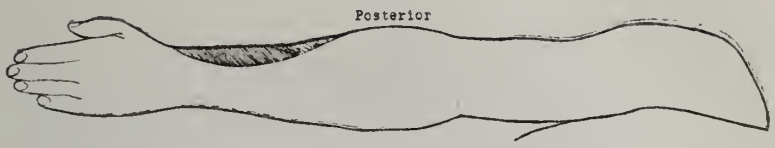
The second case is that of a colored man, aged 23, swamp laborer, single, admitted to Ward 4½, May 10, 1910. Previous history is unimportant. On March 31, 1910, patient was struck on the right arm by the limb of a falling tree, sustaining a fracture of the middle third of the humerus. The fracture was splinted on the following day and remained so for fifteen days. During this time the patient suffered great pain in the arm and below the site of fracture. The hand and forearm became greatly swollen, and at the time of examination a scar apparently from a slough was noticed on the outer side of the forearm. Since the time of removal of first splint the arm and forearm, as well as the hand, have been numb and utterly helpless. Another splint was subsequently applied, which, however, occasioned the patient no pain or discomfort. He was admitted to the hospital for the helpless condition of the arm, the fracture having by this time healed. A few days before the time of my examination the patient, while washing the affected hand, burned it severely in hot water without feeling pain.

Examination showed almost total abolition of all three kinds of sensation in the two lower thirds of the forearm and hand. There was little perceptible wasting of the limb. Electrical reaction in the muscles of the extremity showed a severe degree of RD in all the muscles of the arm, forearm and hand. The reaction was, however



1 —Sensory distribution of musculo-spiral.
2 and 3—Sensory distribution of internal cutaneous.
4 and 5—Sensory distribution of median nerve.
ILLUSTRATING DR. HUMMEL'S ARTICLE.

6



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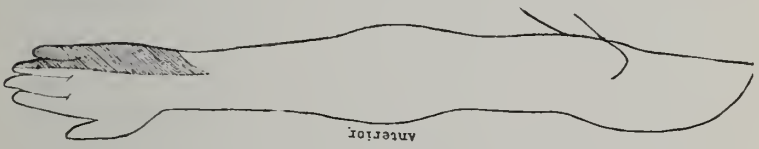
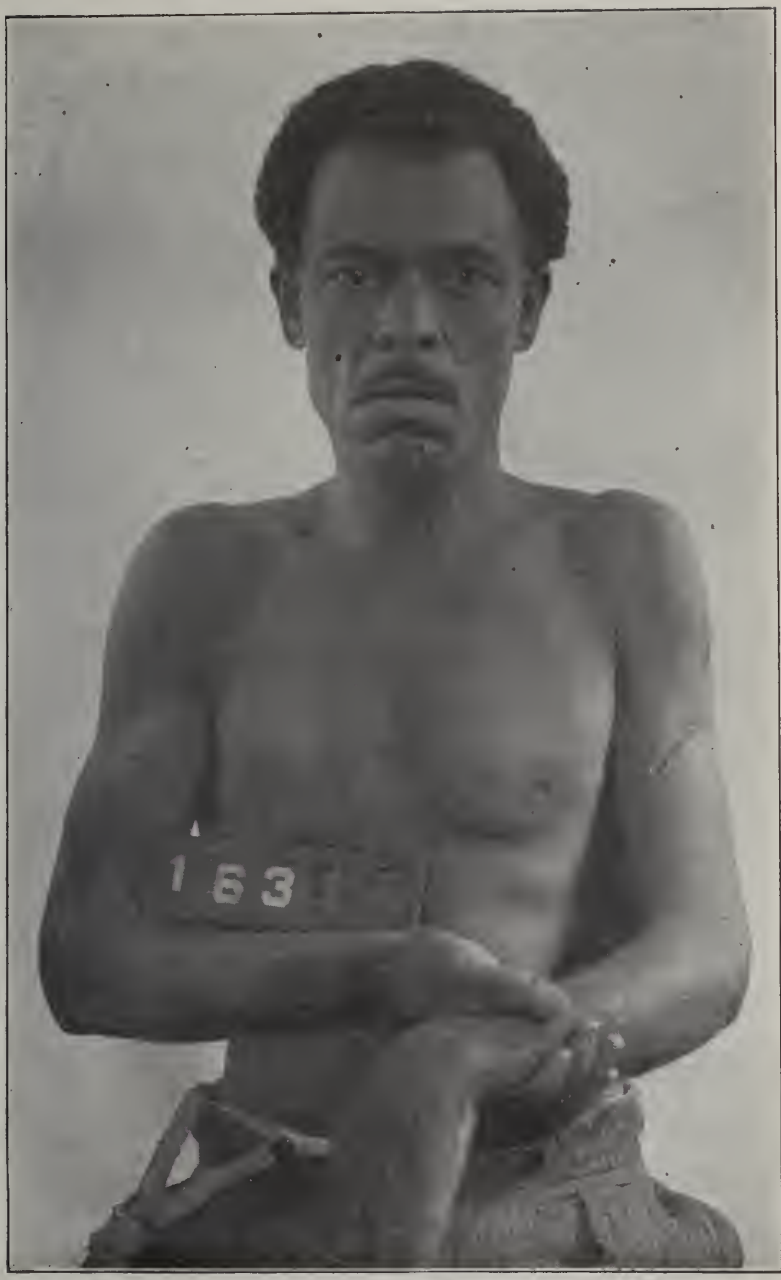


6 and 7—Sensory distribution of musculo-cutaneous.
8 and 9—Sensory distribution of ulnar nerve.
ILLUSTRATING DR. HUMMEL'S ARTICLE.



ILLUSTRATING DR. HUMMEL'S ARTICLE.

not complete, as some response could be elicited by strong faradism; galvanism gave rather plus response and the poles were equal.

The question again at issue was whether the musculo-spiral nerve had been ruptured at the time of fracture of the humerus. Inasmuch as the electrical tests of this nerve and its muscles disclosed incomplete RD, and similar involvement of the other nerve trunks, we were enabled to give a negative answer to the question as to the possible rupture of the musculo-spiral, and to say that all the nerves were involved in a severe neuritis from injury somewhere in the peripheral neurone. The statements of the patient as to swelling and pain in the member after the application of the first splint made it sufficiently obvious that the arm had been too severely constricted by the bandage securing the upper part of splint, producing a severe pressure neuritis. Normal conditions of sensation and motion above the site of binding made this inference conclusive. Evidence furnished by the electrical tests further enabled us to predict recovery in from six to eight months.

It will be seen, then, that the determination of the severity and distribution of injuries to the nerves of the upper extremity is often a matter of some intricacy, under conditions like these, and require patience, some anatomical knowledge, and an intelligent interpretation of electrical reactions. But perhaps the greatest of these is the proper diagnostic use of electricity.

As to the muscle groups supplied by the four grand nerve trunks of the upper extremity, a little reflection or reference to books of anatomy will establish their motor distribution.

In the lantern slides which are to follow I have indicated the sensory distribution of the several important nerves to the arm, forearm and hand. These are shown in conclusion, and will I trust, aid in recalling to mind the areas of skin involved in sensory disturbances when individual nerves are implicated. The designs are slightly modified from Hasse's *Hand-Atlas der Hirn und Ruckenmarksnerren in ihren Sensiblen und Motorischen Gebieten.* These pictures only apply in instances of injury at the junction of the middle and upper thirds of the arm.

The photograph, however, is used to show the position of the wound, and how impossible it would have been for this incision to have included the nerve trunks in such a manner as to produce the paralysis present.

I have the pleasure to express my thanks to Drs. Gessner and McGuire, into whose service these cases were admitted, and to whom I am indebted for the permission of making these reports. I am also indebted to Dr. Lassiter for kindness in securing photograph of the patient.

Observation on the Treatment of Compound Fracture of the Femur and Leg.

By L. SEXTON, M. D., New Orleans.

Before the surgeon can determine what to do in a given case of compound fracture of the lower extremities, it is essential that he should learn the exact condition of the blood vessels, skin, muscles, joints and nerves contiguous to the fracture.

Very often when the skin seems only moderately bruised or injured the underlying soft parts are almost pulpified. Again, when there seems to be very little oozing from the opening through the skin, there may be a considerable amount of clotted blood and concealed hemorrhage in the soft parts. The first indication to be met is the control of shock and hemorrhage, provided the injury is a crushing wound involving extensively the nerves and blood vessels connected with the part.

The limb and wound should be cleansed as carefully as if a laparotomy were to be performed, then coaptation of the fractured ends, and proper reduction should be accomplished; usually this is best done under an anesthetic. See that the fracture wound is well drained, and from the most dependent parts.

Immobilization, after proper reduction, is the next point to be considered in the treatment of these injuries.

When to Amputate.—In extensively comminuted fractures, the best discriminating judgment of the surgeon is required to determine as to whether amputation should be done or not. As a matter of course, it is impossible to have fixed or set rules, as every case must be a law unto itself, and if the blood vessels are at all intact which supply the extremity there can be no harm in delaying the operation until shock has been treated, reaction taken place and the possibility of saving the limb determined. In other words, whenever there is a doubt, give the patient the benefit of this doubt.

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* Read before Orleans Parish Medical Society, June 13, 1910.

as a limb once amputated can certainly never be restored, and even a distorted, shortened limb is very often preferable to an artificial one.

Of course, when large joints have been crushed and the arterial supply shut off, or when the limb is so comminuted that gangrene is likely to follow, amputation may be demanded in order to properly arrest the hemorrhage, prevent shock and save the patient's life. This amputation, however, is best deferred until reaction has taken place (say from ten to twenty-four hours), unless the limb is so crushed that practically a scissors amputation and catching up the blood vessels is all that is necessary, until the patient recovers from the shock, as the increased amount of shock and loss of blood produced by an immediate amputation might turn the scales against him.

In the cases which are less severe, in which conservative treatment dictates that we should try to save the limb (and it is very often possible to save limbs that look hopeless, particularly if the blood supply is not destroyed), the actual traumatism should be covered with moist aseptic gauze. Moist outside dressings serve the double purpose of capillary attraction, absorbing the serum, and protecting the underlying structure from infection.

The limb should be shaved and lightly scrubbed with some cleansing soap. Peroxid of hydrogen, 50 per cent solution, at 100 degrees Fh., should be poured into the wound so as to let the oxidation or mixture of the blood with the peroxid of hydrogen boil out any foreign substances which the original injury may have forced into the wound.

It must always be remembered that some bactericides are corrosive in their effect upon the mangled, bruised tissues of a compound fracture.

In bandaging these cases at the first dressing we should pad, always making due allowance for swelling. The bandaging should start at the foot and be gradually brought up, covering the entire leg with sufficient padding to allow for swelling and to prevent pain.

In compound fractures, septic material is usually forced into the wound at the time of the accident. The bruised muscles serum and heat of the body furnish the very best medium for germ development. Nothing interferes so much with healthy callus and the proper union of bone as keeping the ends of the fracture con-

tinuously in a bath of pus. All such secretions should be washed or wiped away as soon as they accumulate.

These points are mentioned to accentuate the importance and necessity of preventing this first bacterial infection at the primary dressing.

If many blood clots adhere, and much grime or foreign material has been forced into the wound, it may be necessary to pour in considerable quantities of hot sterile solution, enlarging the wound so as to wash out these foreign elements, which might later produce infection. The small spicula of bone, particularly if they have any periosteal attachment, should be left in place; sharp bones or edges of bone which are likely to cut through the skin should be smoothed off with bone forceps.

If the fracture is in the middle of the femur and coaptation is difficult to secure, as proven by the X-ray quite a number of surgeons are drifting towards the treatment of cutting down immediately upon the broken ends, drilling the bones and securing their coaptation by either silver or iron wire, or putting in silver plates with screws attached so as to hold the bones immediately in apposition.

If the wiring is objected to, the twenty-day chromicized catgut or kangaroo tendon will at least hold the parts together until a callus is formed. They obviate the necessity of having to cut down and remove any foreign substance, as is sometimes the case when any metalic material is used.

If there is a good arterial supply, and not too much shock, the fixation by plates is a very satisfactory way of keeping the bones in apposition after they are once reduced, but requires an experienced surgeon to apply these plates properly.

Before closing up the wound it is well to stitch the periosteum over the fractured ends of the bone, provided it is not actually destroyed, as it is from the periosteum that the callus is hardened and the future good use of the bone secured.

As a matter of course, we should also be careful that no capsule, tendon or muscle intervenes between the fractured ends of the bone. The torn tendons near the joints should be united by suture, as should the nerve trunks. In these large wounds there is such an amount of oozing that it is much better to leave in small drians, as said before, in the most dependent portion of the wound, or in some instances to produce stab wounds through the limb on the

opposite side to the main blood vessels and nerves. This small drain, or gauze wick, may be easily removed after the first twenty-four or forty-eight hours.

Different surgeons have different methods of immobilizing these fractures, as with the plaster of Paris, Liston or Hodgin's splint, cradle-wire splint, or sand-bags on either side, with extension; but it matters not what method is used to immobilize the parts, the limb is better suspended, if possible, after the dressing is applied.

Where it is not convenient to have a fracture-bed, one can be improvised by laying twelve-inch boards or a door between the mattress so as to give the ordinary bed the firmness of a hospital fracture-bed.

From our usual hospital beds, or from the ceiling the limb can be suspended with comparative ease, and the great advantage of having the limb movable in this swing is that it is much easier and more comfortable for the patient to move himself about in bed and the approximation of the fragments is more easily kept in position than when the distal end of the extremity is laying as a dead weight on the bed, from which the principal or proximal end of the fracture is withdrawn each time the patient moves in bed or changes his position. If the two fragments of bone are to be held by wire it is better that the wire be put through and through the bone, instead of through a portion of it. Some have advocated iron over silver wire as the material to be used, because of iron being an element of the body, while silver is not. The silver wire is certainly non-irritating and easier to handle, but with the iron I have had no experience.

If the injury to the soft part is something like the cut or gash exposing the bone for a great distance, it might be prudent to stitch the soft parts after the bones have been properly approximated and held together.

In other cases it is as well, or better, to keep the wound open for free drainage, permitting it to heal by granulation. As said before, wherever muscles, tendons or nerves are ruptured, they should be sutured before the wound is closed.

Bruised and comminuted bits of muscles, fascia and small separated pieces of bone with no periosteum should be removed. If there is no rise of temperature, this first dressing and splint may be left on for five or six days before it is changed, unless the wound dressing is blood-soaked.

Dan G., age 40, had his right femur fractured about a year ago. He had never had any serious sickness or blood disorder, was well-nourished, but the femur, after eight months of treatment, application of plaster of Paris dressing four times, had failed to unite. His limb was frail, could bear no weight upon it, so it was determined to cut down upon the two ends of the bone, freshen them and wire them, to see if his condition could not be improved. After rendering the parts thoroughly aseptic, an incision six inches long was made down through the extensor muscles to the periosteum.

The upper segment of the humerus was found to overlap the lower segment for the space of two or three inches, the two being separated by intervening soft parts. It had remained in this position so long (the two ends of the bone being separated by a soft tissue) that it was nearly impossible by extension to bring the two ends in apposition; so, with great effort, a Gigli chain saw was passed around the ends of the bone, being held firm by bone forceps; the ends of the bone were sawed off. With a drill an opening, passing through and through the bone, was made; a periosteal flap having been turned back, wire was introduced and the two bones brought into close approximation.

A long Lister splint was applied, the leg properly padded, a hard fracture-bed being arranged, with sand-bags on either side of the limb, the dressing was complete.

Being treated at a hospital ward with numerous pus cases, the wound became infected, which we cleansed by aseptic injections, carefully draining the part. After two months of this continuous attention, we succeeded in discharging the case cured.

I herewith present an X-ray picture showing the result of the union. The man has had a physiologically good result, with not more than one inch of shortening. Since leaving the hospital he has been able to earn his living.

Conclusions.—Splints should be firm and not too heavy, applied so that the wound can be exposed, and bandaging should be firm, but not tight.

The first aseptic dressing often lays the foundation to a splendid recovery. An anesthetic and X-ray should be utilized whenever possible, both to aid in the diagnosis and treatment of a compound fracture.

Bad results from fractured bones are the cause of 50 per cent of damage suits against doctors.

A fracture is in the province of surgery, and its treatment should not be attempted except by those carefully trained in the management of such cases, unless no such trained help can be procured.

Surgeons, to properly adapt splints, should be of a mechanical bent of mind, and the simpler and less cumbersome the splint that will hold the bone in position the better for the patient.

Many ambulatory and air-cushion splints are not feasible on account of their excessive weight and bungling appearance. Sandbags are invaluable in holding a limb in position; they act very much as the trough or box splint, which was originally a very popular method of treating these fractures. It is almost impossible to get a proper idea of the exact apposition of fractured ends, even after they are reduced, except by an X-ray photograph, which should be taken in all cases where it is possible to get the aid of such a device.

There is no doubt but that in suturing and using bone plates more traumatism is produced, with more likelihood of infection.

To the surgeon accustomed to operating occasionally, as circumstances demand, wiring will be found easier than the plate method.

Primary Carcinoma of the Body of Uterus.*

By M. A. SHLENKER, M. D., New Orleans.

In presenting this paper for your consideration this evening I have nothing new or original to offer. My object is, in the main, to report an interesting case and to call your attention to the extremely favorable prognosis in early operation for this comparatively rare condition, which is so often overlooked.

There is little to be gleaned from the writings on this condition of any country (so says Ballard) prior to 1890. The subject of primary carcinoma of the body of the uterus, with the literature on the subject, was thoroughly reviewed by Ballard in *Surgery, Gynecology and Obstetrics* in 1908, in an extremely comprehensive manner, and from his writings I shall quote a few interesting facts. Of 686 cases collected by Blau, Eppinger, Szukit and Willigh he finds only thirteen cases in which the body of the uterus was primarily affected—showing the occurrence to be less than 2½ per

* Read before Orleans Parish Medical Society, June 27, 1910.

cent of all cases. Though these figures are not in accord with Gebhardt, who states that the body is affected primarily in about 6 per cent of the cases, and this statement agrees with Wilson, of London, who wrote on the subject in 1904. About 60 per cent of the cases occur after the menopause, and 50 per cent of these women are sterile. It occurs much later in life than cancer of the cervix, usually between fifty and sixty years, and it attacks parous as well as multiparous women, though the latter more frequently than the former.

"Penrose says that cancer of the body of the uterus is a rare disease in comparison with cancer of the cervix," and quotes Schroeder, who says that it occurs in about 2 per cent of all cases of cancer of this organ; but these figures are a trifle too low, for now this disease is becoming more readily recognized and a diagnosis made.

Kelly (page 311) says: "Adenocarcinoma of the body is of slow growth, sometimes running a course of five years from the initial symptom; it is further remarkable that the slight tendency to pass beyond the limits of the uterine body to invade either the surrounding parametrium or the cerxiv below."

The malignant growths of the body of the uterus are much slower and the symptoms much less pronounced than is the case when the cervix is involved, nor do metastases occur as readily, and recurrences are comparatively rare when operated sufficiently early. This disease occurs with equal frequency in the white and colored races.

Carcinoma of the body of the uterus usually appears in two forms. The first takes the form of an alveola carcinoma, and arises by extension of the lamina of the gland, and the infiltration of the latter with epithelium. In the other and more rare types there is a growth of pavement epithelium upon the upper surface of the body of the uterus and upon the cervix, and it has a tendency to send cones into the depths of the tissues (Ballard). The failure to recognize this condition early results in an extension laterally, anteriorly and, less often, posteriorly, involving surrounding organs and tissues. The growth that most frequently occurs has its origin in the endometrium, and from there tends to spread. The iliac glands are usually not affected until the disease has affected the broad ligaments.

Hemorrhage is usually the first symptom that causes the patient to consult a physician, and is often the result of an injury to the diseased tissues. Unfortunately, if the menopause has not already been reached, the hemorrhage is attributed to that condition, and a more thorough investigation of the cause is delayed. This loss of blood is slight at first, but usually becomes more pronounced as the disease advances, and it is frequently provoked by exertion of any kind—such as straining at stool, coitus, or any vigorous exercise.

The uterine discharge varies with the progress of the disease. At first it is without odor, and watery, and, as the disease progresses, the discharge becomes bloody and has a bad, nauseating odor, which is a characteristic of the condition.

The pain is rarely present at the beginning, though in the latter stages of the disease, especially when involving the corporeal portion, there are often sharp, lancinating pains, which are due to pressure on the nerve structures.

As the disease progresses the tissue breaks down, and may begin to slough, which not infrequently produces a pelvic lymphangitis or salpingitis. Vesical symptoms may manifest themselves by frequent urinations, dysuria, and later ulcerative processes. Cachexia is, unfortunately, a late symptom and is manifested by the yellow, pasty color associated with progressive emaciation and weakness. This condition comes during the last stages of the disease and when it is too late to offer a favorable field for operation.

The prognosis in these cases is extremely favorable when the condition is recognized early, and before metastases occur, but unfortunately the symptoms are usually not great enough to arouse the suspicion of the attending physician. It is not necessary to have all the text-book symptoms of a uterine cancer to investigate the condition of this organ. When there is an enlarged uterus, with an irregular bleeding, we should at once look for the causation of same—if necessary by curetting the uterus early and having the scrapings examined by a competent pathologist. The diagnosis once made, the treatment should be surgical, with a medical extirpation of the organ with its adnexa.

I beg to present the following case, which I consider of unusual interest.

White; age 38; housework; Hungarian. Family history and previous history very indefinite, owing to the fact that the patient does not speak English.

She has been married and had children. Her menstruation, from her statement, has always been regular up until about six weeks ago, from which time she has not had her periods, though there was a constant leucorrheal discharge. She seemed to be fairly well nourished; her abdomen slightly protuberant. She complained of vague pains in the stomach.

Examination: Patient has a sallow complexion, and seems to act strangely. A tumor the size of fetal head could be palpated through the abdomen.

On vaginal examination found the cervix apparently normal, as well as the adnexa. The tumor was regular in outline. She denied the possibility of pregnancy. The uterus corresponded with a three months' pregnancy, and was of semi-solid consistency. The character of the tumor made me suspicious of pregnancy, but, believing her statement that there was no possibility of same (owing to the failure to find the original history sheets the exact date of the operation must be omitted), I decided to operate the following day, and I had the interne prepare her for curettage and laparotomy, concluding that she had a tumor of the uterus of doubtful nature.

I concluded to do a curettage first, and on introducing the sound into the uterine cavity I was horrified to see the sound enter seven inches into the uterine cavity. Fearing that I had been misled, and that the woman was pregnant, I immediately ordered her returned to the ward, and informed the interne that I anticipated that she would abort within the next twenty-four hours, and, should there be any marked uterine contraction, to give morphin and viburnum. The same evening the interne reported that the woman was bleeding and suffering with uterine contractions, but so far had not expelled anything. She continued to spot freely for the next twenty-four hours; meantime her condition appeared to be growing worse, as she was now running a rather high temperature.

Fearing a septic condition from retained products within the uterine cavity, I ordered her prepared for curettage—which I did the following day. To my surprise, in curetting the uterus, I found, instead of a fetus, only an exuberant growth of the membrane lining the uterine cavity; especially was this marked on the upper part of the fundus. These scrapings were examined, and, to my surprise, the report from the pathologist was that the case was one of adeno-carcinoma.

After the curettage her temperature returned to normal, though the discharge, which was somewhat offensive, was now more profuse and it was of a different character from that previous to the operation. She seemed to grow cachectic and visibly much worse; so several days afterwards I concluded to do a hysterectomy. On opening the abdominal cavity I found a large uterus, regular in outline, and of a very soft consistency. It corresponded in size to an eight weeks' pregnancy. I proceeded to perform a panhysterectomy in the usual manner.

With the exception of a suppurating abdominal wound, the woman made an uneventful recovery. This operation was done in October, 1908, and only a few days ago she was out at the hospital paying a social visit to the Sister in charge of the ward in which she had been.

I present you herewith the specimen, with the pathological report kindly studied by Dr. Pothier (Specimen Number 1931 from Ward 43, Bed 598, tissue taken from Alexandra Mackewana, tissue sent Oct. 5, 1908), which is as follows:

Gross Description: Specimen measures 9x9 cm. On section walls measure 2 cm. The endometrium appears thickened and presents what appears to be granulations in the fundus and the cornea, surface is apparently normal. About the center of the cavity of the uterus is a nodule, measuring about 5 mm.x6 mm., which is elevated, granular, and in that neighborhood the mucus membrane seems to be higher than any other portions of the body. Blocks taken from the above portion for microscopical examination.

Examination of tissue found body of uterus infiltrated with round cells. The cells are grouped, forming islands, and they are epithelial in character. This infiltration extends throughout the body of the organ. On examining mucous membrane, find proliferation of the glandular epithelium, with infiltration of the surrounding tissue with epithelium. Some of the glands are entirely occluded by the proliferated epithelium, the muscular structure below mucous membrane shows marked infiltration and proliferation of epithelial cells. Specimen is one of adeno carcinoma. Specimen preserved in Kiserling for Museum.

Louisiana State Medical Society Proceedings.

Edited by Publication Committee.
Dr. Joseph D. Martin, Chairman, 141 Elk Place, New Orleans, La.

Dr. Henry N. Blum, of New Orleans, read a paper entitled

A Few Things in Ophthalmology Which Every General Practitioner Should Know.

As its title indicates, this paper is intended for the guidance of the general practitioner, and especially for those doctors living in rural districts. Nowadays, even in small towns of several thousand people, there is usually at least one doctor who has paid some attention to diseases of the eye, but in the country districts there is no specialist to whom patients suffering from such diseases may be sent for treatment. City physicians do not take more interest in ophthalmology than country doctors, but they have the advantage of expert advice near by.

In years gone by medical students attended eye-clinics during their under-graduate days in only a perfunctory sort of way, and it was possible for a student to pass his final examination without even ever having seen an eye. What he knew about this organ was only incomplete information concerning its anatomy and physiology, and that rose water was not necessarily always a curative agent. This condition no longer exists, however, for, along with improvement in medical teaching in other departments, the eye has claimed more attention, and as a consequence our recent graduates have been required to show a livelier interest in ophthalmology, and should, therefore, be well trained in the common diseases of the eye. Despite this change, there is still a widespread lack of knowledge of the simpler diseases of the eye, as most ophthalmologists can testify.

It is not my purpose to do more than to remind you of a few things in ophthalmology that will not only be of service in your every-day work, but also will be of great assistance to the ophthal-

mologist. Having been a general practitioner myself, I am well aware that the busy doctor has his hands full without being called upon to become an ophthalmologist, and I shall only ask you to give your attention to one or two things that seem to me of vital importance.

Amongst the diseases of the eye that the family doctor is apt to see, the most important and the most common are conjunctivitis, iritis, glaucoma and ophthalmia neonatorium. I have not included here traumatisms of the eye, nor the headaches that are attributable to functional disturbances of the eye; neither have I mentioned albuminuric retinitis, the diagnosis of which in early nephritics is so useful and so necessary. Severe traumatisms are usually referred to the specialist for treatment, and the general practitioner does not attempt to treat headaches he believes due to the eye. It cannot be emphasized too often that an ophthalmoscopic examination in suspected nephritis or suspected intracranial disorder may be of the greatest service. It is even possible that such an examination may decide for or against in a case of suspected locomotor ataxia. I might add to this list a number of diseases in which a knowledge of the eye-ground is necessary, but enough has been said to show the value of a thorough examination of the eye in general diseases.

Acute inflammations of the conjunctiva are accompanied by redness, swelling, increased and altered secretion, and a sensation of heat and burning. These symptoms are associated with photophobia and a sensation of foreign body in the eye. The latter symptom is due to the presence of flakes of pus which gather in the conjunctival sac. The bulbar conjunctiva assumes a characteristic brick-red color, which is unmistakable, and is due to the injection of the conjunctival blood-vessels. The diagnosis of inflammations of the palpebral membrane is readily made, and there should be no difficulty or confusion here. In the severe inflammations of the conjunctiva, the bulbar conjunctiva is involved, along with the palpebral membrane, and it is in such cases that the diagnosis is of importance.

The superficially seated blood-vessels of this membrane are easily moved by pressure through the eye-lid, and in this way we can distinguish simple conjunctival injection from the engagement of the deeper structures. We must remember, though, that we often see severe conjunctivitis in which the ciliary blood-vessels are dis-

tended, and this is due to the fact that the conjunctiva receives a part of its blood supply from these vessels.

Simple conjunctivitis is not associated with the presence of a contracted, or dilated, or sluggish pupil, and should any one of these conditions be manifest we should be warned that we have something more to deal with than a conjunctivitis.

The iris is derived from the ciliary body, and the two structures have a common blood supply. Inflammations of the two are usually present together, since they are continuous structures, though disease of one part may be more prominent than disease of the other. Inflammations of the iris and ciliary body are usually accompanied by severe pain, though cases of plastic iritis are sometimes seen in which the patient mentions pain as a prominent symptom. The pain of iritis is characteristically a frontal and temporal neuralgia, to the temporal combined with pain in the eye-ball itself, but we should not depend too much upon the seat of pain as an aid in diagnosis.

In plastic iritis, the swollen membrane becomes sluggish and the pupil contracted, and in untreated cases the organized lymph produces adhesions to the capsule of the crystalline lens which lies behind the iris. The anterior chamber may be slightly deepened, and the pericorneal blood-vessels are engorged. The injection of the eye-ball in acute plastic iritis is characteristic, and is due to the filling up of the deeply-placed ciliary blood-vessels which are underneath the conjunctiva, and cannot be moved with that membrane. The injected blood-vessels form a violet ring around the cornea, and with a magnifying lens, the individual vessels may be seen. It may not be inappropriate to say here that conjunctivitis and iritis are sometimes present together, and it is most important to know, in the course of conjunctivitis, when iritis is associated. If iritis is due to a pre-existing conjunctivitis, it is brought about, as a rule, through the development of corneal ulcers secondary to the conjunctival inflammation.

Glaucoma, a disease of middle or advanced life, is characterized by increased intra-ocular tension and progressive failure of vision. While glaucoma occurs most frequently in people past forty years, it is not uncommon to see the disease in people younger. Even infants are not immune, though the character of the disease is changed somewhat because of the more elastic structures of the eye in extreme youth.

The increased tension of the eye-ball in glaucoma is due to a loss of relation between the inflow and the outflow of the fluid content, and the loss of vision is due principally to destruction of the fibres of the optic nerve in the back of the eye.

Glaucoma may be primary or secondary. Primary glaucoma is probably due to one or more of several factors, though in some cases it is difficult to ascribe a plausible causation. Since it is a disease peculiar to far-sighted people, the anatomical construction of such eyes is claimed by some to be responsible for glaucoma. Arteriosclerosis has by some authorities been held responsible for this condition, and other theories have been suggested, but the immediate cause assigned by all is the insufficiency of drainage to the eye. Simple glaucoma is not dependent upon the existence of any antecedent gross disease, while secondary glaucoma is a complication of some other condition which is demonstrable. Secondary glaucoma often follows serous and plastic iritis, traumatisms and intra-ocular growths. The increased tension of the eye is made manifest by pressing alternately with the tips of the index fingers upon the eye through the eye-lids and comparing the result with a similar examination of the other eye. Increased tension gives rise to the symptoms of glaucoma, congestion of the ciliary blood-vessels, dilated and sluggish pupil, shallow anterior chamber, edema of the conjunctiva, and even the eye-lids, glazed appearance of the cornea and loss of sensitiveness of the cornea. Along with these changes in the eye-ball, the patient complains of pain in the eye and neuralgia of the face and head, or in any part of the distribution of the first and second branches of the trigeminal nerve. The neuralgia often resembles a sick headache, and, indeed, nausea and vomiting are not uncommon. Often the disease has lasted for several hours, a longer or shorter time depending upon the severity of the attack; the patient complains of dimness of sight. This immediate effect is due to the disturbance of nutrition of the cornea. This loss of sight may be very great, the patient being able to see only larger objects close by, but it is possible for an acute attack of glaucoma to destroy sight entirely in several hours.

The case of glaucoma I have described is a typical acute glaucoma, though it is possible for such a case to be mistaken by a careless observer for a so-called cold in the eye. Not all cases of glaucoma are so undeniable as this I have spoken of, for there are many gradations between the acute and the chronic. All are characterized,

however, by increased tension at some time in the course of the disease.

The glaucoma cup is the optic nerve head damaged by increased tension of the eye-ball, and is to be seen after one or several attacks of glaucoma, the change in the nerve requiring the lapse of some time.

Doubtless, many cases of glaucoma have been mistaken for neuralgia, cold in the eye, iritis, and even cataract. Not very long ago I was called to see a case of glaucoma in which the family physician had made a diagnosis of senile cataract, and had advised the patient to wait till the cataracts were ripe. It might be a good suggestion to examine the tension of the eye-ball and the depth of the anterior chamber in elderly patients who suffer from neuralgia of the head.

The confusion existing in the mind of the general practitioner concerning the indications for atropin may well be spoken of here. Since the employment of atropin in glaucoma is dangerous to the eye, and the use of eserin in iritis affects deleteriously the ultimate result, I think that the indications for the two drugs cannot be repeated too often. Atropin is a mydriatic, and dilates the pupil by paralyzing the sphincter of the iris. It also suspends the action of the ciliary muscle, and, by this joint action, places the tissues of the iris and ciliary body at rest. The employment of the drug in plastic iritis serves to break loose synechia which may be present, and its use here is clear and logical.

Eserin, a nerotic, contracts the pupil by stimulating the sphincter of the iris, and at the same time stimulates the ciliary muscle. Its purpose in glaucoma is to draw the tissues of the iris away from the angle of the anterior chamber, and thereby facilitate drainage of the eye-ball. The result is lowering of the intra-ocular tension. Atropin would be poison in glaucoma, and eserin would make more severe an existing iritis. It would be unwise and useless to qualify these principles in a gathering of general practitioners. I have spoken especially of atropin and eserin because they are types, but there are several other drugs that have similar actions, though these are not quite so efficient.

It would not be out of place to speak here of the common use of cocain in eye diseases, and its possible abuse by those not familiar with such diseases. The action of cocain in the eye is to produce anesthesia, to dilate the pupil and to widen the palpebral fissure.

Cocain is not an innocent drug when used in the eye, for it not only masks the symptoms and produces a false sense of security, but it is capable of doing actual damage by its deleterious effect upon the corneal epithelium and by the possibility of precipitating an attack of glaucoma in eyes predisposed.

Ophthalmia neonatorum is an inflammation of the conjunctiva occurring in the new-born, and may be due to infection by the gonococcus or to other germs, notably the pneumococcus and the colon bacillus. Gonorrheal conjunctivitis in the new-born is less severe than that occurring in later life, but occasionally the infection is severe, and the disease may go on to destruction of the eye. The disease may be manifest at birth, may develop soon after birth, or be postponed for several days. The inflammation is most severe in the palpebral membrane, there being not much chemosis usually, but in the severe infections the inflammation may end in sloughing of the cornea and producing, as a result, a badly damaged or a useless eye. A number of years ago Crede placed in the hands of obstetricians a means of aborting or preventing this disease almost altogether, and, were this practice universal, many eyes would be saved annually. I refer only to the well-known procedure of placing between the eye-lids one or two drops of a two per cent solution of silver nitrate. It should be unnecessary to mention the subject of ophthalmia neonatorum in a meeting of this sort, but the experience of ophthalmologists shows it is most necessary.

Ophthalmologists are not always able to say whether or not a particular headache is due to functional disease of the eye without a thorough test, and, therefore, it would be asking too much of the family doctor to expect him to make such a diagnosis. It would be well, though, to speak of headaches due to errors of refraction and ciliary spasm, because we know from experience that a large percentage of headaches is due to such causes. Such headaches are usually associated with prolonged use of the eyes, or unusual use of the eyes, and may follow such use immediately, or the headaches may be postponed till the next day. These headaches are frontal, temporal, and post-occipital, and are usually preceded by a tired feeling in the eyes and ocular pains. The patient often complains of a burning sensation in the eyes, and says that when he reads the print runs together and his eyes water, and continuous close work brings on the headache. These headaches are seen most frequently in those whose work demands prolonged close work for the eyes,

and are especially frequent in the school children of the present day. The treatment is not always so simple as it might seem, and usually the patient is not willing to give as much time to his oculist as the case deserves. This applies particularly to the patient from the country, who is told that he might consult the oculist in the morning and leave on the evening train, and is much surprised and disappointed when told that a thorough examination cannot be made in such a short time.

The specialist in diseases of the eyes has much fun poked at him by his brother-physician for placing, or attempting to place, before the eyes of all his patients a pair of glasses. There is some truth in this criticism, but only enough to make it beneficial. We derive so much pleasure from seeing headaches relieved by the use of lenses that we might be tempted to make the wearing of glasses universal.

It is the usual course for patients to come to an oculist for the relief of headaches without having been sent by his doctor. The laity is beginning to understand that most headaches, especially those showing a periodicity, are due to disturbances in the eye, and the family physician should anticipate his patient and send him to consult his oculist rather than treat him for conditions that might not exist. Not all patients who come to us voluntarily for headaches are treated for their eyes, for, though we may be faddists, we try to preserve the medical instinct by attempting to eliminate other causes before testing the eyes.

In conclusion, I wish to express the hope that I have not appeared pedantic. No one is more willing than I to pay high tribute to the wisdom, the skill and the patient devotion of the family physician, but it is useless to deny that he shows no interest in ophthalmology, and holds out no promise of improvement in this direction. It would be immodest for me to think that I have aroused an interest, but I have the satisfaction of having at least made the attempt.

Discussion of Dr. Blum's Paper.

Dr. B. A. Ledbetter, New Orleans: I think special emphasis should be laid on that part of the paper which refers to ophthalmia in the new-born. It has been proven, without a question of a doubt, that almost one-eighth of the blind people in all institutions for the blind are cases resulting from ophthalmia in the new-born, and which were preventable. I think the members of the profession

should get into the habit of using a solution of nitrate of silver in the case of new-born children, and should do all in their power to get the midwives in the various parishes to do the same. This is so important that almost every State Board of Health throughout the nation is supplying tubes of nitrate of silver free of cost, sending them all over the State to physicians and midwives, to be used on the new-born children. I think it is up to the medical profession to agitate this question, and to get the midwives and physicians to take this matter up. It is absolutely the only way we will ever stop blindness among the new-born.

Dr. F. H. Carruth, Lobdell: I understand that there is now in force here a regulation by which the Board of Health sends out a one per cent solution of nitrate of silver free. I think perhaps some do not know that.

Dr. B. A. Ledbetter, New Orleans: The State Board of Health has communicated with every parish health officer in the State, and also mailed them small tubes of nitrate of silver, and have done the same with all midwives they can get in touch with, stating that we make no charge, and are only too glad to furnish it, and requesting that the Parish Societies take the matter up.

Dr. J. A. Caruthers, Baton Rouge: It is very important that the general practitioner be able to diagnose these eye conditions that come to him, not only to the physician, but to the patient. We see cases frequently which have been neglected through the mistakes of the family physician. The importance of being able to differentiate between certain eye conditions cannot be too strongly emphasized. I had a case of iritis only yesterday where the eye was permanently damaged, when a few drops of atropia at the proper time would have relieved the condition.

As to ophthalmia neonatorum, there is no excuse for this condition developing, with our present knowledge, and the ease with which it is prevented. When I first entered special practice I had a great many of these cases, but I explained to the physicians how to avoid them, and now I rarely see a case where our physicians have handled the labor. It is so very easy to use the nitrate of silver at the proper time that no physician should allow these cases to develop. I prefer argyrol; because it is less irritating, and I think just as sure.

Dr. Blum (in closing): I just want to add that ophthalmia neonatorum is not always due to the gonococcus. It is frequently

due to other germs, as the pneumococcus, or other germs present in the birth canal of the mother. It may also develop through too careless handling after birth.

Dr. W. H. Harris, New Orleans, read the paper by Drs. C. W. Duval and Frazer B. Gurd, New Orleans, entitled

The Pathology and Bacteriology of Dysentery.*

Dysentery in general can be divided into two classes, according to the causative agent, viz., dysentery the result of infection by bacteria, and dysentery caused by the lower forms of animal life. The first group may again be subdivided into cases due to the Shiga bacillus and diseases induced by the acid-producing bacilli, which may be grouped under the head of the Flexner type of the organisms. Among the protozoa, the ameba is the organism of the greatest importance, although there are low forms of infusoria, etc., such as the ballantidium coli, which have frequently been considered pathogenic and diarrheal diseases thought to be produced by them.

Shiga first isolated, in 1898, a bacillus from cases of epidemic dysentery in Japan. This bacillus has since been recognized as being the cause of the great majority of cases of epidemic dysentery. Not long after, Flexner, in Manilla, and Kruse, in Germany, isolated a similar organism, but differentiated it culturally, in a manner to be referred to later, from cases of endemic dysenteric diseases. Since then, Harris, Park and Duval have isolated bacilli differing but slightly from one another and but slightly from Flexner's organism.

In general, the two main groups of organisms are differentiated by their ability to ferment certain sugars with the production of acid, the Shiga organism fermenting only dextrose, the Flexner organism dextrose and mannit, the other types all fermenting both dextrose and mannit, and, in addition, both dextrin and lactose. By means of their agglutination when treated with immune sera the organisms can also be separated into different groups, the most marked difference, however, being between the Shiga type of the organism on the one hand and the mannit fermenting organisms on the other.

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* From the Pathological Laboratory of the Touro Infirmary.

The dysentery bacillus is a moderate-sized, non-motile organism, measuring about from two to three microns in length and five microns in diameter. It stains readily by the ordinary anilin dyes, decolorizing by Gram's method. It produces no spores, being comparatively non-resistant to the ordinary disinfecting agents and to heat, drying, etc. The organism grows readily upon ordinary culture media. No strain of the organisms is able to produce gas from dextrose. As a group, the organisms are comparatively easily distinguished from the Bacillus coli, B. typhosus, etc. The B. coli is more or less motile, fermenting most of the sugars, including saccharose, and produces gas from dextrose. It is also easily differentiated from the typhoid group by its lack of motility and by its sugar reactions.

Sera from the patients suffering from the disease agglutinate the organisms, frequently in very high dilutions. The blood from animals artificially immunized to the organisms agglutinates the homologous strain in extremely high dilutions, 1 to 10,000 or more. As mentioned above, the cross agglutinating powers between the various mannit fermenting organisms is much greater than that between the acid groups and bacilli of the Shiga type. These two biologic differences, namely, the fermentation of mannit and the specific agglutinability when treated with immune sera, together with the constant presence of the Shiga organism in epidemic types of the disease, and the usual absence of this organism in endemic and sporadic cases which are due to the acid-producing group, would appear to give comparatively good reason for considering these organisms distinctly differentiated from one another. That the two organisms are very similar in so many respects is no reason for thinking that they may not be different species, since the various intestinal organisms all, in many respects, closely resemble one another. Thus the typhoid and paratyphoid organisms are distinguished by methods no less definite than those differentiating in two dysentery bacilli.

In addition, the Shiga bacillus produces a soluble toxin, whereas the organisms of Flexner's type contain a toxin bound in the body of the bacillus. In this country the Flexner bacillus is much more important than the virulent Shiga organism. Endemic dysentery is common enough in these Southern States, the casual factor of which is the acid-producing bacillus. Throughout the continent the organism is active in the production of diarrheas in infants, as

was first demonstrated by one of us working with Barnett in 1902.

This bacillus is found normally in a large proportion of intestines, so that the mere presence of the bacteria in the feces is not proof of its pathogenicity in the individual case. If, however, along with the demonstration of the Flexner organism in the bowel contents the serum from the blood of the patient is found to agglutinate the bacilli in dilutions of one to eighty or more, the disease may be pronounced one of dysentery due to the action of the bacillus agglutinated.

The coincidence of disease as the result of the action of the bacillus is determined, apparently, by some factor, such as indiscretion in diet, exposure, etc., which leads to an autoinoculation of the individual and the development of a colitis. The frequency of autoinoculation of all kinds, as in tonsilitis, pneumonia, etc., is more frequent and more appreciated every year. It is not, therefore, surprising to find that terminating infections are often due to the dysentery bacillus, after a manner analogous to the development of broncho-pneumonia, also a terminating disease.

In addition to the onset of dysentery as the result of autoinoculation, infection with bacilli of exalted virulence also takes place, in which case the disease is essentially water-borne. Infection with the Shiga bacillus is of necessity from without, since the bacillus has not been found in the intestine of healthy individuals.

The recognition of the different strains of the Bacillus dysenteriæ is of the utmost importance in the development of an immune serum from animals that will be of value in the treatment of the disease by a method of passive immunization. Up to the present, no potent serum has been produced which is of value in all cases, but the outlook for the manufacture of such a serum controlled by the determination of the amboceptor by means of the Bordet reaction seems more hopeful now than ever before.

The ameba has for a long time been recognized as being present in the human intestinal tract in cases of chronic dysentery. An organism called the ameba coli was fully described by Losch in 1875. Since this time numerous observers have corroborated Losch's findings, although there has been a continuous discussion regarding the identity of the ameba found in dysentery and ameba found in the intestines of healthy individuals. Schaudinn considers that they are two distinct types, the one which he calls the ameba coli, following Losch's nomenclature, being a normal, harmless

saprophyte in the intestinal tract; the other type, which corresponds to the form described by Councilman, Lafleur and others, Schaudinn calls the entameba histolytica, and considers it a true pathogen and the cause of chronic dysentery.

According to Schaudinn, the classification of the two types depends upon the following differences: The distinction between ectoplasm and endoplasm is less marked in the pathogenic type. The nucleus of the pathogenic variety contains a smaller amount of chromatin, being, as a result, less readily seen; it is always, too, situated eccentrically. The pathogenic organism multiplies as the result of a simple division or by a fragmentation of the nucleus and formation within the cell membrane of numerous bodies designated by Schaudinn as spores. The ameba coli increases by regular division into eight daughter forms.

With these slight points of difference both organisms, if there are but two, resemble one another very closely. To one who has studied the ameba in dysenteric feces it is evident that there is constantly present a species which answers more or less to the description of Entameba histolytica. That this ameba is pathogenic appears to have been proven by the experiments of Schaudinn, Musgrave and Clegg and Craig. It has, however, recently been demonstrated that the Entameba histolytica has never been cultivated, so that varieties which have been cultivated, and which are proven by animal experiments to be non-pathogenic, must be considered as belonging to a species hitherto undescribed, or to be accepted as subdivisions of the Entameba coli of Schaudinn.

Ameba are composed of a mass of protoplasm measuring from twelve to thirty microns in diameter, surrounded by a distinct cell membrane. The protoplasm is divided into two parts, an endoplasm, more or less granular in appearance and of a darker color than the octoplasm. This latter is homogeneous in color, refractile, and contains no granules. The nucleus is small. One or more vacuoles are usually seen, the one in histolytica being characterized by its non-contractibility. In addition is usually seen in the endoplasm food materials, such as bacteria, red and white blood cells, detritus, etc. Under unfavorable circumstances, both forms of organisms become circular in appearance and surrounded by a well-marked wall, which is refractile and clear, surrounding a more or less dense granular central area, in which mass the nucleus may usually be seen. In movement, a prolongation of the ectoplasm is

thrown out, into which the ectoplasm seems to flow. In the stools these pseudopodia are rounded and appear like clear buds of ectoplasm. In the histolytica they are, probably, longer and less blunt than in the other forms. In the ingestion of food, these clear proturbances seem to flow around the blood cell, etc., completely surrounding it, so that presently the material lies within the cell's body.

In the stools, these organisms are recognized by their greyish color and their size, being very large—larger than any cell found in the intestinal tract. Their motion serves readily to recognize them from other material that may be present in the gut. The soft stool usually contains large numbers, but material collected by means of a rectal tube, with numerous openings paned high up, offers the best opportunity of the procuring of the animalculæ.

Certain intestinal amebæ can be more or less readily cultivated upon artificial medium, although until lately not without the accompanying growth of bacteria, especially those of the colon-typhoid dysentery group. Musgrave and Clegg and Walker have been especially successful in cultivating the organisms. Their methods are similar, and consist in using a medium of slight alkalinity, upon which the symbiotic bacteria grow but slowly. Owing to the fact that a proper growth of bacteria will destroy the ameba, a temperature of 25 C. (at which heat the growth of the bacteria is inhibited) is found to give the best results.

Dr. Couret, of this city, has, as the result of a long series of investigations, been successful in cultivating not less than five different varieties of amebæ from dysenteric stools. He concludes that as these varieties are non-pathogenic for cats, and require bacteria for their existence, they cannot be the Entameba histolytica, a species which is recognized by its pathogenicity for these animals, and which does not require bacteria as a foodstuff in order to remain active and proliferate.

Although there are several non-pathogenic species of amebæ found in the human intestinal tract, the presence of an organism similar to that described by Schaudinn in the stool of a dysenteric patient may be taken as evidence, in the great majority of cases, that the disease is due to the action of the protozoa.

The two forms of dysentery pathologically fall under the heading of colitis. The disease being localized to the large intestine, those areas in the neighborhood of the flexures, as a rule, are most

markedly involved. The lower portions of the ileum occasionally also may be affected.

The pathological lesions of acute bacillary dysentery are confined almost entirely to the intestines, and here to the large gut. The disease is an acute colitis, being, for the most part, limited to the various flexures. The histologic phenomena are those of acute exudative inflammation. There is, first of all a dilatation of the blood vessels, with consequent reddening of the surface of the gut. This dilatation of the vessels and slowing of the blood stream, as in lesions in other tissues, is followed by an exudation of serum and fibrin into tissues, together with the diapedesis of polymorphonuclear leukocytes. The result is that in the gross the wall of the intestines, especially the submucosa, is thickened and edematous. There is a destruction of the epithelium of the mucosa in places, and the formation of a false membrane, composed of fibrin, coagulated serum, acute inflammatory cells and red blood cells. An oversecretion of the mucous on the part of the epithelial cells takes place, so that microscopically a larger number of goblet cells are seen than normally.

By a more extensive destruction of the epithelium, larger or smaller shallow ulcers may result. As a rule, in the repair of the condition, the gut returns to practically its normal condition. As a result of the passage through the tissues of the organism, an inflammation of the peritoneum may be set up. This is usually fibrinoserous in character, and localized. Occasionally, however, owing to the combined action of pyogenic organisms in the intestine, a deeper ulceration of the lining of the gut may take place; occasionally, also, resulting in perforation into the peritoneal cavity, with the development of a general diffuse peritonitis. In cases proceeding to a lethal termination the lesions in the internal organisms of the body are those of an acute toxemia. The organisms are not found in the blood. There may be an acute degeneration, albuminous in character, of the parenchymatous cells of the kidney and liver and the heart musculature.

The inflammation produced by the presence of the Entameba histolytica is essentially chronic in character. The primary and chief lesions are in the large intestines, especially in the neighborhood of the flexures. As a result, apparently of the burrowing of the organisms into the superficial tissues of the mucosa, carrying with them, as they must, the bacteria from the intestinal tract, an

inflammatory process is set up, resulting in the destruction of the lining epithelium and an infiltration of the epithelial tissues with lymphoid and plasma cells. The superficial layers, owing to the action of the extensive bacterial flora in the feces, present all the phenomena of an acute inflammatory reaction. Another explanation of the development of the ulcers is that by their presence in the lymphatics, or blood capillaries, they produce a necrosis in situ in a way similar to that produced by the aggregation of endothelial cells in typhoid fever.

With the continuance of the disease, these ulcers tend to enlarge in size and to invade, to a greater or less extent, the deeper tissues, usually, however, being confined to the submucosa, although not infrequently collections of chronic inflammatory cells are found between the muscle bundles, or even beneath the serosa. In the gross, in cases coming to autopsy, an appearance is presented of larger or smaller ulcerating areas, usually having more or less undermined edges. Occasionally, owing to the increase of tissue as the result of the reactionary process, a polypoidal condition results. The intestinal wall itself is thickened, in part as a result of edema, in part the result of an increase in fibrous tissue. Following the repair of advanced lesions, the normal mucosa is disorganized, fibrous tissue scars replacing the normal submucosa of the gut.

In about 25 per cent of well recognized cases coming to autopsy a diseased condition of the liver is found. This pathologic lesion consists in the presence of a single larger or smaller abscess; rarely two or several such abscesses are found. They may attain a very large size, are situated usually in the right lobe of the liver, sometimes leading to the destruction of practically the whole lobe. Such abscesses usually contain no bacteria, being the result of the action of the ameba themselves. These abscesses are filled with a yellowish purulent material, surrounded with a somewhat ragged surface, which is walled off, as a rule, from the surrounding liver tissue by a dense fibrous tissue reaction. The liver tissue in the neighborhood is infiltrated with lymphoid and plasma cells. There is an increase in fibrous tissue between the lobules, the blood vessels are injected and numerous. Elsewhere throughout the body there are practically no lesions, which may be due to the action of the ameba. Microscopic examination of the pus from such abscesses shows a much larger percentage of polymorphonuclear leukocytes than abscesses due to bacteria. The material consists of large numbers of necrotic

cells, chiefly liver cells, debris and serum, together with a moderate number of lymphoid and plasma cells, the latter predominating. One characteristic of the lesions in the gut, as well as in the liver, is the comparative absence of eosinophiles, which are present in inflammation of the gastro-intestinal tract, due to the bacilli of the colon group.

Individuals dying from amebic dysentery do so as a result of a terminating infection by one or other of the pathogenic bacteria or as a result of the absorption of the toxic materials from the liver abscess and the consequent asthenia, which, in turn, predisposes to a terminating infection.

Whether or not the parasites, such as the Balentidium coli, Strongyloides intestinalis, the trichomonads, etc., are the cause of the intestinal diseases in which they are occasionally found, is still a matter of some doubt. There are, however, a sufficiently large number of the observations published by competent writers reporting the occurrence of diarrheas in which one or other of the flagellates, nematodes, etc., are found, in the absence of other apparent pathogenic factors, to suggest that, either mechanically or as a result of their toxins, these low animal forms are potent to induce an enterocolitis, which may occasionally be fatal in its outcome.

Two cases of interest, in this connection, have been lately reported in New Orleans—a fatal diarrhea, apparently due to the Balantidium coli, reported by Drs. Bel and Couret, and Dr. Gage has described a case of Strongyloides infection in which not only were there numbers of these nematodes imbedded in the intestinal wall, but worms were found in the lung tissue, in which was an acute broncho-pneumonia.

It is by work such as that carried on by Drs. Couret and Gage in this city, a neighborhood peculiarly fitted for investigations along these lines, that a correct appreciation of the rôle of the various intestinal parasites will be brought about.

DR. J. E. KNIGHTON, Shreveport, read a paper entitled

Symptoms and Diagnosis of Dysentery.

Inasmuch as the symptomatology of dysentery is so well known to every physician of experience, I shall not bore you with a lengthy discussion of this phase of the subject.

The bacillary type of dysentery is usually a disease of acute course. The incubation period, according to Shiga, is from twenty-four hours to eight days.

The usual course is the beginning diarrhea and colic, loss of appetite, weakness, and feeling of pressure over the abdomen, followed by the intense pains, tenesmus, and the characteristic stool, consisting of mucus and blood. The temperature is variable, ranging from 101° to 104°. The urine is diminished in quantity and frequently tenesmus of the bladder is observed. Nausea and vomiting are often associated symptoms.

The symptoms vary greatly according to the location of the lesions. When the small intestine is the principal site of the disease process, Shiga has given it the name of "entero-dysentery" to distinguish it from colo-dysentery. With entero-dysentery tenesmus is absent and the character of the stool differs from that of colo-dysentery, in that they are less frequent, of greater volume, and contain fecal matter thoroughly mixed with mucus and blood.

The toxic symptoms are much more marked in entero-dysentery than colo-dysentery, and the prognosis more grave. When the large intestine alone is involved, and especially the rectum, tenesmus is especially marked, the stools are more frequent, and in many instances consist exclusively of blood and mucus or blood alone. Shiga, in his contribution to Osler's Modern Medicine, calls attention to the ascending and descending forms of dysentery. In the former, which is the more common type, the disease process begins in the sigmoid or rectum and extends upward into the descending, transverse and ascending colon, and sometimes extending into the small intestine.

In the descending form, as the name would imply, the primary lesion is situated in the ileum, or upper portion of the large intestine. In this form the symptoms at onset are much more pronounced than in the ascending form, there being greater prostration and higher temperature. The course of bacillary dysentery is from four to eight days in the mild cases, and three to six weeks in the more severe types.

The chronic condition that frequently follows bacillary dysentery should probably not be called chronic dysentery, as it is only the after-effects or results of dysentery, in which neither dysenteric bacilli nor the ameba can be found.

The tendency among the earlier authors was to divide amebic dysentery into two clinical types—the acute and chronic—and the impression prevailed that in either type there was necessarily present the usual symptoms of dysentery. However, the latter observations and reports of cases by such men as Councilman, Osler, Dock and others have proven conclusively that marked pathologic changes may be present, due to amebic infection, without subjective clinical symptoms. In keeping with this later view, Kemp, in his recent book on gastro-intestinal diseases, gives Musgrave's classification under intestinal amebiasis, which follows:

1. Latent and masked infections with ameba.
2. Mild and moderately severe infection (sub-acute dysentery).
3. Severe infection, including gangrenous and diphtheritic types (acute dysentery).
4. Chronic dysentery.
5. Infection in children and the aged.

The importance in recognizing the latent and masked type of infection can hardly be overestimated, since, to neglect them, often leads to the more severe and fatal complications, as in a case reported by Musgrave, in which the patient was treated six months for constipation, and the autopsy showed perforation of a liver abscess as the cause of death, with associated amebic ulceration of the cecum and ascending colon. While the usual symptoms of dysentery are entirely absent in this type of the disease, there are certain symptoms which should suggest the true nature of the condition. Kemp mentions the dull, aching abdominal pains that first appear, and are more active during the night or early morning. Digestive disturbances, headache, lassitude, coated tongue and foul breath, with loss of appetite, loss of color and some loss of weight. If associated with these symptoms, deep palpation discloses tenderness along the colon, and especially over the cecum and ascending colon, a hydrogogue cathartic should be administered and the stool carefully examined under the microscope for the amebæ.

Of the second class, the mild, sub-acute cases often develop from the latent type and present the picture of a diarrhea instead of dysentery. The diarrhea associated with the symptoms mentioned in connection with the latent type should lead to the discovery of the true cause of the condition.

The moderately severe cases of the sub-acute class may begin with the symptoms mentioned above, more marked and at times

showing mucus and blood. This may at times intermit with constipation.

In the severe cases of acute dysentery, diphtheritic and gangrenous processes, due to some secondary infection, are most commonly observed. The onset is sudden, and all the symptoms are severe and pronounced. Death often occurs within a week from the onset, while some cases become chronic, and many recover.

Chronic amebic dysentery exhibits several forms, ranging from the masked form, in which the usual dysenteric symptoms are absent, to the more pronounced form, in which there is extreme emaciation, with persistent diarrhea, the stools containing mucus or mucus and blood, and in which there are severe attacks of colic and tenesmus.

In the fifth class mentioned, Kemp quotes Musgrave as reporting cases in children from six months to ten years, in the Philippines. He states that children seem to present a natural immunity, and when they are attacked by the disease the course is usually mild and yields readily to treatment. The aged also seem to exhibit a partial immunity, but, contrary to the rule with children, when infection does occur, the disease runs a severe and rapid course.

Diagnosis.—In the diagnosis of the bacillary type of dysentery the task is usually easy with the ordinary forms, especially during epidemics. However, the diagnosis of entero-dysentery or the typhoid type is much more difficult. Shiga states that the conditions necessary for a definite diagnosis of dysentery are the positive agglutination reactions of the dysentery bacilli with the blood serum of the patient, and the isolation of the bacilli from the dejecta of the patient or from the organs of the dead.

It is unfortunate that the agglutination reaction first occurs during the second or third week of the disease, and only reaches its highest point during convalescence. It must also be remembered that, as in typhoid fever, the reaction is not constant.

It is not always an easy task to isolate the dysentery bacilli from the stool, it being but rarely found in the mild cases, nor can it be found during the first days of the severer type except in cases with the disease process localized in the lower portion of the large intestines.

I shall not discuss the methods of securing the agglutination reaction nor the isolation of dysentery bacilli, as Duval, who has done such valuable research work along this line, is taking part in

this symposium, and is capable of giving you first-handed the most recent development along this line.

The diagnosis of amebic dysentery is not always easy, there being so many clinical types; and the only means of making an absolute diagnosis is by microscopic examination of the stool. It should be remembered that to find the amebæ in their motile state the stool should be examined as early as possible after being discharged, and preferably on the warm stage. However, I have frequently succeeded in finding the organism while using the ordinary stage, the warm stage not being an absolute essential.

The points to be considered in the differential diagnosis between amebic and bacillary dysentery are given by Shiga as follows:

1. Amebic dysentery usually runs a chronic course.

2. In the amebic form no dysentery bacilli can be found except in the mixed infections of both amebic and bacillary dysentery.

3. In amebic dysentery, toxic symptoms, such as high fever, general malaise, anorexia, rapid emaciation, or various nervous symptoms, are not observed.

4. In bacillary dysentery, liver abscess is never present. It is a very frequent complication in amebic dysentery.

5. The anatomical processes are also different. According to Kartulis and Kruse, the edges of the ulcers are peculiarly undermined in amebic dysentery, while in bacillary dysentery this is never the case, and the ulcers are situated on the surface of the folds of the mucous membrane.

The other diseases that must be excluded in the diagnosis of dysentery are cancer, tuberculosis, polypi and syphilis of the rectum. It would not be out of place to also mention mercury poisoning and hemorrhoids in this connection. The differentiation from these diseases is usually not difficult when a satisfactory history can be obtained, and this considered in connection with the results of physical and microscopic examinations.

DR. SIDNEY K. SIMON, New Orleans, read a paper on the

Treatment of Dysentery.

In the treatment of dysentery, first consideration must be given to a careful search for the underlying cause. The disease is no longer considered a clinical entity, as it was understood by medical men a half century ago, but is made up, as we know to-day, of

varied and distinct types of colonic infections, each presenting its own characteristic pathological and clinical picture. The first step, therefore, in the treatment of dysentery, may be said to depend upon the determination of the particular etiology to which the disease owes its origin, and more especially is this so since we have likewise learned to draw strictly individual lines in the treatment of each type. The classification of the disease, accepted at the present time, includes: (1) Amebic dysentery, (2) bacillary dysentery, (3) catarrhal dysentery, (4) diphtheritic dysentery, each division representing a varied origin and clinical course.

Before entering into a detailed discussion of each particular type in turn it is well to consider, first of all, in a general way, a few of the basic and essential principles upon which the successful treatment of all dysenteries must largely depend. First and foremost of these essentials is rest, which includes rest not only to the diseased bowel, but to the entire organism, body and mind as well. In few diseased conditions, I believe, is rest and relaxation so essential for a successful therapy. Again, and perhaps of equal importance, free drainage must be constantly secured for the intestinal secretions and excrement. Stagnation in any morbid process spells serious mischief, and with added emphasis in the case of an organ already so rich in bacteria as the bowel. Manson dwells with special emphasis upon these points in the following characteristic words:

"In all cases of intestinal flux I like to regard the intestinal canal in the light of a drainage tube, to be kept open and not on any account to be blocked up. I like to treat a medical disease of this description on what I might call surgical principles—free drainage, rest, and the removal of any specific element that may be present."

With these points always in mind, rest, which includes a minimal food residue for the bowel and free drainage, we may now consider in detail the removal of the specific element which lies at the bottom of the infection.

Amebic Dysentery.—The cause of this condition is a specific animal organism of the protozoa group, believed by Schaudinn and others to be the Estameba histolytica, its pathogenicity for man having been sufficiently and abundantly established. The entire aim and scope of treatment, therefore, resolves itself into the question of the destruction of the offending parasite in the lower bowel, since it is agreed that with the extinction of the ameba from the

bowel the specific pathological lesions promptly vanish. How best to accomplish this purpose has been made a matter of discussion in medical literature for many years, and opinion is divided between two methods—the one which relies for results upon bowel irrigations, the other through medication by mouth. Each plan has been enthusiastically defended from many sides down to the present time, and the hope of a long-needed unity in the treatment of the disease still remains thus, apparently, as far in the future as ever.

Those who have found most success with colonic irrigations claim, with some logic, that amebic dysentery is a disease strictly localized in the large bowel, and that the ameba can most advantageously be reached through remedies applied directly to the lesions. There is, however, it must be said, a weak element in this reasoning, since the thorough flushing of the large bowel, including the transverse and ascending elements, as has been shown by experiment, is a matter of great difficulty. It is even doubtful whether the irrigating from above, so to speak, by means of an opening in the appendix or cecum valley, affords the complete drainage its advocates would have us believe. The mere flowing of a solution in this manner through an ulcerated bowel, with its walls undermined and coated in mucus and detritus, does not necessarily imply that all irritant and infective material may be washed away. The variety of the solution that has been suggested is a formidable one, and I will merely mention those most commonly employed: Quinin (Osler); formalin (Jelks); copper salts (Jackson); argyrol (Raymond); acetozone (Strong); plain ice water (Tuttle), as also a peroxid of hydrogen, coal oil, nitrate of silver, and others.

I have stated on another occasion, and am still of the opinion, that the essential element in these irrigations is the water, and that the particular kind of drug in solution is relatively much less important. Though I have used a number of these solutions in turn, I have never been able to convince myself that the ameba could be reached and destroyed by this method alone. There is no question that under daily irrigations, with large amounts of fluid the ameba may seem to vanish from the stools, but the effect in my experience has been but temporary, with recurrences probable within comparatively short intervals. It is likewise undoubtedly true that appendicostomy should afford better results than the more simple flushing from below, but it is not fair, I believe, to

subject cases of amebic dysentery to such operative interference until at least all medical measures have been given the fullest trial.

The method of treatment which we have used extensively within the past three years, and have found eminently successful, both in hospital and private practice, has centered around the administration of ipecac by mouth. This drug has been used in some form almost from time immemorial in all types of dysentery, and has always received high and authoritative praise from Oriental sources. Its use has more recently been restricted to the amebic variety, and in this field it is now enjoying a wider and more extended popularity perhaps than ever before. I should like to put my own faith in ipecac before you just as strongly and impressively as possible. That it does kill off the amebæ as its elements reach the lower bowel, there can absolutely be no question or doubt. It likewise fulfils a prime essential in amebic dysentery by inducing a free catharsis. The technique of its administration has been outlined in the literature on many recent occasions, and in a previous paper* I tried to emphasize the importance of strict attention to detail in its use. The salol coated pills are most effective when dispensed fresh in each individual case by the pharmacist. The dosage should be regulated by the length and severity of the infection. In a case treated recently I gave as much as 100 grains, or twenty five-grain pills at one dose, with no ill effects of any kind resulting. The blood pressure, contrary to our former teaching, is not lowered even after such a large dosage of ipecac. Vomiting is entirely obviated by having the pills well coated with the salol and insisting upon a previous three-hour fast, preferably before sleeping time. There is an objection to opium in amebic dysentery, and it should not be given unless positively indicated.

Our results with the ipecac treatment have been so uniformly successful that I am yet to see an instance after its careful administration where operative interference became necessary.

When the nightly dose of ipecac has been brought down to but five grains it is well to begin with bowel irrigations of half gallon of normal saline, alternating with nitrate of silver solutions, twice daily. This is merely to effect a more rapid recovery of the inflamed and often ulcerated lower bowel, and should not be started at an earlier period in the course of treatment, for fear of washing out the important ipecac elements from the bowel.

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* *Journal American Med. Association*, Nov. 9, 1909.

A repetition of the treatment in toto may be found necessary subsequently, should a recurrence ensue, but such a contingency, I have found, is not often met with. Finally, it is a wise precaution with amebic patients to insist that their drinking water be boiled for years after their disease has been cured.

Other forms of medication by mouth have been suggested from time to time, such as simaruba, nitrate of silver, bismuth subnitrate in heroic doses, and intestinal antiseptic of various kinds. With the bismuth, as suggested recently by Deeks, from the Canal Zone, I have had no experience.

BACILLARY DYSENTERY.—This type is now clearly established, following the identification of the specific bacillus by Shiga in 1898. In Japan and other Oriental countries bacillary dysentery is a very prevalent disease, but, according to authentic reports, the pure Shiga infection is rarely encountered under ordinary conditions in this country. The disease readily assumes epidemic proportions, and in army camps throughout the past history of the world the military man has been made to pay heavy toll to its onslaught.

Its manifestations are thus mostly of the acute or sub-acute order, though Shiga speaks of secondary chronic types in infected localites. Up to the time of the discovery of the bacillus this form of dysentery was usually confused with the amebic, though we know now they have little in common. Certainly, there is considerable diversity in treatment. The one essentially chronic, the other acute in its manifestations, the method of treatment in each must necessarily differ radically. Bowel irrigations with irritant solutions have no place in the therapy of any acute chronic inflammation, and therefore are practically barred in the bacillary type. Ipecac, likewise, would seem to be of no value in this variety of dysentery in any of its stages, though, strange to say, santonin, it is claimed, has proven serviceable in some hands.

The sufferer from bacillary or epidemic dysentery must, first of all, be placed in bed, warmly covered, and placed upon a strict liquid diet, from which even fresh milk is best omitted. A small dose of calomel, followed by castor oil, should be administered at the outset, to rid the bowel of its superfluous material and to check further extension of the infection upwards. Following this, sufficient magnesium or sodium sulphate should be given to allow of a continual mild catharsis and constant drainage from above. If the tenesmus or colic pains be severe, opium in some form is

permissible in fractional dosage—short of checking up the secretions, however. A rational mode of its administration, always agreeable to the patient, is the warm starch enema, with ten to fifteen drops of laudanum added. Berther has recommended highly methylene blue injections (2 grains in litre) in small quantities, for which he claims soothing effects.

The disease is largely a self-limited one, and therapy is, therefore, in the main, expectant.

A specific serum of bacterial as well as antitoxic properties has been produced, and, according to Shiga, Kruse and others, has effected a reduction in the mortality from approximately 25% to 10%. Reports from other sources, however, have not been so flattering. Much more might be hoped from a polyvalent serum of all the various strains of the Shiga group. This has already been used to some extent in this country with a certain degree of success.

Catarrhal and Diphtheritic Dysentery.—These two forms, usually considered under separate clinical headings, are very closely related from the standpoint of bacteriology, probably presenting mild and severe grades of the same infection. The organism involved is thought to be the Flexner-Harris or acid-foot type which, according to Duval and others, is a member of the Shiga group, but of a different strain. This infection is very widely disseminated throughout this country.

The clinical picture may simulate exactly the epidemic type, considered above, in which case the treatment likewise would not differ in any respect. These are, however, mild or ambulatory attacks of a simple catarrhal dysentery, seen frequently in practice, which do not require such stringent restrictions or active therapy. These cases respond readily to an initial purge of calomel or castor oil, followed by a mixture such as the following:

Magnesium Sulph.....	gr. xx
Acid Sulphuric dil.....	m. xv
Tr. Opii	m. v-x
Aqua.	

The diet of the patient should exclude principally the fruit and vegetable foods.

When dysentery occurs as a terminal event in cachectic or severe constitutional states, as it does, often in the form of a necrotic or

diphtheritic inflammation, the main object in treatment should be the removal, if possible, of the underlying condition. Otherwise, treatment in general will be found to be of little avail.

Discussion of Papers on Dysentery.

Dr. Allan Eustis, Abbeville: Dr. Simon's paper regarding the ipecac treatment interests me very much. I have been using it with good results. His admonition to keep the patient quiet physically, and also to keep the bowel quiet, is important. I eliminate all but soluble foods, by which I mean gelatin and the soluble carbohydrates. If you will give this with sufficient liquid the patient will not complain of hunger, if kept in bed. In giving ipecac it is highly important that the salol coated pills be fresh. If you go to the pharmacist you are liable to get old pills, which are not so efficient. It is very easy to prepare your own salol coated pills, and I prefer doing so. The ipecac is made into pills with glucose or some other pill mass, and then dropped into melted salol in a mortar. The pills are rotated while the salol slowly cools, and by frequent repetition of the process a given coating of salol is obtained on each pill.

Dr. J. T. Halsey, New Orleans: I look upon the rectal examination as being of the greatest importance in the differential diagnosis. I remember repeated cases where the differential diagnosis was made by this means. I have seen cases thought to be amebic, which were shown by the proctoscopic examination to be tubercular, and cases not thought to be amebic that were shown to be by the use of the proctoscope. I think that a great many physicians hesitate to use the proctoscope because they do not have one with the electrical attachments, etc. I got along very well before I had these attachments by using the regular proctoscope and my head mirror. I think we should all make these rectal examinations. We do not hesitate to make vaginal examinations, and it is just as important that we make rectal examinations.

Dr. F. R. Bernard, Lake Providence: I have had cases diagnosed as dysentery, and having all the characteristic symptoms of dysentery, when really there was no dysentery present. I had one case recently that had been treated by a great number of physicians all over the country as dysentery, having been diagnosed as a chronic case, and on examination it was found that there was a fibrous growth across the upper portion of the rectum, with con-

siderable occlusion. When this was removed the condition cleared up. As to catarrhal dysentery, of which we hear occasionally, it seems to me that catarrh is simply an exhibition of something going before. There must be some prior reason for that condition. We who practice in the country find that the ipecac-salol treatments give a very easy and happy cure.

Dr. Randolph Lyons, of New Orleans: On the whole, my experience agrees with what Dr. Simon has said. We believe in large doses of ipecac. I think in many of the cases that were not successful the failure was due to the fact that they did not get large enough doses. In the Charity Hospital we began by giving 35 grains and gradually reducing to 5 grains, and then we would stop to see how they came out. I think when you get down to 15 grains you might just as well stop. That was the treatment we followed at first. We now begin with doses of 50 to 100 grains. In one case we gave 300 grains in three days. Patient vomited once, due to the fact that he got some food at the same time. In giving large doses, watch the bowels carefully, as pills may pass through unaltered. If the pills are properly made, patient will not vomit. Ipecac itself, Prof. Dock and myself have found, has but slight effect upon cultivatable amebæ in cultures. Exactly how it acts is still an open question.

Dr. I. I. Lemann, New Orleans: In some cases after the use of the ipecac treatment there has been some continuance of the loose bowel movements, but it has occurred to me that perhaps this diarrhea was due to the laxative effects of the ipecac itself.

Dr. Simon (in closing): I am glad to learn that others are getting results from the ipecac treatment. I am glad to know that some of the country men are using it. Here in the city the city men are using it almost exclusively. I want to say a few words about the technic. It is useless to treat a patient for amebic dysentery if he is walking around. The patient must be put to bed. That is absolutely necessary. I usually start the first night with a dose of castor oil, to see that the canal is clean. I use a liquid diet, milk, eggs, and such food. The next night the food is stopped at five o'clock. Nothing more is given, not even water. At nine o'clock the salol coated pills are given. I have never been guilty of giving less than 40 grains to the dose, and more often it is 80 grains or 100 grains. If you start with 80 grains your dose is next brought down to 70 grains; keep on reducing the dose until you have reached 10 grains, the patient in bed all the time.

As to irrigations, I am satisfied that it is not the medication that gives the results, but the water. After three weeks the patient is allowed to sit up, and then the proctoscope is used. I use the proctoscope in order that I may see what the exact condition is. If necessary, we use a nitrate of silver solution as an irrigation. How ipecac kills the amebæ we do not know. There must be some change in it along the course of the intestinal tract.

DR. J. A. STORCK, New Orleans: Speaking to Dr. Simon's paper, I will say it is true that the treatment of amebic colitis with ipecacuanha is often followed by the amelioration of symptoms. Bowel movements are lessened in number, and the stools become firmer in consistence. It is also true that relapses are not infrequent—that is, there is reappearance of the entamebæ in the feces, and also a recurrence of mucoid passages.

My personal experience coincides with that of Moulden, Thornbrugh and others, that relapses among the sub-acute and chronic cases are frequent after the ipecacuanha treatment. And it is the opinion of some excellent clinicians, Osler, Futcher and Moulden among them, that the instillation or irrigation method is the most rational and satisfactory. The best results with the instillation method, in so far as my experience and information go, has been obtained by means of a hot solution of copper sulphate 1-10,000 to 1-6,000.

Moulden, who had extensive experience with amebic colitis in Manilla, is enthusiastic in his praise of the copper treatment. My own experience has proved to my satisfaction that, used alone or in combination with copper arsenite or ipecacuanha, it leaves little to be desired in the treatment of amebic colitis.

Translations.

Three Cases of Chancre of the Eye.

By DR. HOUDART, of Brest.
Translated by DR. ERNEST A. ROBIN, New Orleans, La.

One of the physician's first obligations is to endeavor to observe accurately, thus enabling him to give to each morbid manifestation presented to him the proper relationship to the nature of the affection of which it is only one of its exterior elements. This is a professional necessity of the greatest importance. From the earliest

times to the present day the constant effort of oral and written teaching has leaned in that direction, so that the habit of classification has become a sort of second nature to the medical profession. However, there are some among us who do not seem to pay an adequate tribute to this necessity, either through lack of analytical power or satisfaction with a judgment based upon most superficial features. They often obtain successful results in cases the nature of which has never been recognized, for the reason that only few affections call for specific treatment, and that well-applied general measures answer practically as well in a large number of affections. Finally, it must be admitted that no small number of patients recover, in spite of a treatment based on a faulty diagnosis, no matter how carefully it was worked out.

But therapeusis is not our only concern; prophylaxis should also be the subject of our constant medical thought. We recognize the existence of some specific, contagious diseases that spread from the focus of an initial lesion, in which cases an early and precisely accurate diagnosis is of the utmost usefulness because of its enormous value, not only in the rapid and effective treatment of the affected individual, but in the prophylactic preservation of the element of society among which he moves.

It must not be inferred that, in ophthalmology, we often meet with early manifestations with diffusive powers so great that they assume within a short while the characteristics of a regional infection. On the contrary, eye affections, even including trachoma and acute contagious conjunctivitis, are far more modest in their behavior and have no tendency to spread, like influenza and measles, in general pathology. My idea, therefore, is not to assume so solemn a ground, but modestly to call attention to the enormous importance of the early diagnosis of the syphilitic nature of any ulceration about the face, whether in the eye or its vicinity, with the very laudable aim of ferreting out the infection as early as possible, thus limiting and neutralizing the inoculation of the virulent secretion—a possible thing at any stage of the ulcer's evolution.

One who has followed this procedure has fully and in a superior manner done his duty, not only to the affected individual, but to all those who may come in contact with him, without submitting him to the barbarous measures adopted in the medieval ages against the leper, and, by extension, a large number of syphilitics.

The principle is well established that society must protect itself, and in turn be protected by its units; but this protection should no longer be sought through Draconian legislation, terrifying as it may appear, because it fails altogether to inspire general respect, and is, therefore, never properly enforced.

Protection must be looked for in the better understanding of things, in the convincing force of truth concerning the nature and reality of the dangers of contagion, in the substitution of precise information for the vague ideas now extant, and in the cultivation of new and wholesome habits by the public, both general and medical.

Early diagnosis is indispensable to this practice, for, no matter how uncertain it may be, it gives rise to doubt and suspicion and commands a prudent reserve concerning an open ulcer about the eye which may, at first, appear benign to the sufferer and his friends, but soon reveals the symptoms of the ever-active syphilis. Unfortunately, the true nature may become known too late to prevent the terrible consequences of contagion, especially if the subject is an infant, an innocent victim, and hence not looked upon with suspicion, accustomed to promiscuous caresses and kisses.

This danger is so real that in England the children are protected againt these indiscreet marks of affection by tagging their clothes plainly with the inscription: "Do not kiss me." Though this cannot be mistaken for a notice that the child is a menace if kissed, still it is far from a vulgar precaution, even in countries like England and America, where measures are sometimes adopted only on account of their originality.

Within the past ten years I have seen three cases of chancre of the eye and eyelids, one of which was the source of two well-defined new infections; but how many of such cases escape observation and go on at random spreading contagion!

Syphilis is always awake and without any special port of entry. The fact that an organism becomes infected through any avenue except the usual one makes the inoculation no less terrible, lasting and profound, the intensity of which depends not only upon the virulence of the poison, but upon the resistance of the inoculated organism and the regularity and length of proper treatment.

Granting this, it is, therefore, useless to insist upon the dangers to which the children of our most modest population are exposed when permitted to roam at large without proper supervision, with

faces covered with sores, presenting surfaces ready for inoculation or secreting syphilitic virus, so that, through their games, their fingers and toys become so many means to spread the disease. Therefore, it seems to me that it would be wise to remove syphilis on account of some of its forms, from the exclusive chapter of venereal disease, and to consider it a social malady, borrowing, as it does, a note of seriousness from the necessity of social life whereby diffusion becomes easy to the infinite variety of our daily relations.

Obs. I.—F. P., *aet.* 35, married, mother of seven healthy children, with the exception of a daughter two years old, who, for some reason, was entrusted to a day nurse, a mere mercenary, altogether unworthy and ignorant of the rôle which she appeared only to fill. In her establishment, wretchedly supervised, the children lived in a state of haphazardness, really fantastic, using in common the towels, clothing, toys and nursing bottles as they felt inclined. Among such surroundings, that the transmission of contagious diseases should be the rule would be far from surprising. Though this particular case was the only one from this establishment to come to my notice, it is quite probable that many others of a latent form may have originated there.

Without medical advice, this little girl was removed from the establishment by its mother, on account of her poor state of health. She presented an extreme degree of emaciation, copper-colored discolorations of the skin, and the entire integument hung in folds over a shrunken body. No physician was called in, as the parents hoped that improvement would follow the renewed attention and careful nursing now given by its mother. A month and a half later the mother presented, on the lower lid of the right eye, about 5 mm. from the external canthus, a small tumor, moderately red, with a discreet infiltration of the surrounding tissues. At the first visit the nature of the swelling was not recognized; but at her next visit, a week later, the tumor appeared a little ulcerated on its surface, flattened and oval in shape, the inner surface concave from the pressure of the eyeball, but prominent on the skin surface, with indurated edges. The inner surface of the lesion appeared pink and covered with sanguinolent secretions. The preauricular glands were enlarged, but no other signs of infection appeared.

The seat of the ulceration, its characters and the appearance of the child, now carried in its mother's arms, allowed no doubt to remain as to the nature of the illness, the agent of contagion and the mode of inoculation. It became so evident that the mother herself realized it, and at once inferred the nature of her child's cachectic condition. The diagnosis was confirmed by the later evolution of the disease, but too late to make useful the necessary precautionary measures which such cases demand.

Chancre may also be attributed to some accident of manual labor.

Obs. II.—A white man, *aet.* 27, working in an arsenal, had been receiving diligent daily attention to his eye for over three weeks for a wound of the right upper lid, said to have been the result of an injury received during the pursuance of his usual work, and so duly certified and witnessed by his employer and companions. Noticing no improvement in his condition, in spite of the treatment, he was assigned to the ophthalmological service of the hospital on account of the region involved. Here we find a complete change in the condition. There are now no evidences of wound, but we find an ulcer of the upper lid, not involving the free border, almond-shaped, with the acute angle extending downward and outward. With a copper-colored base and thin red border, the surface of the ulcer presented a mass of small granulations closely piled up and covered with a thin layer of pus; the border was well defined and the induration extended well into the internal angle of the eye. Preauricular, submaxillary and parotid glands hard and enlarged. At this stage his general condition gave early evidences of a systemic infection. Emaciation, increasing anemia and fatigue upon the least exertion. Moderate febrile reaction in the morning, sore throat and a discreet roseolar eruption, indicating the dawn of the second stage of syphilis. The early lesion had evidently been the result of accident while at work, but it appeared also quite reasonable to conclude that the wound became later on infected with the syphilitic virus.

Chancre of the eyelid is a sufficiently rare affection to escape prompt recognition on the part of observers who are not expert in the matter of its varied aspects in different localizations. In his interesting and charming lectures at the Necker Hospital, Prof. Dieulafoy was fond of repeating the following as an important guide to diagnosis:

1. Herpetic ulcerations lacrimate.

2. Syphilitic ulcerations bleed.
3. Chancroidal ulcerations suppurate.

Obs. III.—In November, 1904, a handsome young soldier, *aet.* 21, presented himself with a lesion of the mucous surface of the right lower lid, which he attributed to a bite received a few weeks previous. The lesion is, of itself, painless, but it gives rise to considerable irritation of the globe by the neighboring infection and by friction of the corneal limbus. After a week's absence he returns in a much worse condition; the swelling is enormous, marked chemosis, entropion, intense blepharospasm, abundant conjunctival secretion strongly resembling gonorrheal ophthalmia. Microscopic examination of secretion showing absence of gonocci excited our suspicions of the real nature of the trouble. After cocainization we discovered, upon everting the lid, a sanguinolent ulcer resting upon an indurated base. The neighboring lymphatic gland was enlarged and tender. The diagnosis of chancre was evident, and was confirmed by further evolution of the case.

Bacteriology having recently made known to us the specific agent of syphilis, it should become easy and possible in the future to differentiate precisely with the microscope between chancre and chancroid, no matter where found.

From the *Recueil D'Ophtalmologie,* November, 1909.

The Contagiousness of Scarlatina and the Scarlatinous Squamae.

Translated from the French by DR. E. M. DUPAQUIER, New Orleans, La.

Until recently the doctrine that the danger of contagion from scarlatina lay mainly in the squamæ was, seemingly, unassailable and unshaken. But to-day it is thought, and taught, with reason, that the squamæ are not, of themselves, a source of danger, and that they really become so only when accidentally laden with the germs coming from the mouth and naso-pharynx. Renaud, in *la Revue de la Suisse Romande* (No. 3) writes on this subject an essay of great interest, based on a series of observations and bacteriological researches which go to confirm the views expressed above.

The research of the etiologic agency of scarlatina, says Renaud, has formerly brought on a number of essays which all tend to show that scarlatina is of streptococcic origin.

Whether the scarlatinous streptococcus be one of special characteristics, as some say, Marignac and d'Espine, for instance, or

whether it be the common streptococcus, as others say, this question is, after all, secondary, in the presence of the almost unanimous belief that scarlatina is a streptococcic infection; and it seems to be scientifically proven to-day that the streptococcus is the etiologic agency of scarlatina. On the other hand, the property of spreading scarlatina was attributed to the squamæ, and the period of desquamation—that is, rather a space from five to six weeks—was considered the dangerous period from the viewpoint of contagion. Under these circumstances, during an epidemic of scarlatina, Renaud, with the assistance of M. L. Roux, sought to find in what proportion the squamæ contained the streptococcus. Now, this examination has demonstrated,

First. *The almost constant absence of the streptococcus in the squamæ.*

Second. *The constant presence of the streptococcus in the mucus of the naso-pharynx, even after the period of desquamation*—that is, after the time prescribed for the isolation of the patient.

The rarity of the streptococcus in the squamæ (twice only in more than 20 examinations) proves that its presence therein is merely by chance, accidental, and that the squamæ are not necessarily infected, essentially so, as it is believed in general.

Among the observations reported by Renaud, there is one in particular which is very instructive. A young girl, convalescent, returns home seven weeks after her attack of scarlatina; and, though at that time, desquamation had ceased since a long while, she infects her two sisters whom she had hugged and kissed profusely in her joy to be back home.

There was at that time no trace of squamæ, but, on the other hand, the bacteriological examination of the mucus from the naso-pharynx disclosed the presence of numerous streptococci.

In short, the researches of Renaud show the remarkable rarity of the streptococcus in the scarlatinous squamæ, and, on the contrary, its constant and prolonged presence in the mucus from the naso-pharynx. If, as we are now agreed, scarlatina is a streptococcic infection, it must follow that the *contagium of the disease occurs through the mucus of the naso-pharynx, not through the squamæ.*

This fact, of itself a quite interesting one, leads to prophylactic and therapeutic measures (disinfection of the naso-pharynx) which

would make isolation during the period of desquamation unnecessary.

We may add to the foregoing the conclusion of an article published in *la Revue de Médicine* (No. 4) by Gauget, who, being in charge of the contagious disease wards at the Claude Bernard Hospital, was able, chiefly as regards scarlatina, to study usefully in what way contagion takes place. Now, his opinion regarding the part of the squamæ, concurs entirely with that of Renaud. Here are his conclusions as regards the duration of isolation and the dangers of contagion:

". . . From the point of view of the duration of isolation, we are of those who think that the fatidical duration of forty days is entirely arbitrary and illusory, because it is founded on an error, very probably, namely, the contagiousness of the squamæ. The results of the investigations of Mittard, of the observations of Doche, Lemoine, etc., seem to firmly establish that the squamæ bear nothing but a borrowed contagiousness, and that it is in the naso-pharyngeal secretions, in the pus (chiefly that of otitis), in the urine, that resides the contagious agency. Like Barlow, who marvels much, old superstitions should persist; we believe, therefore, that many mild cases could be freed without inconvenience, much earlier than the six weeks set by regulations, and that, while we do not approve of discharging certain cases after ten or fifteen days only, as Barlow does, because complications such as otitis and nephritis usually occur at a later date, quite a number of cases could be liberated after an isolation of one month. Contrariwise, we believe, like Pike, Barlow, de Rochely, Borel, Fleming, Aaser, that certain cases (chiefly cases of prolonged otitis) remain contagious during more than forty days. Simpson has reported a typical return case: a child having been in the hospital for 240 days on account of scarlatinous otorrhea, infected all four of his brothers and sisters after his return home. But, is there any reason on that account, for demanding, like Neech, in all cases a minimum isolation of eight weeks? The truth is that no uniform rule applies to all cases; isolation, like treatment, demands individualization."—*(Journal de Medicine,* May 10, 1910.)

[See the remarks in the Department of Internal Medicine, New Orleans Medical and Surgical Journal, May, 1910.]

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

The Public and Sanitation.

The several States along the Gulf Coast and contiguous, interested in hookworm infection, have already moved in the direction of aiding the Rockefeller Commission, and in some of these States actual work will soon begin. The purely sanitary effort on the part of Dr. C. W. Stiles has resulted in this much good, even if a wild scare may have sensationalized his efforts. The chief lesson to be drawn is the ready acquiescence of the thinking public in the movement along lines of improvement of existing conditions.

Much more intelligent and intelligible information regarding this and other diseases falling within the scope of sanitation is now afforded the reading public by the lay press, and altogether it would look as if the public were really being educated to the needs of sanitation.

It is quite true that all of the altruistic spirit exercised in creating the proper enthusiasm in the public mind has been derived from the medical profession, submerged always when the movement reaches a climax. Still, however, that same profession finds its antagonists and its detractors, in spite of all.

Tuberculosis is being fought out by combined interests of professional and lay minds, and in every section of the United States leagues of humanitarians are now organized for concerted action against the White Plague.

No higher evidence of the appreciation of sanitation and hygiene has been expressed than in the steadily improving method of school inspection now generally practised.

It has much advance to make, however, before the ideal condition is obtained. The present strict enforcement of rules for vaccination and regarding contagious diseases does a great deal, but the inspection should be expanded so as to consider and provide remedies for the evils of the schools arising from other causes

and relating to the special organs, the nervous system and the like.

Every physician in city and country should be a self-constituted sanitarian, and he should carry his educational methods into every household.

To-day much more attention is given to the instruction in the borderland studies related to medical teaching, and hygiene finds a regular place in the curricula of the best medical schools; but the education should be even broader, carrying into the homes of the people the need of appreciating laws of health and their observance. Within the past few years our local health authorities have engaged most worthily in these problems, and they have gone far in educating the public—but much remains to be done.

Ehrlich's Remedy for Syphilis.

Rather utopian reports come from the Fatherland anent the rapid cure of syphilis at the hands of Ehrlich and his associates with the injection of some arsenic derivative, given in extraordinary doses. Even one injection, it is reported, will cause evidences of the chancre, or deep-seated syphiloderms to disappear, and in three days after such injection the Wassermann test is negative.

The method is not yet announced, and it is said will not be until enough experimental cases are recorded to justify the dissemination of so great a remedy. The possibilities of such a treatment, if proven adequate, are enormous, and the luetic may be rescued from the list of those whose *"mene, mene"* has always been "the wages of sin is death."

Among the reported cases under experiment are those with late nervous evidences of syphilis, and the reports are not unfavorable.

We may sit patiently waiting for the dictum of the Senate, and hopeful that all the promise may be fulfilled.

A New Theory for Leporosy.

Atcherly, in the *Medical Record* of August 6, 1910, relies upon a twenty years' residence in the Territory of Hawaii for the conclusions he has reached in declaring a new theory for the origin of leprosy.

He assumes that leprosy is a degenerative disease with its chief effect upon the nerve tissues, affording a field for the bacilli found in the dis-

ease. The degeneration is brought about through faulty food, and is comparable to the changes found in scurvy.

The author disposes of the idea of contagion by arguing the absence of evidence in large centers to which cases of leprosy constantly travel; by the fact that infants are never born lepers; if children develop leprosy in the same household with parents who are lepers it is improper food and cannot be looked on as contagion. Segregation is of no value, and ignores the food factor. Habits are contagious, and persons living with lepers contract food habits which create the disease in the new victim. Spontaneous cures are due to change of food or of avocation. The ancient belief in contagion is based upon the fact *(sic!)* that anciently other diseases *(e. g.,* tuberculosis, ringworm, etc.) were classed as leprosy. In the Phillippines, during a famine, a number of the inhabitants had only clams to eat, and of the number many developed leprosy. When the famine closed, no more developed leprosy; therefore the clams caused leprosy.

"There is a special environment more likely than any other to favor the development of leprosy," says the author, and this must be "a barren, stony waste, devoid of vegetation, isolated enough to make any communication with any place where food can be procured rather difficult, when the supply of farinaceous food must be brought from a distance and where firewood is almost entirely wanting. The sea beach provides these conditions better than any other locality." Inhabitants of such "wastes" must depend on birds, or fish, or sea products. Farinaceous foods, once cooked, grow mouldy, and such a diet may produce ills as leprosy. Where the disease occurs among the civilized, "morbid" taste in food creates the proper nidus for leprosy.

This essay of Dr. Atcherly is ingenious and readily disposes of all accepted ideas of the disease, discardng the expermiental work done with the Hansen bacillus and monkeys and precluding any speculation as the future essaying of sera derived from the lepra bacillus as a factor in the production of the disease. The inventer of the "Scurvy theory" of leprosy considers the bacillus as an incident only in the disease, appearing after the nerve tracts and tissues have gone into a decline from insufficient and deleterious pabulum.

Most serious observers of leprosy have long recognized the metabolic changes in the victim, and have realized that the chief reliance in treatment has been in feeding lepers with foods containing hydrocarbons. The incidence of the disease, however, is rarely found under the stipulated environment so graphically set forth by the author, and the victims are as varied in their types as are the races in which the disease occurs. Leprosy has always spread, sooner or later, and always insidiously, wherever it has been introduced, and it has spread among peoples of all races, of all climes and with food habits varying with the conditions of the geographic site. We may say, again, that the theory is ingenious and, may be interesting, but it deserves to be held as such until it

can be proven—or go the way of other theories which have been uttered as honestly and with as much reason for acceptance.

Meanwhile the lepra bacillus must rest as the *causa morbi* of this disease, and must explain, as it seems to have done up to now, the various morbid changes in the various organs, progressive as with like diseases (tuberculosis and syphilis) and with multiplied manifestations which argue kindred processes—all having nothing in common with scurvy, pellagra or podagra, which, to the inventor of the new theory, are similars of leprosy.

Florence Nightingale.

The daily press of August 15 chronicled the death of Florence Nightingale, at the age of ninety years. It has seldom been the lot of a human being to fulfil the purpose of life with so signal a success and in so wide a scope as did this gentlewoman. With an inspired intelligence she gave origin to the humanitarian service to-day expressed in the Red Cross organization, but her activities arose at a time when amenities were scarce and where charity was discounted. In the train of her first endeavor has come the world-wide institution of trained nurses, handmaidens to medical and surgical practice and filling a place in the plan of civilization impossible to estimate by any standard of human measure.

In the history of the world the name of Florence Nightingale must stand out in the first rank of those who have made life more noble, and her example must always be the synonym of unselfishness, humanitarianism and divine charity. No monument can express the life of such a woman, whose name is written among the stars.

Miscellany.

TO FLORENCE NIGHTINGALE.

By E. S. McKee, M. D., Cincinnati, Ohio.

After her great work in the Crimean War, Florence Nightingale was offered a warship to bring her home, and England stood on tiptoe on her shores ready to pay her homage. Florence Nightingale

was as modest as noble. She slipped into England on a French vessel under the assumed name of Miss Smith, and was quietly resting at her Derbyshire home ere England knew that she had returned. *Punch,* in writing and in cartoon, had poked all sorts of fun at "the nightingales when they went to war," but later published the following beautiful and sublime verse on the woman and the incident:

"Then leave her to her quiet she hath chosen; she demands
No greeting from our brazen throats and vulgar clapping hands;
Leave her to the still comfort the saints knew that have striven;
What are our earthly honors? Her honors are in Heaven."

The "Lady with the Lamp" was the title given Miss Nightingale, from her habit of inspecting the wards and everything at Scutari at all times of the night, lamp in hand. This idea of the lamp is carried out in both the statue of Miss Nightingale at St. Thomas' Hospital and the beautiful Parian marble statue of her at the Johns Hopkins Hospital School for Nurses. Longfellow's poem, "Santa Filomena," refers to Miss Nightingale. Perhaps he drew somewhat from the Latin word *philomela,* meaning nightingale. We will quote but one verse from this, and advise our readers to look up and read the whole poem:

"A lady with a lamp shall stand,
In the great history of the land,
A noble type of good,
Heroic womanhood."

The following simple sentence from a wounded soldier at the Barracks Hospital at Scutari is said to have brought a hundred thousand dollars to the Nightingale Fund; it was worth it:—"She would speak to one and another and nod and smile to many more, but she could not do it to all, you know, for we lay there by hundreds; but we could kiss her shadow as it fell, and lay our heads on the pillow again, content."

Whittier has delicately described her:

"The sweetest woman ever fate
Perverse, denied a household mate."

Florence, Italy, the city of flowers, was the fitting birthplace of Florence Nightingale. Flora, the goddess of flowers—Florence comes from it and means flourishing. Nightingale is the sweet song bird which works at night, as does the nurse.

Byron, in "Bride of Abydos," mentions the fondness of the nightingale for the rose; also in the "Giaour," where we find the lines:

> "* * * the rose o'er crag or vale
> Sultana of the Nightingale."

There is a pretty Persian fable which relates that the Bul-Bul, or Nightingale, once fell in love with a rose. The rose, wakened from maiden sleep by the love song of the nightingale, trembled on her stem. At the time of this fable the roses were all white, innocent and virginal. Listening to the sweet song, the little rose heart was stirred; then the nightingale came nearer and whispered, *"Ben severin sana, Gul-Gul."* At these warm words of love the little heart blushed and then we had pink roses.

The rose alone, of all created things, was intended by Allah, when he created the world, never to know earthly love, yet the silly thing opened its petals to the persistent Bul-Bul, thus relinqishing her virginity. In the morning the sun rose red and saw at once that his little flower friend had turned red from shame.

Since that long-ago night the nightingale comes nightly, when all nature and nature's life lie hidden in the deep sleep of night, and implores for love in his sweetest song, but the rose refuses. Each sad successive night the bird seeks anew its love only to be again refused. Though the rose trembles with feeling when it hears the voice of its little feathered lover, its petals remain firmly closed. The nightingale sings till he sees night melt away before the orb of day, as pity melts the maiden heart to love, but the rose remains relentless. The nightingale prolongs his sweet song till he at last dies of unrequited love, singing to his rose. Chilled by the winter of love's last adieu, he is buried by the other nightingales at the foot of the rose bush on which his rose love trembles, his first love and his last. From this long suppression of love and the tragic fate of her lover the rose turned yellow. We now have the white, pink, red and yellow roses.

Isaak Walton has beautifully described the nightingales singing in England, and has done it very well. He had not heard the nightingale sing in the Orient. In the land of Mahommed they are supposed to be souls starved for love.

All this poetry, songs, flowers and birds has led me into the mood, and I send forward the following verse to Florence Nightingale,

hoping that the appellation in the last line may be deemed appropriate:

Purest, sweetest woman cruel Fate,
Unkind, refused her heart to mate.
Oh! rose, Sultana of the Nightingale,
Sultana of the suffering, Florence, Hail!

Abstracts, Extracts and Miscellany.

Department of Surgery.

In Charge of Drs. F. A. Larue and P. L. Thibaut, New Orleans.

Radium in the Treatment of Cancer.—We abstract from the *Revue de Chirurgie* (July 10, 1910,) that, in a recent discussion before the Paris Surgical Society, in which quite a number of members participated, it was the consensus of opinion that radiotherapy, either by the extra or intra-cancerous application, had not proven itself to be a real curative measure. It was asserted by some, however, that a purely local action on the cancerous tissue had at times been noticed, rendering previously inoperable tumors, especially of the womb, operable. Marked retrogression of malignant growths had in a few instances been produced.

Nelaton claimed to have observed in a case of cancer of the cervix uteri with involvement of the anterior cul de sac that, following one application of radium, the parts, one month after, seemed to be free and healthy. Lucas-Championniere mentioned the case of a young woman with a very rapidly growing cancer of the vagina, deemed by him inoperable, and with impending death. Radium treatment effected a complete local healing with cicatricial formation and arrest of the disease in situ.

This same patient, nevertheless, seven months later, suffered with sciatic pains, due to a deep recurrence, to which she quickly succumbed. Larue.

Gunshot Wound of the Portal Vein; Suture.—Mr. Hallopeau *(Ibid)*, through Mr. Pierre Delbet, communicated to the Société de Chirurgie the case of a young woman with a self-in-

flicted wound of the epigastrium, on whom he had immediately performed a median laparotomy. He found an intra-peritoneal accumulation of blood and a wound of the upper surface of the liver. Although no blood oozed from this wound, the hemorrhage continued. Hallopeau then noted that the bleeding was in the space between the stomach and the liver and that it ceased when traction was made on the lesser omentum. Searching in that direction he found a lateral tear six or seven millimeters long on the right side of the portal vein. The hemorrhage was controlled after difficult suturing with very fine needles and linen thread. A small gauze drain was placed under the liver. The patient recovered.

Mr. Delbet remarked that this was the first case of suture of the portal vein under such conditions, and approved Mr. Hallopeau's course. LARUE.

Department of Ear, Nose and Throat.

In Charge of DRS. A. W. DEROALDES and CLYDE LYNCH, New Orleans.

A NOTE ON THE EMPLOYMENT OF "SCARLET RED" IN THE TREATMENT AFTER THE RADICAL MASTOID OPERATION.—Dr. Gaudier *(Annales des Maladies De L'Oreille, Du Larynx, Du Nez, et Du Pharynx,* Vol. xxxvi, 1910, No. 4) discusses scarlet red *(Rouge Ecarlate)* as a dark brown powder insoluble in water, soluble slightly in alcohol, ether and benzol. In chloroform it is dissolved at the normal temperature, in the proportion of one-fifteenth. It is dissolved easily in oils and fats, especially with the aid of heat.

Fischer *(Munch Med. Wochenschr,* 1906, No. 42, 2041) injected an oily solution of scarlet red under the skin, producing a marked inflammation, followed by an active multiplication of the epithelium of the skin. An examination of sections of the skin, thus injected, resembled epithelioma, but they were not *"invading or destructive."*

Helmholz *(Bulletin J. Hopkins Hosp.,* September, 1907, p. 365) thinks that, though it is not a true specific for the epithelium it produces a soil for the development of epithelium in regions with or without hair follicles.

Toulot proved microscopically that the injection of scarlet red produced a characteristic intestinal inflammation, especially the production of giant cells and a ceuital nodule with leucocytic infiltration, a true hypertrophy of the epidermis.

We are indebted to Schmieden for the introduction of scarlet red into medicine *(Centralblatt für Chirurgie,* 1908, No. 6, p. 153). He employed an ointment of 8 per cent and applied it to granulating ulcers, protecting the adjacent skin with vaselin and oiled silk, obtaining by this method an hypertrophy of the epidermis, having the characteristics of normal skin.

Gaudier used this scarlet red in the treatment of the wound made by the radical mastoid operation in the following manner, and insists that the various steps be followed with care, skill and patience.

After completing the operation and resecting the posterior portion of the ear canal the incision is immediately closed. The cavity is packed tightly with iodoform gauze, which is left in place from eight to fifteen days. On removal of the gauze the wound is dry and the granulations slightly atrophic. It is then dressed every day with simple sterile gauze until the granulations are red and healthy—a surface suitable for Thiersch grafts. It is at this stage that he employes the scarlet red in the following ointment:

℞ Scarlet red ..... 5 parts.
Lanolin ..... 40 "
Vaselin ..... 60 "

Clean the wound with 80 per cent alcohol, apply the ointment thinly on strips of gauze, protecting the epithelium (skin) with vaselin and pack the cavity tight with plain gauze, leave in place 24 hours; on removal the tissues are grayish, and there is an abundant secretion. Cleanse well with alcohol, 80 per cent, and dress with plain gauze soaked in vaselin for 48 hours; then repeat the application of the ointment. If the granulations are to abundant, cauterize with silver nitrate and lengthen the time between applications of the ointment.

In seven cases treated in this manner the period of convalescence has been shortened by one-half, and the epithelium in healing is thick and smooth and resembles the normal skin.

Three Cases of Leeches Fixed at the Level of the Vocal Cord.—The penetration of leeches and their fixation in the larynx

is frequently observed in Algeria and Tunis, says René Broc *(Ibid,* vol. xxxvi, No. 4, 1910). Lying flat on the stomach the natives drink (by sucking) water from the puddles and ponds along the roadside, and in this manner suck the leeches into the digestive and air passages. In the latter case they become fixed on the false or true cords and provoke spasms of coughing, with an abundant flow of saliva (tinted or streaked with blood), in sufficient quantity to fill two or three spitoons a day. There is a sticking, choking sen sation in the larynx, the voice being either hoarse or aphonic; there is some dyspnea, but usually slight..

The larynx shows a great tolerance for this kind of foreign body, a leech having been removed forty days after entering the larynx, the three reported by Broc being retained eight, fifteen and twenty-eight days.

The leech is best removed after cocainization of the epiglottis, only; catch the body just behind the sucker on its tail end, and, by pressing the forceps forward, loosen the sucker; the leech will then be coughed out, or be brought out held in the jaws of the forceps.

Though at the time they are in the larynx they produce a profound anemia of the parts, after removal the larynx quickly resumes its normal appearance and one cannot determine the point of the bite or see any trace left by this foreign body.

The Local Treatment of Diphtheria by Pyocyanus.—(Kozlowski—Oto Laryngological Society of St. Petersburg.)—The treatment of diphtheria simultaneously with antitoxin and pyocyanus is indicated in all serious cases, and is recommended in all forms of diphtheria in which there is a persistence of the Klebs-Loeffler bacillus after the membrane has been cast off. The local treatment with pyocyanus will be the most rational and effective.

The action of pyocyanus in destroying by dissolving the false membranes is manifest. The action is due to the fermentative influence of an enzyme.

Department of Nervous and Mental Diseases.

In Charge of Drs. P. E. Archinard and R. M. Van Wart, New Orleans.

Paton (*Brain*, Vol. 32, 1909), in discussing the relationship of optic neuritis to intracranial tumors, gives the following main conclusions as the result of his examination of a series of 200 cases:

1. Tumors directly or indirectly exercising constant pressure on the chiasma, or on the optic nerves, may cause primary pressure atrophy without any preceding edema of the disc.

2. The great majority of tumors affecting the gray matter of the cortex cerebri have optic neuritis, the severity of which seems to vary inversely with the distance of the part affected from the chiasma.

3. Tumors lying deep in the white matter of the cerebral hemisphere do not, as a rule, develop optic neuritis until they invade either the cortex or the basal ganglia. They are most likely to develop optic neuritis when they spread in the latter direction.

4. Tumors affecting the optic thalamus, the mid-brain, the cerebellum and the ventricles, are almost invariably associated with optic neuritis.

5. Pontine tumors and some extra-cerebellar tumors which are closely allied to pontine tumors do not develop optic neuritis until neighboring regions, especially the cerebellum, are invaded.

6. A difference in the intensity of the neuritis in the two eyes is met with in about 50 per cent. of all cases. The neuritis in some cases is greatest in the opposite eye. When a difference exists, it should not be regarded as of localizing value.

7. The nature of a tumor does not in itself play any part in determining the onset of neuritis, except in so far as the nature of the tumor determines its location.

8. A close relationship seems to exist between the occurrence of neuritis and the amount of intracranial tension, but there is as yet nothing to justify us in saying that the relationship is one of cause and effect.

9. Meningeal inflammation is rare in cerebral tumors, and when it does occur is, in the majority of cases, localized to the actual tumor area and plays no part in the causation of optic neuritis.

10. There are reasons for thinking that the diminution of visual acuity and the edema of the optic nerve head are more or less independent of one another, and are not related to one another as cause and effect.

11. The atrophy of the nerve, in some cases at least, is probably a simple pressure or descending atrophy starting from the chiasmal end of the nerve and exactly analagous to the primary atrophies that occur quite apart from any edema of the disc.

12. Age in itself has little or no relationship to the occurrence of neuritis. VAN W.

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

MINUTES OF THE THIRTY-FIRST ANNUAL SESSION. HELD AT NEW ORLEANS, LA., MAY 3-5, 1910.

MONDAY, MAY 3, 1910—4 P. M.

HOUSE OF DELEGATES.

(Continued from August Number.)

DR. ALLAN EUSTIS, Councillor from the Third Congressional District, read a report, which was referred to new business.

DR. J. C. WILLIS, Councillor from the Fourth Congressional District, read a report, which was referred to new business.

DR. THOS. RAGAN, Councillor from the Fifth Congressional District, submitted a report, which was read by the Secretary.

DR. E. K. SIMS, Councillor from the Sixth Congressional District, made a verbal report. He reported that his district was as well represented by parish societies as any district in the State, but that vital statistics were very poorly kept. He reported considerable grippe during the winter and quite a few cases of smallpox. His report was received and referred to new business.

DR. R. O. SIMMONS, Councillor from the Seventh Congressional District, made a report, which was received and referred to new business.

The Committee on Public Policy and Legislation made no report.

The Committee on Medical Education, Dr. Le Beuf, Chairman, made a report, which was received and referred to new business.

The report of the State Board of Medical Examiners, Dr. Thornhill, Chairman, was read and referred to new business.

The President appointed the following committee to audit the Treasurer's books and report back to the next session of the Council: Drs. E. K. Sims (Chairman), A. B. Brown and H. S. Joseph.

Dr. Larue, Secretary of the State Board of Medical Examiners, read his report, which was received and referred to new business.

The report of the Special Commitee on President's Report was received and referred to new business.

The report of the Special Committee on Secretary's Report was read and referred to new business.

New Business.—The applications for membership of the following gentlemen were referred to the Council for action: Drs. Thomas Byron Cracroft, of Tallulah (proposed by Drs. Ragan and Mosely); J. O. Greenlaw, Washington Parish (endorsed by Drs. W. J. Jones and J. E. Pierce; Dr. J. W. K. Shaw, New Iberia (endorsed by Drs. Eustis and Dupuy; C. W. Kibbe, Abbeville (endorsed by Drs. Eustis and A. Landry; Dr. J. L. Graves, Columbia (endorsed by Drs Eustis and Simmons; F. W. Brock, Washington Parish (endorsed by Drs. W. J. Jones and Bass).

Dr. Thornhill's report was received and adopted as read.

Dr. Larue's report was referred to the Committee on Public Policy and Legislation.

The report of the Special Committee on Secretary's Report was received and adopted as read.

(To be Continued in October Issue.)

Medical News Items.

Medical Examiners Meet.—At a special meeting of the Louisiana State Board of Medical Examiners held in August for reorganization and election of officers the following were elected: Dr. E. L. McGehee, President; Dr. J. G. Martin, Vice-President; Dr. A. B. Brown, Secretary and Treasurer.

New Domicile for the Orleans Parish Medical Society.—

The plans of the new home of the Orleans Parish Medical Society are almost perfected, the old building has been torn down and the ground will be broken in a few days.

Dr. Claude A. Smith Wins Gold Medal.—At the recent meeting of the American Medical Association, held at St. Louis, Dr. Claude A. Smith, of Atlanta, Ga., was signally honored by being given the gold medal for the best exhibit and paper of original research before the Committee on Scientific Exhibit and Original Research of the American Medical Association.

Monument to Dr. Long, the Discoverer of Anesthesia.—At the recent special meeting of the Medical Association of Georgia, at Jefferson, a large attendance of physicians and others witnessed the unveiling of a monument to Dr. Crawford W. Long, the discoverer of anesthesia.

The American Proctologic Society Elects Officers.—At its last meeting this Association elected the following new officers: President, Dr. George J. Cook, Indianapolis, Ind.; Vice-President, Dr. Jerome M. Lynch, New York City, N. Y.; Secretary-Treasurer, Dr. Lewis H. Adler, Jr., Phladelphia, Penn. Executive Council—Drs. Dwight H. Murray, Syracuse, N. Y., Chairman; George J. Cook, Indianapolis, Ind.; Louis J. Hirschman, Detroit, Mich.; and Lewis H. Adler, Jr., Philadelphia, Penn. The thirteenth annual session will be held at Los Angeles, Cal., in June, 1911. Exact date and headquarters to be announced later.

Low Mortality in New Orleans.—The death rate in New Orleans for white people, exclusive of non-residents, was 12 per thousand for the first week in August.

A New Gray.—Messrs. Lea & Febiger announce a new edition of Gray's Anatomy, edited by Dr. E. A. Spitzka, Professor of Anatomy in Jefferson Medical College.

Fifteen Pass Examination.—Fifteen applicants out of twenty-six were successful in the examination conducted by the Louisiana State Board of Pharmacy at the Medical Department of Tulane University, August 5 and 6. The successful ones were: J. B. Aucoin, R. U. Barrios, J. J. Bussy, S. A. Desportes, C. E. Jameson, A. J. Laborde, P. J. Lacassin, W. Long, A. M. Nutter, J. E. Scott, Mrs. F. Stewart, N. Voelcker, G. L. Walsdorf, G. Western and L. D. Israel.

Virchow Memorial.—A Virchow memorial was unveiled in Berlin on May 29. It represents a man who is overcoming a fabulous

beast. On the front of the pedestal is a relief of Virchow, while the opposite side shows Virchow surrounded by his pupils.—*Exch.*

Tuberculosis Camp Named.—The Louisiana Anti-Tuberculosis League has named its camp "Hygeia." There are 18 patients now and room for 35. A formal opening will be held September 18. An excursion will be run to the sanitarium on that day. Fare, one dollar for round trip.

Louisiana Health Bulletin.—The third number of the Quarterly Bulletin of the Louisiana State Board of Health has been received and it is a very interesting number. It has numerous illustrations, which makes it a valuable contribution to the sanitary education in Louisiana.

Examination United States Civil Service Commission for Medical Interne, Government Hospital for the Insane.—This examination will take place on October 5, 1910. As considerable difficulty has been experienced in filling vacancies in the position of medical interne in the Hospital Service during the past several years, owing to the limited number of eligibles available, qualified persons are urged to enter this examination. Applicants should at once apply either to the U. S. Civil Service Commission, Washington, D. C., or to the Secretary of the Board of Examiners, for Form 1312. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

Two Medical Colleges Discontinued.—Official notice from the Administrators of the University of Chattanooga announce that the medical school located in that city has been discontinued.

The daily press announces that the Medical Department of the University of Mississippi, which has been conducted for the last two years at Vicksburg, has been discontinued.

State Health Officer Resigns.—Dr. D. Harvey Dillon has resigned the presidency of the Louisiana State Board of Health. The reasons given for this action on his part are attributed to ill health.

American Association of Clinical Research.—The second annual meeting of the American Association of Clinical Research will be held in Boston on September 28 and 29, 1910.

New Site for New Orleans College of Pharmacy.—The New Orleans College of Pharmacy announces that it has bought a new site at St. Charles avenue and Melpomene street on which the

school proposes to erect a more commodious building.

The National Dental Association has selected Cleveland, Ohio, for its next meeting place.

Medical Society of Virginia.—The forty-first annual session of this society will be held in the auditorium of the Monticello Hotel, Norfolk, Virginia, October 25-28, 1910.

Medical College Open to Women.—With the opening of the fall term, women will be admitted to the classes of the Maryland Medical College on the same terms as men.

Smoking Autos Under Rules.—New York has a law making smoking automobiles liable and owners fined. The long-suffering public in the rest of the country may have hopes of relief, *also*.

Tropical Medicine.—Dr. F. M. Shook, Medical Corps United States Navy, has been detailed to conduct lectures and laboratory courses at the New York Post-Graduate Medical School during the months of August and September.

The Mississippi Valley Medical Association.—The thirty-sixth annual meeting of this Association will be held in Detroit, Mich., on Tuesday, Wednesday and Thursday, September 13, 14 and 15, with headquarters at the Hotel Pontchartrain.

Personals.—Dr. Leonard Wood is now Chief of Staff of the United States Army.

During the absence of Dr. W. T. O'Reilly on vacation, Dr. O. F. Ernst will act as Chairman of the City Board of Health.

Mr. J. J. Coyle is the new inspector in the Pure Food Department of the State Board of Health.

Dr. J. A. Danna, House Surgeon of the Charity Hospital, has gone to Europe on a vacation.

Dr. R. M. Van Wart has left for a trip to Europe.

Dr. M. Feingold is spending a few weeks at the Eye and Ear Infirmary in study at Boston.

Dr. J. T. Halsey is summering in North Carolina.

Dr. Glen Yeager, of Winnsboro, has become associated in practice with Dr. J. G. Martin, at Lake Charles.

Dr. F. C. Guilbeau, of Crowley La., lost his residence by fire; it was insured.

Removals.—Dr. L. C. Anderson, from Lake Charles to Tulsa, Oklahoma.

Dr. H. W. Jarrell, from Arcadia to Mansfield, La.

Dr. F. R. Singleton, from Woodworth to Jackson, La.

Died.—Dr. W. T. Hutchins, a well-known practitioner, died at Gulfport, Miss., on August 8, 1910.

TULANE NOTES.

The seventy-fifth session of the Medical Department will open October 1, 1910, and will close June 1, 1911.

Dr. John B. Elliott, Jr., has been promoted from the Professorship of Clinical Medicine to the Chair of Theory and Practice of Medicine and of Clinical Medicine, to succeed Dr. George Dock, who has accepted a simlar position at the reorganized Washington University of St. Louis, of the Medical Department of which, it is announced, he is to be Dean, beginning with the next session.

Dr. Robert Bennett Bean has been elected Associate Professor of Anatomy. Dr. Bean is a graduate of Johns Hopkins, and for some time has taught anatomy in the Medical School at Manila.

Dr. W. H. Seemann has been elected Professor of Clinical Microscopy and Tropical Medicine in the New Orleans Polyclinic, the Post-Graduate Medical Department of Tulane.

Prof. Gustav Mann is summering in Canada.

Dr. Philip Frank is studying at the Harvard Medical School in Boston.

Professors Elliott, Duval, Butterworth and Bel are visiting the medical centers of Europe.

It is formally announced that the Stanley O. Thomas bequest of $60,000 is to be devoted to the erection of a much-needed gymnasium on the Tulane Campus.

The Law School makes the interesting announcement that Tulane is now prepared to give instruction in courses of law in all its branches, preparing students for the practice of law in every State of the Union.

The Summer School of the Medical Department closed August 1 with a total registration of 44. It is proposed hereafter to have the Summer School continue throughout the summer months.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

Atlas and Text-Book of Human Anatomy. Vol. III, by JOHANNES SOBOTTA, M. D., and J PLAIFAIR MCMURRICH, A. M., M. D. W. B. Saunders Company, Philadelphia and London.

This handsome volume concludes the work on Anatomy by these two professors of anatomy, Sobotta, of the University of Würzburg, and McMurrich, formerly of the University of Michigan, and now with the University of Toronto.

It comprises the following subjects: Vascular System, Nerves and Sense Organs.

Like the preceding volumes, the real value of the work lies in the atlas form in which it is so profusely and accurately presented. The illustrations, most of them colored and reproduced from the cadaver, are works of art, due to K. Hajek, who prepared them from original drawings. These plates alone suffice to stamp these volumes as a standard work. LARUE.

Thyroid and Parathyroid Gland, by ALBERT J. OCHSNER, A. M., M. D., LL. D., and RALPH L. THOMPSON, A. M., M. D. C. V. Mosby Company, Publishers, St. Louis, 1910.

It would be difficult to give due praise to Professors Ochsner and Thompson for this work which they have presented to the medical profession on the surgery and the pathology of the thyroid and parathyroid glands. We have never read a book which impressed us more for its lucidity and timely interest.

Although there are some very appropriate illustrations, the pith of the subject is in the text proper.

We have always had some knowledge of the thyroid gland, its anatomy, discussed physiology and variously interpreted pathology, but the parathyroid glands, or glandules, or, as more tersely expressed, the parathyroids, are, so to speak, of recent origin and known but vaguely by the majority of physicians. These tiny glandular bodies, contiguous to the thyroid, are, as it has been shown, of the greatest importance.

The anatomy, physiology and pathology of these structures are fully dealt with in a style which is comprehensive, and therefore instructive.

The externist and internist—in other words, every physician who wishes to keep abreast of the times in the medico-surgical progress—should peruse and carefully reflect over the contents of this book.

The authors did not neglect the medical aspect of their subject, which is given the full scope it deserves. LARUE.

Technique of Reduction Cures and Gout (Part IX. Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition), by PROF. DR. CARL VON NOORDEN. E. B. Treat & Co., New York, 1910.

Here are two rich lectures by a master. Many need re-education on these subjects, and they will certainly be satisfied by following the instruction herein given. Too many follow a routine which is most harmful. Indeed, a number of factors must be considered. In gout the point, among others of practical import, is brought out distinctly that there is generally left some power to properly assimilate purins.

In both treatments, results must be obtained without weakening the patient, just as in diabetes.

These ideas, based on scientific researches and observations of practical results, are intensely interesting. E. M. D.

Progressive Medicine, March and June, 1910.

The first volume of this great quarterly digest for 1910 certainly does not indicate involution, shrinkage and decay. Questions of the day will be found in this volume, notable among which are anterior poliomyelitis and transmission of disease by protozoa.

The second volume for 1910 reviews the advances made in hernia, surgery of the abdomen, gynecology, diseases of the blood, diabetic and metabolic diseases, diseases of the spleen, thyroid gland, nutrition, the lymphatic system and ophthalmology. E. M. D.

The Johns Hopkins Hospital Reports. Volume XV. The Johns Hopkins Press, Baltimore, 1910.

Volume XV is really remarkable in this, that it presents a case symposium on pneumonia, including pneumococcus arthritis and pneumococcus-meningitis. The subjects of the ten articles on pneumonia are: An analytic study of acute lobar pneumonia in the J. H. H., from May 15, 1889, to May 15, 1905, by Chatard; a pathological analysis of 195 cases of lobar pneumonia, by Fabyan; the leucocytes in acute lobar pneumonia, by Chatard; an analytical study of terminal pneumonia, by Chatard; the termination of pneumonia in cases with recovery, by Emerson; acute endocarditis with lobar pneumonia; acute pericarditis complicating acute lobar pneumonia; empyema in acute lobar pneumonia; peripheral venous thrombosis in pneumonia, with report of three cases, and a review of those previously recorded, by Steiner; delayed resolution in lobar pneumonia.

Those who seek references at such grand sources as this may as well know that Volume XV contains also three chapters: (1) A Bacteriological and Clinical Study of a Series of Seventy-four Cases of Diarrhea in Children, by Mason Knox; (2) Skin Transplantation, by Davis; (3) Epidemic Cerebro-Spinal Meningitis and Serum Therapy at the Johns Hopkins Hospital, by Sladen. E. M. D.

The Diseases of Infancy and Childhood, by Henry Koplik, M. D. Lea & Febiger, New York and Philadelphia.

This volume, a copy of the third edition of Koplik's works, contains new matter in the diagnosis and treatment of infectious diseases. The subjects of feeding (the all-important and essential question for every one, but in the case of babies more than in that of grown-ups), of diseases of the stomach, of the nervous system, of cystitis and pyelitis, of idiocy, dwarfism and neurotic conditions, have all been carefully revised. The work is fully illustrated with engravings, plates in color and monochrome, some of these illustrations being remarkably instructive and demonstrative. As to the appearance of the text, it is beautifully printed. E. M. D.

Manual of Tropical Medicine, by ALDO CASTELLANI, M. D., and ALBERT CHALMERS, M. D. University Series. William Wood & Co., New York, 1910.

The amount of knowledge within the covers of this book, which the distinguished authors have found necessary to acquire and use during their work in tropical Asia and Africa, indicates the importance of tropical medicine to-day. Part II, which treats of the physical, chemical and biological causes of disease in the tropics, takes up half of the book and affords pleasure even to the common reader, who does not pretend to be an expert naturalist. Part III, the clinical part, is replete with references. There are 373 illustrations, some of which are, indeed, remarkable. It is a well-finished book in all respects, the mechanical part of the work included. E. M. D.

Publications Received.

THE YEAR-BOOK PUBLISHERS, Chicago, 1910.

The Practical Medicine Series, 1910. Vol. IV, *Gynecology,* by Emilius C. Dadley, A. M., M. D., and C. Von Bachelle, M. S., M. D.

C. V. MOSBY & CO., St. Louis, 1910.

Nephrocoloptosis, by H. W. Longyear, M. D.

INTERSTATE MEDICAL JOURNAL COMPANY, Publishers, St. Louis, 1910.

The Practitioner's Case Book for Recording and Preserving Clinical Histories. Prepared and arranged by the Editorial Staff of the *Interstate Medical Journal.*

VON BOECKMANN-JONES COMPANY, Austin, 1910.

The Strange Case of Dr. Bruno, by F. E. Daniel, M. D.

Miscellaneous.

A Text-Book on the Therapeutic Action of Light, Including the Rho Rays, Solar and Violet Rays, the Electric Arc Light, the Light Cabinet, by Gorydon Eugene Rogers, M. D. (Published by the author.)

Transactions of the Seventh Annual Conference of State and Territorial Health Officers With the United States Public Health and Marine Hospital Service. Year June 2, 1909. (Washington Government Printing Office.)

First Annual Report of the Charlotte Sanatorium, for the Year 1909.

Studies in Relation to Malaria, by Samuel T. Darling, M. D. (Washington Government Printing Office, 1910.)

Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of May, 1910, by W. C. Gorgas. (Washington Government Printing Office, 1910.)

Reprints.

Aus den Jahresberichten der Herlanstalteer fur Tuberculose in den Verunigten Staaten von Nordamerika und in Canada, by J. W. Gleitsmann, M. D.

Hook Worm Disease, by Henry Wardell Stiles, M. D.

The Diagnosis of Sarcoma of Nose by Means of the X. Ray, by Amédée Granger, M. D.

The Cause and Cure of Inguinal Hernia in Man, by Henry O. Marcy, A. M., M. D., LL. D.

The Physician and the Deaf Child, by M. A. Goldstein.

Observations of Brain Surgery and Report of Some Interesting Cases, by Wiliam Edward Fitch, M. D.

Dr. Osler's Address on "The Nation and the Tropics" and Dr. Finlay, by Juan Guiteras, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.

For July 1910.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	6	6	12
Intermittent Fever (Malarial Cachexia)	.....	4	4
Smallpox	.....	.....	.....
Measles	.....	1	1
Scarlet Fever	.....	.....	.....
Whooping Cough	.....	2	2
Diphtheria and Croup	.....	.....	.....
Influenza	.....	.....	.....
Cholera Nostras	.....	.....	.....
Pyemia and Septicemia	1	.....	1
Tuberculosis	52	42	94
Cancer	17	7	24
Rheumatism and Gout	1	1	2
Diabetes	3	.....	3
Alcoholism	1	.....	1
Encephalitis and Meningitis	2	2	4
Locomotor Ataxia	.....	.....	.....
Congestion, Hemorrhage and Softening of Brain	13	10	23
Paralysis	2	.....	2
Convulsions of Infants	.....	.....	.....
Other Diseases of Infancy	9	9	18
Tetanus	1	.....	1
Other Nervous Diseases	.....	1	1
Heart Diseases	38	31	69
Bronchitis	2	6	8
Pneumonia and Broncho-Pneumonia	9	13	22
Other Respiratory Diseases	2	.....	2
Ulcer of Stomach	1	.....	1
Other Diseases of the Stomach	3	4	7
Diarrhea, Dysentery and Enteritis	21	34	55
Hernia, Intestinal Obstruction	5	1	6
Cirrhosis of Liver	9	1	10
Other Diseases of the Liver	5	2	7
Simple Peritonitis	.....	.....	.....
Appendicitis	8	1	9
Bright's Disease	29	22	51
Other Genito-Urinary Diseases	2	3	5
Puerperal Diseases	2	2	4
Senile Debility	8	2	10
Suicide	3	1	4
Injuries	25	13	38
All Other Causes	31	15	46
TOTAL	311	236	547

Still-born Children—White, 16; colored, 22; total, 38.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 13.72; colored, 28.03; total, 17.60.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.00
Mean temperature 81.00
Total precipitation ..... 6.40 inches.
Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

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Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Importance of Early Recognition and Treatment of Tuberculosis.

By JAMES KILBOURNE, M. D., Ethel, La.

Some years ago I had occasion to write for this JOURNAL an article upon the importance of the early recognition of tuberculosis. A longer experience and more extended observation of the subject has but confirmed its importance. Another fact that prompts me to write again on the subject is based upon the common observation that it is necessary to constantly remind both the profession and the general public of a truth in order to impress its necessity upon their minds. We are all prone to forgetfulness; so please let this plead as a sufficient reason for calling attention to this question again.

I think it has been made sufficiently plain, through the good work of the Anti-Tuberculosis Associations, to all classes of people, that the disease under consideration is one of the most important now

before the public, both on account of its wide distribution and its fatal course.

Prophylaxis very justly occupies the most important place in the mind of the profession at this time, and fully emphasizes the old saying that "an ounce of prevention is worth a pound of cure." In spite, however, of every effort that can be made to prevent the spread of this disease, cases will occur, and must be treated. Every case cured removes one menace to society, while it saves much suffering and restores to the world a valuable life. In spite of all our philanthropy, we must for a long time to come realize that the chief work of the physician is personal and individual. Recognizing this fact, the question suggests itself, Can tuberculosis be cured? This can be truthfully answered in the affirmative with this qualification, that its treatment be undertaken in time. The further question is, When is the most favorable time to undertake the cure of this fatal, always difficult and dangerous disease? The answer to this is, the sooner, the better the prospect of success.

In order to undertake the cure of tuberculosis when it is most amenable to treatment—that is, in its earliest stage—it is necessary to set aside a diagnosis based upon the grosser changes that take place when the disease has gained a stronghold upon the patient and turn the attention to those finer and more obscure symptoms which only become manifest after careful examination, and the assembling together of those symptoms and conditions which only those who are painstaking and careful in the extreme will realize. Of course, the first step that will suggest itself is a careful inquiry into the family history of the suspected individual. This is a most important step, in spite of the fact, now commonly recognized, that tuberculosis is a communicable disease. We cannot afford to lose sight of the fact that inheritance plays a very important part in preparing the individual for the reception of the seeds of the disease. The next step, of equal importance, but probably of greater difficulty, is the careful inquiry as to any chance of infection. In many instances this inquiry will be fruitless, but sometimes it will serve as a very important link in the chain of evidence. The third question to be answered is as to the physical condition, or, in other words, the diathesis of the patient. Much valuable information may be gained by a careful physical examination of the important organs of the body, besides the lungs, even where an examination

of these organs proves entirely negative. A delicate build, narrow chest, rapid heart's action, with feeble circulation; the condition of the throat and nasal passages, are all suspicious indications, and will greatly assist in making an early diagnosis.

Another very important point in this connection, especially with children, is the existence of enlarged cervical glands. I mention the cervical glands especially because they are easily found, and are often enlarged earlier than those in other portions of the body, as they are nearer one of the special points of infection, viz., the tonsils. The presence of pleuritis at the time of examination, or any indication of a previous attack, is of the greatest importance, as, according to the opinion of many observers, most attacks of pleuritis, other than traumatic, are tubercular. Whether any importance is to be attached to the condition of the pupils or not seems not to be settled.

The rapidity of the respirations is of very great importance in the diagnosis of this disease, taken in connection with other manifestations, and should always be given careful consideration. In the examination of the lungs for any evidence of beginning tuberculosis, much faithful practice and training of the ear is essential if we are to be able to recognize and rightly interpret those finer changes that indicate beginning tubercular deposits. We must listen for a feeble current of air passing into and out of the cells, a slightly prolonged respiration, a sticky condition of the mucous membrane, showing a catarrhal state. Of course, these changes are to be looked for in the orifices of the lungs, and will generally be found, some or all of them, only after repeated examinations carefully and painstakingly made. But probably of all the means of recognizing the very early stages of tuberculosis, the thermometer is of the first importance. The temperature should be taken and carefully recorded every two hours of the day for many days. It should also be taken after exercise, first mild, then violent.

The use of tuberculin, or some allied substance, used as a test, is useful, but generally, when any lesion of the lungs is sufficiently developed to make the reaction from these substances certain, the changes will be sufficient to be recognized with the stethoscope. Besides, the use of these substances in large quantities is always attended with some risks of calling into activity a latent trouble.

These are some of the points that have assisted the writer in coming to a conclusion as to the existence of tuberculosis in its very

early stages, and he hopes they may be of use to others. When the profession, and through it the general public, has realized the very great importance of an early diagnosis of tuberculosis, and when the children of all feeble persons, as well as those showing signs of feeble organizations, are carefully examined for any signs of this trouble, active or latent, the hope of a permanent cure will be much greater than at present, and much suffering and many deaths will be prevented.

As to the treatment of tuberculosis, I would only offer some suggestions as to its earliest stage, as this subject has been so thoroughly gone over in recent years. If you will allow me the latitude of speech, I would say that the disease ought to be treated before it has begun, or at least in its latent stage, before the grosser manifestations are present. All young children should be carefully examined for adenoids, and any abnormality of the nose, and tonsils should receive special attention; for I am fully convinced that nothing so much interferes with the proper development of the chest as conditions of the upper air passages in preventing a full development of the chest and its contents. Besides, there is no doubt that an unhealthy condition of the nose and throat invites infection. Proper physical training, with special attention to full and deep breathing, will do much toward improving the powers of the system, and thus enable it to overcome and throw off the germs of this disease. Open air, sunlight, well-ventilated schools and sleeping apartments, attention to the skin, nutritious food, good teeth, etc., are all conducive to health, and should engage the physician's closest attention.

Of medicines, I have but little to say, as what can be done in that line is well understood. Only one thing I would stress in this connection, and that is that reliance should never be placed upon any medicinal treatment to the exclusion of the means, barely outlined above. As to specific medication, I am hopeful. I think much good has been done by this class of medicines in the hands of carefully-trained physicians, and I have but little doubt that in the near future this means of combatting this grave disease will reach a stage of perfection that will make it a powerful auxiliary in the cure of the early stages of tuberculosis.

The Family Physician in Relation to the Specialist.*

By T. S. DABNEY, M. D., New Orleans.

Times change, and we change with them. But a few decades ago the family physician held a position of honor and trust in the community. He was not only the medical advisor of his clientele, but he was a trusted counsellor and beloved friend. To him came in all confidence those sick in mind and body. He was consulted about backward children, erring spouses, and in fact about everything that was near and dear to those in affliction. His opinion was sought at all times, for he was looked up to as being a skilful man, an unbiased judge and a loving friend. To-day much, if not all of this, is changed. The reason for this change is two-fold: (1) General education advanced more rapidly than medical education. Our medical schools were laggards. They did not keep pace with the times, and for reasons largely commercial their ambition was rather to turn out annually a large graduating class than a smaller body of qualified physicians. Few schools offered the opportunity to the student for learning anything about the science of medicine, except in its fundamental branches. Long after great strides had been made in bacteriology, in the treatment and diagnosis of diseases of the special senses, of women, of children and of the genito-urinary system, our colleges persisted in refusing to have professors for those branches, and consequently they could not, in all fairness, demand proficiency in what they did not teach, and as a result students were not examined in them. The result was a large body of uneducated, ill-equipped physicians. In the meantime, the public was being educated by the press, by magazine writers and public lectures. This educated public, with clinical thermometers and charts in their homes, demanded far higher qualifications in their medical advisors than did medical schools, and, as an ill-equipped general practitioner could not meet these general requirements, they naturally sought the practitioners that could. (2) Those members of our calling who had availed themselves of extra medical school education, and had fitted themselves for practice along certain definite lines demanded by the public, exploited those requirements, possessed alone by themselves, for all they were worth, and lost no opportunity in calling attention to the deficiencies of the general practitioner and in extolling

* Read before Orleans Parish Medical Society, July 25, 1910.

their own marvelous skilfulness. However, as Kipling would say, this is another story, and will be told later.

For a long time the eye has been recognized as one organ not to be trifled with, and though but few schools in this country demanded in their examination any knowledge of it, the public insisted upon that knowledge, and as a result the oculist soon took his place as a well-recognized specialist. It is true he often wandered into the borderland of the nose, throat and ear. With this exception there were no specialists, as such, claimed or recognized. I mean there were no members of our profession who claimed to devote or did devote their entire time exclusively to any one branch of medicine. However, there may have been at all times men preëminent along certain lines, and this preëminence was not only recognized by the laity at large, but by their colleagues as well. All men engaged in the practice of any calling naturally prefer certain branches of it, and, by paying special attention thereto, naturally acquire proficiency therein. Thus, many physicians became known as being markedly successful—another term for proficient—in certain affections. Some acquired the deserved reputation of being surgeons; others of ability in the diagnosis and treatment of fevers; others again of success in the management of diseases of children; while others still were successful along other lines. These are the fathers of modern specialism, and most worthy sires they are, for they won their spurs in an open field, general medicine, where no favors were asked and none given. Thus we find Ephraim McDowell, of Kentucky, and Marion Sims, of Alabama, two plain country general practitioners, looming up and unconsciously preëmpting certain fields of medicine, and their claims were not disputed at the time, nor can they be now. In our own city the names of Stone, Faget, Bruns, Warren Brickell, to mention but a few, though general practitioners and trusted family physicians, attained preëminence along certain definite lines in the wide field of general medicine. According to Hippocrates, physicians were barred from cutting for stone—nothing else. These stone-cutters were limited to that branch of surgery, and were not allowed to practice any other. They were unlike many of our modern surgeons, whose practice is limited strictly to profitable cases. As medicine advanced, and when the whole world of science had been made contributory to its advancement, it soon

became necessary to divide the field up, as it was evidently an impossibility for any one physician to acquire proficiency in all of its branches, direct and allied. In medicine, as in the arts, efficiency is only attainable by intense attention to detail, and it soon become evident that each one of us had to limit somewhat his practice, if proficiency were aimed at.

Surgery, thanks to anesthesia, bacteriology, chemistry and the resulting knowledge of sepsis, soon shook off her swaddling clothes and stood forth a well-recognized and much-needed, full-fledged specialty, no longer despised and relegated to the barber, but welcomed by our common mother with open arms. Surgery is so far the most gifted child of all, and her brilliant successes and startling advances cause most of us to stand amazed. As was to be expected, the field of surgery soon became too large, and numerous subdivisions, have been made in it, and in each of these men have arisen to add further lustre to this one-time justly despised child, fit only for bone-setters, stone-cutters, blood-letters and barbers. After this came the other specialties with startling rapidity, each claiming, and in many instances justly, the necessity for its existence. However, as in the arts and trades, this infinite attention to detail invariably leads to onesidedness, and often with disastrous results. To illustrate: Many years ago, before the day of hammerless and breech-loading guns, my business compelled me to visit at stated intervals a great Government arsenal, where guns and pistols were made. These weapons were all made by what is known as piece-work. Some workmen did nothing but make hammers, others triggers, others locks, others again, respectively, ramrods, sights, stocks and so on, until every piece of the weapon was made, each by a specialist. Then, the master-worker, the gunsmith, the one thoroughly equipped gun-maker in the whole establishment, fitted these parts together, had the triggers-maker file his trigger to fit the stock, the hammer-maker adjust his hammer to strike the cap, adjusted the sights, tested the gun, and had each defect in its turn corrected; or, if that could not be, rejected the weapon. None of these piece-workers could make a gun; none of them could adjust a sight nor test a barrel; none of them were gun-makers. They had lost their art in one of its details. In this factory no difficulty was ever experienced in obtaining specialists in each line of work. I was told it was easy for a mechanic to

learn the art of making any part of a gun, but it required years of patient labor and of infinite attention to many details, and their proper relation to the whole, to make a master-worker, a man capable of making a gun from stock to sight. It is hardly necessary to state that in this establishment, as in similar ones of the arts and trades, piece-workers do not receive nearly so large a wage as master-workers. As you all know, the reverse is true in medicine, which also is another story. Our first specialists in medicine, as has already been shown, were all-around physicians, master-workers; were men who had practiced medicine for years and who had a working knowledge of the whole body, as well as of its constituent parts and their inter-relationship.

These men knew the broad expanse of the field, and never for a moment forgot that the whole is greater than any of its parts. When called upon to examine an eye, a nose or a throat, they saw something more than a retinitis, an enlarged turbinate or a swollen tonsil. They saw a wonderful mechanism, the human body, with its thousands of constituent parts, so interrelated and correlated that the slightest maladjustment of any of these parts would likely cause a derangement of the whole organism. They saw this wonderfully-made machine, with one of its parts, an eye, a nose or throat, that needed a little attention to adjust it to its environment. They did not magnify that one part, as some of their later-day colleagues are wont to do, but saw it in its true light. The qualified specialist—and there are many of them—realizes fully the importance of a thorough knowledge of practical medicine, and does not hesitate to avail himself of the services of the qualified practitioner when needed. The well-equipped specialist also deplores the lack of preparation and fitness of many of his colleagues in his special branch, and is demanding something more than specialism in the specialist. To this demand the near-specialists reply: "Have we not thoroughly prepared ourselves by taking a four-year course in general medicine and surgery? Have we not received our diplomas attesting our fitness for general medicine, with all its rights, privileges and emoluments?" The argument seems good, but we who have toiled long in the harness know it is one thing to study medicine and quite another to practice it.

Have you ever seen a man fresh from his twelve-weeks' study of the nose and throat try to remove an innocent-looking little

adenoid? I have. The way the curette slips off that little spongy body would lead you to infer it was greased, for even adenoids seem to have sense enough to demand a practiced hand. *Le tour du maitre.* And heaven knows they are easily enough removed by one possessing the proper skill, which practice alone gives, and do not require an excessive amount of gray matter. To tie up a bundle, to remove adenoids or ligate an artery, requires practice, rather than study. You all know it requires years of practice, experience and close observation, coupled with study, to make a diagnostician, and as correct diagnosis is an essential in the specialty as in general medicine, it needs no further argument to show the necessity for the thorough grounding of those entering upon special study. In the beginning, all specialists relied upon the family physican for their patients, and none who failed to obtain such recognition from the general practitioner had any hope of success. Their very bread and meat depended upon the good opinion and good will of their colleagues, and consequently they cultivated that good will in every way possible. When a case was referred to them they invariably wrote a nice little note to the physician, thanking him for his courtesy, and frequently consulted with him as to the patient's general health, habits and idiosyncrasies. If an operation were needed the physician sending the case was asked to administer the anesthetic or assist in the operation, and received the usual fee. After the operation the patient, with a polite note, was referred back to his physician for whatever treatment necessary. How is it now? With but few exceptions, your note referring your patient to your colleague, better qualified than yourself for that class of work, remains unanswered. You are never asked to administer the anesthetic, seldom asked to assist. Frequently, without your knowledge, this patient of yours, referred by you to one specialist, is referred by him to his round of specialists, that as many as possible might get a whack at his pocketbook. By the time your patient has had his stomach washed out, his turbinates torn out, his reflexes tested, his blood and feces examined, his epidermis removed, he returns to you broken in pocket and health, oft-times a wiser, but a sicker man. The general practitioner has a right to justice and courtesy. He is not merely a signpost on the road to the specialist.

In another part of this paper I have shown the responsibility of the medical schools for our poor equipment on leaving their doors,

and I have further shown that the public have found out that the family physician was no longer an oracle. With this judgment of the public I have no fault to find. They pay the bills, and have the right to demand the best. It is far different, however in the case of the specialist, whom we have aided by every means in our power to reach this eminence. Common decency, not to mention gratitude, should forever close his mouth as to our shortcomings, especially as we have the good sense and judgment to recognize his ability. You gentlemen who do piece-work, at least very many of you, never lose an opportunity to belittle general medicine and extol specialism. You blame the family physician for many, if not all, of your failures. You surgeons, in season and out of season, in your papers printed in journals or read to societies, in your interviews by newsmongers, aye, to the very patients sent you by us, blatantly assert that your high death rate in cancer operations is due entirely to the ignorance of the general practitioner, who fails to make an early diagnosis. You assert, with perfect truth, I must admit, that if the diagnosis were made early enough the results would be far more brilliant and successful. You discredit the family physician, the master-workman, the man whose life has been given to the diagnosis and treatment of diseases, that you, mere piece-workers, who seldom see cancers until the diagnosis is patent, could have done better. You claim, as you see so many more cases of cancer than any one physician, you are thereby all the better qualified in the diagnosis of that disease. Specious and shallow argument! The physicians see practically all the cases of incipient cancer and recognize them promptly, but the possessors of those cancers, nine times out of ten, immediately change doctors if we pronounce a slight uterine hemorrhage in a woman passed the climacteric as probably of cancerous origin, or a slight persistent abrasion of the lip or a small nodule in the breast of similar origin.

In no part of my work have I met with so much discouragement as in convincing my patients with incipient cancer, apparently very trivial affections, that they were in grave danger and needed prompt surgical intervention. You gentlemen of the scalpel, who know so much, pray tell us how to make those entrusted to our care appreciate the danger signals of cancer, and you will be rewarded by getting your cancer cases before they have become hopeless. This same claim of diagnostic ability is set up by those general prac-

titioners who pretend to be specialists of the chest, in reference to tuberculosis. We are told by these gentry, and the public is also informed through the press, as well as by themselves, that the cause of the large mortality from tuberculosis is due to ignorance of the family physician. With a grave countenance they assert that if the diagnosis of tuberculosis were made early enough the death rate would be insignificant. This is also platitudinously true. However, when these same gentlemen naively remark that they alone are the capables, and the family physicians the undesirables, the method in their madness is readily perceived, though the soundness of their logic is disputed. We have all heard about the advice given to a certain shoemaker to stick to his last. It were well if these so-called chest specialists, who treat everything that comes their way, were to follow that advice— *ne sutor supra crepidam judicaret.*

While fully recognizing a number of true specialists and their absolute necessity, I think the line should not be so loosely drawn in these special fields as to include practically everything with a dollar in it. I am at a loss to understand how a man who deliberately invades three or four distinct fields of medicine, and all the borderland adjacent thereto, can honestly claim to be a specialist in any one of those fields. Take gynecology, for example. Surely, this field, ample as it is to tax the ingenuity and test the skill of the best of us, should be well-defined and clear-cut. In all parts of the world great men have spent their lives and devoted their entire time in alleviating the sufferings of women. No field of work offers more brilliant results or greater emoluments than gynecology. In no other domain of surgery has as much ingenuity and originality been called forth as here, and surely the female pelvis should easily be recognized. Yet, how often do we hear of men claiming to be specialists of this great branch of surgery, invading the domain of the obstetrician, the pediatrist, the abdominal surgeon, to say nothing of that of the discredited general practitioner? Not even satisfied with this, they include general surgery, or anything else they can lay their hands on. Is this fair to themselves or to the women who trust their lives to them upon the supposition that they are specialists? Is it fair to the lying-in woman for a man fresh from a case of pus-infection to deliver her? Is it fair to the innocent baby for a man claiming

to give all of his time to pathological states of women to assume charge of its young life? Bear in mind, gentlemen, I deny no man the right to land any fish he may get in his net. I simply ask, should such an one be called a specialist?

Our skin specialists, as well as those who practice on the nose and throat, have rather elastic consciences, or, rather, specialties. It taxes one's credulity to be asked to believe that measles, variola, urticaria, scarlatina, iodism and syphilis are diseases of the skin, and should, therefore, be relegated to the dermatologist for diagnosis, and possibly treatment. Also, that diphtheria, being a throat disease, needs the services of the laryngologist. However, no one, as far as I know, has claimed whooping cough and pinworms as a specialty; so we of the general profession will have to feed our families on these, unless we can compel the robbers to disgorge.

In claiming everything and leaving us nothing but a diet of whooping cough and pinworms, the specialists have overshot the mark, for they have unwittingly made general medicine itself a specialty, under the absurd title of internal medicine, and we now see cocky little men strutting around and calling themselves internists.

Our specialty should rather be the skin—and all that is in it. Specialism run riot has had its day, and once more ill people are demanding physicians to treat them. The thousands of useless operations performed, the large fees and the ever-readiness of surgeons to separate every case from an appendix, and a fat roll at the same time, have caused the people to sit up and take notice. As in Egypt of old, a great fear has fallen upon the people. Already the public is afraid to consult a surgeon, except in dire need. Those very cancer cases that should be diagnosed early shun a physician, suspecting that even he may have the ability to diagnose and recommend a surgeon. Such a case has fallen under my observation the past month. Young women, old women, married women and single women alike are afraid to visit their sick friends in our hospitals, for fear of losing an ovary, an appendix, a clitoris or something else they would like to keep on account of old acquaintance.

My specialty, general medicine, is coming into its own at last, and already many patients, having run the gamut of specialism

and seen the folly of their way, are peacefully and happily consulting their old and tried advisors, the general medical specialist. As David W. Reid, of Illinois, says: "But who, if anybody, is to blame, when one department of the medical profession demands for itself from three to ten times the recompense that is paid for the same amount of time and ability displayed by another branch of the same profession and had its claim allowed by the public? Is it the public, the physician or the surgeon? Let me remark, in passing, that the attitude of the public toward the surgeon is well nigh idiotic."

There is a glamour about an operation, which is always dramatic, though often unavoidably tragic, which appeals strongly to the public mind, and which invests the operator with a weird and uncanny knowledge, of which he himself is totally unconscious. See how the crowds, with every manner of non-surgical affections, fill the waiting-rooms of eminent surgeons, and see how complacently fees, modest fees, regular fees of the general practitioner, are pocketed by these same eminent surgons. Were they to charge $50 for a vermifuge or a dose of salts, the public would soon abandon them to their legitimate specialty, and they would lose a large part of their income. No; they are too shrewd for that. They realize that a handful of $2 and $5 fees for eczema, piles, indigestion, tic, gonorrhea and rheumatism make a substantial bank account in the long run. If the public persists in wasting its time, its health and its money in consulting men who do not profess to pactice general medicine, we have no just cause for complaint. The field is open, and the fool and his money soon part. As I have said elsewhere, the public is being educated from day to day in reference to medical subjects, and the day has passed when ignorant physicians—and God know they, like the poor, are always with us—can call every fever, malaria and every abdominal pain, colic, and all other pains, neuralgia. At present, in almost every home will be found a clinical thermometer, charts, popular articles and lectures on diseases, their mode of invasion, symptoms, treatment, etc. Medicine no longer consists in counting the pulse, looking at the tongue, ordering calomel and quinin, looking wise and saying: "I'll call again in the morning." The old order has passed. Are we fitted for the new? If so, all is well; if not, the way is open for all of us to fit ourselves for the new conditions,

or else be left hopelessly behind. The law of the survival of the fittest is as true in medicine as in the flora and fauna surrounding us. As the vigorous young pine sapling pushes its crest above its fellows, thereby putting them in the shade and dwarfing them, so do the studious, hardworking, painstaking young physicians who adapt themselves to their environments, distance their fellows in the mad race for success.

There is said to have been a mythical battle between the devil and some of his associates. In this battle the devil had everything his own way and laughed heartily at the abuse and cold water that was thrown at him. You see, like some of our friends, he was a pachyderm. However, he reckoned without his host, as all of his adversaries were not fools. Soon they commenced fighting him with fire, and the tables were turned. Let us apply this fable to ourselves. If general medicine be too crowded, and the few crumbs allowed us by the octopus that literally has its tentacles on every branch of medicine, do not suffice to feed our hungry broods, what recourse have we? Two courses lie open to us: We must either embrace specialism ourselves or else carry war into the enemy's camp, fight the devil with fire, hoist the enemy with his own petard—but how? you ask. Fit yourselves to do most of your own surgery. Study the skin and learn to treat the commoner forms of its diseases, and leave the rarer to the dermatologist. Every year take a course in our excellent post-graduate schools and hospitals on some special branch. Learn to perform simple operations on the nose and throat, and how to treat the ear and ordinary eye affections. In gynecology, especially, will your harvest be rich for the little study given it. If every physician under forty will do this, and furthermore would refuse to refer his patients to any but legitimate specialists, a quick revolution would ensue. The gynecologist, who claims to be a great baby doctor, a recognized authority in obstetrics, a general abdominal surgeon and an expert diagnostician in cancer, tuberculosis and the innumerable neuroses, would soon pull in his horns or else go out of business. The same rule should be applied to the dermatologist, who persists that syphilis, iodism, scarlatina, variola, etc., are skin diseases. As I have just crossed the forty-mile post, you will see I am not speaking for myself, but for my colleagues who are entering upon the strenuous struggle.

I would not be understood as advising you to attempt a laparotomy, an iridectomy or a mastoid operation, for that would be madness on your part. You should, however, know how such operations are done, their difficulty and the serious results likely to follow such operations in the hands of those not thoroughly fitted for that class of work. Render unto Cæsar the things that are Cæsar's, but fit yourselves for making a living by conscientious work in legitimate fields. I do not go as far as many in attributing every advance in medicine to specialism, but we of the general profession unquestionably owe a big debt of gratitude to "our friend, the enemy," for what he has taught us, and in order to show our appreciation and gratitude it behooves us to teach him his limitations and to warn him off our preserves. *Cave canem.*

The Thorough, Systematic Examination of the Female Genital Organs.*

By PETER B. SALATICH, M. D., New Orleans.

This is the method followed in the gynecological examination in the otudoor clinic of the Charity Hospital.

The first thing to examine is the clitoris. The prepuce is occasionally found either partially or totally adherent to the glans, causing a retention of secretions, which may give rise to irritation or lead to masturbation. The glans, when free from adhesions, is about the size of a green pea, and bluish red in color. The normal arrangement of the prepuce around the clitoris is as follows: The labian minora pass directly into the glans. Over the glans two layers are seen, really only one layer folded into two, from the labia minora. The inner or soft layer is the one that adheres to the glans. By taking hold of the two labia minora and drawing them down and at the same time elevating the prepuce upward, the glans, if not adherent, can be plainly seen. Finding the clitoris normal, we then note the color of the vulva. In a normal case the color is light pink; if inflamed from gonorrhea or other infections, it will vary from a dark pink to a deep red, and also may be granular in appearance and covered by a slight or marked discharge. If we have reasons to suspect infection, a smear should be made. We then wipe off the external part with a piece of moist

* Read before Orleans Parish Medical Society, July 25, 1910.

cotton and examine the urethral canal for any discharge. If we find a discharge, probably only one drop, a smear should be made. Just within the opening, or at the under surface of the urethrea, about one-eighth of an inch from the opening, we find Skeene's glands, generally two in number. They often harbor gonococci for a long time after all evidences of gonorrhea have subsided. By stripping the urethrea outward we may be able to express a small drop of pus. In a normal gland it is very difficult to see the opening, but if infection is present a red spot marking the opening will be seen. A smear should be taken to determine character of pus. Sometimes the end of a female urethral dilator inserted into the first inch of the urethra will steady the canal and allow you to express the secretion.

We now pass to the vulvo-vaginal glands. The openings can always be seen situated just outside of the attachment of the hymen to the labia minora, about the middle of the vaginal opening. If the gland or duct is healthy, no difference in color of the mucous membrane around the opening is seen. If infection is present, a red zone will appear around the opening, clearing pointing it out. This, of course, is in a sub-acute or chronic case, as it is seldom that the ducts are involved in the acute stage, generally when the disease is subsiding. To express the secretion, we place one finger just behind the hymen and one on the labia minora. A smear should be taken.

We have now examined these different structures and assured ourselves that no evidence of chronic infection is present; we then pass to the perineum. By passing one finger to the side of the vagina, about three-quarters to an inch of the outer or skin surface of the labia majora, we feel the thick anterior border of the levator ani muscle. This muscle, as we know, forms the bulk of the pelvic floor. If we now run one finger further back we will feel the muscle for an inch and a half to two inches beyond the border. In a nullipara this muscle is firm and resistant. You press it down and it will immediately return to its original state. In a multipara it returns slowly, if not too badly lacerated, and it is thinned out, and often, instead of feeling a smooth, thick anterior border, we find a cord-like arrangement, suggesting the replacing of the muscle fibres by fibrous tissue. The vaginal opening in a nullipara is very firm, and to introduce two fingers it is generally

necessary to depress the perineum with one finger for a moment so as to paralyze the muscle; while in a multipara the examiner has little trouble in inserting two fingers at once, especially if the perineum has been lacerated. Fissures of the vagina are sometimes present and cause considerable pain; so, with a history of painful intercourse, look carefully for this trouble. We now have the patient to cough. This will show if she has a cystocele or rectocele. One or two fingers are introduced into the vagina, the direction of the cervix is felt, whether pointing upward or downward, whether lacerated, elongated or shortened, low or high, smooth or irregular. If the uterus is not prolapsed the cervix will be felt about the length of the finger up the vagina.

After we have determined the condition of the cervix we examine for any scars or bands in the upper part of the vagina caused by previous deliveries. You will sometimes find the upper vault, which should be at least three times larger than the opening, contracted and distorted by past deliveries. The position of the body of the uterus is then located. In a young girl, where only one finger can be introduced, it is sometimes very difficult; when two fingers can be introduced by turning the palmar surface anterior and using the middle finger to draw the uterus downward, the index finger being posterior to the cervix, the position of the body can be readily felt. After the body of the uterus has been carefully studied we examine the adnexa. If a great amount of pain is present we generally suspect some tubal trouble. Often ovaries of considerable size cause little trouble, while a tube stretched one-half its normal size will give great pain. Sometimes an ovary of very small size will give marked pain, probaly from pressure on the small nerve filament.

Prof. Lewis advises examining the kidneys. When a patient is very sensitive and the abdominal muscles rigid, gentle, steady pressure over the region to be examined before any pressure is made in the vagina, by simply holding the two fingers in, we will be able to make a thorough examination; while if we try to make bimanual pressure at once we will feel very little, in all gynecoligical examination, especially before operating, because so many women have movable kidneys.

Louisiana State Medical Society Proceedings.

Edited by Publication Committee.
Dr. Joseph D. Martin, Chairman, 141 Elk Place, New Orleans, La.

Dr. Allan Eustis, Abbeville, read a paper entitled

The Distribution of Uncinariasis in Louisiana.

Through the generosity of Mr. Rockefeller, the South will be enabled to successfully battle with one of its worst foes, the hookworm, and we of the South owe the donor of this financial help a lasting debt of thanks. However, the lay press have laid such great stress upon the terrible ravages of this parasite that the average layman now considers that the entire Southland is universally infested with this little enemy to progress and ambition.

We are trying our utmost to secure the Panama Exposition for New Orleans, which will no doubt redound to the credit of the entire State, so that just at this time a careful study of the distribution in this State of the hookworm will be not only of medical interest, but will be of economic interest, in that we will all be in a better position to judge of the prevalence of this parasite in our midst, and can better advise our lay brethren.

I am heartily in favor of any measures tending to eradicate disease, but I am not in favor of advertising to the world that we are afflicted with a terrible plague, unless such a plague actually exists. I think that you will agree with me, after considering the statistics which I have been able to collect, that while we undoubtedly have uncinariasis in probably every parish in the State, it is nowhere near as prevalent as typhoid fever, tuberculosis, nor even amebic dysentery, to say nothing of malaria fever and smallpox. These statistics cover all cases of this disease admitted to the Charity Hospital from March, 1905, to date (five years), the results of the examination of the stools of the present first and second course students in the Medical College (for which I am indebted to Dr. Gage), and the results of ninety-five examinations made by me in my private practice in Vermillion Parish. The cases in the Charity Hospital include not only those cases which were diagnosed "uncinariasis" without any further complications, but also those

cases admitted for other complaints in which the hookworm was found in the stools. (Touro not examined, as there were only four or five cases):

	LA.	OUT.
Vermillion (6 Abbeville, 32 Islands)	38	
Lincoln	3	
Mississippi		32
Tangipahoa	8	
Alabama		6
St. Helena	7	
Washington	6	
Madison	1	
Florida 4, Porto Rico 11		15
Orleans	5	
St. Charles	2	
Point Coupée	3	
Livingston	14	
Rapides	3	
Not placed	7	
St. Tammany	4	
Iberia	6	
Spanish Honduras 3, Texas 1		4
Jamaica		1
St. Martin	2	
St. Landry	2	
Caddo	2	
Lafourche	3	
Iberville	1	
St. James	1	
Acadia	2	
Calcasieu	1	
St. Martin	2	
Lafayette	1	
Ascension	1	
Iowa		1
Winn	1	
Terrebonne	1	
	127	59

Total in Louisiana, 127. Estimated population of State (1906), 1,631,825.

It at first glance would appear that Vermillion Parish was very much infected with the disease, while, as a matter of fact, there are very few cases in this parish. I have been able to find only six cases in my practice in the immediate vicinity of Abbeville, the soil of which is boggy and by no means sandy. However, on the islands in the Gulf, especially Cheniere au Pigre, I believe 95 per cent of the population to be infected. This is easily accounted for by the fact that the inhabitants do not use outhouses and run barefooted almost the entire year in the loose, sandy soil. One of the six cases mentioned as having occurred in the immediate vicinity of Abbe-

ville gave a history of ground itch while sojourning for a month on one of the islands.

On referring to the relative numbers of cases found in the several parishes, and on glancing at the plotted map of Louisiana, the spot-marks representing foci of infection, one is struck by the greater prevalence of the disease in those parishes in which there is a sandy soil, such as Livingston, St. Tammany, Washington, St. Helena and Tangipahoa. The cases in Lafourche and Iberia could no doubt be traceable to some of the islands in the Gulf of Mexico, to which the inhabitants of these parishes often go on fishing and hunting expeditions, and on which there are no outhouses and an abundance of sand.

The fact that during five years only 88 cases of hookworm disease were found in the Charity Hospital, during which time 48,335 inmates were treated, points strongly to the fact that Louisiana is singularly free from this disease, and is certainly not sufficiently infected to jeopardize her agricultural or commercial prosperity.

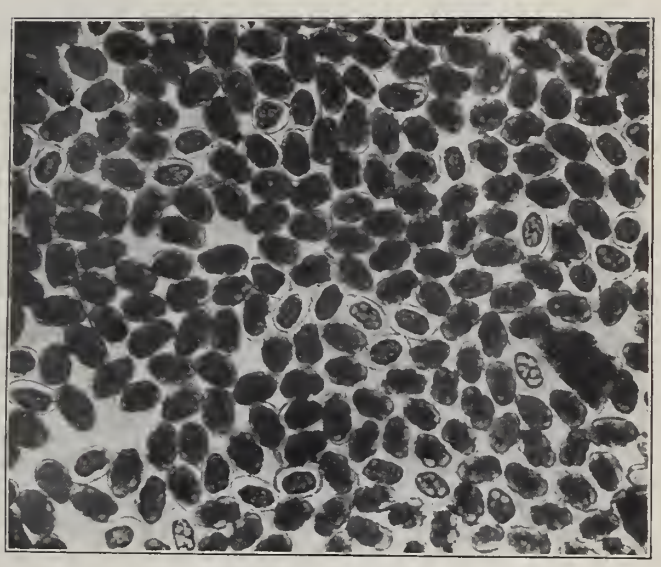
In closing, I wish to thank Dr. G. F. Patton, Registrar of the Charity Hospital, for his courtesy in placing the records of that institution at my disposal and for his aid in securing the necessary data; to Dr. Gage for the results of his examinations of the medical students, and to Mr. Alexander Ficklen, resident student at the Hospital, who also aided me materially in securing the information wanted.

Dr. C. C. Bass, New Orleans, read a paper entitled

The Symptoms and Diagnosis of Hookworm Disease.

It is intended in this paper to direct attention to some of the commoner general symptoms of hookworm disease of the type seen in this country, and to briefly refer to the most important methods of diagnosis. No exhaustive discussion of either part of the subject is undertaken.

The symptoms of hookworm disease are produced by the action of the small worms located in the intestinal canal. They destroy blood by blood-sucking, by hemorrhages following their bites, and probably by the action of toxic substances which they inject at the site of the bites. The worms lay eggs, which pass out with the feces of the patient. These cannot hatch in the intestinal canal, and therefore a patient cannot directly reinfect himself. Every worm comes from without. The conditions leading to infection



DR. BASS' PAPER.

Fig. 3.—High-power View of Hookworm Eggs.

depend on many variable factors, and as a result the number of worms present may vary from one up to the lethal dose, which usually is less than four thousand. The chief symptoms are anemia and other symptoms produced by anemia. Each worm destroys his quantity of blood, and the degree of anemia in a given case, therefore, varies with the number of worms present, and also with certain other known or unknown influences, such as immunity, racial or otherwise, and blood regenerating ability. Negroes are said to be especially resistant to the effects of the infection, though they are susceptible to the infection itself. The amount of blood extracted and wasted by a single worm not more than three-fourths of an inch long and about the diameter of a common brass pin must, indeed, be very small, but if this amount is removed by each of several hundred worms every day for several years considerable anemia must finally result. One drop a day for each worm would be a low estimation, and if five hundred worms were present, which number is often exceeded in this country, this would result in the loss of over an ounce of blood a day. Loss of much smaller amounts of blood from other causes for long periods of time are known to often produce severe anemia.

I desire to especially direct attention to the very mild type or degree of hookworm disease more appropriately called hookworm carriers. They are by far the most numerous class of cases in this country, except in sections that are very heavily infected, where the more severe types may be in excess. People who were heavily infected when they were children usually harbor a few worms for several years at least, during adult life, and are likely to fall in this class. Recently we carefully weighed and measured fifty-six men with this very mild degree of infection, and 129 from the same source who had no infection. It would have been impossible to pick out, from their appearance, the infected men. They averaged eight and one-fourth pounds lighter and two and one-third inches lower than the unifected. Not only did appearance fail to reveal the presence of anemia in the infected men, but estimation of the hemoglobin showed an average of 94 per cent for the uninfected and 90 per cent for the infected. These very mild cases have from 80 to 100 per cent of hemoglobin, and usually say they feel perfectly well. The question would arise as to whether they are actually hurt by the few worms present. This is answered by the results of treating a few of them and closely observing the effect. Many of them will gain five or ten pounds

in a month or two, and if the hemoglobin is estimated by some of the more exact methods it will be found to gain one to five or more per cent. Though they have never been sick in their lives, and feel fully up to the normal health and vigor, after being cured of their worms they often feel better, more vigorous and more like work than they ever have. The change is undoubted in many cases. If the weight and measurements of a large number of children with these very mild infections is compared with that of an equal number of uninfected children of the same age, the averages will be in favor of the uninfected, though inspection, physical examination or their history will not usually show appreciable variations from normal health. In such very mild cases the symptoms are so mild that the slight variation from the patient's possible normal is so small that it cannot be recognized. The results of treatment of such cases usually demonstrate, however, that there actually were symptoms present.

When the hemoglobin ranges from 60 to 80 per cent the case may be classed as a mild one. In this type nearly all the symptoms of the severe types may be present, but they are much milder. This is the next most common type seen in this country. There is usually recognizable pallor, often with a yellow tinge to the skin in whites. The number of red cells is very little below normal, the anemia being due almost entirely to reduction of hemoglobin. The appetite is apt to be capricious, and dirt-eating, or geophagy, may be discovered, if the patient is watched. Chalk, plaster, feathers, hair, green fruit, coffee grounds, salt, pickles, etc., are sometimes craved and eaten. A little uneasiness in the epigastrium is complained of; slight dyspnea on exertion; occasional palpitation; dizziness; lack of attention to details, and a little dulling of the mental faculties. Weakness and indisposition to work exist, which has given rise to the popular idea that the patients are lazy. As a matter of fact, hookworm patients are entitled to credit for working the best they can when they are actually sick. Those robbed of more than half of their hemoglobin usually continue to eke out a bare living. They do not know they are sick, and do not seek treatment. All of their symptoms they recognize are attributable to many different conditions besides hookworm disease. They have usually come on so slowly and have existed so long that their significance is not recognized.

In the severe type of the disease the hemoglobin ranges from 30 to 60 per cent, and there is also reduction in the number of red

cells, but seldom in proportion to the hemoglobin reduction. In localities where the disease is very prevalent there are quite a few of this type. All the symptoms noted under mild cases are increased. The pallor and anemia of mucous membrane is definite. There may be some tenderness, pain and heaviness felt in the epigastrium and abdomen. Dyspnea and palpitation of the heart are severe, especially on exertion, but often without any relation to it. The pulse is more rapid, and is liable to be weak and compressible. Hemic murmurs and dilatation are usually present. The vessels of the neck pulsate noticeably. Weakness in the knees and legs, dizziness, noises in the ears and headache are complained of. The patient feels sick. The mental condition is decidedly depressed and the patient pays less attention to his surroundings and appears stupid.

In the very severe type the hemoglobin ranges between 30 and 8 or 10 per cent. This is the stage in which a fatal termination may occur from uncomplicated hookworm disease. The pallor is very extreme, and edema of the feet and legs, and often extreme general anasarca, are common. The appetite is often poor; diarrhea may occur; nausea and vomiting are frequent symptoms. Marked pulsation of the vessels of the neck is present; dyspnea and weakness are extreme; dizziness and tinnitus aurium are extreme; melancholia, insomnia, confusion and stupidity are among the nervous symptoms. Extreme weakness is also present. Albuminuria is common, but seldom casts.

In mild cases the growth in children is "stunted," and in the severe type of the disease general development is very slow. A patient twenty years old often has the appearance of a twelve or thirteen-year-old child. Amenorrhea is a common symptom.

The disease is without fever, except in the case of severe acute infection, in which the temperature may go to 101 or 101½.

Eosinophilia is generally present, but may be absent in very mild or very severe cases. It is so generally present in this disease that whenever found a feces examination is always indicated.

DIAGNOSIS.—"The secret of success in the diagnosis of anchylostomiasis is to suspect its presence." (Manson.)

All the symptoms of hookworm disease occur in other conditions, and therefore the diagnosis cannot be positively made from the symptoms alone. If in the presence of the common symptoms of the disease a history of ground itch, or dew poison, within a few

years is obtained, a diagnosis of hookworm disease will generally be correct.

The only way to make a positive diagnosis is by finding the worms or their ova in the feces, and the only way to exclude the disease from the diagnosis in a given case is to make a proper microscopic examination of the feces for ova.

The worms are rarely passed in the feces except after anthelmintic treatment, and if it is desired to examine the stools for diagnostic purposes it is necessary to give a course of thymol or beta- napthol, as in treating a positive case. The worms may be found by diluting the feces passed the first twelve hours afterward in a bucket or other suitable vessel with a large amount of water. After it has settled a few minutes pour off the supernatant liquid; add more water and rewash three or four times. The sediment may now be poured into a shallow dish and examined for the worms, which can be picked out with any convenient instrument.

Microscopic examination is easily made by those equipped with a microscope and having proper experience. The patient should be instructed to bring a small quantity of the natural feces in a wide-mouth bottle. No preparatory treatment is necessary. One or two drams is sufficient, and large quantities are undesirable. Vaselin or quinin or two-ounce wide-mouth bottles make good specimen bottles. A couple of drops of water are placed on a slide, and, with a pick or other suitable thing, a quantity of feces about the size of a match-head is taken from the bottle and stirred in the water until it becomes as cloudy as can be seen through well. This is now examined with the low power of any standard microscope. A two-third inch objective and a one-inch eyepiece are appropriate. No cover glass is needed. The eggs are characteristic and easily recognized by anybody at all familiar with them. Reference to the accompanying picture, made by concentrating the eggs, will give an idea of their shape and size. If many eggs are present they will be found on nearly every slide. If the most thorough examination is desirable, it is necessary to concentrate the eggs by the proper use of the centrifuge.

DR. A. DELCOURT, SR., of Houma, read a paper entitled

Anchylostomiasis and the Penetration of the Larvæ of the Uncinariasis Duodenalis through the Human Skin.

My purpose in presenting this paper is not so much to add to the already large and varied contributions offered on the hookworm question as it presents itself in this country. Since the Southern Health Conference of Atlanta, January last, the problem of anchylostomiasis has received widespread attention at the hands of the medical profession, not only as to the scientific side of the problem, but as to its hygienic and economic importance. To be sure, we are not suffering from a dearth of facts or morbid material. As is unfortunately the case, either with a so-called new disease or with a disease newly observed and hastily described, the danger lies rather in an opposite direction: it is that, instead of seeing things as they are, by a spread of imagination we are apt to extract from observed facts conclusions and deductions they do not contain, or ill afford to justify.

As concerns anchylostomiasis, figures have been produced as to its widespread prevalence which well nigh stagger imagination; and if only one-half of the report be true the problem which confronts the medical and public authorities calls for the most energetic and best systematized efforts. In common with other practitioners, I have gathered some personal observations which I keep carefully recorded. They may become of some avail later on, but for the present they could be of little service in the elucidation and systematization of the hookworm disease.

All we can wish for is that, in the present constructive period of this inquiry, all the facts should be carefully looked after, dispassionately investigated, and that the conclusions arrived at should, as little as possible, be tinged with imagination or distorted by hasty deductions.

Great interest attaches to the comparative study of diseases, originating under different climates, developing under different conditions, and having been made the subject of prolonged observation at the hands of great scientists. Aside from the purely scientific interest, it affords an opportunity of studying the ways and means employed by other countries in their warfare against those diseases. My purpose, in this communication, is to throw a side light on the question of anchylostomiasis by relating at some

length how the problem originated in Belgium, and how, after some hesitation, it has been dealt with in that country.

As is well known, towards the first quarter, till the middle of the last century, a large portion of the miners in the coal basins of the northern provinces of France and the southern part of Belgium were visited with a special form of anemia, the so-called "miners' anemia," due to prolonged working in the bottom of deep coal mines under unsanitary conditions, coupled with unwholesome food and alcoholic habits. Thanks to improved sanitary conditions by proper ventilation, the removal of garbage and the drying up of the mines' atmosphere; thanks likewise to the improved methods of treatment, the "miners' anemia" had gradually disappeared, leaving only, here and there, some sporadic cases, which either could be considered as essential, having no connection with any organic lesion, or else would belong to the spleno-medullary or the lymphatic leukamia.

Such were the conditions obtaining in those industrial sections when, in the early eighties, some new cases of anemia, or something looking like it, made their appearance in the mining districts of Belgium. Soon they were seen to develop grave and even fatal consequences, especially among organisms on the verge of morbil imminence, or otherwise debilitated by previous sickness. Forthwith the Belgium Government ordered an inquest, which soon disclosed the nature of the trouble. Professor Firket, in an autopsy performed at the clinic of Professor Masius, of Liege, in 1884, discovered the anchylostoma duodenale, which discovery was made the subject of a report by Professor Van Beneden at the Academy of Medicine of Brussels. Soon after, another report, remarkable both for the precision of the clinical observations and the analytical spirit and acumen displayed by Professors Masius and Francotte, of Liege, was presented to the Academy of Brussels, January 31 and April 25, 1885. The true nature of the trouble was thereby made plain. But in strong contrast with the scientific emotion created in this country at the discovery of the hookworm disease, neither the Government, nor the provincial medical commissions, nor the scientific press, took any notice of the discovery; still less did they conceive any alarm on that score. Inside of fifteen years, just the *"grande mortalis ævi spatium"* fixed by the Roman moralist, as marking an epoch in life, the disease, from its obscure origin, had silently invaded all the mining sections of the country.

Great alarm prevailed among the administrative and industrial spheres.

Spurred on by the necessities of the situation, and headed by the medical profession, the authorities, aroused at last by the gravity of the situation, went to work strenuously, and without resorting to any draconian or arbitrary measures, simply by adopting the most practical rules of hygiene, both public and individual, succeeded in keeping the scourge under control.

The result of the scientific researches had been that the anchylostoma duodenale was a human parasite, a familiar host of the warm countries, accidentally imported in the temperate climates.

As to Belgium, the occurrence and apparition of the uncinariasis in the mining districts had coincided with an invasion of Piedmontese laborers who had worked in the St. Gothard tunnel, where numerous cases of hookworm had been observed. Here, as in the Belgian mines, the warmth of the underground, favored by the humidity and unhygienic conditions in those subterranean works, had transformed them into ideal tropical or subtropical milieux, favorable to the reproduction and the dissemination of the hookworm disease. But there remained to be shown how the disease, originating under those conditions, could be transmitted from infected to healthy people.

Few questions in the late years have aroused the attention of the naturalists and scientists to such a degree as that of the penetration of the larvæ of anchylostoma through the skin of man. In truth, the possibility of infection of man by way of the skin not only was running counter to, and upsetting all the accepted notions of parasitology, but it tended to modify altogether the organization of the prophylaxis of anchylostomiasis.

In view of the dreadful extension the scourge had assumed in this country and abroad, it became an imperative duty to demonstrate, beyond any question, the modes of possible infection, and what were the conditions through which the larvæ, either swallowed down or having reached the organism through the cutaneous integumen, could reach the intestines, to assume their ultimate state of development, and to become sexually mature.

On those points the controversy has been sharp and prolonged, and it is worth while to retrace briefly the different stages of this scientific contest. It was in 1898 that Looss, professor of the medical school of Cairo, Egypt, undertook the systematic study

of the development of the larvæ of Anchylostoma duodenale, and their evolutions toward the adult state.

Working on cultures of larvæ, he soon perceived that the encysted larvæ could pass through filters of paper, and this property led him to a practical application for the preparation of pure cultures of larvæ. Furthermore, experimenting on animals, he found that larvæ could penetrate through the esophagus and larynx; hence the idea that, maybe, the larvæ could penetrate through the skin. Soon experimenting on himself, he found that one drop of the culture of larvæ, deposited on the dorsal part of the hand, was giving rise to an intense irritation, a burning sensation, and an erythematous inflammation appearing on the infected part. Looss, on a microscopic examination, finds that the larvæ have disappeared for the most part, leaving in their stead the cystic envelop the larvæ have been casting in passing through the skin.

A few months later Looss could discover in his excreta the ova, as a proof that the infection was taking place through the skin. It seems that the value of such a conclusive experiment could hardly be contested. But Leichtensterns, of Cologne, soon attacked Looss' thesis, and the reality of the penetration, through the skin, of larvæ of 5/10 to 6/10 of a milimeter, and opposing to Looss' assertions some clinical objections having, it seems to us, no other scientific cogency, than that derived from the method "by analogy."

In 1900 Looss, after some new and more decisive experiments, shows that one hour after the infection through the skin the larvæ, through the hair follicle, reach the derma. But, in order to follow step by step the passage of the larvæ through the skin to the intestinal tract, Looss experimented on a dog with the Anchylostoma caninum. The whole culture (a mixture of feces and animal charcoal containing mature larvæ) was applied like a dressing on the shaved skin of a young dog. After two hours some local irritation manifested itself; the spot was carefully disinfected, in order to avoid any possibility of infection per os. Ten days after, the dog succumbed to an acute infection of anchylostomiasis. The intestinal wall offered hemorrhagic spots, in which Looss found a great quantity of larvæ of Anchylostoma caninum in process of evolution. Those experiences, convincing as they were, have, nevertheless, been contested again by Pieri and Grassi, but through unconclusive and long-drawn arguments, which Looss victoriously refuted.

As we said above, it was through experimentation on the dog

that Looss could follow the passage of the larvæ from the skin all the way to the intestines.

Among other things, he demonstrated at the Zoologic Congress of Berne (August, 1904) that the passage does not take place gradually through the connective tissue, but that the larvæ get through the subcutaneous veins, reach the right heart, and, through the pulmonary circulatory system, arrive to the air vesicles, to the bronchioles, the trachea, and, emerging from the glottis, pass down the esophagus to the duodenum, their normal abode. Sometimes the larvæ wander through the lymphatics, but finally they reach the venous system, unless they be retained by the lymphatic glands.

In the meantime, the German Imperial Sanitary Office had entrusted Dr. F. Schaudinn with the duty of controlling Looss' discoveries. Schaudinn, experimenting on monkeys with larvæ of Anchylostoma duodenale, fully corroborated the experiments of the Cairo scientist. But one link was still missing, in the long chain of experimental demonstrations of the uncinariasis infection through the human skin. This was applied at last by Dr. Martin Herman, director at the Provincial Institute of Bacteriology of Mons, Belgium, in 1905. This eminent scientist volunteered himself for a personal experiment. One drop of pure culture of larvæ was applied on his forearm, with all aseptic precautions. After five minutes the reaction began: itching, burning, erythematous redness, papular condition of the skin, which, on close examination, showed that those papules corrseponded to the openings of the hair follicles—a most important phenomenon under the circumstances.

At the end of one hour the skin on the infected spot was removed by dissection, and the fragment treated in the ordinary way, to secure sections for microscopic examination. On those sections it was easy to demonstrate not only the penetration of the larvæ through the hair follicle, but the disorganization and the effraction of the sheaths of those follicles. All these alterations can be seen clearly on the different plates taken from these preparations, and which I take pleasure in joining to this paper.

On the strength of these experimental demonstrations, the penetration of the larvæ of Anchylostoma through the human skin is an undeniable fact. This penetration, which is very rapid, always takes place through the hair follicle, which can be traversed not only in the bottom, but likewise in the middle part. According to Looss, the larvæ reach the derma in about an hour. Accord-

ing to Herman, that penetration is more rapid, and the larvæ could be found in the derma after thirty-five or forty minutes.

As to the following subjective symptoms, they are virtually absent. Seven weeks after the experiment on Dr. Herman's arm the ova of Anchylostoma made their first appearance in the excreta.

As we have said above, the war that has been waged against anchylostomiasis in Belgium, and which has led to the almost complete eradication of that scourge, was led along the most practical rules of hygiene, both public and individual. The State Department of Hygiene began by opening, in each district of the mining regions, an institute of bacteriology, in order to centralize the scientific researches and to supply all necessary information to the medical and industrial authorities. In each mining centre a dispensary with an hospital annexed to it has been opened for the inspection of the suspicious cases and the treatment of the sick.

A rigid inspection of the miners is thus enforced, and no miner can gain admission to the mines without producing a certificate from the medical inspectors. Along with this systematic medical inspection, a campaign of public education has been inaugurated by means of public conferences and by the dissemination of tracts intended to familiarize the miner with the dangers incident to the anchylostomiasis and the practical means of avoiding the scourge. I join to my paper a few copies of a tract, "The Catechism of the Miner," as a specimen of the propaganda employed among the people. Needless to add that the most rigid cleanliness and hygienic precautions are being enforced in the bottom of the mines, as well as in the dwellings of the miners in the towns and agglomerations.

Whatever difference may be found or alleged to exist in the conditions of anchylostomiasis in Belgium and in this country, it can hardly be doubted that the adoption of a similar plan here would eventually be productive of the same happy results as in Belgium. It is a mere problem of sanitation, and there is nothing in it which a vigilant authority, both administrative and medical, could not cope with successfully. At any rate, the issue has been forced upon us, and we could not, if we would, any longer shut our eyes to the urgency of the situation.

If we weigh the material, and even the moral, interests involved in this question, which, under the pressure of the present conditions of existence, has become, more than eevr, a social concern, we could hardly be justified in continuing to shirk any longer our

responsibility or to withhold our coöperation in the solution of the problem of anchylostomiasis—a true humanitarian problem.

DR. W. E. SISTRUNK, Lake Charles, read a paper entitled

The Treatment of Hookworm Disease.

In presenting this paper I am bringing forth nothing new, but intend simply to enter into a discussion of the different methods of treating uncinariasis, and to call attention to the difficulties which have presented themselves to me in my experience in the treatment of this condition.

While I was a medical student, the first recognized cases of hookworm disease from this part of the country began to present themselves for treatment in New Orleans. We had been taught to believe, from Stiles' first article on the subject, that all that was neecssary to effect a cure in these cases was the administration of one or more doses of thymol. It took a very short while only, though, to demonstrate how much more difficult it was to effect a cure than had been supposed, and when I compiled the statistics of the cases which had occurred in the Charity Hospital up to March, 1906, for a thesis, the terminal results of our work became more evident and were extremely disappointing.

At that time, 1906, all the internes of the Charity Hospital who had had no experience in treating the disease considered it an extremely difficult one to cure. Until the present time I have had the same difficulty in curing cases.

The work which has been reported by some of the other men, however, is far more encouraging. Patterson, in the *Therapeutic Gazette* (Third Series, Volume 24, No. 4), reviews, very interestingly, the work which has been done by the Porto Rican Commission. He reports a grand total of 89,233 cases treated by this Commission from 1904 to 1907, inclusive, of which 22,936, or 25 per cent, were cured; 15,507 practically cured, 36,132 who were under treatment at the time, 14,451 who ceased to return for treatment, and 193 who died. By "cured" cases they meant cases in whom there was an absence of ova in the stools, and who had at least 85 per cent of hemoglobin. "Practically cured" cases were cases in whom the ova had disappeared from the feces also, but were cases who had from 70 per cent to 85 per cent of hemoglobin only.

In the treatment of their cases this Commission used all the

ordinary drugs which have been recommended for the treatment of the disease, and it is largely upon their experience that I will discuss the different drugs used for its treatment.

Thymol, beta-napthol, extract of male-fern and oil of eucalyptus with chloroform are the drugs which have been most used in treating hookworm disease.

Before discussing these drugs individually I will give what is ordinarily known as the "preparatory treatment," which is an essential part of the treatment, no matter which anthelmintic is chosen. This preparatory treatment is one of the most important steps in the treatment, and consists of cleansing, as nearly as possible, the intestinal canal of bowel contents and mucus. The necessity of this is easily seen, for, unless the anthelmintic used comes in direct contact with exposed mucous membrane and with worms which are not covered with bowel contents and mucus, its effect will be much diminished.

Some authorities recommend that, for adults of moderate strength, five grains of calomel, or a combination of five grains of calomel and one-half a grain of podophyllin, be given on the morning of the day before the one chosen for the administration of the anthelmintic. About 7 or 8 o'clock the same afternoon a one-half ounce dose of Epsom or Glauber's salts is given. The next morning the patient is ready for the anthelmintic, but from the beginning of the purgation until after the anthelmintic has been passed by another purgative no food is allowed the patient.

The German authorities recommend very highly the use of podophyllin in this preparatory treatment, and think it is of great value in freeing the upper intestinal tract of mucus.

Others, and the majority of authorities, I think, are less severe in this preparatory treatment, and give only a one-half ounce dose of Epsom or Glauber's salts on the afternoon preceding the day chosen for the giving of the anthelmintic.

Nearly all authorities agree in thinking that thymol is the best drug to be used. This is given in a finely powdered form in cachets or capsules. After the preparatory treatment has been given the day before, to an adult of ordinary strength, a two gm. (30 grs.) dose of thymol is given at 8 A. M., and is repeated at 10 A. M. Two hours after this second dose a one-half ounce of Epsom or Glauber's salts is given to rid the intestinal canal of the thymol and the worms which have been killed. Patients are generally kept in bed until the thymol has been expelled from the canal.

This treatment is repeated once every week or ten days until the case is cured.

Children are given doses of thymol in proportion to their age. The Porto Rican Commission, on a basis of experience with 12,330 doses of thymol, state that generally 5 gm. (7½ grs.) may be given with good results to children under five years; 1 gm. (15 grs.) to children between five and ten years; 2 gms. (30 grs.) to children between ten and fifteen years; 3 gms. (45 grs.) to persons between fifteen and twenty years; 4 gms. (60 grs.) to an ordinary adult, and 3 gms. (45 grs.) to persons over sixty years of age.

This Commission reports that the majority of their cases had no symptoms from the effects of the drug, although a few had dizziness, burning in the stomach and a temporary increase in debility. They never saw the extreme symptoms which have been mentioned as occurring in thymol poisoning, and think the dangers of thymol greatly exaggerated. They think very little of the drug is absorbed, and have obtained voluntary statements from patients that they had gone for two or three days, after having taken thymol, without a bowel movement, and had suffered no bad effects therefrom.

I have never noticed the report of a death which has been directly attributed to thymol, but have known of three cases of marked depression following its use. Two of these were from 60-gr. doses and the third from a 100-gr. dose. All of these cases suffered from vomiting, cold sweats, rapid, weak pulse and marked depression. All were treated by stimulation by needle and hot rectal enemata, and none died.

Stiles, in "Osler's Modern Medicine," rightly claims, I think, that certain conditions, such as great debility, very old age, pregnancy, advanced cardiac, or other serious organic disease, a marked tendency to vomit, anasarca, chronic diarrhea or dysentery, are unfavorable to the administration of thymol.

All solvents of thymol, such as alcohol, ether, glycerin, turpentine, chloroform and the oils are strictly contra-indicated at the time the thymol remains in the intestinal canal, and, should depression follow its use, it should be treated by stimulation by needle.

The Porto Rican Commission, in comparing the effectiveness of thymol with that of the other drugs used, found that in a series of 4,630 cases treated the first dose of thymol generally caused the expulsion of 76.85 per cent of all the worms present in the canal. In this same series of 4,630 cases, by using thymol, they mention

having caused the ova to disappear in the feces of 3,630 of the cases. They also found that in this 3,630 cases

1	treatment	only was	required in	1,518 cases
2	treatments	only were	required in	1,166 cases
3	treatments	only were	required in	518 cases
4	treatments	only were	required in	247 cases
5	treatments	only were	required in	104 cases
6	treatments	only were	required in	47 cases
7	treatments	only were	required in	19 cases
8	treatments	only were	required in	6 cases
9	treatments	only were	required in	3 cases
10	treatments	only were	required in	1 case
11	treatments	only were	required in	1 case

The remarkable results reported by this Commission have certainly differed markedly with results that I have seen, although exactly the same treatment has been used. I think that the results must have been obtained through the fact that in their work they perhaps examined the stools of a large number of cases which presented no symptoms of the disease, and that a great many extremely mild cases must have been included in their reports.

Dr. Russell Leonard, in the *Journal of the American Medical Association* (August 26, 1906), found that in the Philippines he was unable to effect cures easily with 60-gr. doses of thymol, but reported a great many cases as having been cured by the use of very large doses of thymol *(i. e.,* doses varying from 80 to 120 grs.). The best results that I have seen obtained have been through the doses recommended by him, and, were it not for the fact that I am afraid of the drug in that sized dose, I would certainly use that dose altogether.

Betanapthol was brought into prominence by Bentley, who abandoned thymol in 1902 in favor of it. This drug is given in exactly the same manner as the thymol is given, with the exception that just one-half the dose is given—*i. e.,* two 1-gm. (15-gr.) doses are given.

The Porto Rican Commission used it with success in a few cases, but did not think it as efficient as thymol. They placed it second to thymol in all the drugs which they used in treating hookworm disease. They found that one dose of it generally caused the expulsion of 72.24 per cent of all uncinaria in the canal, but noticed that when it is used it was more essential that the intestinal

canal be thoroughly cleansed than when thymol was used. They did not consider it as dangerous as thymol, but thought its effects upon the kidneys were more marked.

Stiles *(op. cit.)* thinks that thousands of cases have been cured by the use of extract of malefern in doses of from one to two drachms, but considers malefern dangerous and does not recommend its use except in cases where thymol has failed. On the other hand, the Porto Rican Commission report that they found it absolutely without value.

Philips, in 1905, recommended the use of the following formula:

Oil eucalyptus	2 to 2.5 c.c
Chloroform	3 to 3.5 c.c
Castor oil	40. c.c

This was to be divided into two or three doses and given according to the age and condition of the patient, and was recommended for use in very weak patients.

The Porto Rican Commission used this in fourteen cases and reported all patients upon whom it was used as having suffered from dizziness, fatigue and a desire to sleep, and some as having had fainting spells, for which it was necessary to administer stimulation in order to prevent death. The Commission abandoned its use and considered it dangerous. In the hands of others it has proven efficacious, however, and is a remedy which allows the worms to be collected alive.

The anemia which is produced by hookworm disease cannot be cured until the worms have been expelled and their toxins eliminated. The usual measures for the treatment of this anemia are those generally used, such as iron preparations, forced feeding, fresh air, sunlight, etc. In severe cases the blood picture very slowly, if ever, returns to normal, and the anemia is a difficult one to cure.

Some authorities recommend that very weak patients should not be treated with thymol until efforts have been made to improve their general condition. Two such cases have come under my own observation. On account of their extreme weakness efforts were made to improve their strength before giving thymol. They both died without having received thymol. Since then, in similar cases, I have not waited, but had used very small doses ¾ to 1 gm. (10 to 15 grs.) of thymol, frequently, and have found that the patients

seemed to grow better under it, and that in a short while I have been able to increase the dose.

Personally, I think that many reported cured cases of uncinariasis have not in reality been cured. It seems as though, after treatment with thymol, the remaining worms in the canal would be temporarily disabled or sickened from it, and as all the existing eggs in the intestinal canal have been washed out it is natural to suppose that some days may elapse before eggs are again discovered in the feces. I do not now think that cases who show an absence of ova during the first few days after treatment can be classed as cured cases. In my own work I always allow an elapse of ten days to two weeks before making a final examination of the feces. Then, too, I think it highly necessary that either a number of cover-glass preparations be examined or that Bass' method of concentration of ova be used in the final work on the case. I have, on some occasions, found ova in a specimen after having carefully and systematically examined six or eight cover-glass preparations.

In conclusion, I wish to state that I do not present this paper with the idea of having you think that I do not think uncinariasis a disease which yields to treatment, for, in my own work, although I have had much difficulty in freeing the stools of ova, the general improvement of the patients has nearly always been quite marked; but I do wish to call the attention of this body to the fact that I have found it far more difficult to entirely cure the disease than is generally supposed.

Discussion of Papers on Hookworm Disease.

Dr. Guthrie, New Orleans: Some one has said that almost anything can be proven by statistics, and I think my friend Eustis has fallen down on his theory that hookworm is rare in Louisiana. I think what he has succeeded in proving was that there is not enough search made for it in the Charity Hospital. His tabulation shows that there has been negligence at the Charity Hospital somewhere. Now, I believe that hookworm is a prevalent disease, and that it seriously menaces the industries of this and other States. I base that statement on a number of years of observation of the disease. I had the pleasure of reporting the first case reported in Louisiana, in 1903. I have always been much interested in this disease, especially the mild cases. These are just as serious, from the standpoint of public health, as the more severe cases. These mild

cases do not hurt the individual so much, but they are a source of infection.

Dr. Kelly, Winnfield: In my section we have a great deal of this disease, and I think wider publicity should be given to it. I think the public school teachers and others should be enlightend. It is my opinion that in North Louisiana, in the piney-wood section, this disease causes more trouble than all other diseases put together among the poorer class of people, especially between the ages of six and twenty years. These patients do not recognize the disease, and they do not apply for treatment. Unless you recognize it when you are called to treat them for chills, or when you are called to set a broken arm, the disease will go unrecognized. I have, when going out through the country, come in contact with whole families which were infected. The reading public, the traveling men and the people in the towns who read the periodicals are familiar with the disease, but the poor people out in the rural districts do not read much and do not know anything about it; they do not know there is anything the matter with them. You go into the hills and you will find just such boys as shown by Dr. Bass—boys said to be "dirt-eaters." These people do not apply for treatment, and there is, therefore, no way to get statistics from the hospitals or anywehere else.

In regard to prophylaxis, I think we should have instructions given in the public schools about wearing shoes. The disease is so prevalent that the children should all wear shoes. We should lay stress on sanitary water closets.

I do not believe in giving much water in the treatment.

Dr. Genella, New Orleans: It has always struck me as remarkable that we have no statistics to prove or to disprove the existence of a marked tendency to hemorrhage in women who become pregnant during this infection. I am afraid that this talk of stunted growth in the South is exaggerated. I have traveled all over the world. Go to any country, and you will find the same physical variation. In France you will find stunted men, and the same is true in Germany, if you will take the padding out of their military clothing. I think we should get out of our heads that the average people of the South are stunted in their growth.

Dr. Halsey, New Orleans: As to the report from the Charity Hospital, and as to the statistics, there are several things to be

considered. Hookworm disease is more prevalent among children, and comparatively few children go to the Charity Hospital from out of town. Further than that, a large number of the cases infected with the hookworm show few, if any, evidences of it, and therefore the large majority of them are not examined for it. The fact that we have had very few cases is of very little importance in the study of this condition, for the reason that not more than one in twenty of the patients at the Charity Hospital have their feces examined in the Pathological Department, and then not always for the hookworm. Last year there were five hundred examinations there, many of them repeated examinations of the same patients. There were a total of ten thousand patients there during the year, so that only one in twenty was examined. More than that, the larger proportion of the inmates of the institution are inhabitants of New Orleans, and we all know that the disease is not an urban disease, but is a rural disease. Then, the experience of men all over the State as well as here, of people coming in with obscure symptoms, and the disease being found on examination, is evidence of greater importance than those coming to the hospital. This last week I saw a man having ten living children and five dead. Two of the children with him had hookworm disease, and, from the statements made as to the others, I believe they had it also. I think it is wrong to try to prove that we haven't got it throughout the State. We want to wake up our people to the fact that the disease is here, although not so prevalent in Louisiana as in most Southern States, and we want to conquer it.

Dr. Porter, New Orleans: I must say that I think the publication of the paper by Dr. Eustis would have a tendency to minimize the condition in the State, just as the publications in the East have had a tendency to exaggerate it. I have visited the parishes, and I have found that it exists throughout the State. I believe the best method of eradicating the disease is to educate the people, and admit that we have it; don't conceal it, for that is a bad thing to do. I think we should go on record as endorsing Mr. Rockefeller's donation.

Dr. Eustis (in closing): When I started this paper, Dr. Bel asked me to get up some statistics. I was of the same opinion as the rest of you as to its being a scourge. I found that 75 per cent of the cases came from the parishes with sandy soil. I did not

attempt to make a point in my paper that it was not widespread in Louisiana. I believe it exists all over the State; every parish has it. If you will go over these parishes you will find that but a small area of the State is afflicted to any extent, the majority of infected areas being in those parishes with a sandy soil. The point that I make is that we are fortunate in the fact that we have a soil in all but comparatively small areas in which it does not grow. Down in my parish I had thirty-two cases from the sandy soil, against very few in the rest of the parish. The point I want to emphasize is that we should not be spreading stories about it when we are trying to build up the State; don't advertise it in the lay press. I am sure if you will investigate throughout the parishes you will find that it is hardly found except in the sandy areas.

Dr. C. C. Bass (in closing): I was born and raised in a country where the majority of the people are infected, perhaps 50 to 90 per cent. I do not mean that 50 to 90 per cent of them are such cases as we have just shown you here, but they are infected to some extent. In my work I have demonstrated that any number of worms, even though small, are able to do some harm. It may not be extensive enough to be appreciated, but if you will treat them and weigh them afterwards you will be convinced.

Now, as to its prevalence in Louisiana, there may be parishes where it does not exist, but in reply to all the arguments that it does not exist, I say "get busy" and examine the feces of your patients; do not only examine the patient, but examine the feces. As to the prophylaxis of the disease, it is very well to talk about sanitary closets; that is all right to talk to people in the city. I have lived in the country all my life, and am not an exception to the rule of people there. Had you told me to use a privy I would have thought you crazy. Many of these people are too poor to build privies. Then, many of them are half a mile or more away from their privy when the desire to defecate takes them. It is useless to instruct them to use privies. My impression is that the way to accomplish most is to teach the people not to get ground itch. Every little boy, and their mothers and fathers, know what ground itch is; they know, as a rule, where they get it, and if you will teach them not to get it, and teach them that ground itch is what causes this disease, and that that is what ails them, I believe they will keep free from it. You must

educate the people as to the way in which they get the disease. As to how to accomplish that, educators and sanitarians can work that out better than I can suggest. I have asked a great number of them where they got their ground itch. Most of them reply that they get it in the cow-lot. Of course, there are various other ways in which infection may occur.

By watching the larvæ carefully when in a dish you will find that in a few days many of them will crawl up to the side of the dish. That is what occurs when strawberries are grown on ground that has been fertilized with night soil. Lettuce and other vegetables eaten raw would be a similar source of infection. It is not improbable, therefore, that vegetables grown in an infected neighborhood may carry the infection.

There are very few cases in New Orleans. It is a rural disease, and cannot be anything else than a rural disease.

To show the power of penetration possessed by the larvæ, I recently took a woman's glove and put a culture of uncinaria larvæ on one side, and on the other side sterilized mud. Later we found that they had penetrated through the glove.

As to how the worms are reproduced, they are in the intestines, and lay eggs in the canal, which canont hatch there, but do so only after the feces have been expelled and have been diluted with dirt. After four or five days they become encysted and capable of infecting, but not before. Before they are encysted, rain will kill them, but afterward it will not. They will then resist strong chemicals and other agents that they could not before.

Dr. J. N. Thomas, Pineville, read a paper entitled

The Relation of Corn Products to Pellagra; Some Observations at the Louisiana Hospital for Insane.

In offering this paper I am not unmindful of the fact that within the past year the subject of pellagra has been discussed at the meetings of most every medical society in this country, and that there is hardly a medical journal of any importance in America which has not contributed its quota of information to this disease, which is creating such widespread interest wherever maize products are used as food.

Believing that the above-mentioned sources of information have familiarized the members of the profession with the symptoms of pellagra, I shall not burden the Society with a repetition of same now, but confine myself to a brief resumé of the observations on the relations of corn products to pellagra made at the Louisiana Hospital for Insane during the past sixteen months, with the report of a few cases as an illustration, which are now free of the symptoms of pellagra.

If I am not mistaken, it was from cases seen in the Louisiana Hospital for Insane, early in 1909, that the first cases in Louisiana were officially reported. Soon after this article, several cases were reported from various parts of the State, and it is now realized, I believe, that pellagra is more widely distributed and has been in existence in Louisiana and throughout the South for an indefinite number of years. To the Searcys, of Alabama, and Babcock and Watson, of South Carolina, is the chief credit due for having brought to the attention of the medical world the prevalence of this disease in the United States, and directed special attention to its relation to corn products. Lombroso and others in Italy have long been studying the disease, and it is to these European observers that we are most indebted for our knowledge of the subject.

While the cause of pellagra is not positively known, the preponderance of evidence and opinion in this country and Europe is so strongly in favor of the theory that it is produced from eating spoiled corn and its products that at the National Conference on Pellagra held in Columbia, S. C., in November, 1909, a resolution was adopted declaring that "evidences between the use of spoiled corn and the prevalence of pellagra seemed so apparent that continued and systematic study of the subject be advised."

At this conference, from among the many papers read by professional men, among the laymen the article by the learned Commissioner of Agriculture of South Carolina, and by a prominent planter giving his personal experience with damaged corn, these papers covering every phase of the pellagra subject, abundant evidence was adduced to convince the most skeptical that damaged corn fed to human beings in the form of cornbread and grits played the chief, if not the only, part in the etiology of pellagra.

For my part, after making a study of the disease as it has existed in southern Europe for the past century, and the failure on the

part of scientists to discover anything to the contrary, I am convinced that the above etiological factor is the only one.

It is well known that the method of harvesting corn throughout the West, and which has been adopted in late years to some extent in the northern tier of Southern States, is the prime cause of damaged corn. This method, outlined briefly, consists in cutting the stalks in a semi-green state, before the corn has fully matured, and placing them in shocks, there to remain an indefinite period before being broken open and the corn husked. Vegetation cut in such a state and massed is obliged, from the heat, moisture, etc., present, to undergo partial fermentation, which often leads to putrefactive changes.

It should not take a vivid stretch of the imagination to realize that much corn harvested under such circumstances, especially during a damp harvesting season, or when cut short from maturity by early frost, is obliged to be damaged, and consequently impure. It is believed that, year after year, millions of bushels of such corn have been sent South in the shape of corn-meal and grits and sold and consumed as food by man and beast, and it is my opinion that right here we may look for the true cause of pellagra.

In January, 1909, I took charge of the Louisiana Hospital for Insane as its superintendent, and an early examination of the physical ailments of the patients then in the institution revealed the fact that there were, and had been, many cases of gastro-enteric trouble, and a further examination and investigation of the records and death list for two or three years back brought out the fact that a very large percentage of the sickness and deaths were recorded as being due to diarrhea and dysentery.

In his biennial report of 1908 to the Board of Administration my predecessor, Superintendent Hays, stated that "during a period of four months we had nearly one hundred patients sick in bed constantly," and in these few months fifty-two deaths are recorded. Following these deaths, eighty-six other deaths occurred for the remaining twenty months of the biennium. He further speaks of the cause of death in the great majority of the above cases as being the result of a "peculiar and fatal disease." To properly appreciate the large percentage of the number of sick and the enormous death rate, it might be well to state that the average population at this time was about four hundred patients, which would mean

that 65 per cent of the population during the four months alluded to were sick in bed constantly, and that over 12 per cent of the population died. The disease not only baffled the knowledge and skill of the officers of the institution, but also that of eminent practitioners of the adjoining city, Alexandria, who were called in consultation.

During the first nine months of my administration fully 80 per cent of the physical ailments of the inmates of the hospital was due to some form of gastro-intestinal trouble, and to this cause many of the deaths may be attributed. Immediate steps were taken to locate the cause of this trouble, which, from the records, had been apparently existing for four years.

The food, cooking and water supply were carefully and often investigated, with negative results as to finding absolutely the cause of the sickness. The water supply, coming from artesian wells, had been pronounced excellent by Professor Metz. The food was well cooked and apparently good. No causative agent being found, general sanitary measures within and without the buildings were resorted to and relied upon to alleviate conditions. Wooden floors in bath and toilet rooms were replaced with floors of concrete, reinforced by steel; wards, including halls, rooms and galleries, were cleaned, scrubbed, disinfected and painted; mosquitoes abounded, and the drainage near buildings was looked after, and even to the fountain, with its pool, was destroyed, to further reduce the breeding places of Stegomyia and Anopheles.

These important sanitary measures were completed by July 1, but for the three months prior to this, and the three months following, there was not only no improvement in the health of the patients, but there had been, and continued to be, a steadily increasing number of cases of bowel trouble.

In February, among the gastro-enteric cases, there was one who had a severe dermatitis, the lesions manifesting themselves in the shape of vesicles, pustules, crusts, etc., on the dorsal surfaces of both hands. The patient, a white female, had free access to the bathroom, and explained the condition of her hands to the ward physician and myself as resulting from continual dipping of her hands in hot water until same were blistered. She was very anemic, had stomatitis, and an uncontrollable and exhausting diarrhea. She died, and a certificate of death from pernicious

anemia was given. Though unsuspicious of its being pellagra, after reading Lavinder's precis on the subject, so kindly forwarded to me by Surgeon-General Wyman, we were positive that it was.

Within two months other cases developed, and these formed the basis for reporting the cases that appeared in an article in the July number of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, which, I believe, were the first reported from Louisiana. At about this time the medical and lay journals of the country were teeming with the reports of cases of pellagra in various parts of the South and in Illinois, I put myself into correspondence with the two Searcys, of Alabama, who, up to that time, probably had more experience with the disease than other physicians this side of the Atlantic. From them I gained my most valuable information. From them and other writers in this country and Europe I learned of the strong suspicions all had of the relation that bad maize bore to the disease, while from Lombroso and his adherents in Italy we are told that a toxin produced and elaborated in bad maize is the only cause.

The daily food supply of our hospital had, as two of its chief articles, cornbread and grits—cornbread being the only bread served for the dinner meal and grits was served each day for breakfast. Both the meal and grits were purchased by bid in the open market, and, on inspection, seemed good. The meal used was what is commonly called bolted meal, and both articles came from the West. From some of the old employees of the hospital I learned that these articles had been used as above outlined for the breakfast and dinner meals since the organization of this institution in 1906, and similarly utilized in the Jackson Asylum from time immemorial.

As medication in the form of intestinal antiseptics and otherwise was having no effect whatsoever, and as the active sanitary measures above referred to were equally ineffective in checking the progress of the disase, I became strongly suspicious that cornmeal was the cause of the trouble. Being responsible for the care and well-being of the unfortunates in my charge, I felt that if cornbread or meal was producing this dreaded disease I could not conscientiously continue its use as an article of food in this institution, and accordingly, with the sanction of the Board of Administrators of the Hospital, eliminated corn and its allied food stuffs

entirely from the daily food supply early in October, excepting, however, grits, which was continued once daily until January. Flour was substituted for corn-meal, and rice took the place of grits. When this change in October was made I am confident that there were fully forty cases of pellagra and cases of gastro-enteric disturbance, suspicious of pellagra, under treatment. My two assistants, Drs. Kaffie and Fougerousse, made daily observations for results, and after twenty-one days from the time that cornbread had been eliminated Dr. Kaffie reported that he had not a case of bowel trouble among his patients, consisting of about two hundred and sixty; and Dr. Fougerousse made a similar report in a little less than four weeks, covering observations on three hundred patients. From the very beginning, however, both ward physicians reported daily diminution, and rapid convalescence of those affected. The hospital wards of this institution have been absolutely free of the condition as described above, and have remained so until the present time. Pellagrins that I fully expected to see develop symptoms again this spring have not only remained free of all bowel disorder and skin lesions, but have also remained lucid and free from periodical excitement and maniacal attacks, as noted formerly in individual cases. There is not to-day, May 1, a case of sickness in bed in the entire institution, while the death rate for the past three months has been less than one-half what it was for the corresponding months and period last year. In February, March and April, 1909, with an average population of 480, there were eighteen deaths, while for the same months in 1910, with an average population of 556, the nmber of deaths was seven.

Now, to what can this changed condition be attributed? In my opinion, to nothing other than the elimination of corn products from our dietary. If not this, then what has brought about the change?

There were about forty cases of pellagra under treatment in this institution during the year of 1909, four of which, with your permission, I will briefly report:

CASE I.—Mrs. A. P., white female, 45 years of age, married; admitted June 23, 1909.

Past History.—Admitted in poorly-nourished state, cachexic appearance and extensive mental involvement of melancholic character, interspersed with religious fanaticism. Clear history of pneumonia, la grippe,

typhoid fever and "indigestion" for past few years, resulting in diarrhea and weakness. Ate extensively of cornbread and grits from childhood. History of "summer diarrhea" for the past five years confirmed by son.

Present Illness.—Patient of an hypochrondriacal tendency, complaining of many imaginative ailments. An edematous condition of feet led to examination of urine frequently, which revealed slight, transitory albuminuria. Some days later patient complained of "feeling badly." Temperature 99, slight diarrhea, anorexia, coated tongue and other earmark symptoms of digestive disturbance. The temperature abated, but the diarrheal symptoms increased from day to day until patient was having from twenty to twenty-five passages daily, of foul odor, considerable mucus and very dark in color . The patient became intensely hyperemic with bald splotches, the gums and lips highly congested. Upon entering the sick chamber a peculiar odor was easily detected, in spite of the best efforts to keep patient and surroundings scrupulously clean. The skin lesions became manifest in due time, and were typical in type, character, distribution, arrangement, etc., of pellagra.

Treatment.—This case, within the scope of justifiable experimentation, was given many remedies, as recommended by the various authorities now writing on the subject. Arsenic in one form or another was given daily. Chemicals tending to exert an antiseptic influence on intestinal tract, quinin judiciously, mild tonics and stimulation as indicated were employed without perceptible benefit. The dietetic treatment consisted of restrictions in regard to indigestible substances and abstinence of all corn products. Conditions became gradually but steadily worse; death seemed imminent, and the last rites of the church were administered, as requested by relatives, in case of approaching death. In a desperate effort to prolong life, nourishment was greatly increased, in spite of diarrheal symptoms and other seeming contraindications. To the milk, Ducro, etc., were added custards, eggs, oatmeal, coffee, oysters, beefsteak, bacon, and anything within reason that the patient requested. The result was marvellous; improvement was noted from beginning, and to-day patient is in a fair state of health.

Case No. II.—M. B., negro, female, 25 years, married; cook by occupation. Admitted July 3, 1909, in highly maniacal state, weighing 112½ pounds.

Past History.—No history of childhood obtainable. Rational now, and states that she was never seriously ill until the spring and summer of 1908. During these periods she suffered from a chronic, obstinate diarrhea, which did not yield to treatment as afforded by several physicians. Her hands and feet were sore, and she had been "raised on cornbread."

Mental History.—No history of previous similar maniacal outbreaks. During the early days of April, 1909, she became suddenly highly excited, confused and very active, mentally and physically. Hallucinated vividly; could not sleep, and was filthy and destructive. In this state she was admitted to this institution. She remained in this condition, or a modification of same, until October, at which time beginning restoration was obvious. By November she was perfectly rational, and has remained so since.

Physical Examination.—At the time of admission examination revealed nothing strikingly abnormal in so far as heart, lungs, kidneys, etc., were concerned. Digestive tract in badly disordered condition.

Tongue—Coated, hyperemic, and showed scalded surfaces.

Gums—Hyperemic and swolen.

Teeth—Tendency to looseness, covered with sordes.

Lips—Cracked, hardened, hemorrhagic.

Intestinal Tract—Highly inflamed and irritated. Patient having fifteen to twenty involuntary passages daily of muco-sanguinous nature.

Skin—On the cutaneous surfaces were found lesions, corresponding in every detail with those observed among pellagrins. The location and distribution of lesions were limited to hands, feet, neck and region of inner surface of thighs. The dorsal surface of hands, from finger-tips to beyond the wrists, extensor surface of forearms, elbows, anterior and posterior surfaces of neck were involved. The inner surface of thighs, perineum and portion of labia were irritated, revealing excoriated, desquamating surfaces. The condition of vulva producing increased inclination to masturbation.

Temperature—98.6. No elevation of temperature was noted throughout progress of disease.

Diagnosis—Pronounced as pellagra.

Treatment.—The medical treatment consisted of Fowler's solution, in conjunction with the judicious application of stimulants to excretory organs. Ointments of soothing nature were applied locally. The usual hygienic treatment was resorted to. Dietetically treated by total abstinence of corn products, and fed abundantly of highly nutritious and easily digestible nutrients.

Progress of Disease.—Three weeks after admission patient ceased to have hemorrhagic stools, and the number were greatly diminished. She ate ravenously and was fed frequently throughout course of disease. As physical condition was bettered, the skin lesions disappeared and gradual mental restoration was noted. The following weights by months will give an insight to progress: July, 1909, 112½; August, 135; September, xx; October, 108½; November, 115; December, 130; January, 1910, 140; February, 160; March, 170; April, 171.

CASE No. III.—J. S., white, male, unmarried; admitted May 22, 1908.

Past History.—Nothing having bearing on present condition elicited from patient. Diagnosis of mental condition places patient among the group of recurrent or manic-depressive cases.

Physical Examination.—Enlarged and painful spleen only abnormality detected in examination of deeper organs. Albumen found periodically in urine in small amounts. Has an anemic, cachexic appearance.

Present Illness.—In June, 1909, had attack of malarial fever, with intermittent temperature, for about seven days. Condition cleared up readily under quinin treatment. Preceding and complicating this condition an obstinate diarrhea had been noted. The usual treatment for such conditions was resorted to without effect. Other evidences of a profound gastro-intestinal disturbance became evident in the shape of foul breath and coated tongue, which was also intensely hyperemic with bald splotches. Mucous membrane of gums, lips and buccal cavity in general were congested and prone to bleed.

The skin on dorsal surfaces of hands and feet became roughened, pigmented and desquamative. The post-cervical region and inner surface of thighs were similarly effected. Other evidences, typical and characteristic of pellagra, made the diagnosis easy.

This condition of diarrhea, skin lesions and mental disorder remained practically unchanged for forty-five days, when gradual improvement was noticed, and as the physical condition improved the mental state of high excitement and mania began to subside. By December patient was free from intestinal trouble, the skin lesions were replaced by glossy and pigmented surfaces, and the mentality of p. fully restored. He has remained thus up to date, with no evidence of mania or physical derangement returning.

Treatment.—The treatment differed but little from the routine procedure as adopted by this institution for such cases. Patient was deprived

of all corn products, placed under the most favorable hygienic conditions, fed judiciously, given arsenic internally, and meeting other symptoms as they became manifest. These steps constituted full management of case. It might be well to add that this man had eaten abudantly of cornbread every day for a year before the date of above-mentioned attack, and many evidences of long-standing pellagrous infection are easily obvious and tend to prove the case an old one.

Case No. IV.—J. A., negro, female, married, housewife, forty years of age; admitted June 13, 1909.

Past History.—Nothing of interest, in so far as present illness is concerned, in past history. She ate cornbread when the opportunity presented itself. Addicted to drug habit.

Mental Condition.—Admitted in wild and maniacal state, remaining so until the early days of January, at which time patient began showing evidences of mental restoration.

Present Illness.—Physical examination at time of admission revealed but little deviating from the normal, other than that resulting from mental disorder. Health and appetite seemed very good. She ate ravenously, and, because of high state of excitement and consequent exhaustion, was fed abundantly of the food as given to the ordinary patient. Cornbread and grits at this time had not been eliminated from our dietary, and she naturaly received a goodly supply of each. About the middle of August it became necessary to treat patient for intestinal disorder, resulting in diarrhea. She had from five to ten passages daily, of muco-sanguinous nature and of very foul odor. Both feet became roughened, bullæ developed, which became infected secondarily, resulting in pustules. The post-cervical region became similarly affected, without vesicles, however. Lips, gums and tongue intensely hyperemic, and the former dry and cracked. For three or four days during October temperature varied from 100 to 101.

This case undoubtedly developed in the institution, and had its influence in the adoption of the corn-free diet as outlined above.

I had the pleasure of visiting seven of the best-equipped and regulated institutions of the Southern States last fall, and every one of which was using corn-meal and grits, as was formerly the custom here, and every one of them has had cases of pellagra. I know of no similar institution that has eliminated corn and its products from its dietary.

That fully matured, sound corn is a wholesome and nutritious article of diet cannot be questioned or denied, and as the South has soil, climate and a long growing season to fully mature the product, there is no reason why a grain of corn should be bought from the West for food purposes, and it is hoped that the changed economic conditions, brought about by the advent of the boll weevil, will see the South not only producing all corn necessary for home consumption, but exporting it as well for the toiling millions beyond the sea.

Discussion of Dr. Thomas' Paper on Pellagra.

Dr. Menage, New Orleans: I recall the case of a woman who is a starch-eater; she eats a pound or more of raw starch a day. I mention this, as other grain products than corn may be responsible, and in this case it might be attributed to the starch. I do not believe that corn and its products, if a cause, are the only sources of pellagra. We have now a number of cases where corn does not seem to have any connection with the disease. The patients have been questioned, and no corn used, so far as we can learn; yet they have typical pellagra. We should, therefore, be careful in speaking of corn as the only cause, as there may be other causes unknown to us at this time.

Dr. Kelly, Winnfield: I wish to report three cases that I have had under observation. One died about three weeks ago, another case died about one year ago at the City Hospital at Shreveport after a sickness of about six months. I now have a case under treatment that came to me last June, and she has been improving nicely. I gave her atoxyl, beginning with 1 1/3 grains, hypodermically, once a week, gradually increasing until I got to 2 grains, and she has passed a good summer, with no nervous manifestations, and there was practically no trouble with the bowels after she came under the influence of this medicine. I had another case that went to the bad under the same treatment. All of these cases ate cornbread; of one of them, cornbread was her only bread.

Dr. C. C. Bass, New Orleans: A number of interesting cases sent down by Dr. McGee are suggestive as to the causes of pellagra. A negro woman developed what he suspected was pellagra. It was confirmed, and after it was confirmed he decided that maybe he had another case or two in the same family. He went back home and found that two or three other members of the same family had had eruptions on their hands, and they were also brought down. All four, making five in all, were diagnosed as having pellagra. Investigation of the history of the case was taken up, and the doctor went back home to investigate the source of supply of their corn-meal and other food products. He is a fox-hunter, and has a negro man whose business is to feed the hounds. They had learned that cornbread was excellent for the hounds, and he has been in the habit of buying a cheap corn-meal for making

cornbread for the hounds. It developed that the negro man had been stealing this corn-meal and the family eating it.

The case reported by Dr. Menage had a still further interesting history. This starch-eating began only about three years ago, when this question of pellagra was first brought up. It developed that the patient's children and the neighbors' children have ground itch very often and very bad. The ground itch being the source of hookworm disease, it is probable the patient was exposed to hookworm disease. Whether she has it will be determined by an examination of the feces as soon as a specimen can be secured. It is difficult to tell what was the fact. If it be true that her starch-eating was due to the hookworm disease, and that the pellagra developed from the starch-eating, this will be one case in which pellagra is indirectly due to hookworm disease.

In the cases I have had I have inquired into the source of the corn-meal, and the kind eaten, and have studied the possible connection with pellagra. So far as I am personally concerned, I am convinced that corn is connected with the development of pellagra. This starch-eating case rather favors the theory of toxin, and not bacterial infection from corn.

Dr. Allan Eustis, Abbeville: I have a case under treatment now which I have not yet positively diagnosed, as I have my first case of pellagra to see. I live in a community in which they live almost entirely on "couch-couche," a dish made of a parboiled corn-meal and molasses. I have talked to the oldest physicians there, and none of them recall any conditions similar to what we have in pellagra. If it were due to decomposed corn-meal alone we would certainly have some cases in Vermillion. This case that I mention has a gastro-enteric disturbance and other symptoms. I simply mention this because they do not try to take any care whether the corn-meal is bad or not, and because corn-meal is the staple diet in Vermillion Parish.

Dr. H. P. Jones, New Orleans: At the recent meeting of the Southern Medical Society one of the speakers said he had been at Andersonville during the Civil War, and that he was now convinced, in the light of present knowledge, that a great many of the cases at Andersonville were really cases of pellagra. I have looked through my father's writings very carefully, and I have failed, not only in his writings, but in the writings of others, to find any

descriptions of any conditions that in anywise tallies with pellagra, although I have no doubt there were a great many hookworm cases there. If it were true that they did have pellagra there to the extent that this gentleman thought, I believe we ought to derive a very satisfactory prognosis from that, because it would then be very evidently a disease very amenable to improved sanitary conditions and improved food supply. While I do not believe it existed at Andersonville, except rarely, I might wish that it was true, because it would then show that there is nothing to fear. As to the use of atoxyl, we should be very careful in the use of this drug, because it is dangerous, and is often followed by serious after-effects.

Dr. J. N. Thomas, Pineville (in closing): So far as medication goes, I do not think there is any medication about it. I do not think the medicines given by me had a particle of effect. I think the elimination of corn products from the food supply of your patients will do more than any medicine towards their cure. If the cause of a disease is known, and it removed, there is no necessity for medication.

Orleans Parish Medical Society Proceedings.

President, Dr. B. A. Ledbetter. *Secretary,* Dr. C. P. Holderith.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, Dr. C. P. Holderith, Chairman. Dr. Homer Dupuy and Dr. H. D. King.

Meeting of July 25, 1910.

Discussion of Dr. Dabney's Paper.

Dr. Chassaignac: Mr. President, I am very sorry indeed that Dr. Dabney has not been able to finish his paper, for the thing that frequently adds weight to the argument is found in the latter part of one's paper. He spoke about the weak points of the specialist, and, taking one viewpoint of it, he has made a comparison—that of the gunmaker and the piece-worker. Depending upon this standpoint, a specialist should first be the gunmaker, and not the piece-

worker. The doctor, in general, should be a gunmaker first, then a piece-worker; or, in other words, the doctor should have a general experience, for it is absolutely wrong to make any other comparison. I agree with Dr. Dabney in the abuse of the term "specialist," and I will again like to make clear the point that the so-called specialists should first be general gunmakers, then piece-workers, only after sufficient additional time and labor have enabled them to do better work than the average in some special direction.

Dr. Dabney (in closing): I appreciate the importance of the points brought out by the men who have taken part in the discussion, and am pleased to see that they agree with me. As to Dr. Perkins' remarks, I may say that I was never more serious. The point that I wanted to make is the point that was seen by Dr. Chassaignac—that is, the specialist must be first a good workman. To illustrate this: two years ago, while in the hospital, I felt the pulse of a patient who was on the table prepared for operation, and I told the operator that the patient was suffering with chronic interstitial nephritis. If operated on, death would have resulted, but the operation would have been successful. Ambitious to do surgical work, this man had overlooked other conditions, which were quite evident. The point is made in the latter part of my paper that specialists should limit themselves to one thing, and should do nothing else. Dr. Bruns' point, that we are all in a state of transition, is true, and medicine of to-day is in a chaotic stage.

Communications.

The Co-Operation of the Physicians and Dentists.

In thinking this subject over, carefully and seriously, I have almost come to the conclusion that the family dentist is as important as the family physician, and, if properly patronized, will often prevent many physical ailments, especially in children, that now call for much attention from the physician. Many cases, in fact, would not need the physician at all if the hygiene of the oral cavity was properly looked after by the dentist, and there is no doubt but what the modern dentists will gladly do this if the people give them the opportunity.

We have all too long believed ourselves to be two separate and distinct professions, with altogether different duties toward our patients; but if we think of it a little we realize the more the medical and dental professions work together the better it will be for all concerned.

The time is over when the physician works alone, and thinks, individually, that he knows it all, as they now freely work together as general practitioners; also they are constantly calling in specialists to co-operate with them in cases where their special training is useful to their patients. Why should they not call in an oral surgeon as readily as any other specialist?

The mouth, in relation to the rest of the digestive organs, is very close; and a good healthy mouth, equipped with healthy and useful teeth, is as necessary to perfect digestion as a strong stomach or liver.

In considering a way by which simplification can be aided, Dr. Van Someran, of Venice, has suggested that we can profitably divide digestion into two divisions: voluntary and involuntary digestion.

Voluntary digestion is that which takes place while the food is yet under our control and before it is swallowed, and the results, from experiments of the past ten or twelve years, have shown that when the food is properly treated within that small section of the alimentary tract, under our voluntary control, that we have no evidence, apparent to the senses, that there is any more alimentary tract beyond the throat, and the whole process of involuntary digestion is done so completely and easily that we have no thought or care in the matter at all; whereas, if the food is not properly treated within that small section, it is apt to cause fermentation in the stomach. Half-digested food follows, and instead of having a good, healthy, aseptic process going on in the alimentary tract, giving clean nourishment to all parts, we have a foul, decomposing mass, giving off toxins, which are absorbed by the blood and poison every tissue of the body. This causes headaches and endless other symptoms, and lowers the resistance of the body, extending an invitation to a long train of ills that are so easily preventable by the proper care and use of the mouth.

Good teeth are essential to proper mastication. Without them, health cannot be maintained in its highest possible degree. That this truth is rapidly becoming more and more appreciated by the

general public is evidenced by the advance in dentistry during a few decades.

From an humble art to one of the most exacting sciences, with a literature of its own, voluminous, learned and liberal to a degree, in that it universally advocates the instruction of the people in matters pertaining to the proper care and preservation of the teeth.

Americans are on the verge of becoming a toothless nation, notwithstanding the enormous progress of the dental profession. Young folks, from sixteen to eighteen years of age, are already wearing artificial teeth, while a very few adults can boast of having a complete set as nature gave them. Nature intended the teeth to be sound and intact, in both sexes, at the age of eighty years, and this can actually be achieved by following a few simple rules of mouth hygiene. Something must be done to counteract the fearful consequence to our nation in this matter. Too great stress cannot be laid upon this question, and it is the physicians' duty, as well as the dentists', to exercise every possible means available to counteract and eliminate this fact.

We are living in the present, but we must think in the future, and strive to build for those who are yet to come. The present becomes the past, and the future the present, in such rapid succession that the man in any of the serious concerns of life who does not think and live in the future is certain, sooner or later, to find himself hopelessly in the past.

The intimate connection between the teeth and the general health is a point which has never been sufficiently impressed upon the mass of people; and *who* is in a better position to do this than the physicians? And, unless they do, it will always remain as a dark streak or shadow upon their achievements.

It is common to hear people with poor teeth say: "We'll have them all out and substitute artificial ones." The insufficiency of this plan is shown by the fact that the crushing force of the best artificial teeth is only from 50 to 180 pounds, compared with the 275 pounds of the natural ones. The only remedy for all such false ideas and the neglect of the teeth, the earliest, most immediate and most far-reaching cause of disease, is the introduction of instruction in dental hygiene into our public schools.

Dentists of years ago, whose limited education only permitted them to be extracters of teeth, cannot expect to be of much assistance to the physician; but, thanks to an awakening in the dental

profession, and the making of dentists who are surgeons and physicians of the mouth, we can now be of material assistance to each other by co-operation, and the sooner we recognize the advantage of hearty co-operation in this matter the better it will be for all concerned.

(Signed) L. P. St. Amant, D. D. S.

Epidemic Poliomyelitis.

At the recent meeting of the Congress of American Physicians and Surgeons held in Washington in May, 1910, a joint session of the American Orthopedic and American Pediatric Societies, the subject of epidemic poliomyelitis was discussed. The following resolution was adopted:

"It having been shown by recent epidemics and investigations connected with the same that epidemic infantile spinal paralysis is an infectious communicable disease that has a mortality of from 5 to 20 per cent, and that 75 per cent or more of the patients surviving are permanently crippled, State Boards of Health and other health authorities are urged to adopt the same or similar measures as are already adopted and enforced in Massachusetts for ascertaining the modes of origin and manner of distribution of the disease, with a view of controlling and limiting the spread of so serious an affection."

A committee, with Dr. Robert W. Lovett, President, Boston, Mass.; Dr. Irving M. Shaw, Secretary, Buffalo, N. Y., was appointed to urge the various State and municipal health authorities to take up the work of investigation of the various foci of epidemic poliomyelitis, to study its epidemiology, and to instruct the public that the disease is at least mildly communicable.

May we ask you to publish this letter and the resolutions in your journal, and also to allude to the matter editorially, urging the Health Commissioners of the various States of the United States and of the Provinces of Canada to follow the example of the Massachusetts Health Department in studying the epidemiology of poliomyelitis? Respectfully yours,

Robert W. Lovett, M. D., President,
Committee on Poliomyelitis, American Orthopedic and Pediatric Societies

Irving M. Snow, Secretary,
475 Franklin Street, Buffalo, N. Y.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

Prevention of Infant Mortality.

In the awaking interest of the general public in sanitary matters no greater field for education exists than in the study and prevention of infant mortality. An association for such a purpose has been organized, and the annual meeting is announced for November 9-11, 1910, in Baltimore. The objects of the association are: The study of infant mortality in all its relations; the dissemination of knowledge concerning the causes and prevention of infant mortality; the encouragement of methods for the prevention of infant mortality.

Municipalities have systematically encouraged some halt in the advanced death rate among infants by improving the milk supplies, but there are few cities where even this has reached a plane of practical results.

The question is a broad one, and must be met by the concerted efforts of all—physicians, sociologists, sanitarians, municipal authorities, and as well as by the families themselves among whom children are born. Philanthropists might also be mentioned in grouping factors—but philanthropy is no laggard when the need is shown.

The tendency among all races growing into more advanced civilization is to a reduction in the birth rate with the closer community growth. There are other factors which reduce the birth rate—some of which are best referred to the courts and district attorneys' provinces. With the tendency, however, comes the acknowledgment of the fact that the infants who survive both tendencies and practises of civilization should be preserved and their loss prevented by proper measures.

The encouragement of a belief in a future improvement in the condition of infants in this country is afforded by the general

professional interest elicited by any movement such as that exampled in the work of the American Association for the Study and Prevention of Infant Mortality.

Poliomyelitis or Infantile Paralysis.

Dr. Simon Flexner, who, it need scarcely be mentioned to the readers of the JOURNAL, is in charge of the Rockefeller Institute for Medical Research, is anxious to secure specimens of the nervous system from fatal cases of epidemic poliomyelitis, a disease which is so widely prevalent throughout the United States and Canada at the present time. He would like to obtain portions of the spinal cord and, by preference, of the lumbar or cervical enlargement removed as soon after death as possible and preserved in plenty of pure glycerine, either Squibb's or Merck's or Kahlbaum's, which specimens are to be used for experimental purposes. The specimens may be sent by express, addressed to Dr. Flexner, at the Rockefeller Institute, Sixty-sixth street and Avenue A, New York City, charges "collect."

We hope that any of our readers who may have the opportunity will serve the cause of science, and also Dr. Flexner, by taking the trouble to obtain and send the specimens as above mentioned.

Fortunately, the disease has not invaded the South to any extent, as far as can be ascertained. However, it is extremely important to remember that the existence of the disaese has sometimes been overlooked for a time, although it is of the utmost utility that it be recognized before it becomes epidemic. The isolation of cases appears to be the best means of control up to this time, as the disease is evidently infectious.

Obscure cases, indicating a general infection, with symptoms referable to the alimentary tract and to involvement of the nervous system, should be watched carefully in reference to the possibility of their being instances of this fearful disease.

We refer our readers to the able and comprehensive articles by Dr. Cazenavette, in the February, 1910, number, and Drs. DeBuys, Duval and Hummel, in the March, 1910, number of the JOURNAL, for a clear exposé of the various phases of the subject.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of Dr. P. Michinard and Dr. C. J. Miller, New Orleans.

Insufficiency of the Uterus and Hemorrhage.—Theilhaber *(Monats. für Gebürtsülfe and Gynec.)* emphasizes the importance of muscular contraction for the arrest of hemorrhage, regarding excessive uterine hemorrhage, as often due to muscular insufficiency of this organ. Not only atonic, but also functional disturbances in the uterine musculature may be responsible for the continuance of hemorrhage. An atonic uterus is not always insufficient, but insufficiency of the uterine musculature is usually a consequence of atony, although it may be due to other causes. The insufficiency becomes manifest when there is a lack of proportion between the blood content in the uterus and the development of its muscle. In 62 cases of uterine hemorrhage, under the age of 19, he found the uterus unusually small in 58; in only four was it of normal size. Excessive hyperemia in an insufficient musculature is liable to entail hemorrhage from it, and sexual excitement, maintaining the hyperemia in the uterus, is an important factor in uterine hemorrhage. He adds that masturbation is extraordinarily prevalent among women, especially in the years of greatest development, but also later. The uterus accommodates itself poorly to frequent sexual excitement.

Meat and alcohol are liable to induce congestion in the uterus, and thus entail hemorrhage; abstinence from both has sometimes aided in the cure of a long-persisting uterine hemorrhage, in his experience, especially in girls. He thinks that the assumption of a hyperemia in excess of what the musculature can take care of amply explains uterine hemorrhage in many cases.—*Journ. A. M. A.* Miller.

Report on the Employment of Vaccine Therapy in Gynecology and Obstetrics (by Drs. William, Cragin and Newell.)—The above committee was appointed by the American Gynecological Society to investigate the above subject, and the following conclusions were submitted at the last meeting.

After a brief review of immunity, with reference to the various

theories, including that of phagocytosis and opsonins, the subject proper was discussed in four different headings, after a thorough review of the literature:

1. *Its use in gonorrheal infections,* including vulvo-vaginitis in girls. It appeared to be of most value in the treatment of gonorrheal arthritis and in chronic cases of vulvo-vaginitis in young girls. There were very few reports of good results in acute urethritis. It has seemed to do some good in a few cases of septicemia, due to the gonococcus, though cultures could be obtained from the blood after disappearance of all symptoms. There seems to be no decided advantage of the autogenous vaccine over that obtained out of stock.

2. *Infections of the Urinary Tract:* Most cases of infection in kidney, ureter and bladder were due to colon bacillus. In such cases the stock vaccines appeared valueless, but the autogenous vaccines in many cases seemed to hasten abatement of all symptoms, though the organisms did not appear from the urine. It seemed to have better effect in the treatment of pyelitis than of cystitis; also of some apparent value in cases of pyelo-nephritis of pregnancy. It had no value in streptococcic infection.

3. *Inflammatory Conditions of the Internal Genitalia:* It proved of no particular benefit as far as could be ascertained in these cases.

4. *Puerperal Infection:* Of practically no value in acute general infections, though a few have claimed good results. It is best in chronic local conditions, and seems to hasten recovery.

Conclusions.—There is no doubt that opsonins take an active part in the production of immunity, but the determination of the index is difficult and uncertain.

2. It is valuable as a prophylactic measure in a number of diseases; of undoubted value in chronic local conditions; of very doubtful value in acute general infections.

3. Of some value in gonorrheal arthritis, chronic urethritis and chronic vulvo-vaginitis.

4. May hasten symptomatic cure in infection of the bladder and kidney.

5. It may be of some value in assisting to bring about a cure in chronic infections of the uterus and in old abdominal sinuses.

6. Of little or no value in acute general puerperal infection, though may hasten relief of trouble in chronic local conditions, which, however, tend to get well under the ordinary methods.

Miller.

Stretching the Vagina in Advance of the Fetus With Breech Presentation.—Sauvage *(Annales de Gynecologie et d'Obstetrique)* stretches the vagina with the Champetier de Ribes bag to facilitate delivery. In thirty-two cases it enabled spontaneous delivery in all but four instances. When forceps were required this preliminary dilatation aids materially; done cautiously it does not harm the mother, while the advantage for the child is beyond question. In primaparæ it generally promotes delivery and seems to reduce by 25 per cent the mortality of the children, while they are in a better condition, not having suffered from the traumatism of compression from the soft parts. He advises it also for shoulder presentation in primiparæ, and in multiparæ if the child is large, and gives details of fifty cases in which prefetal dilatation was applied.—*Journ. A. M. A.* Miller.

Louisiana State Medical Society Notes.

In Charge of Dr. Joseph D. Martin, Secretary, New Orleans.

Minutes of the Thirty-first Annual Session. Held at New Orleans, La., May 3-5, 1910.

Monday, May 3, 1910—4. P. M.

House of Delegates.

(Continued from September Number.)

Moved by Dr. Newton, seconded by Dr. Ledbetter, that the Vital Statistics Bill be endorsed by the House of Delegates. Carried.

Moved by Dr. Joseph, duly seconded, that a Committee on Necrology be appointed. The Chair appointed Drs. Joseph, Dupuy and F. H. Carruth.

The Secretary of the Council reported that the following applicants for membership had been favorably acted upon: Drs. Cracroft, Greenlaw, J. W. A. Shaw, Kibbe, Graves and F. W. Brock.

Moved, seconded and carried, that applicants be elected.

Adjourned to Tuesday, May 4, 1910, at 11 A. M.

MAY 4, 1910, 11 A. M.—Meeting called to order by DR. CALLAN. Dr. Joseph D. Martin, Secretary, at his desk.

Resolution offered by DR. FOSSIER, seconded by DR. JOSEPH, read by Secretary. Discussed by Drs. E. D. Martin, W. M. Perkins, Ragan, Callan and Atkins. Motion made to table resolution. Carried.

Report of Auditing Committee adopted as read.

The application of Dr. Guy A. Shaw, endorsed by Drs. Eustis and Hummel, was referred to the Council.

Moved by DR. LEDBETTER, seconded by DR. CARRUTH, that the report of the Committee on Medical Education be sent to the Council on Medical Education of the American Medical Association. Carried.

Moved by DR. PERKINS, duly seconded, that a committee be appointed to draft a proper amendment to the Constitution or By-Laws so as to make the fiscal year begin January 1. Carried.

A communication was received from the Arkansas Medical Society and referred to a special committee, composed of Drs. Perkins and Joseph. This committee reported back that this Society regretted it was not ready at present to take up the burden of additional organization work, and that the Secretary draft a suitable letter of regret.

The following resolution was offered by DR. CHASSAIGNAC, seconded by DR. SIMONS:

"WHEREAS, The holding of the World's Panama Exposition at New Orleans in 1915 would redound to the great advantage of the whole State of Louisiana, owing in part to the proper impetus which would be given to the matters of sanitation;

"*Be it Resolved,* That the Louisiana State Medical Society, in annual session assembled, endorses the project and pledges thereto the earnest support of its members."

Moved by DR. LEDBETTER, seconded by DR. A. B. BROWN, that above resolution be adopted. Carried.

Adjourned to 4 P. M. this day.

(To be Continued.)

Announcement of Sections.

Dr. E. J. Graner, President of the Louisiana State Medical Society, has appointed the following chairmen of sections for the 1911 meeting of the Society, which will be held at Shreveport, May 30, 31 and June 1:

Practice of Medicine, Dr. C. McVea, Baton Rouge.

Surgery and Anatomy, Dr. Marion Souchon, New Orleans.

Materia Medica and Therapeutics, Dr. J. T. Halsey, New Orleans.

Obstetrics and Gynccology, Dr. G. B. Lawrason, Shreveport.

Genito-Urinary and Rectal Diseases, Dr. C. Chassaignac, New Orleans.

Diseases of Children, Dr. L. R. DeBuys, New Orleans.

Nervous and Mental Diseases, Dr. C. Pierson, Jackson, La.

Ophthalmology, Dr. M. Feingold, New Orleans.

Laryngology, Otology and Rhinology, Dr. Homer Dupuy, New Orleans.

Cutaneous Medicine and Surgery, Dr. J. F. Buquoi, Covington.

Pathology and Physiology, Dr. C. W. Duval, New Orleans.

Bacteriology, Dr. C. C. Bass.

X-Ray and Electro-Therapeutics, Dr. A. Granger, New Orleans.

Hygiene and Sanitary Science, Dr. R. M. Littell, Opelousas.

Medical Jurisprudence, Dr. J. M. Barrier, Delhi.

Fraternal Delegates: To Arkansas, Dr. J. T. Halsey; to Texas, Dr. J. A. Storck; to Mississippi, Dr. S. M. D. Clark.

Alternates: To Arkansas, Dr. J. B. Elliott, Jr.; to Texas, Dr. S. K. Simon; to Mississippi, Dr. C. N. Chavigny.

Medical News Items.

Meetings.

The Southern Medical Association will meet in Nashville, Tenn., Nov. 8-10. From all indications, there will be a large meeting. The President is Dr. W. W. Crawford, of Mississippi, and Secretary, Dr. Oscar Dowling, of Louisiana.

The Louisiana Board of Medical Examiners will meet October 18 and 19 at the Hutchinson Building of the Tulane Medical Department.

The Tri-County Medical Society of Mississippi, composed of Lincoln, Copiah and Pike counties, met August 23, with a very good attendance. Tuberculosis was discussed, and the Society pledged its support to the State Board of Health in its campaign of public health sanitation. The next meeting will take place in Brookhaven, in October.

The Claiborne Parish Medical Society held an interesting session in Homer, La., on August 25, followed by a banquet at the Claiborne Hotel.

The Pearl River County Medical Association met at McNeill, Miss., Sept. 7, and the following members were present: Drs. Nimocks and Fountain, of Poplarville; Drs. Locke and Horne, of Carriere; Dr. Newson, of McNeill, and Dr. McCoy, of Picayune.

The Association of State and National Food Departments will hold its fourteenth annual convention in this city, Nov. 29 to Dec. 2, inclusive. It bids fair to be the biggest gathering of the winter months, and one that will bring some of the nation's most eminent physicians and food specialists to New Orleans.

A. M. A.'s Fourth of July Record for 1910 shows 2,923 persons were injured, of whom 131 died. Sixty-seven deaths were due to tetanus, 19 were killed outright by firearms, 11 by explosions of powder, bombs or torpedoes; 6 by cannon or similar contrivances, while 26, mostly little girls, were burned to death by fire from fireworks. This is the best showing since 1903, when the *Journal* began keeping its records. In 1903, 4,449 persons were injured, of whom 466 lost their lives, 406 of them dying from tetanus.

A Merger of Homeopathic Medical Colleges.—The Southwestern Homeopathic Medical College and Hospital, of Louisville, Ky., has been consolidated with the Hahnemann Medical College, of Chicago. The headquarters of the enlarged institution will be in Chicago, and the building and grounds of the Louisville College will be sold.

Medical Fellowships at the University of Texas, Galveston.—Through the Texas Federation of Women's Clubs, the Regents of the University of Texas have established ten fellowships, carrying with them a stipend of $35 a month for eight

months, open exclusively to young women desiring to study medicine at the Medical Department of the University. The Regents and President Mezes believe that there is need of more women physicians in Texas.

Osteopathic Physicians Not Permitted to Sign Burial Certificates.—A decision was handed down on Thursday, Aug. 26, by Justice Putnam, of the Supreme Court of Brooklyn, that osteopathic physicians should not be permitted to sign certificates assigning a cause of death.

The Alvarenga Prize of the Hufeland Society, for which the subject proposed this year was "Increase of Blood Pressure Considered From an Etiological and Therapeutical Standpoint," has been awarded to Dr. Hasebrock, of Hamburg.

The Mary Gates Hospital, at Port Arthur, Texas, was opened Sept. 5. This is a $40,000 establishment, erected by John W. Gates in memory of his mother, who died in that city.

Negro Hospital in Memphis.—The negroes of Memphis have built a hospital on Williams avenue. It has both pay and free beds, and is known as the Negro Baptist Hospital.

The Arkansas Tuberculosis Sanatorium was opened last month at Booneville, Ark., under the management of Dr. J. S. Shibley, who took special work at the New Orleans Polyclinic last spring.

Tulane Notes.—Dr. R. C. Lynch has been elected Acting Professor of Diseases of the Ear, Nose and Throat in the New Orleans Polyclinic.

Prof. Grawitz, of Berlin, will deliver a lecture on "Pernicious Anemia" at the Hutchinson Memorial during his visit, about October 12. The date of the lecture will be duly announced, and the profession generally is invited.

The New Orleans Polyclinic will open October 31.

Personals.—Among the doctors returning from vacation trips this summer are: Drs. Joseph Hume, M. H. McGuire, S. M. D. Clark, E. A. Robin, N. Eiseman, E. M. Hummel, L. R. DeBuys, L. Sexton, A. L. Metz, W. W. Butterworth, M. Feingold, J. B. Elliott, Jr., and G. F. Patton.

Dr. S. H. McLain, of Jackson, Miss., has been appointed Superintendent of the State Charity Hospital, Jackson, Miss.

Dr. A. G. Friedrichs attended the meeting of the National Dental Association in Denver. There were over 1,200 delegates. The doctor was re-elected a member of the Executive Committe of the National Association of Dental Faculties, and also elected Secretary of the Committee.

Dr. Oscar Dowling, of Shreveport, has been appointed President of the State Board of Health, to succeed Dr. Harvey Dillon.

A surprise banquet at West End was tendered Dr. L. D. Archinard by the Odontological Society, in recognition for what he has done in upbuilding the profession of dentistry, not only in Louisiana, but throughout the South. Dr. Archinard was presented a handsome solid silver loving cup.

Dr. W. M. Brumby is to resign the Texas State Health Office to accept the head of the Medical Bureau of a leading insurance company located in Texas.

Removals.—Dr. J. C. Hardy, from Alexandria, La. to LeCompte.

Dr. T. J. Box, from McCrea, La., to Torras.

Dr. C. H. Milburn, from Winnfield, La., to Ville Platte.

Dr. E. B. Pries, of El Paso, Texas, has returned to New Orleans to practice.

Married.—On Sept. 7, Dr. G. King Logan, of this city, to Miss Ellen Lee Rogers, of Lexington, Va.

Died.—On August 26, at Bunkie, La., Dr. W. G. Branch, a prominent physician and Mason, aged 49 years.

On August 28, at St. Martinville, La., Dr. Louis Alfred De Laureal, aged 42 years.

On August 29, at Moreauville, La., Dr. Tobie Lucien Laugarre, a prominent physician and pharmacist of Moreauville, aged 72 years.

On Sept. 4, at Terry, Miss., Dr. E. M. Grant, aged 68 years .

On Friday, Sept. 16, Dr. Marx Levy, aged 61 years.

On Sept. 5, in this city, Dr. Sidney L. Theard, aged 42 years. Dr. Theard was a graduate of Tulane Medical Department, and for four years held the office of Secretary and Treasurer of the City Board of Health. His death is a loss to the community, as his services in the health affairs of the City of New Orleans have been constant for a number of years.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

Pathology and Therapy of Disorders of Metabolism and Nutrition, by PROF. DR. CARL VON NOORDEN. Part VIII. *Inanition and Fattening Cures.* E. B. Treat & Co., New York, 1910.

We, physicians, are frequently consulted by patients who for weeks or months have not been taking food in sufficient quantity to cover completely the demands of the organism for nourishment. We also encounter cases of inanition and undernutrition, due to numerous diseases, of severe inflammatory and traumatic lesions of the upper digestive tract, rendering it impossible, or almost impossible, to swallow food; of many acute, grave diseases of the stomach and intestine (severe forms of gastritis, enteritis, dysentery, and cholera-like diseases); of many serious fevers with psychoses; many nervous diseases (psychic disorders, severe tabetic crises, hysterical hyperemesia, etc.); and also of advanced circulatory disturbances. Chronic under-nutrition almost always accompanies chronic diseases that run a febrile course, the author points out.

Under-nutrition is employed therapeutically in all reduction cures. In many diseases, under-nutrition is prescribed. Complete fasting is occasionally prescribed in serious disorders of the stomach and intestines. Chronic under-nutrition, as a part phenomenon of certain diseases, is often a troublesome problem.

Regarding fattening foods, we read: "It is quite clear that all articles of food that incorporate caloric values that become available for the organism may also be considered articles that can be used for fattening purposes. The availability of the caloric content for the organism is, of course, a fundamental condition, and it is only this property that characterizes any article that is eaten as a food."

This brochure deserves careful reading. STORCK.

Diagnostic Therapeutics, A Guide for Practitioners in Diagnosis by Aid of Drugs and Methods Other Than Drugs, by ALBERT ABRAMS, A. M., M. D. (Heidelberg). Robinson Company, New York.

The labor involved in producing a work of this magnitude would have appalled a less energetic and resourceful man; but those who are acquainted with Abrams along other lines know well his capacity, his ingenuity and his capability for a good task. This is neither a work only upon diagnosis nor upon therapeutics, but it conciliates both with a special object in view.

The author is of the rational school of therapeutics, and, having practiced medicine long and successfully, is competent to pass judgment from a clinical point of view on the value of many drugs. The action of drugs on the human body, observed by the trained clinician, is always of more importance than experimentation on the bodies of lower animals. The clinician has always blazed the way for the pharmacologist to follow, though he is often tardy in so doing.

For the intelligent compilation of this mass of information a debt of gratitude is due Dr. Abrams by the medical profession. In those 1,039

pages is contained information not easily accessible to many. The book has merit, and should be within easy reach of anyone who desires information along its lines. STORCK.

A Study of the Anatomy of the Watsonius (n. g.) Watsoni of Man and of Nineteen Allied Species of Mammalian Trematode Worms of the Superfamily Paramphistomoidea, by CH. WARDELL STILES and JOSEPH GOLDSBERGER. Hygienic Laboratory, Bulletin No. 60, Washington Government Priting Office.

The student of parasitology will find this bulletin replete with interest, containing, as it does, the results of an anatomical study of one parasite of man (Watsonius Watsoni), and comparison with nineteen other closely related trematodes. The bulletin is copiously illustrated. STORCK.

A Manual of Midwifery, by HENRY JELLETT, B. A. M. D., F. R. C. P. I., L. M. William Wood & Co., New York, 1910.

Dr. Jellett presents a new edition of his well-known book on midwifery, enlarged and thoroughly revised.

The title rather suggests a compend for students, but only a glance is necessary to reveal the wide scope of the work. It is admirably arranged, systematic, well illustrated, and the text is notably clear and definite. Among the most important alterations that have been made will be noticed a new set of drawings, illustrating the chapters on Obstetrical Anantomy, Mechanism of Labor, Application of Forceps, Pubiotomy, Cesarean Section and Vaginal Cesarean Section.

Dr. Jellett has had the assistance of Dr. R. J. Rowlette, pathologist to the Rotenda Hospital and a well-known teacher of pathology, in the preparation of the chapters on Eclampsia, Hyperemesis Gravidarum, Chorion Epithelioma, Diseases of the Chorion, and the Surgical Fevers of Childbed.

The illustrations have been carefully selected and well executed.

Dublin has enjoyed the distinction for many years of maintaining one of the foremost maternity institutions of the world, and the contributions emanating from the "Dublin School" have been numerous and of great scientific value. Dr. Jellett's book is a valuable addition to this already large number, and will be promptly accepted as a useful textbook for both students and practitioners. MILLER.

A Practical Treatise on Fracture and Dislocation, by LEWIS A. STIMSON, B. A., M. D., LL. D. Sixth edition, revised and enlarged. Lea & Febiger, New York and Philadelphia.

The sixth edition of this magnificent work comprises a thorough study of the subjects, so far as Etiology and Pathology are concerned, but we think, with his extensive knowledge of fractures, the author might have given more time to the operative treatment. Since the advent of the Roentgen Rays, and in view of the remarkable results surgeons are reporting in old and supposedly incurable deformities, as well as the work of Lane and others in fresh fractures, this phase of the question deserves more than passing mention. It is true cases are cited where wire has given bad results, the use of which is discouraged. In the use of wire, or any material which does not give fixed support to the fragments, we are in perfect accord with the author, and it was from the reports of these methods that operations were discouraged, and we were satisfied with good functional results.

Before the advent of the X-ray we were too often inclined to the belief that our results were good. The surgeon must do more to-day than furnish a useful limb—he must correct the deformity, no matter how good the functional result; otherwise there is always the possibility of a damage suit—a danger which is growing more serious every day. It is for this reason regrettable, that the author has not given more time to the study of these methods, which are growing more popular with the surgeon and giving results which cannot be questioned.

The additional work on fractures of the wrist and ankle are more interesting and instructive, especially so in regard to the injuries of the tarsal bones. Many injuries to these parts have been overlooked, giving bad and permanent results. These fractures, as Dr. Stimson states, are not easily recognized, and in no class of fracture is the X-ray of greater diagnostic value. But the note of warning issued by the author in referring to the use of the Roentgen Rays is borne out by the experience of all who have an intimate knowledge of its use. It is impossible for one unfamiliar with the skiagraph to readily and correctly interpret many of the negatives; and yet it is, in experienced hands, the most important adjunct ever added to the surgeon's paraphernalia in the diagnosis and treatment of fractures.

All who are familiar with the former editions of this work know its value, and to the younger men of the profession who are not, it is essential that they should have it. The entire subject of fractures and dislocations is thoroughly covered. It is beautifully written and well illustrated.

MARTIN.

Fundamentals and Requirements of Health and Disease. In three parts, by THOMAS POWELL, M. D. The Powell Publishing Company, Los Angeles, Cal., and London, England.

This is a queer book. It is difficult to classify it. The author claims to have discovered the agency of the lenticular shape of the leaf-epithelium in the protolytic dissociation of the atoms of carbon and oxygen under the action of solar rays. Such a discovery stamps a man as an original thinker. Dr. Powell has carried his original thinking into the domain of physiology, pathology, and therapeutics. He claims to have discovered the source of all vital phenomena in what he calls the "vitomotive force," which is the expansive energy generated by the oxidation of carbon in the system. The conversion of carbon into carbon dioxide is accompanied by the liberation of force estimated to be equal to forty atmospheres. The sudden liberation of such a tremendous force in the muscular tissue is sufficient to account for many things—or all things physiological, according to Dr. Powell.

His "New Etiology and Pathology" is based upon his (alleged) discovery of a new and hitherto unsuspected substance, which he calls "Pathogen." This substance is a viscid body which has the uncomfortable habit of blocking various capillaries for no particular reason, and setting up congestion, inflammation, neurosis, carcinosis, and tuberculosis. This "pathogen" is a remarkably versatile substance. Dr. Powell would have us believe that current teaching in the formation of leucocytes is altogether wrong, and that they are caused by condensation and inspiration of this supposed substance. We had been for a long time under the impression that normal serum-albumin was a good institution; but no! It seems that we have, for, lo! these many years, been laboring under a strange delusion, for Dr. Powell gravely informs us that serum-albumin is a pathological product, and is one source, or form, of his omnipresent "pathogen." We are inclined to wonder if Dr. Powell has never heard of the Humoral Pathology.

The blocking of the capillaries by this singular substance furnishes the key to Dr. Powell's therapeusis. He introduces (by cataphoresis) into the system such solvents of this vsicid albuminoid as bromelin, ficusin and trypsin, with carbonate of soda, in aqueous solution. The ferments mentioned are all powerful proteolytic agents. Dr. Powell claims to have cured Bright's disease, diabetes, phthisis, epithelioma and a number of other ailments. The doctor is evidently a man of sincerity, who is animated by a desire to do his share in the great work of alleviating human suffering. He offers his book in the hope that it will do good. He has probably stumbled upon (or "reasoned out," as he would put it) a useful adjunct to practical therapeutics; and, even while we reject his fantastic pathology, we cannot but admit that he may have added something to our stock of available remedial measures. A bare synopsis of his method of treatment would occupy too much space here; so we must refer those who are interested to the original work for detailed information. McSHANE.

Nutrition and Dietetics, by WINFIELD S. HALL, Ph. D., M. D. D. Appleton & Co., New York and London.

The physician of to-day needs just such books as this. A comprehensive idea of foods and their value is presented, with enough detail to serve the purposes of education in this subject, in which most physicians are deficient.

Nutrition and food are considered from all points of view—in health and in disease. Dietary lists are offered as examples in particular types of individuals, and special food stuffs are treated with reference to their values. Altogether a book which is timely and a desideratum. DYER.

Living Anatomy and Pathology. The Diagnosis of Diseases in Early Life by the Roentgen Method, by THOMAS MORGAN ROTCH, M. D. J. B. Lippincott Company, Philadelphia and London.

With over 300 illustrations, and a collateral text, the author presents a most unique and graphic discussion of many ailments of childhood. The value of the illustrations cannot be overestimated when their high quality is remarked and their fitness with the descriptive text. Fulfiling the scope both of an atlas and a text on diagnosis, Dr. Rotch's work stands alone in the advanced contribution to the field of Pediatrics, in which he is so distinguished a worker. DYER.

Publications Received.

PAUL B. HOEBER COMPANY, New York, 1910.

Some Common Remedies and Their Use in Practice, by Eustace Smith, M. D.

Syphilis, Its Diagnosis and Treatment, by Thomas Pugh Beddoes, M. B., B. C., F. R. C. S.

Lectures on Cosmetic Treatment, by Edmund Saalfeld. Translated by J. F Halls Dally, A. M., M. D., B. S., M. R. C. P., with an introduction and notes, by P. S. Abraham, M. A., M. D., B. Sc., F. R. C. S. I.

LEA & FEBIGER, Philadelphia and New York, 1910.

A Text-book of Pharmacology and Therapeutics and the Action of Drugs in Health and Disease, by Arthur R. Cushny, M. A., M. D., F. R. S. Fifth Edition Thoroughly Revised.

A Manual of Obstetrics, by A. F. A. King, A. M., M. D., LL.D. Eleventh Edition Revised and Enlarged.

P. BLAKISTON'S SON & CO., Philadelphia,, 1910.

Vaccine Therapy and Opsonic Treatment, by R. W. Allen, M. D., B. S. Third Edition.

A Laboratory Text-book of Embryology, by Charles Sedgwick Minot, LL.D., D. Sc. Second Edition, Revised.

WILLIAM WOOD & CO., New York, 1910.

Difficult Labor; A Guide to Its Management, by G. Ernest Herman, M. D., F. R. C. P., F. R. C. S. New and Enlarged Edition, with Added Chapters on Retroversion of the Gravid Uterus and Puerperal Eclampsia.

Diseases of the Colon and Their Surgical Treatment, by P. Lockhart Mummery, F. R. C. S., B. A., M. D., B. C.

D. APPLETON & CO., New York and London, 1910.

Gynecological Diagnosis, by Walter L. Burrage, A. M., M. D.

Miscellaneous.

Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of July, 1910, by W. C. Gorgas. (Washington Government Printing Office, 1910.)

Twentieth Annual Report of the Sewerage and Water Board of New Orleans to the Home City Council, December 31, 1910. (The L. Graham Co., Publishers.)

The Sanitary Privy; Its Purpose and Construction, by Charles Wardell Stiles, Ph. D. Hygienic Laboratory—Public Health Bulletin No. 37. (Washington Government Printing Office, 1910.)

The Influence of Age and Temperature on the Potency of Diphtheria Anti-Toxin, by John F. Anderson; *An Organism (pseudomonas protea) Isolated From Water, Agglutinated by the Serum of Typhoid Fever Patients,* by W. H. Frost; *Some Considerations on Colorimetry and a New Colorimetry; A Gas Generator in Four Form, For Laboratory and Technical Use,* by Norman Roberts. Hygienic Laboratory—Bulletin No. 66. (Washington Government Printing Office, 1910.)

The Solubilities of Pharmacopoeial Organic Acids and Their Salts, by Atherton Seidell. Hygienic Laboratory—Bulletin No. 67. (Washington Government Printing Office, 1910.)

Facts and Problems of Rabies, by A. M. Stimson. Hygienic Laboratory—Bulletin No. 65. (Washington Government Printing Office, 1910.)

Digest of Comments on the Pharmacopoeia of the United States of America (Eighth Decennial Edition) *and the National Formulary* (Third Edition), by Murray Galt Motter and Martin I. Wilbert. Hygienic Laboratory—Bulletin No. 63. (Washington Government Printing Office, 1910.)

The Effects of a Restricted Diet and of Various Diets Upon the Resistance of Animals to Certain Poisons, by Reid Hunt. Hygienic Leboratory—Bulletin No. 69. (Washington Government Printing Office, 1910.)

Reprints.

Synopsis of p- Hydroxphenylethylalkylamine; A Method of Titrating Physiological Fluids, by George S. Walpole, B. Sc., A. I. C.

The Presence in Ergot and Physiological Activity of p-Imidazolylethylamine; A Third Active Principle in Ergot Extracts, by George Barger, M. A., D. Sc., and Henry Hallett Dale, M. A., M. D.

Some Color Reactions of Adrenine and Allied Bases, by A. J. Ewins, B. Sc.

The Alleged Formation of Adrenine from Tyrosine, by A. J. Ewins, B. Sc., and P. P. Laidlaw, M. A., B. C.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.

For August, 1910.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	8	5	13
Intermittent Fever (Malarial Cachexia)	2	3	5
Smallpox			
Measles	2		2
Scarlet Fever			
Whooping Cough	3		3
Diphtheria and Croup	1		1
Influenza		1	1
Cholera Nostras		1	1
Pyemia and Septicemia	2	1	3
Tuberculosis	27	42	69
Cancer	26	9	35
Rheumatism and Gout	1		1
Diabetes	1	1	2
Alcoholism			
Encephalitis and Meningitis	6	1	7
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	16	6	22
Paralysis	4	5	9
Convulsions of Infants	1		1
Other Diseases of Infancy	14	5	19
Tetanus	4	3	7
Other Nervous Diseases	6	1	7
Heart Diseases	55	28	83
Bronchitis	1	2	3
Pneumonia and Broncho-Pneumonia	6	12	18
Other Respiratory Diseases	1	3	4
Ulcer of Stomach			
Other Diseases of the Stomach	2	2	4
Diarrhea, Dysentery and Enteritis	32	32	64
Hernia, Intestinal Obstruction	2		2
Cirrhosis of Liver	8	3	11
Other Diseases of the Liver	2	4	6
Simple Peritonitis	2		2
Appendicitis	2	1	3
Bright's Disease	23	22	45
Other Genito-Urinary Diseases	5	8	13
Puerperal Diseases	4		4
Senile Debility	4	3	7
Suicide	5		5
Injuries	26	22	48
All Other Causes	8	6	14
TOTAL	312	232	544

Still-born Children—White, 24; colored, 22; total, 46.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 13.76; colored, 27.56; total, 17.50.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 29.96

Mean temperature 83.00

Total precipitation ..... 6.01 inches.

Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

VOL. LXIII. NOVEMBER, 1910. No. 5

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Local Anesthesia with Quinin and Urea Hydrochloride.*

By CARROLL W. ALLEN, M. D., New Orleans.

About one year ago my attention was called to the anesthetic properties of the soluble salts of quinin when injected hypodermically; and at the suggestion of Prof. Matas undertook this investigation.

I later had some correspondence with Dr. Isaac Newton, of Monroe, La., who was one of the first to use quinin in this way and who gave me his experience and referred me to the discoverer of the method, Dr. Henry Thibault, of Scott, Ark.

Dr. Thibault informs me that he discovered the anesthetic properties of the agent while administering it hypodermically for malaria in June, 1905, by taking a second injection six hours after the first in the same place. His experiments and surgical use of it quickly followed which he reported in the *Journal of the Arkansas Medical Society,* September 15, 1907.

We know that quinin is an antiseptic, antiperiodic, anti-

* Read before Orleans Parish Medical Society, August 22, 1910.

phlogistic, antipyretic, antimiasmatic, a diminisher of reflex action, a protoplasmic poison, emmenagogue and oxytocic; we have now to add its anesthetic properties and swell the list of its already many uses.

I have used it to date in thirty-three cases which included inguinal hernia, varicocele, circumcision, hemorrhoids, anal fissure, fistula in ano, superficial abscesses, ulcers of leg, epithelioma of face, galactocele of breast, and removal of sebaceous cysts; a fair range of cases, and sufficient to arrive at some conclusions regarding its merits as a local anesthetic.

The first case of any consequence was a large perirectal abscess and fistula in ano with multiple perirectal sinuses. It was a trying case for any form of local anesthesia and was intended to put the method to a decided test and develop certain technical details which I had found necessary from my experience in the office.

The patient, Burnell, aet. 67, was operated from Ward 69, Delgado Memorial, December 2, 1909. No preliminary morphin or sedatives were used. A 1% aqueous solution of quinin and urea hydrochloride was selected. The injection was commenced in healthy tissue and advanced towards the inflamed area; the initial injection caused some burning and pain which lasted about five minutes. By advancing slowly into the surrounding parts practically no discomfort was caused, no more than was to be expected from the manipulation of the yet unanesthetized parts. If the infiltration was advanced too rapidly it produced a return of the burning pain in the fleshy invaded area, but when slowly done this did not occur. Also if the needle was entered too near the margin of the infiltrated area, without waiting for anesthesia to be established, it caused pain, but if a long needle was used and entered some distance back and advanced gradually by distending the tissues, no pain was produced. The infiltration lasted fifteen minutes and by the time it was completed the areas first injected showed profound anesthesia; those last injected showed sensation to both touch and pain.

But by operating in the order of the infiltration, by the time the area last infiltrated was reached anesthesia was well established. The infiltration was about as thorough as would have

been obtained with any other local anesthetic. Several injections were made deep into the tissues behind and to the side of the anus to meet the branches of the pudic nerve as they came down from the spine of the ischium. In all, four ounces of a 1% solution was used, 19.2 grains of the quinin salt. The anesthesia produced was everywhere profound. The anus was dilated, the sinuses slit up freely and curetted and pieces of tissue removed.

There was no apparent effect on the circulation in situ, there was considerable bleeding, and hemostats and ligatures were used. The wound was finally well cleansed and packed freely.

At no time did the patient suffer any discomfort beyond the burning pain following the first injection.

At the completion of the operation no infiltration of the tissues was apparent; they presented the same appearance as would have been expected after a general anesthetic. No peripheral zone of hyperesthesia could be detected.

After his return to the ward observations were made at intervals during the afternoon for return of sensibility, and he was instructed to note the time at which he noticed any painful sensations in the wound. He reported next day that there had been no painful sensations, but a feeling of deadness about the operated parts. The only after effect, either local or general, was a slight ringing in the ears for several hours.

The wound was then examined and the pack removed, infiltration of the tissues was now very apparent, they looked and felt much thickened and presented a pale edemic, greyish appearance. Two striking points were noticed. The removal of the pack caused no pain and was followed by very little oozing of blood. This was in marked contrast to what would have been expected in removing a pack within 24 hours from a wound of this kind. The wound was dressed daily for the purpose of making observations, and very little change noticed from day to day. About the third day the tissues in the wound became sensitive to the prick of an instrument or the grasp of a dressing forceps, but up to the sixth day the removal of the pack caused no pain, the tissues were slow in losing the pale, edemic appearance and some infiltration was still noticed eight days afterwards. The progress of healing seemed much retarded.

Three weeks later when the patient left the ward there was still quite a wound, which he was instructed to care for. He returned at intervals for observation and it was about six weeks before healing was complete.

Through the kindness of Dr. Matas I was permitted to operate, December 7, 1909, on a galactocele of the breast, of sixteen years' duration, in Mrs. M., aet. 38, Ward 70.

The operation was performed in the general amphitheater, and as the patient was quite nervous a preliminary injection of morphin, gr. 1/6 and scopolamin, gr. 1/150, was given a short time before; 1% quinin and urea in steril water was used.

The first injection caused some little burning pain. The tissues around the cyst and at the base of the gland were well infiltrated. A large incision at the base of the gland under its dependent portion was then made and the breast turned up; bleeding was very free; the cyst was dissected out and its ramifications entirely removed. Aside from a little nervousness on the part of the patient, she made no complaint and the procedure was quite satisfactory.

Six ounces of the solution was used, 28.8 grains of the quinin salt. The wound healed by first intention without much apparent infiltration and in about the usual time.

On January 3, I attempted to operate on an old ulcer of the leg, the result of a compound fracture. It was my intention to curette the base of the ulcer, liberate its edges and draw them together.

The patient, Mr. R., aet. 53, a railroad conductor. A 1% quinin and ureas solution was used. Infiltration was very difficult as the tissues everywhere were much thickened and bound down to the underlying bones. After much effort at infiltration, in which about 3 oz. of the solution was used and a delay of twenty minutes for anesthesia to become established, it was finally abandoned, as the tissues seemed as sensitive as at first. Cocain was then used, anesthesia secured and the operation performed.

Inguinal hernia: Davis, aet. 33, Ward 69. Left oblique inguinal hernia, duration 4 years; operation, January 14, 1910, 1% quinin and urea.

No complaint was made at any time by the patient and anesthesia was very satisfactory; 7 ounces of solution were

used as the hernia was very large. By the time the superficial injection of the skin was completed, anesthesia was established. The field was very vascular. No hyperesthesia was noted and no induration was seen at the completion of the operation. The dressings were not disturbed for one week, as the wound had remained perfectly comfortable and the patient had no temperature.

When the dressings were changed the wound presented a brawny induration, extending over the entire area of infiltration; the tissues were much thickened and felt leathery. A few superficial stitches were loosened without any pain and fresh dressings applied. These were changed in two days, some serous exudate was found, the wound remained much the same in appearance. About the tenth day suppuration became more apparent and finally extended down to the apponeurosis of the external oblique, a portion of which sloughed away. Healing was very slow. The patient remained in the ward over one month and became restless and left before healing was complete. I do not know what effect the infection will have upon the final result. I asked the patent to return, but have not seen him since.

Epithelioma right cheek: Mr. C., aet. 51, carpenter. Growth was as large as a quarter and had existed for three years. operation in office January 15, 1910; ¼of 1% quinin and urea was attempted, but proved insufficient after fifteen minutes' delay. The strength was gradually increased until 1% was used, which produced profound anesthesia. The growth was removed by a wide incision and good approximation of the wound sewed with silk sutures. A suitable dressing was applied and changed in two days, when much induration of the wound was noticed. Infection became apparent by the fifth day, the wound was three weeks in healing and left quite a scar.

Many other minor operations were performed before and since these detailed cases, including circumcisions, hemorrhoids, rectal fissures, fistulas, varicocele, buboes, etc., most of which were done in the office. From ¼ to 1% in steril water or salt solution was used. The weaker solutions proved effective in loose cellular tissue like the scrotum or skin of the penis, and their use was always followed by less induration and

less danger of slough than the stronger solutions. I did not find that the addition of normal salt solution influenced the results to any marked extent. About the rectum the 1% solution was always found necessary and succeeded well in all but one case, when it was abandoned and cocain used.

The after effects when used about the rectum are in marked contrast to that following the use of cocain solution. When the quinin solution was used in the removal of hemorrhoids practically no after discomfort was complained of, the anesthesia lasting until healing was well under way, while similar operations performed with a cocain solution are always followed by much burning and pain after the anesthesia dies out. Particularly about this region a preliminary injection of a syringe full of Schleich solution to prevent the burning following the quinin, as some infection always follows operations on these part. I have not found that the quinin solution added to the suppuration sufficiently to be objectionable, but judgment must be used in selecting the operations for its use or embarrassing results may follow.

I would not care to undertake a resection of the bowel or extensive Whitehead operation with quinin as the anesthetic, but if a local anesthetic had to be used would prefer Schleich or Braun solutions.

In circumcisions the ¼% solutions have some points to commend it. The pain and discomfort associated with the trying erections which follow this operation are absent when quinin is used and no discomfort is experienced when changing the dressings.

In seven circumcisions performed in this way I have had uniformly good results and much time and annoyance saved myself and the patient, and I have not found that healing was interfered with to any great extent, the wound was generally well in about ten days.

The infiltration which this agent produces has been found by Hertzler to be fibrin, and its exudation is in proportion to the strength of the solution used. It is probably all absorbed as healing takes place, as I have often examined the site of operation afterwards and failed to detect any thickening of the tissues, although it was well marked just after operation. This fibrinous exudate has a decided hemostatic effect; the

field may have been very vascular at the time of operation, but the rapid accumulation of the exudate by its perivascular pressure effectually chokes off any oozing and prevents its recurrence. I have never seen the dressings blood stained following its use, provided all vessels of any size had been ligated.

This is in marked contrast to cocain and adrenalin, which produces an ephemeral constriction of the vessels which soon subsides and may sometimes be followed by considerable oozing. This exudation is always less when the quinin salt is used in normal salt solution; the period of anesthesia is also much shortened. I have not noticed these effects to be as marked as reported by some writers, but they are noticeable. What effect this will have upon the possible suppuration I have not had sufficient experience to say, but by shortening the period of anesthesia it removes one of the principal features for which the quinin is used, and may not be very popular for that reason. I have used it in the bladder in 15 and 20 per cent solutions, but did not obtain very satisfactory results. It has been recommended for use in the throat, especially in tonsillar surgery, and may find a field of usefulness here. It has also been spoken of for use in the eye, but I would hesitate using it in any strength in this organ.

It has been suggested and used as an injection in neuralgia, but I have had no experience with it here and doubt that it will prove very useful.

Just how quinin acts as an anesthetic has not been determined, but judging from its other uses and local action it is probably an irritant poison to all tissue cells; if it had a selective action on nerve tissue the exudation of fibrin and sloughing would not follow its local use.

Just what effect later experimentation will have in removing its undesirable qualities remains to be seen; its combination in weak solution with the cocain salts or adrenalin may accomplish something.

As it stands at present I would hesitate to recommend it except in selected operations about the rectum.

Bumm's Round Ligament Fixation; Report of 125 Cases.*

By WM. KOHLMANN, M. D., New Orleans.

It is not my intention to discuss in detail the different methods of fixation of the uterus, nor their indications. I will only say this much, that the Alexander-Adams operation, especially with the opening of the peritoneal fold (processus vaginalis) has given almost uniform good results, according to the recent publications of many operators.

The results, though, are only satisfactory when the cases for this operation are carefully selected, and the operation is performed only when the uterus is freely movable. As a rule, it is possible by bimanual examination to decide if the uterus is perfectly movable. Retroflexions in young women before childbirth, and when free of possible gonococcus infection, are mostly movable and free of adhesions. If a retroflected uterus is brought to the normal position and kept there by a pessary, and the pessary does not give symptoms, and the local and general symptoms of malposition disappear, we may depend that the uterus is not adherent. I always like to recommend women to wear a pessary for awhile before the operation, to decide if the symptoms complained of will disappear.

An Alexander-Adams should not be the operation of choice if there is the slightest doubt regarding the mobility of the uterus. Goldspohn's suggestion to loosen the adhesions through the opening of the peritoneum is only possible in slight adhesions. In broad and dense adhesions the procedure cannot be considered free of danger as injuries to the bowels, or bleeding, are possible and may interfere with a normal recovery.

In regard to the opening of the posterior cul-de-sac the same objection is to be found. Adhesions may be too dense, or situated too high. To overlook these adhesions would bring an otherwise successful operation to discredit.

In all cases where the diagnosis of adhesions is in any way doubtful an abdominal section is necessary. Ventrofixation or suspension has, under these conditions, given good results, producing broad adhesions of the uterus to the abdominal walls, and producing a permanent normal position of the formerly deflected uterus.

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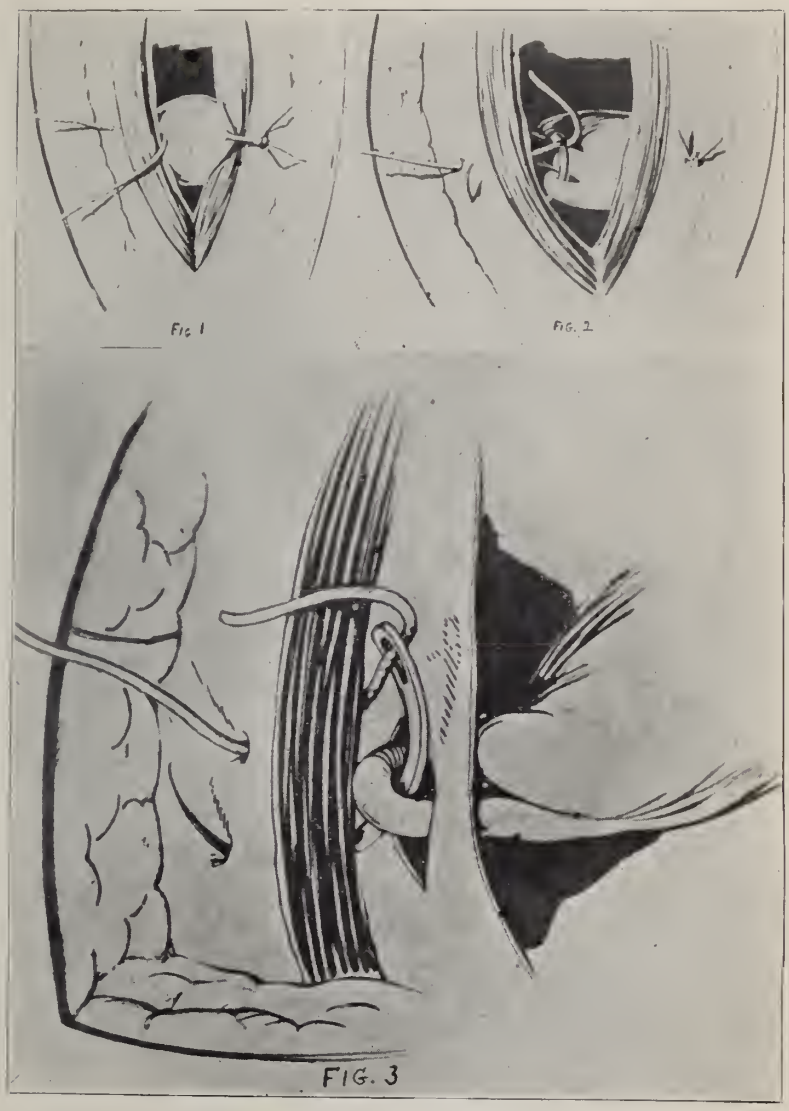
* Read before the Orleans Parish Medical Society, September 12, 1910.



ILLUSTRATING DR. KOHLMANN'S ARTICLE.

During the child bearing period of a woman's life it is preferable to follow Olshausen's method of fixation of the broad ligaments, as in such cases the enlargement of the pregnant uterus is less interfered with. Since Olshausen recommended the fixation of the uterus by means of the round ligaments a number of variations and new methods of the underlying principle have been tried in the effort to produce a broad, firm adhesion of the round ligaments, and at the same time insure a freely movable uterus in the normal position. In the original Olshausen method the adhesions of the round ligaments to the parietal peritoneum has been rather insufficient as the point of contact could only be small.

To avoid the possibility of recurrence, Bumm modified the method. The peritoneum is loosened to the extent of about one and one-half inches and perforated. The round ligament is caught up by artery forceps about one-half inch from the uterine end and down through the above perforation of the peritoneum. The result is that the ligament is enveloped by peritoneum and in addition made adherent to the submuscular intercellular tissue. By this method—

First. A stronger fixation is formed, which at the same time gives the possibility of a normally movable uterus, important on account of a possible pregnancy.

Second. The position of the uterus and of the adnexa is as nearly the physiological state as possibly could be expected.

Since November, 1907, until to-day, I have performed this operation on 125 cases. With very few exceptions after opening the abdomen adhesions of the uterus and diseased ovaries and tubes, more or less extensive, have been found. After loosening the adhesions partial resections on ovaries and tubes have been performed—such as the condition indicated. The fixation of the uterus was made as described above.

In the last few months I have examined 45 of these cases, most of whom were operated over one year ago. The uterus, in all cases examined, was found in normal position, freely movable and the patient suffering very little discomfort.

In only one case result was rather unsatisfactory, as uterus was found in retroversion at first examination before patient had left the hospital. Uterus is in about the same position

now, but patient is entirely relieved from her former symptoms.

Quite recently I had the occasion to open the abdomen again in two cases that I had operated some time ago; one, one and one-half years ago, and the other one year ago.

Case No. 1. Mrs. F. Age 38 years. Admitted August 9, 1908. Diagnosis: Acute Pelvic Peritonitis.

Uterus and appendages were fixed in posterior cul-de-sac, and extensive intestinal adhesions were found. Both ovaries were removed and resection of bowels (about six inches in length) was required.

Round ligament fixation was done to prevent uterus from falling back again. The abdomen could only be partially closed as drainage was essential.

This patient was admitted again May 13, 1910, for operation of post-operative ventral hernia.

Case No. 2. Mrs. P. Age 22 years. Admitted October 18. Discharged October 28. Diagnosis: Fixed Retroflexion. Chronic Appendicitis.

Fixation was done as described above. One month ago patient was readmitted for operation—suspected extra-uterine gravidity.

In both instances the uterus was found by inspection to be in normal position. The parts of the round ligament, which were made adherent, were normal in size, and only slightly elongated about one-third of the original length.

The Treatment of Tabes Dorsalis.

By TOM A. WILLIAMS, M. D., Washington, D. C.,

Memb. Corresp. Soc. de Neurologie de Paris, Memb. Corresp. Soc. de Psychol. de Paris, Memb. Assoc. de la Soc. de Med. Ment. Clin., Neurologist to the Epiphany Free Dispensary.

Were one to accept the dystrophic theory of the pathogenesis of tabes dorsalis, there could be little hope of effective treatment.

The evidence against this view increases daily*, however, and the majority of us strongly believe that tabes is merely a consequence of syphilis of the spinal roots and their cranial homologues (pageotte). Against the view that it is a para-

* See author's articles, in *Am. Jour. Med. Sc.*, August, 1908; March, 1910; *Int. Clinics*, Spring, 1910; *Med. Record*, Feb. 5, 1910.

syphilitic or other dystrophy is (1) the vastly greater degeneration of the root between radicular zone and spinal cord as compared with the amount between intervertebral ganglion and radicular zone; (2) the meningitis always present, evidenced during life by lymphocytosis, and postmortem by granulomata or their cicatricial results which a microscopic examination always reveals.

But the strongest argument in favor of the inflammatory theory is the demonstration of the active focus in the radicular zone, both of the anterior and posterior root, or in the presence of regenerated nerve fibres distal to this. Is it conceivable that regenerations can occur in a dystrophic disease?

Moreover, not only are sensory protoneurons implicated in the syphilitic exudate, but also the sympathetic (Roux) and motor systems which pass through the spinal roots.

Why then have so many neurologists disbelieved in the efficacy of antiluetic remedies against tabes?

In the first place, the iodids have been too much relied upon, on account of the notion that they are the remedies of choice against tertiary lesions, and hence are a fortiori against so late a result as tabes. Recent work, especially in France, has shown syphilographers the subsidiary place of the iodids even in tertiary disease and that mercury is the only truly specific remedy in every stage.

Why then has mercury failed to benefit countless tabetics? I believe on account of its administration by the mouth by which means it is not possible, without disturbing assimilation, to saturate the system to the point where an adequate dose of mercury can reach a part of such comparatively low vascularity as the meningeal envelopes of the spinal roots. Beside in many tabetics nutrition is poor; and this must be compensated to combat granulomatous disease, a result not conduced to by intense mercurialization.

The inunction method is uncertain, inconvenient and perhaps interferes with cutaneous elimination.

The method of choice in most cases seems to be intramuscular injections. As I have most experience with the soluble salts, I adduce a few cases in which the pathogen of tabes is attacked in this way with enormous benefit to the patient:

Case I. Man aged 40; referred May, 1908, by Dr. Lewis L. Taylor, of Washington, for a severe "nervous breakdown" following "indigestion" for five years.

Previous History. Moderate smoker and rarely took alcohol; had given up coffee. Eats well. Single from choice. No sexual excesses. Infected twenty years before. Since nine years, felt useless and depressed, almost wanted to die. Attacks of desperate desire to flee. Since two years, dyspneic and sinking feelings occurring suddenly without external cause, light feelings in the chest, thumpings in the heart. Nervous chills with tremor, crying spells, voice tremulous and uncertain. For a year and a half, had given up his bank, and taken up out-of-doors soliciting; since when he had gained ten pounds.

Examination. Foul breath, thickly furred tongue; circulation, respiration, urination normal.

Nervous System. Deep reflexes all exaggerated; the triceps, patellar, achilles and deltoid were unequal on the two sides. The cutaneous reflexes were diminished, including the plantar. The pupils reacted normally.

Motility was deficient in the left forehead; trembling of left cheek and tongue and right fingers. Adduction of right thigh was imperfect. The left heel left the floor while he sat up from recumbency.

Sensibility unimpaired.

Psychic Function. Memory not impaired. Perception clear, calculation slow and imperfect. Not a tabetic; but in pretabetic stage of chronic meningeal irritation.

Treatment. He was given a mercurial course during seven weeks, when he went to the mountains with all the symptoms vastly improved and able to do office work without tire or irritability.

In October, a second course was given; and he could now stand the pain of mercurial cream injections once a week. He has since then remained well.

I should add that a very careful regime and a restriction of the proteids in the food were instituted.

Case II. Man, 54; seen with Drs. Prentiss and Main, of Washington, on account of a "neurasthenic state" since six months, which rest, change and a sea voyage had benefited only slightly and temporarily. His complaints were insomnia, irritability and a state of suffering and incapacity. He has no children. Has been subject to hardly noticed depressions and exaltations every few years.

Examination. In spite of the cold, an abundant sudorrhea of both axillae and the internal borders of the left arm, less abundant on the left leg.

Motility was strong. There was no tremor of tongue or face or eyes, but the right platysma trembles, and there was a rhythmical tremor of the arm.

Sensibility. A zone corresponding to fifth lumbar and first sacral roots was insensible to vibrations.

Reflexes were uneven, that of the right knee being diminished, the abdominal almost absent, as was the right plantar. The pupils were irregular, and the light reflex was imperfectly maintained. The speech was slightly drawling and a word or letter was occasionally stuttered over.

Psychic Examination. Memory was slightly below normal. Calculation was slightly imperfect. During the first examination, his insight seemed impaired, as he was quite indifferent. He declared that his lack of interest ensues upon peculiar abdominal feelings like the sensation after a debauch, followed by a sinking feeling and misery.

Treatment. He was at once given mercurial injections, and a few days

later the examination was continued, and showed him to be incapable of detecting the glaring impossibilities depicted in some drawings I used for the purpose.

His steady improvement was interrupted only once by an error of diet. After five months of hard work on the farm he began to feel nervous again; but another course of mercury arrested the symptoms. Six months later, some unusually hard work caused another relapse; but I believe that a short rest will fully compensate this.

See International Clinics, 1909, for full report of first two cases.

CASE III. Is one of a pretabetic invasion characterized for four years by paroxysmal twinges of darting and deep pain chiefly in the lower limbs, also pin pricks in the scalp and intercostal pains with cold feelings in legs and occasional hot flushes. Symptoms lasted for a few days every week or so. Attacks of burning at the neck of the bladder with imperious desire to urinate were particularly troublesome.

The patient had consulted several English neurologists, who incline to attribute his symptoms to fear; for they found no objective signs, although he had contracted syphilis nine years before. Diarrhoea and depression had prevented him taking mercury by the mouth. A four months' course of inunction when the pains began five years after the chancre had produced no improvement.

Treatment directed to the bladder produced no improvement. Treatment by vaccines for two years was inefficacious.

I urged the patient, who was a medical man, to take a course of injections and have the cerebro-spinal fluid examined. The lumbar puncture showed an apparently normal fluid, but produced severe vomiting and vertigo.

However, the patient injected a twelfth of a grain of perchloride of mercury every other day, and soon doubled the dose. In a few months the pains had practically disappeared, although he continued working hard; and he now has been free for six months, with only an occasional reminder. He writes: "It has made me a different man, and changed me from self-absorbtions into a normal being; not that I showed it outwardly, I hope, but perhaps you cannot imagine, not having experienced it, the difference it makes to one's life having a constant shadow like that unexpectedly removed."

A purin free diet, particularly at night, was recommended; and the very observant patient considers this almost as important as the injections. He found that late dinner was particularly apt to bring return of the pains.

In all cases it is of the greatest importance to prescribe regular physical exercise of a brisk kind, and periods of rest in the more aggravated cases. And regulation of the diet is of extreme importance. Twice weekly I prescribe a hot bath of about half an hour's duration, and do not permit it to be followed by the usual cold shower. I believe that in this way the kidney is preserved from the untoward effects of the mercury. Two months is perhaps long enough for an uninterrupted course of injection. If symptoms persist, then another course should commence after two weeks of recuperation from mercurialization.

I believe that the kind of treatment thus broadly outlined will enable us in the future to arrest or control the majority

of cases of tabes dorsalis, more especially in the earlier stages, the diagnosis of which neurological technique makes possible. Even in later stages, hope need not be given up, as some remarkable cases could attest, did space permit.

This is a great step in advance; and if the results of the new organic arsenical (dioxydiamidoarsenobenzol) preparation recently discovered by Ehrlich are confirmed, we shall have still more rapid control over the pathogen of tabes dorsalis, a quondam despair of medicine.

Louisiana State Medical Society Proceedings.

Edited by Publication Committee.
Dr. Joseph D. Martin, Chairman, 141 Elk Place, New Orleans, La.

Dr. S. P. Delaup, of New Orleans, read a paper entitled

Contribution to the Study of Spinal Analgesia, with Report of 1239 Cases.

It is fortunate that our profession is so conservative in adopting new remedies or new methods of treatment; for this conservatism preserves the well tested and accepted methods until some real and valuable advance is presented. Since its introduction by Bier, in 1899, spinal analgesia has had a varied fortune, its ups and downs, and difficult has been the process of loosening the chains of conservatism. Surgeons in Europe and in this country began testing the method almost as soon as its first publication appeared in the journals, and here let it be said in passing that my colleague, Professor Matas, was the first in America to apply the method. And just as in the history of chloroform and ether anesthesia reports of ill effects and even death discredited the procedure.

Notwithstanding the adverse criticism of many American surgeons and some from abroad, and especially of physicians ignorant of its possibilities, subarachnoid injections for surgical analgesia is a method that has come to stay. Too readily

condemned at first not to be reconsidered, it has maintained its proper place and quite recently has been revived in the Eastern clinics by Jonnesco, the Hungarian surgeon. Far from being abandoned in Europe, the method has received new life at the International Congress at Budapest last year from the efforts of Colombini and Le Filliatre, the former reporting 1,100 cases and the latter 1,693 cases, and later from Sabadini at the French Congress of Surgery at Paris.

My observations and statistics, probably less important than theirs, still seem to me to present a real interest, for they are not the results of a hasty or immature enthusiasm capable of being carried away by results obtained, but indeed of an initial distrust slowly replaced by a progressive conviction.

That the ideal anesthetic has not been discovered or that the ideal method of administration has not been invented is indidicated by the large number of articles on anesthesia in current medical literature. Since its discovery additional demands have been made on anesthesia, so much so that the patient demands not only freedom from pain, but also freedom from danger, and the surgeon asks not only freedom from danger, but also perfect passiveness and muscular relaxation. We are told that practically all the dangers can be avoided by an expert anesthetist, in the judicious choice of the anesthetic, and a skillful method of administration.

With all the improvements in the choice of anesthetics and the method of their administration, there still remains with many patients a strong disinclination toward being put to sleep and remaining unconscious through an operation. This decided antipathy to being made unconscious amounts at times to a positive terror, and has been advanced as a cause of some of the sudden deaths reported under anesthesia. It was the desire to overcome this unpleasant feature and the dread of general anesthetics that led me to use spinal analgesia from its very inception ten years ago.

Subarachnoid cocainization was first employed clinically by me in November, 1900, and in an article read before this Society in April, 1910, reported 22 cases. In the nine years that have since elapsed my experience has been increased by a considerable number of cases in which I have put the method

to the fullest possible tests. My added experience has led me to believe it possibly worth while to present this technic again to the medical profession.

Theoretically, the method is not without reproach. It is possible to forestall danger in chloroform or ether anesthesia by preliminary treatment, such as by diuretics, cardiac tonics, regimen, etc.; also an expert anesthetist can put his patient asleep slowly and calmly without excitement, and during the operation controls the quantity of anesthetic inhaled, dosing it according to the general and momentary receptivity of the patient. It is said that with spinal analgesia no such control exists. Whoever be the patient, a fixed quantity of toxic principle is injected once for all into his organism; though this toxic quantity may vary with the operator, it does not with the patient and very slightly with the operation. In my opinion such statement is incorrect and shows a lack of appreciation of the technic of the procedure. Moreover, one thing is certain, that is, that spinal analgesia is not a mere question of injecting a drug at a given point and awaiting a general effect. Many factors have to be considered in the production of a satisfactory condition for operation and blameless recovery, and it is to be hoped that these will be earnestly analyzed by competent observers before the procedure is condemned.

Practically, the mortality from chloroform and ether anesthesia is still a recognizable quantity, especially in the hands of self-reckoned anesthetists, whose patients occasionally forget how to breathe, or else persist in not recovering their vitality or in developing post-operative pneumonia or nephritis which carry them to an untimely grave.

Barring the possibility of an occasional headache, subarachnoid injection is free from these disquieting effects and the patient serenely looks on during the operation, justifying in a measure the name of smiling surgery. Furthermore, spinal analgesia should be of special advantage to the general surgeon whose trained assistants are few, if any at all.

I have done in all 1,239 spinal analgesias in hospital and private practice, including those done for my colleague, Dr. Chassaignac, and those by our assistants, Drs. Gelpi and Thibaut. Of these 1,239 analgesias, 1,085 were with cocain,

28 with alypin and 126 with stovain. From the first case it has been my aim to keep the amount of the toxic agent used as small as would insure perfect analgesia, and to carry the effect on the cord by injection as high as was considered necessary for the operation in hand.

Of the 1,085 cocain injections the first 50 were with a 4% solution, 8m. (1-3 gr.); then the great majority 1,000, were with a 2%, 6 or 7 m. (1-8 gr.); and, lastly, 35 a 1% solution, 10 m. (1-10 gr.). In my hands the 2% solution injected in the lumbar or lower-dorsal region, according to the height of the operation, has given me the best results with the least inconvenience.

My experience about three years ago with the alypin solution was not satisfactory enough for me to continue using it. For the past two years I have employed at times the stovain solution, at first using 1 grain of stovain to 1 cc. normal salt solution, later ¾ grain, and more recently ½ grain for short operations.

This analgesic agent has given me very satisfactory results, and I can mention only one inconvenience against it; that is, the slight motor paralysis noted in most injections and which lasted about one hour. Four months ago I had occasion for the amputation of a hand to use Jonnesco's solution (¾ gr. stovain and 1-100 strychnia sulph. in 1 cc. salt solution) with excellent result. In another case, two weeks ago, I have reason to regret its use.

Tropacocain is at the present time the anesthetic which is most frequently employed and is said to be the least toxic. The dose usually employed is 1 cc. of a 5% solution in normal salt; its only drawback is the comparatively short analgesia it produces, the average being three-quarters of an hour.

I propose in the near future to make the use of tropacocain solution under as nearly as possible the same conditions with a view to contrasting the results with those obtained with stovain and cocain.

With the addition of adrenal principles the duration of the effects of the anesthetic has been much prolonged and enhanced, as demonstrated in local and regional analgesia, but for several reasons this addition appears undesirable to me

personally. In passing I may say that recently there is a reaction against the suprarenal preparations.

Solutions of high density have been used by Tuffier, Barker, Bier and others for the purpose of localizing the spinal analgesia to a particular region of the cord. By being isotonic such solutions as Bier and Chaput's cause the least irritation to the nerve tissue, others like Barker's, owing to their high specific gravity, do not diffuse readily and fall by gravity to the most dependent point of the spinal canal and exert their effect on that particular point.

The formulae for these solutions are as follows:

1. Barker's: Stovain 10%, Glucose 5%, Dist. Water 85%; sp. gr, 1.0300.

2. Chaput's: Stovain 10%, Nace 10%, Dist. Water 80%; sp. gr. 1.0831.

3. Bier's: Stovain 4%, Nace 0.11%, Epirenin borate 0.01%; sp. gr. 1.0058.

4. Cerebrospinal fluid, sp. gr. 1.0070.

From this cursory review of the analgesic agents employed to the present time, the deduction seems to follow naturally that the choice between cocain, alypin, stovain, novocain and tropacocain has less to say to success and safety than the mode in which they are employed.

These 1,239 spinal analgesias, with the exception of the analgesic agent used, constitute a group of analgesias performed with the same technic, which is as follows:

1. A spray of ethyl chloride, or any other local anesthetic, could be used to lessen the pain which accompanies the introduction of the needle. Strong antiseptic agents, such as carbolic acid, should be avoided on account of the possibility of carrying some of it into the subarachnoid space and thereby excite irritation. If the patient be warned a moment before the puncture, it will be unnecessary, except in highly nervous ones, to resort to such preliminary measure.

2. Puncture with a sterilized spinal needle on patient sitting on edge of table and with curved spine in the lower lumbar interspace for surgery of lower extremities and lower half of abdominal cavity, in the last dorsal or first lumbar interspace for surgery of the upper half of abdominal cavity,

and in the first or second dorsal interspace for surgery of the upper extremities and thorax. In exceptional cases, when the patient is unable to assume the sitting posture, the puncture may be done while he lies on the side, with the knees well drawn up. Barker performs the puncture in this position for all operations, except upon the perineum, this being in keeping with his principle of gravity analgesia.

3. Evacuation of as much cerebro-spinal fluid as is injected, so as to leave the intraspinal pressure undisturbed. European advocates of the method, however, recommend the withdrawal of one or more cc. of the fluid, some employing it as the solvent and vehicle for the drug to be injected.

4. Injection slow with a sterilized glass syringe of the freshly made analgesia solution previously sterilized. Avoidance of alkaline solutions in the process of sterilization should not be forgotten, as there is risk of destroying the efficacy of the analgesic by particles of alkaline salts on the syringe or needle.

5. Closure of puncture hole with collodion or plaster..

To those who intend to practice this method it is needless to say that the whole procedure must be done with perfect asepsis, and that its importance must be fully realized.

Of the 1,239 analgesias:

1,225 were successful,

11 were incomplete as to location or duration,

2 only were failures,

1 resulted fatally.

By success, I mean all cases in which the operation was performed without pain. It must not be forgotten, however, that as a rule common sensation or contact sensation is not abolished, though diminished,

Two distinct classes can be made out from the incomplete analgesias: One, the short analgesias, complete at first, rapidly ceasing and requiring chloroform or ether to complete the operation; the other, atypical analgesias, in which certain parts or regions are affected while similar and corresponding parts are not. Occasionally cases are met presenting this peculiar phenomenon of persistance of sensibility in a particular part while the surrounding parts are painless; for instance, the

scrotum may be sensitive, while the perineum and lower extremities are analgesic.

The cause of such anomalies may be explained by an incomplete diffusion of the solution or by a partition of the subarachnoid space excluding certain nervous roots from contact with the analgesic solution.

The two failures must not be taken seriously, as both were in highly neurotic and timorous patients who complained of pain at the slightest touch, though due allowance must be granted in the difficulty of estimating the degree of subjective phenomenon.

This paper had already been written, and, in reporting the number of cases, I had made the statement—and, let it be said in passing, without accident—when two weeks ago the death of case 1224 caused me to alter this statement.

A negro, 28 years of age, was injured in a sawmill; he sustained a fracture of the right humerus, with lacterated and contused wounds of the right arm, of the neck and left shoulder, and general contusions of head and trunk. One week after injury there was gangrene of the right hand, with loss of sensation to the elbow; his condition was very serious and required immediate attention. While preparing the dorsal region for the puncture he came near fainting. An injection of 16 m. of a solution containing one-half grain of stovain and 1/100 grain of strychnia sulphate was given between the first and second dorsal vertebræ. The patient was held up for two minutes after receiving the injection, and the attendants carelessly allowed his head to fall rather forcibly on the pillows. About ten minutes after receiving the injection, and before any operative procedure, his respiration became labored and shallow. Artificial respiration was immediately practiced, thracheotomy was performed to introduce the O'Dwyer tube, and even laparotomy to insert hand for massage of the heart was done; these most energetic attempts failed to resuscitate him. There was no doubt that death was due to respiratory failure, whether as a result of spasm from the action of the strychnia on the medulla or from partial paralysis due to the action of the stovain, is difficult to determine.

Among the 1,239 cases there were 21 deaths, wholly unconnected with the method of anesthesia employed; 7 external

urethtomies with extravasation; 4 prostatectomies; 3 cystotomies; 1 colostomy; 1 rectal fistula; amputations—hip 1, thigh 1, ilio-abdominal 1; cancer—rectum 1, arms and buttock 1.

Failure to show cerebrospinal fluid on tapping is usually due to a clogging of the needle with a piece of fat or a clot which can be removed by aspiration with the syringe. If unsuccessful, the needle is withdrawn and another puncture made. The use of the stylet seems to me not to be without danger.

It has been a common observation that patients with a high spinal pressure, as evidenced by a strong, continuous flow of the cerebrospinal fluid, are more powerfully influenced by the analgesic solution than those in whom the spinal fluid escapes by drops. It is possible that the diffusion occurred too rapidly in such cases.

The time elapsing from the moment of injection to analgesia varied from five to fifteen minutes, and was usually about eight minutes. The duration of the analgesia has varied between three-fourths to a couple of hours. The average appeared to be about one full hour.

Slight headache was noted in about 33 per cent. of cases; fairly bad headache, lasting four or five days, in about one per cent; nausea and vomiting in about 15 per cent., less so after stovain, but neither seem to have reached the intensity described by other observers. These after-effects have been variously explained. Headaches and faintness, when they occur during or after operation, have been put down in many cases to physical disturbances, when more persistent, explained as probably due to increased pressure within the intradural space caused by mild irritation. I am inclined to believe that the frequency and extent of these after-effects are largely determined by individual susceptibility to the toxic agent.

But before we can settle definitely these questions as to after-effects and uniformity of the distribution of the analgesia, we must know more about the physical properties of the compounds we inject.

A word as to the behavior of the patients during operation. Even those who were excited and restless before operation became quiet after analgesia, and were not disturbed by the sights and sounds of the operation. More than one fell asleep before the end of a prolonged operation. For those who are unduly excited,

a preliminary subcutaneous injection of morphin (1/6 grain) will allay their fear and obtund their sensibility; in fact, after nearly all intervention under spinal analgesia, this injection should be practised as a routine.

It will be seen from the appended list that the variety of cases has been considerable. Special analgesia is at its best when used in operations about the rectum and genito-urinary tract; hence, as my work lies mainly in that branch, I report 452 cases on the rectum and anus, and 585 on the genito-urinary organs. To surgery of the lower extremity, 104 cases must be given. In abdominal surgery, of which there were 94 cases, and about which there was, and still is, some doubt as to the suitability of spinal analgesia, it has in all cases proved most satisfactory as far as the lower half of the abdomen is concerned.

Operations in the upper half of the abdominal cavity I have not done for obvious reasons, nor have my surgical friends allowed me to use the method on their cases. Many years before the advent of Jonnesco I had employed spinal analgesia in several cases of surgery of the upper extremity and thorax, with good results. Goodfellow also, long before the San Francisco fire, employed the method with success in the surgery of the head and face. So far, I have the impression from my limited experience of spinal analgesia in that branch of surgery that, though it may prove of value in such cases, and if carried out with every care; still the risk is too considerable, as any puncture above the six dorsal vertebræ I consider rather dangerous.

Punctures have been practised on patients of all ages, the extremes being 10 to 84 years, and in both cases the procedure was eminently successful and followed by no particular trouble. It is especially in conditions which ordinarily contraindicate the use of a general anesthetic that spinal analgesia gives excellent results. Take, for instance, on old man of 75 or more years with an enlarged prostate and the usual unfavorable concomitant condition, and see him relieved of his trouble without pain, without shock, and you will be convinced.

The method is truly seductive, ideal, in the great majority of cases: no pain, no anxiety, the most perfect serenity on the part of the patient and operator. Many patients who had taken a

general anesthetic on previous occasion expressed their marked preference for spinal analgesia.

On the whole, my results have differed little, if at all, from what many observers have already published, notably in Europe. Accepting, then, this evidence of others, and in the light of my own experience, I feel that the deficiencies of the method, far from being sufficient to cause its rejection and abandonment, are so slight as to recommend it for general adoption. Furthermore, I cannot but think, from what has been seen, that these undoubted deficiencies, so far noted pretty often, are avoidable, and will in the future be fewer and of ever-less moment than they are now. And so satisfactory have been my results in genito-urinary and rectal work that I propose to continue using spinal analgesia.

To summarize briefly, a study of these cases has led me to the following conclusions:

1. That spinal analgesia has proved to be a mode of inducing insensibility of great practical value. That it must not be employed only in contra-indications of the general anesthetics, but should be put on a parity with them, and even be preferred to them.

2. That the method is free from special dangers, provided weak doses are employed, and the punctures are made at heights to suit the intended operation.

3. That late nerve symptoms have never been observed.

LIST OF OPERATIONS.

Rectum and anus:		
Hemorrhoids	220	
Fistula	91	
Ulcer	41	
Stricture	50	
Prolapse	13	
Peri-rectal abscess	15	
Fissure	10	
Excision of Rectum	2	
Polypus	7	
Cancer	3	452
Genito-Urinary Organs:		
Hydrocele	28	
Varicocele	23	
Castration	17	
Circumcision	84	
Amputation of penis	84	
Urethrotomy, external	115	
Urethrotomy, internal	67	
Chancroids	78	
Adenectomy, Ing.	40	

Plastic operations	31	
Fibroma of penis and scrotum	13	
Fibroma of vulva	4	
Recto-Vaginal fistula	6	
Hysterectomy	3	
Perineorrhaphy	9	
Curettage	5	
Prostatomy (Bottini)	22	
Prostatectomy, perineal	12—	585
Abdomen and Thorax:		
Herniotomy	14	
Colostomy	6	
Cystotomy	31	
Prostatectomy, suprapubic	35	
Appendicectomy	8—	94
Lower Extremities:		
Amputation of toes	11	
" " foot	9	
" " leg	7	
" " thigh	5	
" " " Wyeth	3	
" ilio-abdominal	1	
Excision of knee	2	
Arthrotomy	6	
Incision for exploration and drainage	20	
Thiersch graft	4	
Osteo-myelitis	12	
Necrosis	7	
Cauterization of ulcer	9	
Varicose veins	5	
Aneurism, popliteal	2	
Dermoid cyst of cervix	1—	104
Upper Extremities:		
Amputation of hand	2	
Excision of elbow	1	
" " rib	1—	4
Total number of cases		1,239

Discussion of Dr. Delaup's Paper on Spinal Analgesia.

Dr. Charles Chassaignac, New Orleans: So far as my observation goes, this method appears to be the ideal one in the cases in which I use it—that is, below the waist line. I say it is ideal because efficient. We all know that in general anesthesia the sense of pain often persists in the genito-urinary tract and rectum, even after the patient is asleep. It is ideal in those cases. I have no experience with it above the waist line. As the technic has been improved, the after-effects are less disturbing and annoying. I would like to call attention to the fact that one of the chief

improvements made is the use of a smaller amount of fluid and a moderately stronger solution. I prefer cocain. That may be because I have used it more and am more familiar with it. The few cases I have observed where stovain was used did not impress me as favorably. I have never had an operation lasting long enough for the effect to pass off. We never use it with children. Formerly we were afraid to use it with nervous women, but have given up that fear and are now using it even on them with good results.

DR. ISAAC IVAN LEMANN, New Orleans, read a paper entitled

Auto Serotherapy in the Treatment of Collections of Fluids in Serous Cavities.

The procedure which I am about to present to you is, because of its simplicity and harmlessness, worthy of more attention and investigation than it has received. While it is entirely empirical, and as yet not established upon any rational basis, still the reports of benefits from its use are sufficiently good to call for better tests of its efficiency and to provoke speculation and scientific inquiry as to the manner of its action. The whole procedure consists in the reinjection hypodermatically of small quantities of serous exudates or transudates withdrawn from pleura or peritoneum. It was originally proposed in 1894 by Gilbert, of Geneva, for the treatment of pleurisy with effusion, and its use has been limited chiefly to this. The method has received its chief attention from French and Italian clinicians.

Donzello treated five patients by the withdrawal of five c. c. of pleural effusion and the immediate reinjection of three c. c. under the skin under the forearm. The patients recovered, and he is convinced that the treatment was responsible for the prompt absorption of the effusion and the copious diuresis which followed. In one case he was obliged to aspirate the effusion, owing to serious complications on the part of the lungs, but it did not collect again.

Jona used the method in fifteen cases of pleural effusion (nine of which were due to tuberculous pleurisy and one was traumatic) and found it worth while. The fluid was absorbed in from six to thirty-four days. In all save two the injections were followed by a marked increase in urinary excretion, excitation of which seems to be the method of their action.

Carletti treated twelve cases of pleurisy with effusion by aspirating the fluid, setting it aside at blood temperature to allow autolysis to proceed, and reinjecting it later. The results seemed to be better from this modification than from the immediate reinjection of the fluid, but he considered them not very favorable, even with the modified technic.

Fede reports five patients treated with the withdrawal of one c. c. of pleural effusion reinjected at another point. This was repeated three times on three successive days in the acute cases, and the results were excellent. In more chronic cases, up to four c. c. or more were reinjected. No reaction, local or general, took place, except in one case of tuberculosis. In this the prostration and rise in temperature promptly subsided.

I hope at some future time to make a more thorough review of the literature, but for the present occasion the foregoing will serve to illustrate the type of cases in which the method was first used.

My first case was also one of pleurisy with effusion.

Case I. A. S., age 29, white male, laborer, single, admitted to the Charity Hospital March 10, 1910, on account of pain in his left side and cough. Family history negative as to tuberculosis. Patient had never had a serious illness of any sort, and had always been in good health. On March 4, 1910, while at work, patient began to feel sick. At first there were chilly sensations, and these were soon followed by fever. He also vomited at this time. During the night of March 4 the patient claimed the fever left him following a profuse sweat. However, the pain in his left side, which came on on the first day of his illness, had persisted during the whole week since.

Status presens: Well-developed Mexican, well-nourished. Temperature on admission, after walking to hospital, 103°. Pulse 110. Respiration 48. Temperature began to drop almost immediately, so that when the physical examination was made next morning (March 11) the temperature was 98°, the pulse 72, and respiration 30. Respiration was then shallow, and the patient avoided taking deep inspiration. Attempts to inspire deeply brought on cough and more severe pain in the left side, and caused him to "catch his breath" before the inspiration was completed. There was diminished fremitus and dullness in the left axilla, and posteriorly below the scapula on the left side. Fine friction sounds

(crepitations) heard in left axilla. Otherwise the physical examination revealed nothing abnormal worthy of note.

March 14. Pain had entirely disappeared. Temperature 98.6° Pulse 64. Respiration 64. Flatness, with absent voice and respiratory sounds over base of left lung up to the level of eight rib posteriorly. Grocco's triangle on right side, its apex reaching to the eighth vertebra and its base extending to three inches from the vertebral column.

March 15. Paracentesis in ninth intercostal space two and a half inches from the vertebral column. About 15 c. c of a straw-colored fluid was withdrawn. The needle was withdrawn from the pleural cavity and passed under the skin, and 7½ c. c. of this fluid was reinjected into the subcutaneous tissues.

March 16. No constitutional nor local reaction. Upper border of flatness at ninth rib posteriorly. Grocco somewhat diminished. Friction sounds heard in left axilla.

March 17-21. Each day showed diminution of fluid, which had entirely disappeared by March 19. Patient was allowed to leave hospital March 21 apparently cured.

I next used this method in a case of chronic parenchymatous nephritis, where the patient not only had an accumulation fluid in the left pleura, but was also generally anasarcous.

CASE II. J. C. L., white, male, 19, sawmill hand. Admitted to Charity Hospital, New Orleans, Feb. 25, 1910.

Complaint: Difficult breathing, cough, swelling.

Family History: Father died of dropsy. Mother living, said to have heart disease. One brother has swelling of abdomen and feet. Another brother has asthma.

Previous History: Whooping cough at four years. Typhoid, eighteen months prior to admission. Malaria (?) in 1908.

Previous illness began in December, 1909. He fell five or six feet from a platform, and on the same day suffered a thorough wetting. Following this, had to go to bed with fever, and soon began to swell in the face, abdomen and legs. He was admitted to the Charity Hospital for the first time in January, 1910, in a condition of general anasarca. The urine at that time was scanty, of high specific gravity, with large amounts of albumen persistently present and numerous casts. After several weeks of restricted liquids, free purgation and rest in bed, the anasarca disappeared and the patient left the hospital.

On Feb. 25, 1910, he returned in practically the same condition as on the first admission. His condition is indicated by the following:

Physical Examination: Skin extremely fair. Face edematous. The body has a peculiar roundness, due to anasarca, which was general. Heart enlarged to right and left. Left outer limit 1¾ inches beyond left nipple. Right border one-half inch beyond right sternal border. Second aortic sound accentuated. Lungs clear. No evidence of fluid in pleural cavities. Abdomen, moderate amount of fluid in peritoneal cavity. Liver and spleen not palpable. Urinalysis: Specific gravity 1028; large amount of albumen. Numerous hyalin, epithelial, coarse and finely granulated casts.

This condition persisted, in spite of restricted fluids, free purgation, hot packs, caffein, digitalis, etc.

March 21. Flatness, with absent voice and respiratory sounds at base of eighth dorsal spine. Grocco triangle on right side, with apex at eighth dorsal vertebra and base line, measuring 1½ inches. Seven and a half c. c. of a clear, watery fluid were aspirated in the ninth intercostal space of left side, and the entire amount was immediately reinjected.

March 22. No local nor constitutional reaction. Patient passed very large quantities of urine. Flatness on left side receded from eighth to ninth dorsal spine. Grocco had diminished in size, its apex reaching to the tenth instead of the ninth dorsal spine and its base being about two inches in length.

March 22. Flatness on left side had fallen to tenth dorsal spine, and corresponded in level with the line of flatness (dullness) on right side. No Grocco. The edema entirely disappeared.

From this time until the latter part of April the patient continued to improve in strength and comfort. Some slight edema of the feet returned in the latter part of April. The urine, however, showed no change. In spite of its larger amount, it continued to show large amounts of albumen and numerous casts.

Upon boiling, the urine would become solid in the test tube. In no sense can the underlying condition be said to have been improved by the serum injected. But I am inclined to believe that the sudden increased diuresis, with prompt disappearance of the fluid in the chest, in the abdomen and in subcutaneous tissue, should be ascribed to the influence of the injection.

The report of Audibert and Monges, in February, 1910, of their experience with autoserotherapy in the treatment of ascites of hepatic origin led me to attempt it in a similar case. They gave twelve injections to their patient at intervals of six days, beginning with three c. c. and never exceeding ten c. c. There was no pain, no local reaction, nor any apparent influence on the temperature or the elimination of chlorides and urea. The main effect, they report, was a copious and persistent polyuria, which caused a notable improvement.

CASE III. This patient, E. D. S., is the same man whose history was reported by Professor Dock in his article on "Operative Treatment for Cirrhosis of the Liver." Briefly summarized, his history follows: White male, single, age 58; smallpox and gonorrhea at 30. Since then several mild attacks of malaria. In 1892 was shot through the abdomen just below liver. Drank regularly, but moderately, up to fifteen years ago; then began to get drunk about every four months. Periods of intoxication ranged from five days to two and even four weeks. In 1902 began to feel bad, drowsy and tired, and developed severe diarrhea. Following this, abdomen became swollen. Ascites was severe, and patient had to be tapped fourteen times in three months. He then underwent a Talma operation. (Dr. Edward Hamilton, of Houston, Texas.) He had to be tapped ten times during the next four months, but has never been tapped from that time until now (April, 1910). Since 1905 he has been admitted to the Charity Hospital a number of times. He has always presented a moderate ascites, anemia and a slight icterus. The ascites has always subsided (though it has never entirely disappeared) under a few weeks' treatment with compound jalap powder. Upon his last admission he was more anemic and more prostrated than before, but in general his condition corresponded to the description given by Dr. Dock upon his previous admission. After prolonged rest in bed, purgation with jalap, and afterward with cream of tartar, and the administration of Blaud's pills, the patient regained his average and usual condition, and was assisting in light tasks around the ward. At this point I gained his consent to see what autoserotherapy would do for him.

April 11, 1910. Hemoglobin 60 per cent. Has been pasisng about one quart of urine in twenty-four hours. Circumference of abdomen at umbilicus 91.2 cm. Temperature 98.6°. Fifteen c. c.

clear fluid withdrawn from abdomen and 7½ reinjected under the skin.

April 12. Passed three pints of urine. No reaction, local or constitutional. No change.

April 13. Three and one-half pints of urine. No change.

April 15. Circumference of abdomen 93 c. m. Autoserotherapy. Ten c. c. reinjected.

April 16. Urine 3½ pints. Patient claimed that injections have stopped his "sour stomach." Bowels loose instead of constipated, as hitherto, when not taking laxatives.

April 18. Circumference of abdomen 89.2. Diarrhea continued. Autoserotherapy 15 c. c. withdrawn, but, on account of faulty needle, only about 5 c. c. were reinjected.

April 19. Diarrhea continued. Large, watery evacuations; probably three quarts of fluid in stools this morning. Urine, three pints in twenty-four hours.

April 21. Diarrhea continued. Patient went to bed on account of weakness.

April 22. Still felt weak, and remained in bed. Purging somewhat less.

April 23. Circumference of abdomen 86.5. Bowels better, but watery stools continued. Spleen, formerly not palpable, could now be easily felt.

April 25. Circumference of abdomen 84.25. Bowels were nearly checked. Urine two quarts.

April 26. Three stools on April 25, only one of which was watery. Urine three and one-half pints.

There was, therefore, in this case, no increased diuresis. The diminution of the ascites I would ascribe to the diarrhea. Whether the diarrhea was actually due to the injection or was intercurrent and simply a coincidence, it is impossible to say.

As I have already said, autoserotherapy is an entirely empirical method. Marcou has suggested that its action in pleurisy is due to the stimulation of the formation of antipleuritic substances. Browning, arguing upon purely theoretical grounds for the use of the patient's own serum in the treatment of various diseases, would explain the matter for infectious diseases at least by assuming the formation of specific immune bodies or amboceptors. It is clear, however, that this would not explain the action of autoserotherapy

upon transudates due to parenchymatous nephritis or to cirrhosis of the liver.

In conclusion, I submit that, in view of the experiences so far reported, the following investigations are desirable.

1. The use of this method in a large series of patients, scientifically observed.

2. Experimentation with the injections of transudates and exudates into animals, together with an attempt to arrive at the chemical nature of the active principle of these transudates and exudates.

I desire to express my obligation to Professor Dock, at whose suggestions these injections were made.

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DR. F. E. LAMOTHE, New Orleans, read a paper entitled

Aerophagy; Report of Cases.

Aerophagy is the deglutition or aspiration of atmospheric air, voluntary or involuntary, conscious or unconscious, causing symptoms. Every individual swallows a certain amount of air with his saliva and with his food, but it is only when the quantity becomes excessive that the term aerophagy can be applied.

Time does not allow me to give more than a very brief history of this affection.

In 1814 Desjardin was first to call attention to the fact that man could voluntarily swallow air, and reported the famous case of the conscript who so distended his stomach with swallowed air in order to escape military service.

One year later Magendie discovered that any one could acquire the faculty of swallowing air by practice. No notable advance was then made until 1868, when Willieme, in his thesis on Dyspepsia, called attention to the kind of aerophagy which, as practitioners,

particularly interests us. While he expressed his idea very poorly, yet his idea is clear enough. He said: "The eructations, very numerous and rapid, observed in certain persons, which could be attributed to internal production, are often the alternative of swallowing air."

Two years later Luton of Rheims, in the *Dictionary of Jaccoud,* made an advance in the diagnosis of this affection. I have translated his words, almost literally, thus: "Flatulence acquires, at times, unaccustomed proportions. In certain neuropaths, and principally in some hysterics, the belching of gases is incessant. They constitute an important accident which manifests itself, as well between meals as during the period of digestion. It is not to be doubted that they owe their origin to the swallowing of air, because we hear the noise made by the penetration of gases into the esophagus, as well as that of the exit, and, besides, we cannot otherwise explain their abundance."

In a later edition he recommended the auscultation of the esophagus as a means of diagnosis.

Damaschino, in his "Lectures on Diseases of the Stomach," published by Lutelle in 1880, disputes this etiology of flatulence, and says that deglutition of air is rare and observed only in hypochondriacs.

In 1891 Bouveret, of Lyons, France, demonstrated that the spasmodic hiccough of hysterics was in reality nothing more than the deglutition of air followed by this noisy explosion. It was in that article that the term aerophagy was born. Since then many noted gastro-enterologists have studied this phenomenon—Mathieu, Roux, Soupault, Vincines, Lenossier, Ewald.

In certain parts of China, aerophagy is cultivated by the refined, so that, after having partaken of the hospitality of a friend, they show their stomach's satisfaction by giving forth a few noisy belches, which are received by the host as a compliment to his table.

Frequency.—Aerophagy has long been known to exist in the lower animals. The term "cribbing" is applied to aerophagy in horses, and one cribbing horse will communicate his vicious habit to every horse in the stable. The same thing applies to the human family. One aerophage will communicate the habit to others, especially persons of the same family.

Anyone can learn to swallow, and then eructate atmospheric gases,

but, once learned, this trick is never forgotten, and may, in the neurotic, become uncontrolable. While most writers consider aerophagy rare, yet those who have most experience consider it a very frequent affection. My experience here in New Orleans gives a percentage of twenty to the hundred of gastro-intestinal cases seen in private practice. In the clinics devoted to gastro-intestinal diseases in Paris the percentage ranged between 10 and 15. The reason that aerophagy is regarded as so infrequent is that it passes unrecognized.

Etiology.—The predisposing cause of aerophagy is a neurotic temperament. The patient need not necessarily be an hysteric, hypochondriac, or neurasthenic, but is always a neurotic.

Now, while a marked neurotic can become an aerophagic without other cause, yet, if a very careful history is taken, the exciting cause, which may be unknown to the patient, will be found.

Exciting Causes.—Any organic lesion, or functional disturbance of the stomach, from the most grave to the most trifling, or any other other abdominal condition causing a sensation of weight, distention or discomfort in the epigastric region, or causing a reflex sialorrhea, will produce aerophagy.

Frights or other strong emotions cause a peculiar hollow or sinking sensation in the epigastrium, which causes the patient to swallow saliva for relief, and with it goes a large quantity of gas, which the patient tries to expel by making attempts to belch, and succeeds only, in the majority of instances, in distending the stomach the more.

In hysterics, what is known as the "Boule hysterique," or that lump in the throat which we have come to recognize as a spasmodic contraction of the esophagus, may cause the patient to swallow continuously, and thus distend the stomach with air.

There are many cases which have as an exciting cause a sialorrhea caused by defective dentistry, or a salivation due to some drug. Another cause may be a chronic naso-pharyngeal catarrh, or any irritation of the pharynx, causing the patient to swallow in order to relieve a sensation of dryness, or so swallow mucus.

Drinking and eating rapidly, but particularly drinking rapidly, will cause most people to swallow air with the bolus of food or water. We, most of us, have had the experience of making loud sounds on drinking rapidly when thirsty, and afterwards belching

the large quantities of gas which were swallowed. Besides, there are those who have learned to swallow air voluntarily, and by some shock, emotion, or from too frequent repetition, lose control of themselves and repeat the action automatically.

I had a case of a young girl who acquired the aerophagy simply by imitation of her sister, who was suffering from an ulcer of the stomach.

Mechanism.—As before stated, the ingestion of air takes place by two separate and distinct processes. The deglutition of air is probably the most frequent. Air may be swallowed either by itself or with food or drink. Its mechanism is almost the same as that of swallowing food. The bolus of air is pressed backwards by the tongue, the nasopharynx is closed by the soft palate, and the epiglottis covers the glottis. On passing the isthmus of the fauces, the posterior pharyngeal walls advance; the bolus is seized by the constrictors of the pharynx and pushed down into the esophagus. Here there is a difference: instead of being shot down into the stomach as solids or liquids are, it has to wait to be slowly pushed down by the esophageal peristalsis, and penetrates into the stomach in from six to eight seconds. The cardia, however, is not always ready to let air pass without some resistance, and often this gives time for an antiperistaltic wave to form, and bring up some or all of the air, constituting the false or aerophagic belch. If all of the gas is not brought up by the backward peristaltic movement, the remainder passes into the stomach, and can be heard to do so by auscultation. Many authors describe a movement of the head taking place while swallowing air, but this is entirely unnecessary, though it may be present.

Aspiration is brought about by patient's closing the glottis, drawing down the diaphragm, raising the ribs, any maybe bringing the auxiliary muscles into play, creating a great vacuum in the thoracic cavity. The mouth is usually opened, but may not be in some cases, and the air rushes into the esophagus to fill the vacuum. Once in the esophagus, peristaltic waves pass it into the stomach.

The air, having penetrated into the stomach, distends that organ, causing a feeling varying from pleasant fullness to weight, painful distention or oppression. The stomach tries to rid itself of its gaseous contents and passes it either back into the esophagus, to be belched forth or into the intestines, causing flatulency, to a more or less degree with the expulsion of gases per rectum.

Radioscopy.—The patient is placed in the right anterior oblique position behind the screen, and with a tube which is hard enough to see clearly the median clear space between the heart and the aorta to the right and the spinal column to the left. Now, as he swallows a large bolus of air, the clear space through which passes the trachea and esophagus becomes clearer and slightly wider. If the patient has just swallowed some bismuth, the shadow of the bismuth is seen to move, and sometimes to broaden.

When a small quantity of bismuth remains at the inferior part of the esophagus and the patient belches, the bismuth is seen to rise and the median space becomes clear. With the patient facing the screen as he swallows the air, the left wing of the diaphragm is seen to rise, and the clear space under it, which is the air-chamber of the stomach, or the great tuberosity, is seen to enlarge. After a certain amount of distention the diaphragm is seen to make several motions downwards and the stomach contracts, raising the level of the bismuth, which has been previously ingested. The diaphragm now descends lower than previously and a belch is heard. The diaphragm reascends, but does not reach its former level until raised again by the deglutition of air.

I have seen a patient of Beclère's in Paris raise the bismuth emulsion from the stomach up to the mouth with gas, constituting an eructation with regurgitation.

The classification of aerophagy is by

Aspiration, noisy, May be silent	conscious	voluntary	eructation
		involuntary	eructation and regurgitation
Deglutition (silent or noisy.)	unconscious	voluntary	gases per rectum,
		involuntary	alone or with feces

CASE I. Aspiration, noisy; conscious; voluntary eructations. "I can voluntarily, consciously, aspirate air into the esophagus with the characteristic sound, and follow it with eructation."

N. B.—Colored, male, porter, age 27, native of New Orleans. Aspiration, noisy; unconscious; involuntary eructation; regurgitation. Nervous. Has had burning in epigastrium after meals for ten years. Has been belching gases for five years; every time pain

comes on. Lately has been belching all day long, about once every two or three minutes. Sometimes regurgitates a sour liquid, clear or without food remnants, depending on how long after meals. Feels relieved after regurgitation, so he tries to provoke them. He says that "most times I only kin bring up a belch." On being asked to bring up food, he immediately began to aspirate air into the esophagus. Milk carbohydrated as a diet. Alkalies and codein and bismuth subnitrate.

Explained condition, but could not control aspiration. Gave instructions as to respiration and ordered light band about base of neck.

Case II. "I am a voluntary, conscious, noisy, or silent, as I wish to be, swallower of air, who can either eructate or distend my stomach and intestines with air."

Unconscious, involuntary, silent deglutition, followed by eructation. E. M. R., male, baseball pitcher, age 24, native of Detroit. Does not smoke or drink alcoholics. Does not suffer from stomach. Slightly constipated. Has been belching odorless, tasteless gases for three years. Stopped coffee and tea-drinking, but with little effect. Has been playing ball three years. Is a great chewer of gum. Every half hour to three-quarters of an hour he suddenly has five, six or seven large, noisy belches. Could not belch upon request. Belched in company, which embarrassed him. Does not belch at night or early morn. Gum-chewing stopped, and mechanism of aerophagy explained to him. Seen one week later and was told that he had never again eructated.

Case III. Unconscious, voluntary, noisy deglutition, followed by eructations, and gases per rectum; vomiting.

F. D., clerk, male, age 28, native of New Orleans. Pain in epigastrium after eating, for eight years. Gases in stomach. Feeling of distention; phobia of gases; bowels regular; passes much gas per rectum; loud belches all day long every few minutes, except when mind is distracted; regurgitates sometimes. Occasionally vomits bitter, sour food after meals. Rapid, irregular eater. Very nervous. Habits good. Belched upon request. Explanation of mechanism of aerophagy. Regulations of life, warm shower and diet. Supra alimentation. Relapse after attending a wake. Same treatment, plus cork. Cured.

SYMPTOMS.—The most prominent symptom is belching. Any patient who belches eight or ten times in succession several times a day is an aerophage, but it is not necessary that they should belch to be aerophagic, for, while they may swallow or aspirate gas, it may not return, but, instead, pass into the intestine. On the other hand, the number of eructations may mount up into the thousands. Eructation has no fixed time; it may occur before or during the meals, but never during sleep. The patient may belch once every ten seconds throughout the day, or may have a series of belches after meals, in the morning or at night. The eructation may alternate with each deglutition, but this is not necessary. I have seen a patient who swallowed air all morning, belched all the afternoon, being normal in the evening. The eructation may be accompanied by regurgitation, or even vomiting of liquids. Levin and Barret consider them frequent in children. The air belched is odorless, tasteless, and has the same composition as the atmospheric gases. Lenosier found that the first gases belched could be mixed with some pre-existing stomach gases and cause confusion on analysis. If, however, the specimen is taken after the first few belches, it will be found to be pure atmospheric gases. By collecting belches under water I have found that the average belch is from 25 to 450 c. cs.; but Soupault has reported a case in which the patient belched 750 to 1,000 c. cs. at a time. The deglutition, as well as the belching of gas, may be silent, but I have never seen a silent aspirator, although I believe that they may be found. After swallowing, the patient may complain of a sensation of bloat, fullness or distention and swelling in the region of the stomach. Borborygmi are not uncommon, and often are produced as the air passes into the intestines. The intestine may become distended and tympanitic. When flatulency exists there is generally the expulsion of numerous odorless gases by rectum. Careful watching will disclose the fact that the patient has the habit of swallowing every few seconds, and in well-marked cases the noise made by the deglutition may be mistaken for an eructation. By making the patient hold a glass tube in the closed lips, and with a flame held near the other end of the tube, when the sound is produced we can tell whether the air is being swallowed or eructated. The flame will move towards the tube in aspiration; generally remains stationary during deglutition, and may be blown away

during eructation. In order to swallow, the patient may flex the neck, bringing the chin downward and upward, then extend the neck, bringing the chin upward and forward. To eructate, he may stretch the neck forward, bringing the chin upward. This movement is considered necessary by many authors, but in my experience I find it rare, and see it only in hysterics. The aspirator usually stretches the neck, always ceases respiration, and usually inspires immediately afterwards. The rising and falling of the larynx will show when the patient is swallowing. In either case, if a stethoscope is placed at the apex of the heart, the penetration of air into the stomach will be plainly heard. Sometimes it is heard several feet away.

Examination of the abdomen will usually, but not always, show a fullness in the region of the stomach. The distention of the abdomen varies from nil to a great, glistening, globular affair, which looks as if it is about to burst. Traube's space is more tympanitic than normal, in all cases, and the entire abdomen may be tympanitic when the gas passes into the intestines. The distention may be so great as to cause dyspnea, palpitations, and precordial pains.

Treatment.—The treatment of aerophagy is divided into general, causal and symptomatic. The general treatment consists in attending to the underlying neurosis. In hysterics, suggestion will play a great part in the cure. If there is anxiety, worry or emotion at play, find it out, and if possible reason the patient out of it. Never use bromides, as they are too irritant to the stomach. A quiet, regular life, abstension from all mental work, long hours of sleep, a reasonable amount of exercise, warm shower and sheet baths, is all that can be done in a general way. The causal treatmen consists in finding out the immediate cause and removing it, if possible. Whenever the stomach is at fault, a symptomatic as well as curative treatment is in order. If there is any discomfort at all in the region of the stomach, give some drug which will calm the irritability of the mucous membrane, such as dionin, codein, stovain, cherry laurel and chloroform water. Defective dentistry should be righted, and any nasal pharyngeal or laryngeal trouble must receive treatment.

Treatment of the Aerophage.—All aerophagics should be made conscious of the fact that they are swallowing air. This suffices to

cure the unconscious and involuntary cases. When they have become conscious that they are swallowing air, but are unable to voluntarily control themselves, place a cork between their teeth to keep the mouth open as widely as possible, and most of them will be unable to swallow. However, should this not suffice, make them protrude the tongue. This prevents swallowing, and educates them to resist the desire, and thus breaks the habit. In cases of silent, continuous swallowing of air, a band tied tightly around the neck so as to interfere with the movement of deglutition, will not only remind the patient each time that he swallows, but interferes with the act. Aspirators are told to breathe shallowly, avoiding deep inspirations and full expirations; to bend the head so that the chin rests upon the chest, or to tie a tight band around the base of the neck so as to compress the esophagus, thus inhibiting the entrance of air. Digital pressure may be used, but is not as effective, unless applied by the physician. If the doctor does not speak gently to them, or laughs at them, many patients will produce a laryngeal sound which simulates, though poorly, the eructation, in order to show that he (the doctor) is the fool, and not they. This usually occurs in hysterics, and requires a very strong suggestion, or even isolation, to break them of it.

In some cases the isolation treatment is the only one, but I have seen it become absolutely necessary. Relapses occur, but are usually due to overlooking some etiological factor. They are harder to cure, but, if a little patience is exercised, usually react to treatment. Intestinal antiseptics are not only worthless, but absolutely contraindicated in this condition.

Discussion of Dr. Lamothe's Paper on Aerophagia.

Dr. Storck, of New Orleans: Aerophagia neurosa usually occurs in neurotic individuals, but may be acquired by anyone. It is usually a play to an audience, a plea for sympathy, a simple psychosis. It is not to be confounded with pneumatosis, nor with motor disturbances of the stomach in which there is retention of food, with its consequent fermentation and eructation of gases.

Bouveret thinks aerophagia is due to spasm of the esophagus, while Ewald inclines to the belief that the esophageal belching is due to contraction of the muscles of the neck.

Dr. Lamothe (in closing): In closing, I would just add that my patients never continue swallowing air. When I suspect air-swallowing, I have the trick of asking the patient to belch, and if they are air-swallowers they will belch as many times as requested. If the trouble is due to some condition in the stomach they cannot control the belching. I always inform my patients that they are swallowing air, and transform them from unconscious to conscious aerophagics, unless they are very grave hysterics.

In answer to Dr. Storck, I would repeat that simple auscultation of the stomach will show that the gas does enter the stomach, and that I, myself, once swallowed enough gas to so distend my stomach that I could mark off its outlines on the skin with a blue pencil.

Dr. A. E. Fossier, New Orleans, read a paper entitled

Displacement of the Heart; Report of Cases.

Displacement of the heart, so often overlooked and very rarely referred to in text-books, is of great diagnostic significance and of moderate frequency.

Any variation of the abdominal or thoracix pressure has a tendency to force the heart from its normal position.

The heart is so attached as to allow mobility of its apex in conformity with the movements of the thorax. It is held in place by the aorta, veins and pulmonary artery, and is also attached to the center tendon of the diaphragm.

Determann claims that, in a normal person, in the left lateral position, displacement of the heart takes place upon the average of 2 to 3 c. m. to the left, and in the right lateral position about 1 c. m., and in the new-born it is almost unknown, and in children very slight.

A greater amount of displacement must be accompanied by a disturbance of the abdominal or thoracic pressure. Slight displacement may take place in the normal thorax, but when the apex is beyond the left nipple there are present some pathological features.

A downward displacement is generally serious, and may be due to thoracic aneurism pulmonary diseases, tumors and pleuritic effusion, gastroptosis or general ptosis of abdominal organs.

These are a few of the many cases of cormobile which I had the opportunity to see in the office of Dr. Lerch in the past few years.

CASE I. Dr. P., aged 39. For sixteen years he has been practicing medicine in Texas, with all its accompanying hardships, long buggy and automobile rides, irregular meals and bed hours.

Has always been a good eater, meals comprising meats and starchy foods, but very little fruits and green vegetables. His father is living and in excellent health. Mother died at 35 of pneumonia. A sister suffers from inflammatory rheumatism.

The patient has had the children diseases. In 1903 he had two attacks of articular rheumatism, preceded by tonsilitis, and another very serious occurrence of the same disease in May of the past year. The fever lasted eight weeks. The knees were first attacked, the disease gradually involving all the joints and leaving a slight tendency, which exists at the present time.

He is 5 feet 7 inches in height and weighs 138 pounds. There is a slight injection of the conjunctiva. The finger joints are slightly enlarged. Lungs and spleen normal. The stomach is downward displaced, the left curvature reaching about the width of two fingers below the umbilicus.

There is a right nephroptosis, the whole kidney can be palpated. In the left axillary region there is a large area of diffused pulsation. A systolic blow at the apex, and in the second intercostal space to the left. The murmur is not conveyed to the axilla, and is not heard when the patient is in a recumbent position.

When patient is in the recumbent posture, lying on the right side, the heart drops to that side and the displacement shows 6 c. m.

On account of the previous history of rheumatism, an organic lesion cannot be entirely excluded, notwithstanding that the heart is normal in size, and that there is no accentuation of second pulmonary sound.

CASE II. Mrs. X., born in South Texas 50 years ago and a resident of New Orleans for seven years. A mother of four children. Has always led an indoor life. Indulged in no walking or other outdoor sports, excepting an occasional carriage ride. Father died at 58 of bronchial troubles. Mother died at 55 of intestinal obstruction. Both parents of a very nervous disposition. Brothers and sisters all inherit the nervous temperament.

The patient has had the usual diseases of children. Influenza several times. Malaria at 18 years of age, the chills and fever lasting six weeks. The patient gives the history of indigestion, dating from childhood, with intervals of sour stomach and a feeling of fullness, and occasional vomiting after eating. This was followed by constipation, due to contracted sphincter and hemorrhoids. Complains at present of spastic constipation and a sour stomach. Is awakened at 4 o'clock in the morning by sensations which she describes as heartburn and a feeling of oppression which she terms asthma, gas on the stomach and a feeling of emptiness. Feels very nervous and has intense thirst. Dull pains several hours after eating.

The patient is 5 feet 7 inches in height, and weighs 119 pounds. tongue is coated. Scleræ normal, conjunctivæ injected, complexion pale. Pulse 114. Arteries contracted. Blood pressure 114 m. m. Lungs free. Lower liver border smooth, full and hard to touch. Right kidney can be palpated. Urine is normal. Splashing over the stomach, the lower curvature at the navel. The ascending colon and flexure are contracted. The heart is normal in size; sounds are pure, both in the upright and recumbent position.

By placing the patient in the left lateral position the heart is displaced to the left, the apex being 13 c. m. from the midsternal line.

Case III. A. F., school boy, 9 years old. Father and mother living and healthy. When six months old had a severe fall, which left apparently no permanent injury.

Three weeks previous to this examination the boy had a fall at school, followed shortly afterwards by an attack of grippe. Complained of pains all over the body, palpitation and severe dyspnea, which was only relieved when he assumed a sitting posture. The little fellow presented a pitiable picture, sitting in bed, gasping for breath, marked cyanosis of lips and finger nails, complexion pale and features showing anxiety and suffering.

Lungs were normal, except for harsh and roughened breathing. Marked ptosis of the stomach and kidneys. Heart normal in size, about 10½ c. m. in width. Heaving and diffused apex beat, loud systolic blow transmitted all over the chest. The base is at the upper border of the fourth rib, showing the downward displacement.

The heart moves to the right or to the left 6 or 8 c. m. to each side as he lies to the right or left side.

We again observed the child two years after this examination. He was in apparent good health, plays, runs, and rides a bicycle, and does not complain of any heart symptoms. Re-examination revealed the same condition of the organs.

CASE IV. This history is taken *verbatim* from the article of Dr. Lerch ("Displacement of Abdominal Organs," *Medical Record,* Dec. 9, 1905). Mrs. H., 57 years of age. Has four children and never had any miscarriages. She stated that she lives on raw eggs, milk and rice, and that she does not take coffee, tea or alcoholics. Her father died at the age of 81 years, and her mother at 39, after childbirth. She has had measles, diphtheria, yellow fever and dysentery when 17 years of age. She states that she has been a dyspeptic all her life, and does not remember whether her mother was nervous. She was always thin, but during the last two years has lost weight and gotten weaker. She complains of excessive weakness, palpitation of the heart. indigestion, fullness, pressure, pain and swelling after eating; loud belching of odorless gas, and severe constipation. Her appetite is good, but she is afraid to eat. She sleeps well. Patient is 5 feet 3 inches in height and weighs 89 pounds. Three years ago she used to weigh between 100 and 110 pounds. She has stigmata of hysteria. The lungs are normal. In standing, heart dullness to the right is increased and the apex near left sternal border is displaced downward. Size normal. Systolic murmur at apex, not conveyed to left. Had no symptoms of heart disease, no dyspnea, cyanosis or concentrated urine, swelling of feet, ankles, etc., and never has had any. In lying down, heart is normal; the displacement and murmur disappear. The right kidney can be palpated full length, and lower curvature of stomach shows hydrochloric acid in excess and mucus. Two brothers, one sister and daughter suffer as she does. One sister and daughter are now under treatment. This case is especially interesting, on account of the heart displacement simulating disease of this organ.

A study of these cases reveals the following points:

I. These severe cases depend always on a marked general ptosis.

II. All these patients show the nervous symptoms which have been described in an article of Dr. Lerch, and have been termed

Psycho-Splanchnic Neuropathy by Professor Grasset in the *Monde Medical* of a recent issue.

III. There is always a ptosis of the liver, and I found especially the left lobe displaced. In one of these cases the dullness reaches to the line of the navel to the left.

IV. Murmurs are present in three cases of right lateral displacement, and absent in one of left lateral displacement.

V. Murmurs are due to the displacement, and not always to a valvular lesion in the quoted cases, and must be classified as accidental, with the exception of the first case, which leaves some doubt.

Clinical Report.

The Successful Use of Chromic Sulphate in a Case of Ataxic Paraplegia.

By B. O. LeBLANC, M. D., St. Gabriel, La.

Some months ago I read in a Northern journal of the use of chromic sulphate in enlargement of the prostate gland, for which it is claimed to be almost specific. It has been employed with reputed success in the treatment of neurasthenia and locomotor ataxia. I had never seen an account of its having been administered in ataxic paraplegia, but used it with results mentioned below.

History.—Patient, Mrs. A. Z., age 58, mother of eight children. Had always been healthy ,and does not remember having had any serious illness in her life up to present illness. Husband denies syphilis or any venereal disease. It was on June 26 this year (1910) that I was called to her place for the confinement of her daughter-in-law, when I was first asked to prescribe for her. She washed the baby and attended to the wants of the confined lady. At that time she complained of a weakness in the legs, general lassitude and loss of appetite, and a feeling as though she had slight fever. I prescribed a purgative and anti-malarial treatment, followed by a tonic, and told her to let me hear from her in a few days, which she did, saying that she felt worse. I visited her and made a thorough examination, with the following results: Heart, lungs, liver, kidneys normal, but she was beginning to

walk with difficulty and could scarcely stand. Later there was absolute inability to walk; she was unable to stand with feet together and eyes closed. Knee-jerk reflex increased. Sensation was unimpaired.

Treatment.—In spite of the non-specific history, I administered full doses of anti-syphilitic treatment, only to see her gradually growing worse. I then started with chromium sulphate, 16 grains per day in 4-grain tablets, one tablet three times daily and at bedtime. After a few days, added one tablet to the first and last dose, making 24 grains per day. After two weeks there was a slight improvement. The drug was pushed to as much as ten tablets a day (40 grains), and continued at that amount. Massage with water as hot as could be borne was practiced morning and night.

Now, after six weeks of treatment, she can walk around the house, has no longer the feeling of weakness in the legs, appetite good, and is about to resume her household duties.

From the above brief report I don't intimate that we have a panacea for diseases of the nervous system, but certainly this drug seems to have some influence on diseases of the spinal cord and is well worthy of trial, inasmuch as it is harmless and devoid of cumulative effects. I don't pretend to offer any suggestions to the neurologists, as they have doubtlessly tested this remedy in the wards and clinics of the hospital, but to the general practitioner who may have occasion to try it. The drug is marketed in four-grain tablets by several reputable manufacturing houses.

Orleans Parish Medical Society Proceedings.

President, Dr. B. A. Ledbetter. *Secretary,* Dr. C. P. Holderith.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, Dr. C. P. Holderith, Chairman.
Dr. Homer Dupuy and Dr. H. D. King.

Meeting of August 22, 1910.

Discussion of Dr. Allen's Paper.

Dr. Matas: It gives me much pleasure to participate in the discussion of Dr. Allen's excellent paper, and I thank the Chairman of the Committee on Scientific Essays for the privilege here accorded me. I have always felt a deep interest in the progress of local and regional anesthesia, and this occasion will allow me not only to contribute my mite of clinical experience with the new drug under discussion, but will also permit me to discharge a debt of courtesy which I owe Dr. Henry Thibault for a personal letter which he wrote me in 1907 calling my attention to the analgesic properties of the double chlorid of quinin and urea which he had then discovered. Owing to the pressure of other work at the time, I neglected to give the subject the attention which it deserved, and I called upon Dr. Allen to undertake an investigation on the value of the new anesthetic with the surgical cases that were available in our joint services at the Charity Hospital. This is what Dr. Allen has done to-night. Dr. Newton, formerly of Little Rock, now of Monroe, La., who was acquainted with Dr. Thibault, also communicated to me his very favorable impressions of quinin as a local anesthetic, and urged me to try it in my practice. This was some time in 1908, not long after Dr. Thibault had published his first paper in the *Journal of the Arkansas State Medical Society* (September, 1907*).

Since the publication of Dr. Thibault's paper, in September, 1907, quinin has been applied as a local anesthetic and studied by a number of observers, almost exclusively American, but the literature

* An abstract of this paper appears in the *Jn'l. Am. Med. Ass'n,* Nov. 16, 1907, page 1719.

which developed about this subject is still in the bud, and is, for this reason, very limited and easily summarized. In August, 1908, Dr. Edw. J. Brown, of Minneapolis, wrote a brief note on "Painless Tonsilectomy and Adenectomy with Quinin Anesthesia" *(Journal Am. Med. Ass'n.,* August 8, 1908, pp. 496-497), in which he praised the new anesthetic. Hertzler, Brewster and Rogers, of Kansas City, wrote on "Quinia-Urea Hydrochlorid as a Local Anesthetic" in the *Journal of the A. M. A.,* Oct. 23, 1910. They stated that they had been using this drug as a local anesthetic for "the last six months with the greatest satisfaction," though the induration which is peculiar to this drug was noted as a drawback and carefully studied by Hertzler. Hertzler has again taken up the subject in a series of articles in the *American Journal of Surgery* (See, especially for quinia, the August number of 1910). Dr. Louis J. Hirschman, of Detroit, Mich., has more recently extolled the value of quinin as a local anesthetic in the operative treatment of hemorrhoids *(Lancet-Clinic,* Cincinnati, July 9, 1910), and also discussed the same subject in the surgical section of the A. M. A. at the St. Louis meeting, June, 1910. The latest, and only foreign, contrbution to quinin anesthesia which has come to my notice is the paper by Dr. M. Gandier, of Lisle, France, which has just appeared in the *Presse Médicale,* Paris, No. 53, July 2, 1910, p. 500. In this paper the anesthetic action of quinin is discussed in connection with nose and throat work. These, and Dr. Allen's paper, measure the extent of the literature to which I have had access. I am also indebted to Parke, Davis & Co., who, with their usual enterprise, have taken up the subject and supplied me with convenient tablets of the double chlorids for clinical use.

It is interesting to note that, though the bichlorid of quinin and urea, which was first discovered by Driguine in 1881, and extensively used all over the world as the most soluble salt of quinin and the best adapted to hypodermic use in the malarial infections, was not recognized as a local anesthetic until 1907, when Dr. Thibault first called attention to this property which it possesses in common with other salts of quinin, notably the bisulphate. In this, the analogy of historic experience is not unlike that of cocain.

In judging the comparative merit of any new claimant for surgical favor in the field of local or regional anesthesia, we must ask ourselves at least three questions: (1) What are the require-

ments that we must demand of the *ideal* local analgesic or anesthetic—utilizing these requirements as the basis or standard of comparison? (2) What are the claims made for the new anesthetic? (3) To what extent does our experience confirm these claims? To answer the first question, we would require of the ideal local anesthetic: (1) That it should be efficient in producing a durable, diffusible and maximum analgesic effect with a minimum of local or tissue disturbances; (2) that it be non-toxic to the organism when absorbed in the doses required to obtain the fullest local effect; (3) that it must be benign in its local action on the tissues—non-irritating, non-toxic—it should not permanently injure the cellular protoplasm or interfere with the normal repair of the traumatized tissues; (4) it should be absolutely sterilizable by heat; (5) it should be soluble; (6) it should be commercially accessible and available at a reasonable cost. These, then would be the fundamental requirements. Thus far, no local anesthetic of sufficient efficiency is able to meet all these requirements unreservedly. Even novocain or eucain, which I have used most satisfactorily in my practice, cannot claim to be free from the dangers of somatic toxicity.

Now, it is claimed for this quinin salt: (1) That it is efficient in one-half per cent solutions; (2) that it is not injurious to the tissues with which it comes in contact; "healing is as rapid as with any other local anesthetic"; (3) "it is safer than any other local anesthetic of anything like equal efficiency; (4) solutions can be kept in stock and boiled repeatedly without deterioration; (5) it is much less expensive than any one of the more dangerous drugs now used for local anesthesia; (6) it is neither patented nor proprietary; (7) it can be obtained readily everywhere; (8) it is efficient when applied in 15 to 20 per cent solutions to raw surfaces on cotton pledgets; (9) the anesthesia lasts from one to six hours.

Now, to what extent can these claims be sustained by our experience? We may at once state, and admit without hesitation, that the claims above specified by Dr. Thibault are sustained by the experience not only of Dr. Allen and myself, but of other observers, in all but the following very important particulars:

(1) The local anesthetic effect is not as rapidly obtained as with other local anesthetics (cocain, stovain, novocain, eucain-B. and others) with which we have compared the drug. This is especially

true of its topical applications to mucous membranes. On the other hand, when the anesthesia is obtained it is of very long duration, the after-pain in some operations being thus avoided—a great advantage in nasal and rectal work, when painful dressings must be removed shortly after the operation. (3) The local anesthetic effect is not only slower in its appearance five to fifteen minutes, but is less diffused—spreads over a more restricted area than with cocain and other local anesthetics. (3 Quinin acts as a vaso-dilator and favors capillary oozing; it has none of the vaso-constrictor and ischemic action of cocain, eucain-B., novocain and other local analgesics. (4) Quinin produces a secondary indurative reaction in the tissues which Hertzler has studied particularly. This induration, which has been so distinctly pronounced in Dr. Allen's experiences, is due, according to Hertzler, to a rapid exudation of fibrin in the tissues, which appears in a few minutes after the injection of the quinin. In a general way, the amount of exudation, and consequent induration, is dependent upon the concentration of the solution. "In one-half of one per cent solutions the exudate is less than one per cent, and, with one-fourth of one per cent, only traces of exudation can be discovered. To what extent this fibrinous exudate is subsequently transformed into fibrinous tissue has not been definitely determined, but, apparently, nearly all is absorbed." (Hertzler.)

While from the point of view of repair this excess of fibrinous reaction is a disadvantage, since it tends to interfere with the healing of wounds, as has been noted by Dr. Allen, myself and others who have preceded us, it is also an advantage in producing a secondary and permanent hemostatic effect by producing a perivascular compression, which may be utilized profitably in some operations, associated with much secondary oozing. This may be the case in rhinologic work and in hemorrhoidal operations, where, in addition to a long anesthesia, a permanent hemostasis is desirable.

The primary vaso-dilator effect and interference with healing, with long persistence of hard swelling when the more effective quinin solutions are used, is a serious drawback in aseptic operations where quick primary healing is desirable, and will militate against the general acceptance of quinin as a routine anesthetic, its non-toxicity notwithstanding. It is possible that, by combining the quinin and urea bichlorid with adrenalin solution, the objection-

able oozing due to the primary vaso-dilator effect may be overcome; but it would appear that by this combination the vaso-constrictor effect of the adrenalin is diminished and the ischemia is not obtained, as is the case when cocain or its substitutes are combined with adrenalin (Gandier). Neither does this combination appear to have a very marked influence in diminishing the objectionable fibrinous exudation of quinin, in my experience.

I have had occasion to try both the bichlorid of urea and quinin and the bisulphat, in the treatment of trigeminal neuralgia and as a preliminary to the extirpation of the second and third divisions of the trigeminus, associated with the alcohol injections into these nerves at their exit from the base of the skull (Schlosser's method). My experience has brought out most forcibly the objections above stated. In the case of an aged gentleman, Judge H., 73 years, who consulted me two months ago for a most violent tic douloureux of the infra orbital and inferior maxillary divisions of the trigeminus, I felt especially anxious to avoid any extensive operation which might require a general anesthetic, because he was a corpulent man with a dilated heart, chronic asthma and emphysematous lung. I decided in this case to try, as on many previous occasions, the effect of a deep, massive infiltration of the nerve trunks at the base of the skull, and thus obtain a regional anesthesia, as a preliminary to the excision of the nerves after injection of the nerve trunks with alcohol. I used a solution of quinin bisulphate one per cent, with adrenalin solution (1 to 1,000); 20 minims of the adrenalin to five ounces of quinin solution. With my special infiltration apparatus I edematized the spheno maxillary and zygomatic fossæ by introducing the needle of the pump into these regions through the sigmoid notch of the lower jaw. The anesthetic effect on the peripheral distribution of the nerves was pronounced in half an hour, but in a few hours I was much worried by the persistence of the edematous swelling of the entire cheek and face on the corresponding side, and extreme induration of the infiltrated parts. The paroxysms of pain, which subsided for a day, gradually returned to their original violence; the hard swelling of the cheek persisting for nearly two weeks. I then decided to reinject the nerves with my regular eucain-B. (two per cent) and adrenalin solution. With this infiltration the anesthesia was so complete that I was able to resect both nerves painlessly.

The inferior maxillary was exposed above the origin of the inferior dental by deepening the sigmoid notch and following the nerves towards the foramen ovale (Victor Horsley's method). The infra orbital nerve was exposed and followed through the orbit to the spheno palatine fossa by a simplified Carnochan method. Both nerve trunks were injected interstitially with alcohol as near the point of exit as possible from the skull, and then, torn away by twisting with forceps, the peripheral distribution being extracted by Thiersch's method. The relief obtained by this procedure was complete and satisfactory. In this case I learned, first, that the anesthetic effect of the quinin solution was not as pronounced as when eucain-B. was used; and, second, that the long-lasting hard swelling after the quinin, even when used in combination with adrenalin, was not a negligible after-effect.

In the case of an old lady, who was also very feeble and suffering from severe tic in the lower division of the fifth nerve, I reversed the experiment, trying first the massive infiltration of eucain-B. (two per cent) with adrenalin, obtaining invariably a good temporary anesthesia, with marked relief of the symptoms, lasting over thirty-six hours. The prompt and total absorption of the solution, in a few hours after the injection, even after five ounces of solution had been used, offered a striking contrast to the persistent swelling and deformity caused by the injection of a one per cent bichlorid of urea and quinin, which was tried on the same patient at another sitting. There was a fair amount of anesthesia, but of less duration than when the eucain-adrenalin solution was used, and yet a noticeable swelling on the side injected with quinin could be observed for over twelve days after the injection.

From my observations of these and a few other cases, I have concluded that quinin should not be used in massive infiltration anesthesia where large edematizations are required, unless, for special reasons, this excessive and long-lasting exudation may be desired, as in some regions where the immobilization of the operative field, by a splint of exudate or a prolonged hemostatic effect, are desirable, as may be the case in the hemorrhoidal areas of the rectum.

In conclusion, it is only fair to state that, whatever may be the objections to the routine use of the quinin as a local anesthetic in surgical practice, we must admit that there is always place for a reliable anesthetic as quinin has proven to be, which is absolutely

free from toxicity. (Brewer has injected 100 grains of the bichlorid of urea and quinin intravenously in the course of six hours in a case of pernicious malarial infection without ill effect.) This non-toxicity, coupled with the extraordinary duration of the anesthesia (one to six days) will always keep this remarkable drug in the mind of every surgeon who is constantly facing the problem of local anesthesia in its multitudinous phases, in the daily routine of surgical practice. Furthermore, in view of the remarkable properties which quinin possesses, as above stated, it is to be hoped that every effort will be made to overcome the objections which we have previously noticed by combining its salts with other agents that will modify or neutralize its undesirable reactions in the tissues. In discovering this unknown and most valuable property in a long-familiar drug, Dr. Thibault has contributed a valuable addition to the surgeon's resources in annuling pain and has proved himself an unusually keen and perspicuous observer.

Dr. Guthrie: I have had rather an extensive experience in the use of hydrobromate of quinin and urea, hypodermically, and have seen a large number of abscesses form in consequence. This was due to a too concentrated solution. Since I have been using more diluted solutions I have not had this trouble. I believe a solution of 1 to 15 is as strong as should be used by injection. This is, of course, considerably stronger than is used to produce anesthesia. The sloughs which result from quinin necrosis are hard and leathery, and separate with difficulty from the surrounding tissues, exposing oftentimes to view crystals of alkaloidal quinin. The cup-shaped depression left after the separation of the slough granulates very slowly, and it is often three months before complete healing occurs.

I cannot help thinking that the induration noted by the speaker may be due to a precipitation of crystals of alkaloidal quinin in the tissues.

Dr. Weil: This paper is of special interest to me, and from the nose and throat standpoint it should receive some consideration from rhinologist and laryngologist, especially in tonsilectomy. Its value in this work is that the anesthesia lasts three, four, and even five days, and obviates the likelihood of secondary hemorrhage. The primary hemorrhage, at the time of tonsilectomy, is very great, and proves a disadvantage. At present we have no very good local anesthesia for this work.

Dr. Blum: The experience of Dr. Guthrie is remarkable to me, as in the Shreveport Hospital, where we used this agent very frequently in malaria, and I have used twenty grains to the syringe and never experienced any bad effects whatever. I recommend its use.

Dr. Talbot: As to the sloughing effects of quinin and urea, used hypodermatically, I will state that I remember of a case in the gynecological wards of the Charity Hospital while I was a student there. This case had been operated upon for some gynecological trouble, but later presented some malarial symptoms, and quinin with urea was ordered by needle.

Following the injections, large ulcers appeared, which were very persistent and yielded so slowly to treatment that, although the patient remained some six weeks in the hospital, the arm was not well at her departure.

Dr. Allen (in closing): I think we owe a debt of thanks to Dr. Matas for his interesting and instructive remarks, which I feel have added much to the attractiveness of my paper and the entertainment of the evening. Regarding Dr. Guthrie's statement, will state that using certain amounts of this salt of quinin, or any other salt of quinin, it matters not which one, we will always have the constitutional symptoms, and, if the amount is sufficient, ringing in the ears. Regarding some of the remarks made in discussing tonsilar surgery, will say that the addition of adrenalin might find a useful field here, as well as elsewhere, by controlling the preliminary vascular dilatation and consequent troublesome hemorrhage. This addition of adrenalin to the quinin and urea solution, I have not yet experimented with, but propose to do so. In thinking over the matter, certain points come up which will have to be carefully observed. It might be possible that, by the addition of adrenalin and the consequent prevention of the initial vascular dilatation, we might prevent the formation of the fibrinous exudates, which possibly act as a dilutent, or may protect the tissue cells in other ways from the irritating action of the quinin; consequently the addition of adrenalin might possibly prove of more harm than value. The admixture of quinin salts with weak solutions of cocain or other local anesthetics, as in the Schleich or Braun solutions, has yet to be tried, and may find a field of usefulness in these combinations.

Discussion of Dr. Kohlmann's Paper.

Dr. S. M. D. Clark: I feel as though an apology is due Dr. Kohlmann in my opening a discussion upon an operation which I have never performed.

It is interesting to look back for a few years and see the progress made in the treatment of retro-displacement of the uterus. About ten years ago the fixation operation was beginning to yield to the operation of suspension, the latter made popular through Dr. Howard Kelly. After the suspension operation was about accepted, reports of difficult labor, in a certain percentage of these cases, began to appear in the literature, Dr. Hurdon, one of Dr. Kelly's assistants, reporting two cases. Then began the flood of various round ligament operations, all of which were founded upon a better physiological and anatomical basis than the earlier proceedings.

Dr. Gilliam, of Columbus, Ohio, was among the first, then the Mann operation, and later the Noble-Mayo-Barrett-Montgomery technique of handling these poor little ligaments. There is the Webster-Baldy procedure, as well as the Coffey-Doderlein (too numerous to mention). The Alexander-Adams operation has its well-defined limitations. In the past five years a great deal of fuss has been made over the various modifications of using these ligaments, and it has settled itself by individual operators adopting the one he fancies.

The time is too limited to go into a detailed discussion of this subject, but, in my opinion, the Bumm operation is the least attractive of any of the round ligament stunts, primarily so, since the ligament has the least area to which it may adhere. Personally, I adopt the Mayo-Barrett procedure, varying this in individual cases. Where pregnancy is not possible, and for urgent reasons, I still do the Kelly suspension. There is one point regarding the Mayo-Barrett operation: I used to suture the two ligaments in the median line, but, owing to pains in the groin following this, I now attach them to the aponeurosis.

To sum up, I think too much time has been spent in fussing about these round ligaments. In good hands, nearly all of them will give results. The question that, to me, is far more important, is not how retro-displacements should be corrected, but what retroversions should be treated. I do not believe we are justified in operating upon every retroversion. As a general statement, I am

of the opinion that any position of the uterus is normal so long as it is freely movable.

Dr. Chavigny: The uterus, devoid of its normal ligamentous support, has been one of the most fruitful fields for the ingenious mind of the gynecologist. The numerous operations suggested have all some good points, appreciable in individual cases. We should not, therefore, cry down the old operation of suspension and fixation, because, in certain cases, they are the best means of support that can be given. The shortening of the round ligament, as done in the classical operation of Alexander and Gilliam, modified by Mayo, Ferguson, Nobles and others, as also the operation of Bumm, so ably described by Dr. Kohlmann to-night, have all, in specially selected cases, their advantages. We should not allow ourselves to be pinned down to any one of the different supporting operations, but go into the case unbiased.

I might mention an operation, entirely different in its method, recently brought before the Gynecological Section of the A. M. A. by Dr. Baldy—that is, of using the round ligament as a means of uterine support, in a rather unique manner. The round ligaments are pulled through the broad ligaments by means of forceps and sutured to the posterior middle surface of the uterus, acting very much as a swing. I cannot say that I would favor the operation by a trial. The idea of leaving these cases wear a pessary is a good one; by this means we can feel more positive of the results we are likely to obtain. The objections to pessaries are that a great many physicians cannot properly apply them. I have been using a tampon of lamb's wool saturated with glycerin applied in the knee-chest position in the posterior vaginal cul de sac. This method has given me very satisfactory results, and I belieev would be more serviceable to the general practitioner to ascertain the probable benefits of a suspension operation.

Dr. Kohlmann (in closing): Regarding the remarks made by Dr. Clark about the weak points of the Bumm operation in comparison with the Gilliam operation, will say only this much, that these weak points are, in my opinion, the strongest in favor of this method.

First. In the Gilliam operation the mobility of the uterus may not be sufficient.

Second. On account of perforating the muscular tissues there is a possibility of a hernia.

Third. By loosening the subcutaneous tissue and perforating the abdominal walls there is a possibility of infection along the canal, especially in cases of complicating diseases of ovaries and tubes.

As mentioned before, the Bumm operation has given very good results, though I believe in future the combination of laparotomy with an Alexander operation will be more utilized in the manner recommended by Palm in Berlin and strongly supported by Werth—laparotomy by Pfannensteil incision—and attention as required to the uterus and appendages; the abdomen being open yet to control the position of the uterus, a typical Alexander-Adams operation is done, the round ligaments are drawn through the inguinal ring and sutured in the usual way, and abdomen closed afterward.

I did this operation last week on two cases, and was very much impressed by this method. The only objection would be that the time of operation is necessarily somewhat prolonged.

Communication.

Question of the Day.

There are rudimentary facts that are really precious to the practitioner, and we should recite them, at short intervals, lest we forget. Prof. Gaucher (Hospital Saint Louis), Paris, in a recent clinical lecture, judiciously said:

"The evolution of syphilis is so variable that it is most difficult to express an opinion on the value of the abortive treatment (Ehrlich's; Hallopeau's) now in vogue, until a long experience has been had with them. Many are the cases where the disease remains in a latent state for many years, the patient not being conscious that he had ever been infected."

Then, the Professor presented to the class two such cases, one with a typical gumma on the knee, the other two gummata (forehead, pubis), remarking:

"It is certain that treated by an abortive treatment, after so many years of latency, these cases would have been considered and reported as cured all this while."

We all, more or less, have come across such cases of latent or ignored syphilis.

I can recall among others the case of a perfect lady, married, mother of two healthy children, seen in consultation with Dr. Touatre, who presened a gumma of the pubis, about to be operated for an abscess by an eminent surgeon, here, which yielded to Hg. & KI. combined. After a few years, recurrence of a gumma on the instep, yielding promptly to the same classical combination. She had never noticed any primary sore; she could not recall anything like such a sore, when told about it.

A young man, perfectly healthy in appearance, hard worker in the open air, without any accident in the course of twelve years since the existence of a small sore on his penis, presents a gumma on each leg, yielding readily to the old specific combination.

A business man, shop-keeper, indoor work, seen by an eminent specialist here, a hospital surgeon, was told he had tuberculosis, and advised to leave town at once. He went to France, his native land; was taken very sick over there; unconscious, paralyzed, he was trepaned for a gumma, and with a generous old specific treatment he was brought back to life. He is back here now. [These are the tricks insidious syphilis will play on patients and doctors.]

Now, we all of us, also, have seen many cases coming to us for treatment who had received a course of abortive and radical treatment, by needle, Hg, years ago, having been told that they were safe.

What a delusion! Of course, the newest abortive treatment by arsenic alone, or arsenic and mercury combined, may prove safer, hereafter. Yet . . . at all events, for the present, a fact which will probably give Hallopeau's method of aborting syphilis, apparently some superiority over Ehrlich's, in common practice at least, is that Hallopeau, with his Hectine B. (arsenic soluble) LOCALLY, around the chancre, BY NEEDLE, concurrently uses, in the first 20 days of treatment, a daily injection of soluble mercurial (benzoate or biniodide) into the buttock; in other words, Hallopeau combines the local and the general treatment, using, locally, Hectine B (the new drug),

and, generally, mercury, the old standby. On that account, the majority of us will instinctly look more favorably on this method, for a time yet, until a new order of things is firmly established and the old treatment of syphilis is entirely relegated.

Hum! It will take time for that to come. Indeed!

Prof. Gaucher says: "In spite of the criticism now in vogue against potassium iodide, this old standby is, certainly, indicated in many cases of syphilis, when associated with Hg., and not necessarily given in large doses, 2 gms. a day."

Those of us who see many cases af syphilis, will feel like that, for a while yet, since we have the hardest time in the world to have the administration of a really effective mercurial by needle, accepted by the majority of patients. After trying many of the various stuffs advertized as "painless," it is a blessing that we can still depend on the old bichloride pill, the old Dupuytren pill, which can not be beat in the ordinary run of cases. Is it not so?

Still, we are watching, anxiously, for further developments in the new field of treament very hopefully. Let us be encouraged by the fact that many of us in the beginning of our practice, had never dreamt of saving babies' lives from the grip of diphtheria by a single injection of 10 or 20 cc. of serum as we can do now. So, it is that something wonderfully good may come out of all these attempts, researches and experiments made by such leaders as Ehrlich and Hallopeau.

(Signed) Dr. E. M. Dupaquier.

New Orleans.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

Duval's Work with the Cultivation of the Lepra Bacillus and the Proof of this Culture by Experiments on Japanese Dancing Mice.

Duval, in his laboratory at Tulane, has succeeded in confirming the work of Clegg, in the Philippines, in growing the lepra bacillus in pure culture. Many essays have been made in this direction, and credit is due to Byron, Bouffé, Kitasato, Rost and Carrasquilla for their efforts, which only opened the way to the later successful results of Clegg and Duval. Recent reports have announced that Clegg had carried his cultures into the third generation, which, with Duval's work, now presented,* argues the possibility of further experimentation with sera—especially since, as Duval has shown, at least one lower species can be inoculated with the artificially grown organism of leprosy.

Duval has established several new points in the bacteriology of leprosy which have not hitherto been offered, and it is seemly that credit should be given to his work in the Louisiana field, which has hitherto been distinguished only for the clinical advances made in the study of the disease and its treatment.

The material of Duval's work was derived from many cases at the Louisiana Leper Home and from well-established varieties of the disease, including one case autopsied. It is interesting to observe that in the last-named case a successful culture was grown from bacilli derived from nodules taken from the ear of the dead subject.

In experimenting with media a large variety was tested, including those made up with plain agar, and with all sorts of combinations of media, mixed with various bacteriologic cultures. "With regard to ameba cultures," says Duval, "it did not seem to matter what nutriment was used, as growth resulted in every in-

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stance," * * * "nor did the reaction of the medium seem to make any material difference."

The temperature was very important, and particular attention is called to the fact that the best results were obtained when the cultures were kept at from 32° to 35° C.

An interesting feature of the cultivation is noted in the use of the banana as a medium. Bacteria free solutions of tryptophane, cystein (made from protein) and leucein (passed through a Berkefeld filter to make them bacteria-free) were prepared, and a portion of each poured on the strips of banana in quantities enough to saturate. These solutions were used separately and in varying combinations to determine upon which the *B. lepræ* would grow best, if at all. A similar culture medium was prepared in combination with these substances and nutrient agar (alkaline to phenolphthalin).

Both the banana and agar were successful media.

Light seemed to favor the growth of the bacilli, which developed in from four to six weeks. The bacillus grows more slowly than the tubercle bacillus. Cultures were experimented with at varying temperatures and under varying conditions.

Control experiments to disprove the likelihood of the bacilli in culture being tuberculosis, conducted on guinea pigs and rabbits, proved negative. Attention is called by Duval to the variants in the morphology of the bacilli grown in culture as compared with those found in the tissues. They are longer, more curved, rounder, more filamentous in arrangement—but staining in much the same way.

The animal experiments conducted are interesting in a negative way, in the absence of any evidence of inoculability in the rabbits or guinea pigs, and again in the fact that Japanese dancing mice should be so susceptible as to show prompt results of the infection in all cases, and that in no case was there any ill result evidenced in the animals.

In the experiments with these mice they were equally affected by bacilli taken from early or late cultures, and no different from effects produced by original bacilli as taken from human tissue. Some effects were observed four weeks after intraperitoneal injection with the bacilli.

The anatomy of the leprous lesions in the mice was found

identical with that found histologically in human leprosy. The bacilli are found in enormous numbers, and, for the most part, within cells.

Altogether, the work of Clegg and Duval has placed the study of leprosy upon a better plane. We can now understand the difficulty of contagion in leprosy, and why the number of cases is so small when the bacilli are so slow to grow at temperatures unfavorably high.

The susceptibility of one among several lower animals argues the individual susceptibility in man, with tissue possibilities making the particular subject a likely medium for the disease.

The chief value in these experiments, however, must rest in their possible relation to artificial derivations to prove efficacious in curing the disease.

New Theory of Menstruation.

The attempts to explain the highly interesting and strange, though familiar, phenomenon of menstruation have been as numerous as ingenious. None of them have been quite satisfactory up to now, but the latest theory as evolved by Dr. E. R. Garia, of Mexico, promises to supersede all the previous ones as to plausibility and scientific value.

In an elaborate article in the *Gaceta Medica de Mexico,* he gives a careful description of what may be termed his discovery, after a thorough analysis of existing views on the subject and showing their inadequacy. He devotes most attention to the theory which attributes menstruation to rupture of the capillaries of the uterus caused by the abundant flow of blood to the organ and the resulting hypertension. His main arguments against it are the absences of cicatrices in the uterine mucosa and the physiological experiments of Rouget proving that injection of the ovaries and uterus in the cadaver caused erection of these organs, but never ruptured the vessels of the mucosa or produced a flow.

Dr. Garia, after describing the vascular supply of the uterus, ovaries and Fallopian tubes, shows that the veins ramify in a remarkable manner in the mucosa and that they open by quadrilateral stomata on its inner surface, which close by the action of the uterine fibres. He recites the results of various physi-

ological experiments, concluding: 1st, the uterus, like the ovary, is an erectile organ; 2d, the muscular fasciculi of which it is composed produce the erection; 3d, the vessels of the internal genitals in women are innervated by a system of true vaso-dilators and vaso-constrictors; 4th, these nerves are derived from the hypogastric plexus.

From all the above, which is a bare outline of his exposé, he concludes that at menstruation there happens on a small scale what occurs at the moment of giving birth, when the placenta is detached and the vessels close. At each menstrual epoch the orifices of the vessels of the sexual apparatus open as a consequence of the action of the vaso-dilator nerves referred to above and allow blood to escape from the surface of the uterine mucosa.

On account of the slowness with which the dilation of the stomata occurs through excitation of nerve filaments from the hypogastric plexus, the outpouring of blood is small at first, gradually increases for a second day, remaining stationary for a day or two during complete capillary dilation, and then disappears by degrees as the apertures contract by the action of the vaso-constrictor nerves.

Such is in brief the latest theory as to the origin and mechanism of menstruation. It is pretty, withal scientific, and we expect Dr. Garia to receive much credit for his observations.

The Presbyterian Hospital of New Orleans.

For some time past the leading influences in the Presbyterian Church in New Orleans have endeavored to locate a hospital under the auspices of that church. A small beginning was made about a year ago in the establishment of a clinic, but not until recently was the chief object attained. On October 1, 1910, the New Orleans Sanitarium changed hands, becoming the Presbyterian Hospital of New Orleans, and no worthier adoption could have been planned by the gentlemen of the Presbyterian flock, when the work of the Sanitarium is reviewed.

In the late eighties, the progressive and charitable women of New Orleans conceived the idea of a training school for nurses, and to

make it practicable they founded the Hospital for Women and Children, in conjunction with the New Orleans Training School for Nurses. This combined organization lasted about four years, when the difficulties in management and financial embarrassment compelled the ladies at the head of the school and hospital to call upon the medical profession to aid in carrying on their institution. A stock company was organized and took over the original concern—then originating the New Orleans Sanitarium and continuing the New Orleans Training School for Nurses, for some years the only such school in New Orleans, and for many years one of two such schools in the South. Two years later, in 1894, the Sanitarium moved to its present location on Carondelet street, and since that date the almost single object of those who controlled the institution has been to continue the Training School for Nurses and to improve the Sanitarium to its fullest efficiency. At no time have the commercial possibilities outweighed the professional side of the management, and, with the transfer to the Presbyterian Hospital, the owners of the Sanitarium have felt that they were simply transferring to worthier hands the humanitarian task laid on them by the New Orleans women who appealed for aid in 1892.

The Presbyterian Hospital, however, comes into a fully-equipped institution, self-supporting and free of debt, having the patronage of a large proportionate of the local profession, and a liberality of management can not only continue the good will of such physicians, but may add to the list of patrons.

It is expected that in the near future the Presbyterian Hospital will arrange for a charity service and for a comprehensive out-clinic department.

The JOURNAL joins with the many friends of the Sanitarium in wishing a prolonged success to the new administration under the name of the Presbyterian Hospital of New Orleans.

Meeting of the Southern Medical Association

The Southern Medical Association will meet in Nashville, November 8 to 10. While no preliminary program has been received by the JOURNAL, it is expected that both a large attendance and an excellent program will distinguish the meeting.

The purposes of this Association are not yet clearly defined, but

so long as it remains as an independent association, organized for the development of medical interests in the South, it must command the respect and support of every medical man in the South.

The problems of medical education need a concerted interest of the general profession of the South, so as to make a standard above the criticism of the bodies engaged in raising the standards, and the influence of higher demands must have a healthy reflected action on the subsidiary schools.

We are, moreover, in the limelight of the daily press, and the general public everywhere, on account of our deficiencies in health records, especially our vital statistics. Besides this, we have our own problems of disease to solve, independently of others and their influences.

The mere gathering of many men from various parts of the South means some advance, but the organization for real purposes must be consummated—and soon, if the Association is to survive as a real factor in Southern medicine.

Let us go in a large body to Nashville to help make a great association.

The Owen Bill and the National League for Medical Freedom.

Under the auspices of the Committee of One Hundred on National Health, appointed from the American Association for the Advancement of Science, has appeared a circular of defense from the pen of Dr. Knopf, a distinguished member of the Association. It is too long for reproduction in our pages, but it should be recommended to the sober perusal of every representative to the National Congress as a campaign document for the Owen bill.

The attack upon the Owen bill has been mostly brought about by the "National League for Medical Freedom," a mongrel composite of sects and cults headed by an evangelist of uncertain persuasion, predilected for a position in the limelight, irrespective of the issue. It might not be difficult to analyze the motives of those antagonists to a clean movement for the ultimate good of the human population in the United States, but it is not worth while to waste time with mud-

slingers who cannot be reached by ordinary civil means. The imputations in their attacks, however, have brought about Dr. Knopf's open letter and the retort to these should be as general as may be possible.

It would seem that these Don Quixotes (God save the mark!) of modern Hippocratism have evolved the conceit that the organized medical profession, representing the majority of the medical practitioners in the United States, by their efforts for a Department of Health, as exists in the civilized countries of Europe and in some semi-civilized countries of Asia, are aiming at the Constitution of the United States in restraining the liberty of the nondescripts who are in and out of the Association. To establish the principle of their argument they have travestied the achievements of the men who are and have been most active in their work for the Owen bill and for what it stands.

The people is usually emotional and easily revolutionary and anarchistic, *at first*, but among the mass of our general public there is enough of old-fashioned horse sense to bring about the conviction that a human being really does have some value in the community, and any power which can improve the condition of the health of the human being by government regulation, care and concern, must be worthy in its origin and purpose. The other side of the thing will finally force itself on thinking men—that any body of men opposing a sane, reasonable, humanitarian movement, and opposing it with the weapons of evil minds, must have an ulterior motive and the veneer of hypocrisy and of fealty to a pretense of standing between the public and the dragon of greed will soon wear off and will show the rottenness of a cause difficult to sustain and as yet without reason, but evidently not yet without the financial means derived from a source not nearly as patent as are evidences of its expenditures.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of Dr. P. Michinard and Dr. C. J. Miller, New Orleans.

Prolapsus Virginalis and the After-Results of Operative Treatment.—Stephen v. Manitius *(Centralblatt für Gynäk.,* No. 36, 1910, presents the report of 22 cases of virginal prolapse of the uterus, which were operated upon in the years 1894 to 1909.

Of the number twenty were total prolapse; in two there were prolapsus, retroversion and descent of the uterus. The cause of virginal prolapse is usually severe strain or hard work. Predisposition to the condition may arise from abnormal depth of the cul-de-sac of Douglas, or vesico-uterine space, arrested development of the embryonal steps, resulting in a small uterus or tumors.

All recovered but one case, and were discharged with satisfactory healing results.

The after examination took place at the earliest date after the lapse of one year. Only sixteen could be found for examination, ten of which could be officially classed as cures. In four cases operation was a complete failure. The operations performed were as follows: Alexander-Adams combined with vaginal plastic operation in six cases. Three were examined—all were failures.

Ventrofixation in twelve cases. Fixation to the promontory in two cases. Only one of these was re-examined. The result was not satisfactory.

In one instance a vaginal plastic operation was followed by permanent cure.

Vaginal fixation and total extirpation were never practised in the cases of virginal prolapse. The lasting results of the operative treatment of virginal prolapse are therefore very meager.

Lasting results are only obtained when, together with a plastic operation, some one of the antefixation operations are performed. From his experience he could not recommend any one special antefixing procedure. Miller.

The Diagnosis of Membraneous Dysmenorrhea and Extrauterine Pregnancy.—It is often not easy to make the differential diagnosis between extrauterine pregnancy and dysmenorrhea, on the basis of the expelled membrane.

Therefore, we often find the assertion that extrauterine pregnancy occurs much oftener than has been generally assumed and that it is relieved by the interruption of pregnancy and the expulsion of the decidua.

In a minutely detailed case, Le Page, only after a very close examination, established the existence of a tubal pregnancy gradually decreasing in size. One year later a membrane was again expelled and at this time a tube gradually enlarging confirmed the diagnosis of tubal pregnancy and was removed by operation. *Centralblatt für Gynäk.*, No. 36, 1910. Miller.

Department of Internal Medicine.

In charge of Dr. E. M. Dupaquier, New Orleans.

Portal Cirrhosis (Laennec's). Pathologic Evolution, or Physiology, the Guide in Treatment. Nihilism in Medication a Mistake. Prescription for a Classical Case, as a Model in Case-Teaching.—Cirrhosis is started, usually, by prolonged excitation of the liver cells and of the surrounding connective tissue. The most common, of the very many causative irritants, are: Alcohol, potassium sulphate, gastro-intestinal toxins, infectious toxins.

In the initial period, increased gastric activity (hypersthenia) is associated with increased hepatic activity, functional solidarity having been demonstrated by Beaumont's observations and Claude Bernard's experiments.

When the liver cells in the state of hyperfunction have reached their maximum of activity, they must begin to degenerate sooner or later, should the causes of excitation persist, while the connective tissue around shall begin to proliferate. At that stage, the liver cells become exceedingly sensitive to the action of toxic and infectious material, even to changes in the osmotic pressure about them.

This sensitiveness or fragility of the liver cells leads to acidophile granular degeneration; but repair is yet possible, provided the stimulation is only transient, by formation of new liver cells, compensatory hypertrophy of the neighboring cells, karyokinesis of the cells. However, around the affected groups of cells or pathologic foci, a fibrous reaction occurs, and thus begins cirrhosis.

The newly formed connective tissue fills the empty or collapsed spaces and its ingrowth compresses other less resisting cells. Of course, the changes in the liver cells are far more important than the growing fibrosis. Hepato-toxins, the result of their disintegration, when not destroyed by antibodies (Fiessinger), help to destroy other healthy liver cells.

So, in the end, the patient is not defending his liver any more, but is trying hard to defend himself against his liver.

No attention is given, here, to the treatment of the usual complications, viz: Ascites, oliguria, hemmorrhages, etc. No mention shall be made, either of the important dietetic, hygienic, or of the important local, mechanical and operative measures.

A. To moderate the hyperactivity of the liver (initial stage) some reliable hepatic moderators can be depended on:

First Series—Calomel and belladonna, combined, in small doses, during 20 or 30 days.

Second Series.—Sodium arsenate, extract of valerian, lithine carbonate, combined, during 20 or 30 days.

Third Series.—Antipyrin, sodium bromid, in alternation for ten days.

Concomitant gastric hypersthenia (pyrosis, pain, cramps), is met by saturation powders.

B. To tone up the failing function of the liver (cirrhotic period), some reliable hepatic stimulants can be depended on:

First, a word about hepatic opotherapy. It is indicated and gives result, if used carefully. Fresh pork or veal liver extract is better than hepatic extracts on the market. It is better than bile itself and its extracts.

First Series of hepatic stimulants—Sodium phosphate, sodium sulphate, sodium benzoate, potassium iodid, a great lympha-

gogue and vascular stimulant. Sodium salicylate is a good cholagogue, but it injures the kidneys.

Second Series.—Combretum rambaultii, boldo, jaborandi.

Third Series.—Bontius pills, metallic ferment and pyramidon. (From the Lectures of Albert Robin, Professor of Clinical Therapeutics, Paris Faculty, at the Hospital Beaujon. Book just out, 1910. First series. *Therapeutique usuelle du Praticien.*)

About Syphilis—The same week Ehrlich, in Berlin's Academy, created such a sensation and raised such a great enthusiasm when he made his report on his discovery of 606, arseno benzol, and its wonderful effects on the spirochete of syphilis, Hallopeau, in Paris' Academy, attracted much attention by his report on his "Traitement abortif de la syphilis." Hallopeau is the same man who with Gaucher was the pioneer in the use of atoxyl, an organic arsenic, too, in the treatment of syphilis. Atoxyl, then, was very promising. We have heard of many disasters since. Hallopeau returns to the classical mercury; but he is no standpatter, for his method of using it is absolutely progressive. We shall not say any more about the matter until many reports on the use of arsenobenzol are available from unprejudiced sources. We most sincerely hope that arsenobenzol shall prove to be the real antispirochetic agency for the relief of much physical and moral suffering, in spite of the stoutest heart and the greatest amount of cheerfulness.

Department of Ear, Nose and Throat.

In Charge of Drs. A. W. deRoaldes and Clyde Lynch, New Orleans.

Lateral Sinus Thrombosis Treated Post Operatively with Hiss Extract of Leucocytes.—By Samuel McCullagh, M. D.)—The extract is prepared in the following manner: It is usually obtained by double pleural injection of normal rabbits with a solution of Aleuronat. This causes a sterile pleurisy with effusion—the amount obtained after twenty-four hours is usually 30-60 cc's. of turbid and often blood-stained serum.

The serum is quickly centrifugalized, the serum decanted and the cell residue extracted in sterile distilled water for periods from five to ten hours.

A standardization of 20,000,000 leucocytes to 10 cc. of solution is made, after a few hours at 37½° C. The extract is preserved in an ice box. Just prior to using the tubes are shaken and all contents are used.

Two cases treated: Mastoiditis, requiring Schwartze operation, blood clot dressing, followed by sinus thrombosis and septic pneumonia. Temperature on fifth day following operation 105° F. Seventh day sinus exposed jugular vein thrombosed. Eighth day 20 cc's. of the extract injected beneath skin of abdomen; no effect on temperature; 24 hours later 20 cc's. of extract injected, followed in 12 hours by drop of two degrees in temperature; however, temperature was on decline at time of injection. Five days later 20 cc's. of extract injected, followed in 6 hours by drop of 1 2/5° F., dropping in 9 hours to 98 3/5°. Convalesence from this time on was uneventful.

Second Case.—Mastoidectomy with sinus thrombosis requiring ligature and excision of jugular vein. Septic temperature. Fifth day 10 cc. extract, followed by fall in eight hours of 2 1/5°. Sixth day 10 cc. extract, followed by drop of 1°, then a fall of two degrees. Seventh day 10 cc. extract, followed by fall of 2/5°. Three days later temperature reached normal, and convalescense was established, recovery being complete.

While neither of these cases prove conclusively the value of the extract, the author having observed the cases closely feels that the use of the extract helped maerially in bringing about the happy termination of these cases. This was especially so in the second case, where no complications existed, where the extract was used fairly early and with a degree of regularity. The rapid clearing up of the toxemic depression of the central nervous system was the most striking feature.

Dr. J. G. Dwyer *(Annals Otology, Rhinology and Laryngology,* for June, 1910,) reports treating six cases with the Hiss extract of leucocytes. Of these, there were mastoiditis with sinus thrombosis, one an acute pan sinusitis involving frontal ethmoidal and sphenoidal sinuses, all of which recovered. Two cases died, the one a child, one and a half years old, with mastoiditis, extradural

abscess and meningitis, the extract being used as a last resort. The other, a man, 37 years old, with mastoiditis, sinus thrombosis, and diffuse lepto meningitis, died two hours after the first dose of the extract.

In the cases that recovered, marked improvement followed the first dose of the extract. The most satisfactory was a case of pan sinusitis in a child nine years old. A frontal sinus operation being performed and the anterior ethmoidal cells removed at the same time. For fifteen days following the operation the temperature ranged between 98° and 105° F., marked general hyperæsthesia, deep muscular tenderness, and a well marked Kernig's sign significant of meningitis. Just before the injection of the extract the temperature was 104.4°, pulse 145, respiration 30. Within twenty-four hours the temperature fell to 100°, the pulse to 90, respiration 25. The temperature gradually returned to normal and recovery was uneventful.

The author feels that the use of the extract was responsible for these good results, the best results being obtained by the early use of the extract and its regular repetition. Hiss himself recommending an injection every three hours if necessary.

Louisiana State Medical Society Notes.

In Charge of Dr. Joseph D. Martin, Secretary, New Orleans.

Minutes of the House of Delegates.

Wednesday, May 4, 1910—At 4 P. M.

House called to order by Dr. Callan, Chairman, at 4 p. m.

Dr. Joseph D. Martin, Secretary, at his desk.

Minutes of previous meeting read and adopted.

There being no communications, new business was taken up.

The application of Dr. I. Irwin, of Gibson, endorsed by Drs. Eustis and Owen; Dr. E. E. Lafferty, of Bogalusa, endorsed by Drs. S. M. D. Clark and S. C. Fittz; and G. H. Shaw, of Loreau-

ville, endorsed by Drs. Eustis and Hummel, were referred to the Council.

The report of the special committee appointed to draft suitable telegram and secure signatures of members in attendance endorsing the Owen bill, was read and adopted.

The report of the special Committee on Necrology was read and adopted.

A resolution made by Dr. Roy, by request of Dr. Martin, of Arkansas, seconded by Dr. Dowling,, was discussed by Drs. W. M. Perkins, Ledbetter, Carruth, Dowling, Ayo and E. D. Martin.

Moved by Dr. Carruth, seconded by Dr. E. D. Martin, that the matter be referred to a committee of five, and that the delegates from this body to the A. M. A. be a part of this committee, and that they report back to the next annual meeting. Carried.

The names which had been recommended to the Council for membershp having been approved by that body, were voted on as a whole, and Drs. Lafferty, Irwin and Shaw were declared elected members of the Society.

A resolution to the A. M. A. by Drs. Chassaignac and Graner was read. Moved and seconded that same be adopted as read, and a copy sent to the A. M. A. Carried.

Moved by Dr. Seemann, seconded by Drs. Martin and Dupuy, that hereafter a copy of the reports of officers, Councilors and committees be furnished the Secretary thirty days before the annual session, and printed copies be furnished the House of Delegates at the first session.

Moved by Dr. Wm. M. Perkins, seconded by Dr. Dupuy, that a new charter, constitution and by-laws be printed as soon as there is money in the treasury not otherwise appropriated, and that a copy be sent to the members, with parts of the constitution and by-laws relating to ethics printed in italics. Carried.

Meeting adjourned to May 5, 1910, at 10 a. m., all business to be suspended at 11 o'clock for nomination for officers.

(To be Continued Next Month.)

Parish Medical Society Meetings.

East Feliciana Parish Medical Society.—The regular October meeting of the above Society was held in Clinton, at the office of the Secretary, Dr. R. P. Jones, October 5. Owing to the bad weather, the attendance was not as full as usual, only fourteen members being present. Dr. Carroll W. Allen, of New Orleans, was the special guest for this meeting, and his paper on enlarged prostate was not only enjoyed by all present, but discussed by every member. This Society adopted the plan of having some visiting doctor present at every meeting, which not only adds interest to the meetings, but stimulates the members to attend. Drs. Chas. McVea and Tucker, of Baton Rouge, were present at this meeting, and helped to enjoy the usual good dinner provided for the Society at the Rist House. Before adjourning, a resolution was adopted congratulating Mayor Roux on the passage of the milk inspection ordinance as recently passed by the city fathers of Baton Rouge.

Medical News Items.

Meetings.—The Tangipahoa Medical Society met in Independence, La., Oct. 12. Several scientific papers were read and discussed, after which an invitation to dinner was extended by Dr. W. T. Newman to the members of the Society.

The Southwest Medical Society will hold its fall meeting at Springfield, Mo., Nov. 3 and 4.

The fourteenth annual convention of the Association of State and National Food and Drug Departments will be held Nov. 29 to Dec. 2.

The railroad surgeons of the Seaboard Air Line met in Birmingham Oct. 1. There was a large attendance.

A conference of hookworm experts met in Richmond, Va., Sept. 27-29. Dr. Oscar Dowling, President of the State Board of Health, represented Louisiana.

First Charity Bed in the Presbyterian Hospital.—The first charity bed in the Presbyterian Hospital has been named in honor of the late Charles Weiss. This has been presented by the widow and children of Mr. Weiss.

New Orleans Lying-in Clinic.—A lying-in clinic for the poor has been established by Dr. Edith Loeber-Ballard and Jacob W. Newman. A better motherhood—a more intelligent maternity, for a better and happier humanity, summarizes all the objects of this new medical charity.

The New Orleans College of Pharmacy opened its session last month. Dr. Philip Asher, Dean, reports an enrollment of about seventy students. The college opened its session in its own building, 1602-6 St. Charles street, recently acquired.

Graduation of Nurses at the Touro Infirmary.—Eleven nurses graduated at the Touro Infirmary on Oct 1, in the presence of a large assembly. The opening address was delivered by E. V. Benjamin, president of the Touro Infirmary. Mayor Behrman then addressed the graduates, and Rev. I. L. Leucht presented the diplomas to the eleven young ladies. An address was also delivered by Dr. M. Feingold, who spoke in the place of Dr. J. D. Weis. The graduates were: Misses Margaret H. Bauman, Nellie Casey, Carrie C. Harris, Peytonia L. Howell, Leodosia R. Hyams, Lenore J. Ryan, Mary Lou Ruffin, Maude Vula Schilling, Kate Levis Steen, Eliza Weiss and Josephine C. Williams.

Atlanta College of Physicians and Surgeons.—Announcement is made of the receipt of a gift of $50,000 to establish and equip laboratories of histology, physiology and embryology. Dr. Harry S. Bachmann, of Philadelphia, has been elected professor of physiology; Dr. Justin F. Grant, of Morgantown, W. Va., professor of embryology and histology, and Dr. W. W. Funk, of Philadelphia, has been appointed adjunct professor of bacteriology.

The University of Arkansas.—An agreement has been reached by which the medical department of this university, located at Little Rock, is to become more closely affiliated with the university at Fayetteville. The first two years of the course will be given at Fayetteville and the last two years at Little Rock.

Valuation of Property of the Charity Hospital.—A valuation of $1,280,000 has been placed on the property which comprises the real estate of the Charity Hospital of New Orleans, according to a statement submitted to the Board of Administrators at a reecnt meeting.

Sand-Fly Cause of Pellagra.—Dr. Sambon, a British medical expert, in charge of a commission sent to study pellagra in Italy, where the disease is endemic, has announced his belief that he has finally discovered the cause in a species of sand-fly.

The Mississippi Medical Examining Board had seventy applicants before it last month and only twenty-six passed.

The Pharmaceutical Board of Mississippi passed twenty-six of forty-eight applicants to practice pharmacy in Mississippi.

The Mississippi Legislature of 1910 passed a law for the prevention of the spread of tuberculosis. This will make it the duty of all practising physicians in the State to report any and all cases arising to the Secretary of the State Board of Health.

Lectures at the American Medical College, St. Louis.—Dr. T. D. Crothers, of Hartford, Conn., editor of the *Journal of Inebriety,* will deliver a series of lectures on "Alcohol" and on "Drug Addiction," before the students of the American Medical College of St. Louis. These lectures will be given Dec. 8-10, 1910, and will be open to the public as well as to members of the medical profession.

The Kansas City Medical Index-Lancet will be merged with the *Medical Herald* on Jan. 1, 1911.

Ether Day at the Massachusetts General Hospital.—Exercises were held at the Massachusetts General Hospital on the sixty-fourth anniversary of Ether Day, on Oct. 15, 1910. An address was delivered by Dr. George W. Crile.

Personals.—Dr. W. M. McGallard has returned to Donaldsonville, after spending several months in California.

Dr. J. J. Castellanos has returned to the city, after spending the summer in St. Tammany parish.

Dr. J. H. Kellogg, of Battle Creek, Mich., delivered a lecture at Crowley recently, entitled "Are We a Dying Race?"

Dr. Robert R. Harsh has been elected inspector of the meat and milk supply of Mobile.

Dr. Fred J. Mayer, former special medical inspector of the Louisiana State Board of Health, of Opelousas, sailed from Galveston, Texas, on Wednesday, Oct. 5, as a special medical inspector of the

State Board of Health of Texas, for the purpose of inspecting various ports, looking towards the possibilities of minimizing quarantine restrictions.

Dr. Geo. S. Kreeger has been elected president of the Lake Charles Board of Health.

Dr. J. J. Ayo, of Bowie, La., was recently in the city for several days.

Dr. P. T. Talbot is making a tour of the State in the interests of the State Board of Health.

Dr. W. H. Robin has been elected secretary of the City Board of Health, to fill the vacancy caused by the death of Dr. Sidney Théard.

Drs. Paul Reiss and R. M. Van Wart have returned from Europe.

Removals.—Dr. A. A. David, from Pitkin, La., to Effie.

Dr. F. L. Duckworth, from Dumas, Ark., to Monticello.

Dr. Paul L. Tipton, from Blytheville, Ark., to Senath, Mo.

Married.—On Oct. 12, 1910, Dr. Rozell McGlathery, of Oil City, La., to Miss Margery Frances Lloyd, of Chicago.

Died.—On Oct. 1, 1910, Dr. William H. Riley, of New Orleans.

On Sept. 29, 1910, at Columbia, Miss., Dr. J. R. Berry, aged 54.

On Oct. 6, 1910, at Lake Charles, La., Dr. Temple Smith, aged 41.

On Oct. 9, 1910, at Monroe, La., Dr. C. B. Johnston.

Obituary.

The committee appointed to prepare resolutions relative to the death of Dr. A. J. Pennington beg to submit the following:

Dr. A. J. Pennington was born October 26, 1847, in Madison County, Mississippi, and died in Gibsland, La., April 26, 1910, aged 62 years and six months. Graduated in medicine from Alabama Medical College at Mobile, Ala., March, 1878; practiced at Decatur, Miss., until December, 1890, when he removed to Haughton, La., where he practiced till 1895, when he moved to Gibsland, where he established a large and lucrative practice, which he continued until his death.

Dr. Pennington possessed many and noble generous traits of character; was a physician of more than ordinary judgment and skill, a friend to medical organization, and an active member of the

Bienville Parish Medical Society; was enterprising, both as a physician and a citizen; modest, unassuming. His conduct was honorable and upright in all the relations of life. He was held in the highest esteem by his colleagues, and in a financial way had succeeded beyond the average physician, and, withal, was charitable and just to a fault, and in his death we feel that the Bienville Parish Medical Society and the profession of the State have sustained a great loss.

Therefore, be it resolved, That in the death of Dr. Pennington the Bienville Parish Medical Society has lost an honorable and valuable member, and the State an enterprising and useful citizen.

Resolved, further, That a copy of these resolutions be furnished the family of Dr. Pennington, and also the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for publication.

Committee: F. M. THORNHILL, M. D.
J. M. MOSBY, M. D.
W. W. TIER, M. D.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

Education in Sexual Physiology and Hygiene, by DR. PHILIP ZEHNER. The Robert Clark Co., Cincinnati, 1910.

The aim of this little book is to show to parents and others in authority the importance of giving proper and timely instruction to the young in hygiene and sexual matters. It consists mainly of talks to school children of both sexes and to college boys, hence is intended mainly for lay readers and is a valuable book for them. In addition, it can serve as a good guide to physicians who may be called up to address children on these subjects, and serves a further good purpose in making physicians realize it is their duty to impart such knowledge whenever consistent.

C. C.

Eye, Ear, Nose and Throat. WOOD, ANDREWS AND HEAD. The Year Book Publishers, Chicago, Ill., 1910.

This small volume, Number III., of a series of ten, consists of abstracts from the most recent literature pertaining to diseases of the ear, nose and throat. Being intended primarily for the general practitioner it would be a very useful addition to his library, and assist materially in keeping him abreast with the times.

LYNCH.

The Practical Medicine Series. Under the general editorial charge of Drs. Gustavus P. Head and Charles L. Mix. *Gynecology,* Vol. IV. Edited by Drs. Emilius C. Dudley and C. von Bachelle. Published by the Year Book Publishers, Chicago.

This series of books no longer needs an introduction to the medical profession. For a number of years they have been recognized as one of the standard annual reviews of all the branches of medicine and surgery.

The scope of Volume IV. contains an excellent review of the gynecological literature of the preceding year, to which the editors have added numerous notes presenting their personal views.

The entire series is published primarily for the general practitioner. At the same time the arrangement in several volumes enables those interested in special subjects to purchase only the volumes they desire.

Miller.

A Manual of Obstetrics, by A. F. A. King, A. M., M. D., LL.D. Published by Lea and Febiger. Philadelphia and New York, 1910.

This is one of the best known manuals on obstetrics published. The author has occupied a leading position among teachers and practitioners for many years and his volume intended originally for students has grown by successive editions to be not only a work for the classroom, but an excellent reference medium for the busy practitioner who wishes to review the essential points of obstetric practice.

Dr. King now presents the eleventh edition. Among the important additions to the present revision may be mentioned pubiotomy, spontaneous version by position, and the factor of thigh pressure upon the abdomen, considered as one of the auxiliary forces of labor. The section on hyperemesis has been rewritten.

The general scope of the work remains, as from the first, elementary, the main object being such brevity and simplicity of statement as might be easily intelligible to all students. Miller.

The Practitioner's Case Book. Interstate Medical Journal Co., St. Louis, Mo.

A book for recording and preserving clinical histories. A mistake that most practitioners make is not to record the interesting cases they come across, for there is nothing so really pleasant than to read reports of cases for the man who is a-going in the harness. Most practitioners claim they have no time. Yet, they find time to keep their accounts. The book presented, here, shall obviate much of the drudgery in case-taking. All headings are already printed and the filling of the blank spaces is quickly done. The detachable diagrams, showing regional areas for the markings of physical signs, are remarkably handy, a time-saving device. The only slight criticism we ask to make, here, is that in the chapter History, the past history paragraph, should be allowed more space in the next issue. For instance, from our own records, we take a case of syphilis under intensive treatment for persistent headache connected with iritis and synechiæ, detected by the specialist and shown by him. Not yielding to antisyphilic treatment alone, and beginning to yield only when the local, mechanical treatment (Atropin, Dionin) was combined with the specific. Now, this is so important a *past* that it required space enough to be distinctly written and legible. Again, a case of general arteriosclerosis may have an important past covered by dyspepsia, bronchitis, œdema of the lungs, cardaic asthma with or without rheumatism, amnesia, anemia, circulatory trouble in limbs, preceding and connecting with the past a final cerebral hemorrhage, the present trouble, etc.

This case book will help the practitioner who is not a privileged

visitor of hospital wards. If he has a stout heart and much cheerfulness, let him seek the tenement house practice, and he shall find there material enough to fill his case book without the annoyance of hospital officialism. A privileged few come there in real contact with the patient and really are at liberty to learn much on that account. France, we are told, is the only place of medical importance where the file and rank of the students still come in actual contact with the patients in hospital wards. The *stagiaire* in France who is not an official, sees more of a case than the *famulus* in Germany, who considers himself a very privileged person if allowed to take the temperature and count the pulse. The French students handle the "*feuille d'observation,*" and learn much when taking records.

We heartily recommend the Practitioner's Case Book. E. M. D.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1910.

Anatomy, Descriptive and Applied, by Henry Gray, F. R. S. Eighteenth Edition thoroughly revised and re-edited, with additions, by Edward Anthony Spitzka, M. D.

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Progressive Medicine, edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D.

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J. B. LIPPINCOTT & CO., Philadelphia and London, 1910.

International Clinics. Volume III., Twentieth Series. Edited by the leading members of the medical profession throughout the world.

The Surgery of Childhood, Including Orthopedic Surgery, by De Forest Willard, A. M., M. D., Ph.D.

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Symptomatic and Regional Therapeutics, by George Howard Hoxie, M. D.

THE YEAR-BOOK PUBLISHERS, Chicago, 1910.

The Practical Medicine Series, under the general editorial charge of Gustavus P. Head, M. D., and Charles L. Mix, A. M., M. D. Volume V, *Obstetrics,* edited by Joseph D. De Lee, A. M., M. D., with the collaboration of Herbert M. Stowe, M. D. Volume VI, *General Medicine,* edited by Frank Billings, M. S., M. D., and J. H. Salisbury, A. M., M. D.

THE ALTHURIANS, New York, 1910.

Never-Told Tales, by William J. Robinson, M. D.

HARVEY PUBLISHING COMPANY, Cincinnati, 1910.

Diagnosis of Syphilis, by George E. Malbary, M. D.

THE NEW ENGLAND NEWS COMPANY, Boston, 1910.

"*World Corporation,*" by King C. Gillette.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.

FOR SEPTEMBER, 1910.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	7	6	13
Intermittent Fever (Malarial Cachexia)	4	1	5
Smallpox			
Measles			
Scarlet Fever			
Whooping Cough			
Diphtheria and Croup	2	3	5
Influenza			
Cholera Nostras	1		1
Pyemia and Septicemia	1		1
Tuberculosis	24	39	63
Cancer	17	5	22
Rheumatism and Gout	1	2	3
Diabetes	2		2
Alcoholism			
Encephalitis and Meningitis	4	1	
Locomotor Ataxia	3		3
Congestion, Hemorrhage and Softening of Brain	17	10	27
Paralysis		2	2
Convulsions of Infants			
Other Diseases of Infancy	10	4	14
Tetanus	1	7	8
Other Nervous Diseases	5	1	6
Heart Diseases	34	32	66
Bronchitis	2	5	7
Pneumonia and Broncho-Pneumonia	10	9	19
Other Respiratory Diseases	5	3	8
Ulcer of Stomach	1		1
Other Diseases of the Stomach	3	2	5
Diarrhea, Dysentery and Enteritis	28	13	41
Hernia, Intestinal Obstruction	4	1	5
Cirrhosis of Liver	7	2	9
Other Diseases of the Liver	3	3	6
Simple Peritonitis	1	1	2
Appendicitis		2	2
Bright's Disease	21	21	42
Other Genito-Urinary Diseases	7	6	13
Puerperal Diseases	6		6
Senile Debility	11	4	15
Suicide	10	3	13
Injuries	20	17	37
All Other Causes	18	9	27
TOTAL	290	214	504

Still-born Children—White, 27; colored, 28; total, 55.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 12.79; colored, 24.38; total, 16.21.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.02
Mean temperature 80.00
Total precipitation ..... 4.91 inches.
Prevailing direction of wind, southeast.

New Orleans Medical and Surgical Journal.

VOL. LXIII. DECEMBER, 1910. No. 6

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

An Interesting Neurodermatological Case.*

By H. E. MÉNAGE, M. D., New Orleans.

The patient I take pleasure in showing you to-night I was invited to see by Dr. Bruns about three years ago in the Eye Department of the Eye, Ear, Nose and Throat Hospital. She is 19 years of age and the fourth child of a family of six. Her mother died when she was quite young, and she, with the other children, was placed in an orphanage by the father, who left the city to go West, and was heard from only at long and irregular intervals. The father is a confirmed alcoholic, and an individual reputed to be of violent temper. One sister died of tuberculosis. The patient left the orphanage a little over two years ago and has been living ever since with two unmarried sisters, one of whom works out to supply the family needs.

After long and repeated examinations I elicited from the patient herself that she had tried to cross the Grand Divide by the tincture opii route on two different occasions. Her menstrual periods are

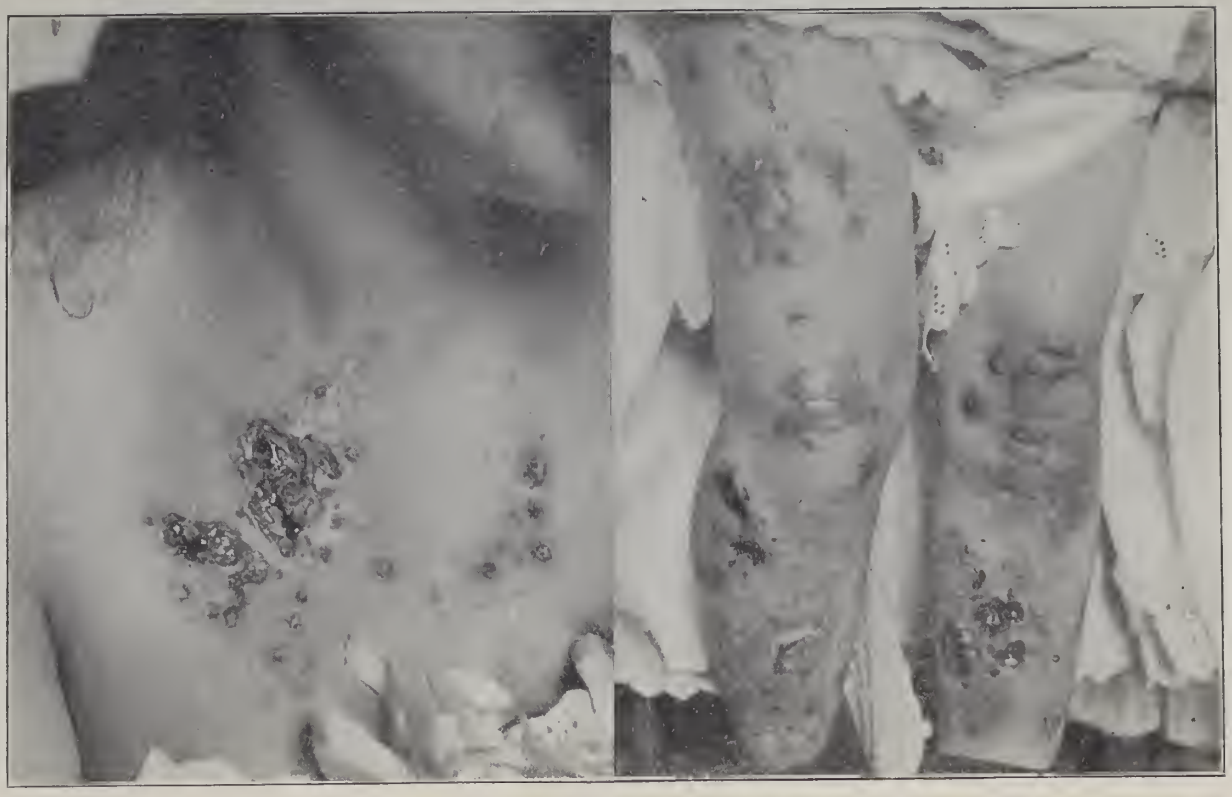
* Read before Orleans Parish Medical Society, September 26, 1910.

very irregular, having stopped on one occasion for over one year. When seen during the month of May, last year, at the request of Dr. Bruns, she presented ulcers on the lower lids and lesions of the conjunctivæ, which apparently had resisted, in a great measure, all lines of treatment. The lesions would improve, almost get well, then suddenly, without known cause, become as bad as ever, if not worse. A tentative diagnosis of tuberculosis of the lids was suggested, but subsequently proven incorrect by the negative tuberculin test applied, I believe, by Dr. Calmette himself, during a recent visit to New Orleans. As subsequently observed, the ulcers proved to be the result of spontaneous circumscribed and discrete gangrenous patches; the process being complete in an incredibly short space of time. The first crop of the lesions which you see on her body made its appearance about November of last year, above and below the right knee. When I saw them, perhaps twenty-four hours after their appearance, they consisted of large, deeply-seated, irregularly-shaped areas of coal-black, hard, gangrenous skin, surrounded by little or no inflammation. The outline, although irregular, was clean-cut and appeared to have been stamped. There were no especial subjective symptoms, no febrile reaction, and no general disturbances of any kind. The patches measured in size, irregularly, from a split pea to one two and one-half by two inches. In the course of time the sloughs separated, leaving clean, deep-seated granulating ulcers, which appeared quite healthy, similar to some you may still see present elsewhere on the body. Within a short time, probably two weeks, after the first series, appeared another on the left leg, in about the same relative location and having the same characteristics, except in configuration. From that time to this date the patient had been under observation, more or less constantly, and new lesions have been seen to develop on almost all accessible parts of the body; none, however, quite as severe as in the first and second outbreaks.

A critical analysis of this most interesting case forces one to place it in the category of the so-called hysterical gangrene, spontaneous gangrene of the skin, disseminated gangrene of the skin, and dermatitis factitia or artefacta. The diagnosis I made is hysterical gangrene, but of the self-inflicted type, as differentiated from the spontaneous class. Although I am not able, unfortunately, at this time, to say how and with what the patient causes these

Case of Dermatitis Artefacta From Carbolic Acid.

Illustrating Dr. Menage's Article.



Case of Hysterical Gangrene *vs.* Dermatitis Artefacta.

lesions, or whether the injury is caused with premeditation or unconsciously during a period of somnambulistic or subconscious personality, I believe the study of other cases will bear me out in my theory of this one.

This paper was prepared only to be able to present this case, and not with a view of reconciling various opinions and dissensions on the subject of hysterical gangrene of the skin, nor whether all cases of hysterical gangrene of the skin are artificially produced, with the cause and reason evident to the observer at the time of observation.

It may not be amiss, here, however, to show you the attitude of some of the men who have studied the question, to quote the concluding paragraph of Towles' article on "Gangrena Cutis Hysterica," published in November, 1907, in the *Journal of the Cutaneous Diseases.* He studied four of his own cases and reviews the literature of ninety. Also I may offer the discussion of Dr. Pernet's paper, "The Psychological Aspect of Dermatitis Factitia."

Dr. Towles' article:

"If we now consider this detailed analysis and comparison of the cases of artificial and of spontaneous origin as a whole, the similarity of the two groups is so striking in every essential that we may draw the following conclusions:

"1. We canont distinguish clinically between the cases of known artificial origin and those of unknown or so-called spontaneous origin.

"2. This clinical similarity justifies us in the belief that the cases of unknown—*i. e.,* spontaneous—origin are due to the same causes as the cases of known origin. The burden of proof lies with those who deny this.

"3. The hypothesis of an artificial production, without positive proof, is no more doubtful than any diagnosis, say of pneumonia, without an autopsy."

Discussion of Dr. Pernet's article:

"Dr. White: Contrary to the view taken by Dr. Duhring, he believed that these patients should be regarded as responsible for the lesions until they were proven innocent. No certain rules should be laid down regarding them; each case had to be judged on its own merits, and we had to consider all the minute details pertaining to the patient—his history, his character, the appearance of the lesions, their contour and localization, etc. The speaker said he recalled two cases where two surgeons cut out a supposed area of gangrene, which proved to be purely artificial.

"Dr. Hyde: After thanking Dr. Pernet for bringing up this interesting subject, said he thought that he and his colleagues had collected notes of about twenty-five similar cases that had come under their personal observation. He was much interested in the suggestion that an altered personality may have something to do with the development of these lesions. The lesions were usually associated with hysterical stigmata, and in many instances the artificial character of the lesions was so apparent that, in their dermatological features, they could not be mistaken for anything else, and this in spite of the patients' denial that they were self-produced. In all his experience, Dr. Hyde said, he had failed to secure a confession of such a fact, and there was usually nothing but abuse for the physician who made the diagnosis, instead of a compliment for his ability. The speaker said that it had been his experience, in these cases, that the moment a certain lesion was pronounced factitious it seldom after reappeared. Serious mistakes were at times made in failing to recognize the true character of these lesions, especially from a surgical standpoint. He could recall a case of the amputation of the index finger for supposed gangrene, followed subsequently by a second operation. The patient was a novitiate in a Roman Catholic institution, and she finally admitted to the Mother Superior that she had produced the lesions herself.

"Dr. White: The contour of the lesions in these cases of factitious dermatitis was usually unlike any other form of skin disease. When we had to deal with lesions of the skin which were square in outline, or otherwise of unusual shape, we had grounds for believing that they were of artificial origin. He had not found the neurologists very helpful in the diagnosis of these cases. Hypnotism had been tried upon them, but the patients did not confess. When told that they were suspected of producing the lesions themselves they failed to come back, preferring to go to some one else, who did not understand them as well.

"Dr. Stelwagon: Had never been able to avoid the conclusion psycho-sexual element, and he was inclined to agree with the view generally held by neurologists that hysterical stigmata were frequently founded on a sexual basis. He recalled two cases belonging to this group. One was reported by Dr. Schwab, a neurologist, and himself, who, after thoroughly studying the case, came to the conclusion that it had a sexual basis.

"Had never been able to avoid the conclusion that all the so-called hysterical eruptions were self-inflicted. By carefully covering the affected parts, the eruption promptly disappeared. and, upon the suggestion that it would appear elsewhere, the lesions would invariably occur at the site suggested.

"Dr. Towles was firmly convinced, with Dr. Pernet, that the psychological aspect of this subject should be more fully appre-

ciated. These patients, as a rule, were exceedingly cunning and skillful, and it was not surprising that the physician, who was working in the dark, should not be able to detect the method by which the eruption was produced. Because we could not find the cause, we could not say that it did not exist. The most serious opposition to overcome was to induce the people to believe that these self-mutilations were possible.

"Dr. Hartzell: Had seen a fair number of these self-produced eruptions, and he had found it very difficult in most instances to detect the patients, as they were extremely cunning in their ways. He could corroborate what Dr. Gotthiel said in regard to the value of an occlusive dressing, and he recalled one case where factitious lesions on the forearm rapidly disappeared after the application of a silicate of soda bandage. In other cases of extensive necrosis of the skin of the leg, which was regarded as of neurotic origin, the patient was detected in the act of substituting the urine of a diabetic for her own. These patients should be looked upon as mentally, rather than physically, ill. They mutilated themselves because they could not help it."

In conclusion, gentlemen, I wish to thank you for the privilege of showing you this example of a most interesting and baffling class of neuro-dermatological diseases.

Intra-Capsular Fracture of the Femur, with Reference to Treatment with the Maxwell-Ruth Apparatus.*

By URBAN MAES, M. D., New Orleans.

The comparative frequency of intra-capsular fractures of the femur has led me to look for some statistics as to the occurrence of this injury. Stimson's collected figures place the number as one-sixth of all fractures; and Eisendrath, in his series, taken from the reports of the Boston City Hospital, states that one-third of all fractures in people past seventy are of this variety. Judging from these facts, we have to deal with a rather common injury, which, in the elderly, is probably the most serious of all bone injuries, excepting those of the cranium.

The cause is often, or usually, some trivial injury, such as tripping, a slight fall or stepping down a step. In fact, the trivial nature of the accident has led Scudder to believe that the fracture precedes the fall in some instances. As predisposing factors, we have the normal fragility of bone in the aged, and the angle formed

* Read before Orleans Parish Medical Society, September 26, 1910.

by the junction of the femoral shaft and head. This latter varies considerably, but is usually about 129 degrees. Many authors (Stimson, Linhart, Reidinger) mention the strain on the ligaments in extreme positions of the limb as a frequent factor.

It may not be amiss to mention some of the principal points in the diagnosis. I may say there is no fracture which has been more studied, and which gives more classical signs, making the diagnosis easy in most instances. Dislocation on to the dorsum of the illium is easily distinguished by the characteristic attitude and the inversion of the foot in a rigid position. The recognition of all fractures, from the trochanter to the head, excepting the very rare fractures of the head, may all be taken together. Fractures of the head are so very infrequent (there being only fourteen cases on record, according to Eisendrath) they need not be considered. Fractures with impaction may not be discovered without a good skiagraph.

In a patient past fifty, the history of a sudden fall, with severe pain, inability to stand, and eversion of the foot, makes the diagnosis almost certain. To confirm, however, there are several signs and measures which make the condition unmistakable. To enumerate in order of importance, we have as confirmatory evidence:

1. Allis sign. This is a relaxation of the fascia lata above the trochanter, due to the changing angle, or what may be called a traumatic coxa vara.

2. Displacement of the trochanter above Nelaton's line. Normally, the trochanter is just below this line.

3. Alteration in Bryant's triangle, which is normally a right angle triangle, its base being formed by Nelaton's line.

4. Different measurements from the symphisis pubis to the trochanters (Morris measurement).

5. Loss of parallelism between a line drawn from one anterior superior spine to the other, and one connecting the two trochanters (Chiene's lines).

6. A good skiagraph will give us exact information, but good skiagraphs of this region are hard to get.

The title of this paper refers more particularly to the apparatus devised by Prof. Maxwell, and later perfected by his colleague. Prof. Ruth; so I shall have but little to say about some of the other suggestions made, which may be given as follows:

1. The Liston splint, combined with extension, and the internal short splint, this latter being of great advantage, and insisted on by Prof. Matas.
2. The plaster spica, encasing the leg below the knee.
3. The Thomas hip splint, modified by Ridlon.
4. The Maxwell-Ruth apparatus.
5. The Hodgen splint.
6. The Downey table and plaster.
7. Operative measures.

With such a variety to choose from, we may be puzzled as to which to select. After having tried, or having seen tried, all of the above, my conclusion, from my last two cases treated by the Maxwell-Ruth apparatus, is that we secure the best results from this, with least discomfort to the patient, and certainly there is less risk of the usual complications, viz.: decubitus ulcers, and hypostatic pneumonia. Besides these, we have the advantage of having the fragments in as good apposition as by the Whitman position of extreme abduction and flexion, and doing away with the vicious function of the psoas muscle, which seems to be the cause of fibrous union obtained in so many of these cases. This muscle (the psoas) plays directly over the seat of fracture, and forces a part of the capsule between the fragments, thus preventing accurate apposition. Dr. Ruth has shown us that bony union is perfectly possible under favorable conditions, even in advanced age, and has secured ideal results in his series of cases.

The requisites of the Maxwell, or Maxwell-Ruth plan, consist in making traction in two directions—the longitudinal traction overcoming the shortening and counter-traction at the line of the highest point of the iliac crests, to overcome the vicious function of the psoas muscle. As found most serviceable, the steps of the procedure are as follows:

1. Buck's extension is put on in the usual way.
2. The thigh is flexed at right angles to the trunk, so as to displace the psoas muscle.
3. A short internal splint (binder's board) is now put on, extending from the crotch to the knee. A sling is put around this, to which is fastened a weight (sixteen pounds, for the average adult). This sling is fastened to a rope, which runs on a pulley, which latter has been made fast to the bed on a line with the iliac

crest. This maneuver is to overcome the interposition of the psoas. Traction at this point should be sufficient to overcome eversion, and to make the trochanter of the injured side as prominent as the sound one.

4. The leg is now extended, and the extension applied with the same weight as used in the counter-traction.

5. Counter-traction is made by the patient's weight. The bed (a single iron one being preferred) is tilted to overcome the tendency to slip to the foot of the bed, and is also tilted to prevent the patient being drawn in the direction of the counter-traction on the injured leg. This makes the bed a doubly-inclined plane, the highest point being nearest the foot of the injured leg.

At the end of two or three days the patient can move about pretty freely in bed, can sit upright, and is very comfortable as a whole. This extension is kept up three to four weeks, and then massage and passive motion begun.

One of my patients was a 200-pound man, 68 years old, and was walking with the aid of one crutch in six weeks, and at the end of two months came to my office, using only a cane. The second patient was 87 years old and had a good functional result, but in this instance it took considerable time to overcome the atrophy of disuse. In neither case was there any shortening.

I wish to express my thanks to Prof. Matas, who very kindly referred both cases to me.

The Ciliary Muscle and Accommodation.

By T. J. DIMITRY, M. D., New Orleans.

This article is written with a desire to convey to the general practitioner some information that may not be generally understood by him, especially when one realizes that it is only in the last few years that the student receives instruction on the eye. The selection of the heading of this article will not appear clear to many; the choice was made so because the ciliary muscle and accommodation is so little understood. A knowledge of the function of the ciliary muscle and an ordinary smattering of physics makes it easier to grasp the entire optical system of the eye, and to understand much that is unknown to many.

The eye is much like a camera, with the purpose in view of having a distinct image of an object formed on the sensitive plate,

"the retina." With the camera, the focusing is carried on by means of the "focusing lens" in the front of the camera, that is movable backward and forward, or is occasioned by a change in the position of the sensitive plate. This, in the camera, appears to be very simple, but those who have had experience realize that

a picture, in most cases, is only made under certain difficulties, one reason or another being the cause for an imperfect picture, such as an improper exposure, a lens not perfectly spherical, the quality of the glass, etc. But the camera can always take a picture, though a poor one; so it is with the eye, that we can

very often see, with most of the defective conditions of refraction, but it is with difficulty, and sometimes indistinctly. This diagram that I have attached gives one a fair idea of the anatomy of the eye, and shows clearly the subject of my remarks. I here show the sclera; it forms the external elastic capsule of the globe, and its connective tissue sheaths ramify in it. The choroid, next, lines the posterior section of the eye, and extends from the ora serrata to the aperture for the optic nerve. The choroid concerns us most on account of the great number of blood vessels contained therein, as well as to the quantity of pigment. The next layer is the retina; it is a perfectly transparent membrane and of a purplish-red color. It is the retina that is provided with the nervous mechanism that so strangely accepts an image formed on it, and, by the nerve fibres contained, transmits this strange impulse created to the brain. One can easily appreciate that the desire is to have a perfect image formed on the sensitive retina.

The cornea is a transparent refractive medium; it forms, as it were, the window to the eye, and is the continuation anteriorly of the epithelial layer of the conjunctiva, of the sclera, and possibly a part of the choroid. It is convex, and has a refractive power of 40.5 diopters, or its equivalent of one inch focus.

Iwanoff first described the ciliary muscle, and when an antero-posterior section is viewed, even under slight magnification, one can readily see the muscle fibres, which we divide into three groups. The outer is the meridional or longitudinal layer, which runs parallel with the sclera; these fibres seem to arise from the cornea-sclera border, at the root of the iris, and run backward, and become continuous with the choroid at and beyond the ora serrata. The second layer, designated the radial fibres, are situated more interiorly; their origin is the same as the meridional layer, but in passing backwards the fibres spread out very much like that of a fan, towards the center of the eye.

The thickness of this layer varies somewhat in the errors of refraction. The deeper layer is known of as the circular fibres, and it is spoken of as the muscle of Mueller. This circular muscle, when viewed in cross-section, appears as so many points, and in the physermetropic eye this portion of the muscle is more developed, while in the myopic eye, especially of the higher degrees, it is entirely lacking (Iwanoff). Mueller thought that the latter layer

formed a true sphincter, but this is readily disproved. These three groups of fibres, which we designate the ciliary muscle, regulate the accommodative changes of the crystalline lens, and I feel assured contribute more to our comfort, health and enjoyment than any other muscle in the body.

The Zonular of Zinn are those little fibres that extend from the ciliary body to the lens; they are the bridles of the lens, and when the muscle changes its action it relaxes or contracts, causing the lens to change its curvature, for it is believed that the lens is an elastic body, and as soon as these fibres are relaxed the anterior surface will become more convex, according to Helmholtz.

The mechanism of accommodation has been a disputed scientific question for many years. Accommodation can be accounted for by an increase in convexity either of (1) the cornea (2) of the lens. Increase of the length of the globe could accord, and for accommodation, two other hypotheses that are theoretically impossible—that is, an advance of the entire lens or a contraction of the pupil. If the lens did advance, and admitting that it touched the cornea, it would not explain any amount of accommodation.

That accommodation is not occasioned by any change in the curvature of the cornea was demonstrated by Thomas Young when but 27 years of age. His experiment consisted of putting the eye under water and holding close to his eye a weak objective of a microscope, which possessed nearly the same refraction as the cornea; both being under water eliminated the refractive power of the cornea and was replaced by that of the objective. In his experiment, the amplitude of accommodation remained the same. Accommodation is not effected by an elongation of the globe, but, when the crystalline lens is removed, there remains no accommodation.

The emmetropic, or, one may say, the normal eye, provides that, during rest, parallel rays of light should focus on the retina. To have parallel rays one must be at an infinite distance, and twenty feet or more is so considered. The normal dioptric apparatus—that is, the cornea, the aqueous, the crystalline lens and the vitreous—provide for a focus on the retina; but this focus is only for parallel rays, but, if an object is brought nearer than infinite distance, the rays are no longer parallel, but divergent, and should the dioptric apparatus remain the same the focus

would be behind the retina, and one would thereby see very indistinctly, as through a circle of diffusion.

The crystalline lens can increase the curvature of the anterior surface, therefore adding to its dioptric power and accommodating a focus at all times on the retina, just as we see the use of the delicate thumbscrew on the microscope allowing a focus for different objects on the slide.

The function of the lens is to assist (when at rest) the other refractive media in focusing parallel rays on the retina, and when the object is nearer, and the rays are not parallel, it performs that function of accommodation, which condition is said to be occasioned by a change in its curvature.

Thomas Young (1801) first demonstrated that accommodation was occasioned by an increase in curvature of the crystalline lens. Nearly a century elapsed before his great treatise "Mechanism of the Eye," was understood, and before we came to know as much as he. The crystalline lens is a bi-convex body, and by its own inherent elasticity (Helmholtz) provides for a change in the curvature of the anterior surfaces. The lens very readily shows its structure after submitting it to hot water for a few moments; the laminæ which make up the lens bend over its edge like the layers of a flattened onion. This lens substance is held together by a fibrous capsule, and it is the capsular membrane that these fine, transparent fibres, that come from all parts of the ciliary body, are attached. These fibres are known of as the Ligament of Zinn.

Tscherning does not agree with Helmholtz in the elasticity of the lens. He speaks of a lens substance and a nucleus, the lens substance having the consistency of gum, and can very readily change its form, while the nucleus cannot. The outer layer he calls the accommodative layer, and, as age advances, the accommodative layer diminishes as the nucleus increases, and with it the amplitude of accommodation disappears. It is not my desire here to discuss the different views of accommodation, but may mention that the one mostly accepted is that of Helmholtz. There lurks in my mind the possibility of the Tscherning theory as the correct one.

The difficulty that Young had in demonstrating accommodation depends upon the fact that the ciliary muscle, which consists of non-striped muscular fibres, was not discovered till forty-five years

after the explanation offered by Young. In 1846 Bowman and Bruecke, in the discovery of this muscle, gave great impetus to the further study of this subject. All agree that accommodation is due to an effort on the part of the ciliary muscle.

Astigmatic accommodation has been discussed for some years past. It was Debrowolsky who first expressed the opinion that astigmatic patients could partly correct their defects by producing a deformity of the crystalline lens in a contrary direction by an irregular contraction of the ciliary muscle. George Bull does not admit of astigmatic accommodation. The hypermetrope needs accommodation, even for distant vision; that is, much more the case for seeing nearby. He may be said to be always dragging about with him a deficit in his accommodation, namely, the quota of the latter necessary for the correction of his hypermetropia—a deficit which caused him to tire quickly when doing near work (Asthenopia). The overstrained muscle gives way and the eye then ceases to be properly focused. With these continued attempts at accommodation, pain in the eyes is created, and more especially in the forehead, and headaches. This condition is dependent upon an exhaustion of the ciliary muscle, and are hence comprised under the name of Asthenopia accommodativa to distinguish them from Asthenopia muscularis and Asthenopia nervosa.

A cycloplegic, such as atropin, when instilled into the eyes, will temporarily paralyze the ciliary muscle, and thereby put the eye at rest. When under the influence of this drug there can be no accommodation, and it is with this most reliable cycloplegic that we obtain the latent refraction. All calculations in the fitting of glasses for those under thirty years should only be corrected after atropin has been instilled, for it is only then that we possess a true information as to the refractive condition of the eye. The substitutes for atropin only add to the opprobrium of lack of exactness of medicine, while ophthalmology can be made, under objective and subjective tests, well nigh an exact science. One may compare atropin and its substitutes to the difference between exact and appropriate methods.

In conclusion—the ciliary muscle and accommodation provide as the possible illogical cause for many reflex conditions that are now classified as neurotic, and that the ciliary muscle contributes more to our comfort, health and enjoyment than any other muscle in our body.

Louisiana State Medical Society Proceedings.

Edited by Publication Committee.
Dr. Joseph D. Martin, Chairman, 141 Elk Place, New Orleans, La.

Dr. Isidore Cohn read a paper entitled

A Case of Thoracic Aneurism Treated by Occlusion of the Common Carotid and Sub-Clavicular Arteries with Aluminum Bands.

The surgical treatment of diseases of the vascular system has received great attention during the past seventy-five years, and especially do we note great improvements in the methods of handling aneurisms.

In Dr. Rudolph Matas' masterly monograph (1909) we find the following: "The only aneurisms that remain in the absolutely non-surgical category are those of the thoracic and abdominal aorta, especially those which occupy the trans and sub-diaphragmatic segments of the artery."

Luiga Porta, in 1846, attempted partial occlusion of arteries with diachylon plaster. As an outcome of this idea, Halstead suggested the use of metal bands for the purpose of partially occluding the lumen of vessels. The value of the method is well known, and more than a passing mention of some of its advantages would be presumptuous and unnecessary. Our chairman has performed many valuable experiments to test the efficiency of the method, and has given us the benefit of his work in his paper just referred to.

I am indebted to Dr. Matas for the following case, which I have the pleasure of reporting to you:

G. W., negro, aged 41, railroad fireman. Family history was not known to patient. Previous history: He denied venereal infections, but this can be taken with a grain of salt.

Present Illness.—About February, 1909, he noticed a sense of numbness and tingling in his left hand, and an inability to use the hand as freely as formerly. He noticed that he was unable to raise a weight with the left hand. He then noticed a small mass on the left side of chest.

Meager as this history of the onset is, it was all he could tell me.

When I saw him for the first time, on August 4, 1909, he complained that the pain in his chest was becoming more intense, and especially after any exertion. His left arm had then become practically useless; he had also noted a sense of coldness in the left arm and hand. I was able to elicit from him that he had had no difficulty with vision, hearing or swallowing. He had a slight cough and hoarseness, which he told me had become progressively worse.

Patient, when seen, showed a tumor about the size of a hen's egg, situated in the region of the sternum, at the junction of the second and third ribs, just to the left of the median line. The tumor was soft and fluctuating and pulsating with a distinctly expansile character, which left no doubt of its nature, and indicated extensive erosion of the ribs and sternum in the region occupied. The point of maximum cardiac impulse was not demonstrable, the whole organ being displaced downward and to the right, bringing the apex behind the sternum. Cardiac pulsation of a feeble character was present in the fourth and fifth interspaces on each side of the sternum, also in the epigastric region. In fact, by percussion, the heart was shown to occupy a median position in the chest. The sounds were feeble and no murmurs heard.

The examination revealed no pupilary differences, and nothing of interest was noted by inspection of the neck. Inspection of the thorax revealed a pulsating semi-spherical tumor occupying the first and second interspaces, and the intervening space made by the erosion of the second rib, on the left of the sternum. The greatest impulse of the heart against chest wall was seen slightly to the right of the sternum.

A marked difference in the surface temperature of the two arms was noticed, the left being much colder than the right. The left arm was dry, as compared to the right. The left radial pulse was more easily compressible than the right. This same difference was noted in the two carotids.

PHYSICAL EXAMINATION.—*Auscultation:* No murmurs nor bruits could be heard over the tumor. During deep inspiration a "tracheal tug" could be heard over the left common carotid (Thrill).

Dr. Feingold made an examination of the eye grounds, and found nothing to note. His examination of the larynx revealed a paralysis of the left recurrent laryngeal nerve and an adduction of left vocal chord.

The radiograph demonstrated the outlines of the transverse thoracic aortic dilatation very well.

As it was entirely through the courtesy of Dr. Matas that I had the privilege of operating the case, his ideas were adhered to as nearly as I could. The operation, August 21, was a simple one. It consisted merely in the exposure of the common carotid above the omohyoid muscle, and there applying the metal band, and next exposing the subclavian in its third position, and in a similar manner applying the aluminum band.

N. B.—Before administering the anesthetic the patient was put in the Fowler position and tourniquets were applied over both femoral arteries. The patient was kept in this position until, during the operation, the pulse became weak, and then one tourniquet was loosened, after which he improved steadily. After operation the arm was well wrapped in cotton, and hot-water bags were applied.

Had there been evidence of cerebral disturbance, or disturbance of the left arm due to circulatory insufficiency, I could have removed the bands without difficulty, and circulation would have been re-established without any trouble, as has been proven by Halstead, Matas and Allen.

Fortunately, no interference was necessary, as will be seen by notes taken subsequent to operation.

August 22. The hand was warm; he was able to move the hand and arm freely; there were no sensory disturbances. He had some difficulty in swallowing. Pulsation in tumor was unchanged.

August 23. No difficulty in swallowing.

August 26. Wound dressed; primary union. Pulsation in mass was less; the mass seemed to have become more diffused.

He seemed to improve steadily; the mass at times seemed to stop pulsating almost entirely; the pain disappeared entirely. He regained the use of his arm.

History Subsequent to Operation.—About three weeks after operation he had an elevation of temperature, rapid pulse, dyspnea, cough, and a quantity of bloody sputum.

On physical examination I found dullness over left base posteriorly. I made a diagnosis of pneumonia, and treated him accordingly. However, after a few days, he had another rise of temperature, with the recurrence of the same symptoms as before.

Then I examined the sputum, and tubercle bacilli were found. His pulmonary symptoms have rapidly and steadily become worse.

On November 19 he had a violent coughing spell, at which time he spat up a large quantity of blood. He was relieved by morphin, one-fourth grain.

The mass is smaller at present than at the time of operation. The pulsation is less marked; he has freer use of his arm than formerly, and has been able to sleep better.

Later he had a coughing spell, at which time he had a pulmonary hemorrhage and death followed almost immediately. Autopsy was done next morning by Dr. Gurd.

PRIVATE AUTOPSY.—(Performed by Dr. Gurd in Negro hut.) Service of Dr. Cohn:

Name, George; age, 42. Twelve hours' post -mortem. Body is that of a well-developed, poorly-nourished negro. Marked rigidity, moderate lividity of the dependent parts. About the left side of the neck, above the clavicle, are several scars, apparently the result of surgical incisions.

Upon opening the abdomen there is 8 c. m. of sub-cutaneous fatty tissue.

Peritoneal cavity contains about 300 c. c. of clear straw-colored fluid. Parietal peritoneum is sparsely studded with small, pin-head sized grayish nodules, which are easily removed. The peritoneum surrounding the spleen is adherent to that organ, dense, fibrous tissue bands. The parietal peritoneum covering the liver is similarly densely adherent.

Thorax upon the left side, 5 c. m. from the mid-sternal line; the second rib is eroded. There is a resulting prominence, semispherical in shape, measuring about 4 c. m. in diameter.

Upon opening the thorax, this prominence is seen to be the anterior portion of a dilatation of the transverse arch of the aorta. Upon further examination, it is seen that there are two separate and distinct aneurisms of the aorta—one situated on the anterior wall between the origin of the left common carotid and left subclavian, with the result that these two vessels are separated at their origin by about 7 c. m., also that the left common carotid has its origin very close to the innominate.

The anterior sac is of the nature more of a diverticulum than a dilatation. The communicating opening measures 3 c. m. in

diameter. The sac itself is practically filled with old and new ante-mortem thrombi.

The second sac is situated upon the posterior wall of the transverse and descending arch. The communicating opening is ovoid in shape, measuring about 6 c. m. in its axis. This sac is almost entirely filled with blood clots.

The left common carotid is obliterated about 7 c. m. from its origin by a metal band, 6. 6. c. m. in width. Beyond this band the lumen of the vessel is entirely obliterated, being filled with a homogenous, somewhat jelly-like, brownish material.

The left subclavian, at the point at which it crosses the first rib, is also obliterated by a similar band, which, however, has a shaft 2½ c. m. in length. The subclavian beyond the point of obliteration appears normal.

Heart.—The heart is normal in size, and of good color and consistence. The epicardium and endocardium are normal.

Lungs.—The right lung is studded everywhere with fresh, grayish nodules of tuberculosis. The upper lobe, behind, is largely made up of a large cavity containing evil-smelling, purulent material. The wall of the cavity is somewhat ragged, apparently made up of dense fibrous tissue.

Bronchial lymph nodes contain tuberculous nodules.

Spleen.—Weight, 120 gms. Negative.

Liver.—Weight, 1,800 gms. Normal in color; increased in consistence. The surface is covered with numerous fibrous tags. There are also several small radiate scars.

Cut surface is somewhat browner than usual. Lobules moderately distinct.

Gall bladder and bile ducts, negative.

Kidneys.—Normal in size and color. Somewhat firmer than usual in consistence. Cut surface shows a slightly decreased cortical band; otherwise negative.

Stomach and Intestines.—Negative.

Pancreas.—Negative.

Adrenals.—Negative.

Genito-Urinary System.—Negative.

Anatomical Diagnosis.—Aneurism of the aorta; acute and chronic pulmonary tuberculosis; obliteration of the left common carotid and subclavian (operative); chronic interstitial nephritis; tuberculous peritonitis; healed syphilis of the liver.

Clinical Note.—Patient was operated upon four months ago and the vessel obliterated, as described, with the hope of promoting coagulation in the sac. Since then he has apparently been somewhat better, with regard to the discomfort arising from the aneurism, but has gradually failed as the result of his tuberculous lesion.

CONCLUSIONS FROM OBSERVATION OF THIS CASE.—1. Rapidity with which collateral circulation was established after occlusion of the third portion of subclavian and common carotid.

2. The relief of pain resulting from the operation; the apparent diminution of blood through the aneurism, as evidenced by diminished amount of pulsation.

3. The metal bands do not act as irritants.

4. The ease with which bands could be removed if the indication should arise.

5. In view of the fact that the patient was relieved of his annoying symptoms due to the aneurism, and that he finally died of tuberculosis, it seems that we should more often make an effort to relieve, surgically, these apparently hopeless medical conditions.

I wish to thank Dr. Bickham for his kind assistance; Dr. Allen for the metal bands used on the case, and Mr. E. C. Samuels for assistance and the excellent radiograph presented; also Dr. Gurd for the thorough autopsy.

DR. LEVIN read the papers of DRS. A. L. LEVIN and W. J. DUREL, New Orleans,

Tubercle Bacilli in the Blood.

Students of tuberculosis have been stirred to excited judgment ever since DR. R. C. ROSENBERGER, a little over a year ago, read his paper before the Pathological Society of Philadelphia, giving birth to a new bacteriemia theory of tuberculosis. Prior to his announcement there was a well established fact that in a certain class of cases, such as acute miliary tuberculosis, primary tuberculosis of bones and deeply seated organs, the blood was the primary medium of conveying the disease, harboring tubercle bacilli in very small numbers, but it was not demonstrated as yet that in every case of tuberculosis the microscopical examination of

the blood should be the first aid in recognizing the disease even before the physical signs and symptoms could be detected by the expert clinician. Such a contribution to medical science, when every physician could easily detect the greatest affliction of humanity in the very incipiency and by proper advice and treatment arrest the progress of the disease, naturally aroused the greatest interest among investigators all over the world. Since then, we frequently read in the medical literature very discouraging results reported by different observers. In fact, all the reports which have reached us so far, are negative in the majority of cases. Dr. Rosenberger's positive findings in every case in a series of (300) three hundred cases were explained by Durham, Lyon and Brem to be duc to the presence of the so called "water bacilli" of an acid fast character present in contaminated solutions and stains,—the latter mistaken for tubercle bacilli. This was demonstrated when the smears were made by the addition of a trace of albumin. The whole subject scemed to us of such great importance and interest that we could not play the role of mere onlookers, and notwithstanding the difficulties we have encountered we are able to report on a series of 25 cases in a period of 8 months.

In every one of our 25 cases the clinical findings were unmistakably those of tuberculosis, sputum examinations positive, classifications—from incipient cases to far advanced stages. In obtaining the blood from patients we have deviated from Rosenberger's method by using arterio-venous blood, making an incision into the thumb which was previously rendered aseptically clean, letting then 5 c. c. of blood flow into a sterile tube containing 5 c. c. of a O. 2 sodium citrate solution to prevent coagulation. After centrifugalization of the blood the serum was removed with a pipet and smears on sterile cover glasses were made from the blood sediment. The hemoglobin was washed off after fixing the smears by heat, according to Rosenberger's method. Some specimens were left with the hemoglobin partly washed for the sake of comparison, and then stained by the same method as sputum is stained for the finding of T. B. The previously pipetted blood serum was then added to the residue and from 2 to 5 c. c. injected intraperitoneally into a guinea-pig. Fourteen guinea-

pigs and two rabbits were thus treated to make sure that if our faulty techinique was the hindrance in finding the T. B. in the smears,—if Rosenberger's bacteriemia theory of tuberculosis is nearer to a truth than being a mere theory—the injected animals should develop some form of tuberculosis and succumb to the disease. One guinea-pig, for control, was injected intraperitoneally with 2 c. c. of positive sputum obtained from one of the patients in the 4th clinical stage, and 5 c. c. of blood from the same patient was injected into another guinea-pig for comparison.

The results of our painstaking labors were as follows: Seventy-two out of 75 slides examined very carefully did not show anything which resembled the tubercle bacillus; only three slides in which the hemoglobin was not thoroughly washed off showed a stained reddish streak which somewhat resembled the tubercle bacillus. This we could explain by the staining of the shrunken red blood corpuscle. That is, the shrunken corpuscle retained the stain and somewhat resembled the T. B. Yet, by moving the objective field, this difference could be easily noticed.

The guinea-pig inoculated with the positive sputum showed symptoms of phthisis on the sixth day after inoculation and succumbed to the disease on the fourth week. The autopsy showed that almost every organ was in a state of tuberculosis; the left lung showed several cavities, the liver, spleen, kidneys, mesenteric glands and peritoneum were all a mass of maliary tubercles. The other guinea-pig injected with suspected blood from the same patient was killed after six weeks. This autopsy with those of the other animals injected with blood and killed showed absolutely negative findings.

The experimental work, carried on in Dr. Durel's laboratory, goes to show conclusively, that at present, in spite of the respect we feel toward Dr. Rosenberger, as a scientist and investigator, his contribution, in reference to finding of tubercle bacilli in the blood in every case of tuberculosis by a simple method of blood examination is far yet from being an established fact, and we would hesitiate to advise our confreres to make use of that method for diagnotic purposes for the sake of the suffering humanity, unless Dr. Rosenberger will enlighten us a little more on that subject.

Dr. E. L. McGehee, Sr., New Orleans, read a paper on

Value of Tuberculin in the Treatment of Tuberculosis.

This study has brought aid in understanding the reaction of the animal tissue to a tuberculous infection, but in this day when medical research rests upon a firm foundation much is being done to clearly establish the value of specific treatment of tuberculosis. The tubercle, man's greatest enemy, as a unit has much in its structure, reaction and transformation that interprets the resisting mechanism of the body cells.

Tho we are yet only on the threshold of the knowledge of immunization in our present light, stress must be laid on leucocytes and lymphoid tissue as changing during immunization by which a more vigorous defense is presented to invading bacilli. The large mononuclear cells which seem chiefly concerned in the process of immunization are probably derived from the endothelial cells of the lymph and blood vessels. These are directly stimulated at point distant from infected area by the hypodermic injection of tuberculin.

Tuberculin susceptibility is apparently a phase of immunity and may exist according to Von Behring without the presence of tubercles, owing to functional alterations in the lymphatic tissues and endothelium of arteries and serous membranes. Eye inoculations in immunized rabbits in Trudeau's 93 experiments, resulted in massive leucocytosis and more marked congestion than in control eyes and with eventual healing. Such is the latest explanation as to the action of this active toxin.

The evident destruction of the bacilli by the leucocytes points to a lytic function in the cells since the serum alone fails to reveal it.

It is presumable then that so long as the susceptibility lasts there is hightened phagocytic power. Whether at the same time a tolerance is developed for toxins is doubtful.

A satisfactory degree of protection may be considered established only when no general disturbance, no local caseation or cachexia follows the death of inoculated bacilli.

Essence of the explanation for immunity phenomena given recently by Von Behring, viz.: "The assimilation and transforma-

tion of the antitoxin by certain chemical groups in the body cells which have an affinity for allied groups in the bacilli."

In the actually diseased individual but little impression is made in the cells outside the aggregation about the tubercles until the malady has progressed to an advanced stage, then increasing resistance may seem to be developed gradually and lead to arrest or chronicity of the disease, such immunity sometimes comes too late to save life.

But by influencing the cells outside the tubercle artificially (Hypo. of tuberculin) during favorable stages of the disease one has the best rationale for the use of immunizing tuberculins, as introduced by Koch and Von Behring.

Surely it can be demonstrated that tuberculin increases the agglutinins and precipitins in the serum of the blood. It is a power developed in blood of animals, injected with bacilli or extracts of same, of agglutinating and precipitating. Its function seems to be to localize the infection. Its significance in tuberculosis is like in typhoid, but does not seem necessary to immunity. By this laboratory test it is claimed that the progress of the case may be determined.

Antitoxins have been sought that would kill the bacilli or overcome its poison ever since tuberculosis was discovered. The study of the pathology shows the impossibility of attacking the germ through the blood, it is encased in a caseous matter, with few if any blood vessels, but to find a substance that can be borne by the blood or lymph stream, that will antagonize the bacillus in lymph stream (for those encased in tubercule are not harmful) is the basis of immunity.

Chemistry does not furnish the agent; for germicides that will kill the tubercles in the blood would destroy the host.

Much has been done to try and separate the beneficial substance from various preparations of tuberculins, precipitates, filtrates and emulsions and removing those capable of injuring the patient.

Dosage.—The age of tuberculin delirium, as Virchow dubbed the heroic dosage of Koch, original tuberculin (O. T.), has passed. It would be just as wise to discard strychnia because death by large doses is inevitable. Tuberculin, like strychnia, is a potent poison when used injudiciously. Though the errors made in the begin-

ning of administering tuberculin gave this form of treatment a serious set-back, owing to Trudeau, Von Ruck and Goetsch in Germany, many tuberculins are to-day widely used. The object in all tuberculin work is to free tuberculin of its dangerous constituents and to preserve its usefulness; as yet the results do not show a fixed product constant in composition and effect, but valuable scientific research is being done. In the emulsion, made by grinding the tubercle in with crystal agates for six months, until every tubercle has been crushed, a more powerful and reliable product is found and contains all the toxin which may prove prophylactic, is the hope of the future.

Tuberculin is made with culture fluid of tubercule bacilli or both culture fluid and tubercle bacilli. It has long been held that if a more virulent toxin could be obtained from the tubercule bacilli or from its culture fluids, immunization would be more probable. Among the many varieties of tuberculin preparations used clinically the old tuberculin of Koch and its dilutions stand out prominently. Also Von Ruck's watery extract (with which the writer is more familiar having spent some time in his laboratory in Asheville, N. C.). Here the tubercles are first washed with water then the fat is extracted by filtration, with hot alcohol and ether. The residue is placed in water at a temperature of 50 c. agitated daily for six months, when the extract is then standardized and beginning with minimum doses by hypodermatic introduced into suitable subjects with the result of increasing their resisting power.

The tuberculin obtained from sputum is mixed with other bacteria, hence to obtain pure tuberculin a guinea-pig is inoculated and after several weeks a slice of liver or other viscera studded with T. B. is used to infect culture medium.

Administration—Subcutaneous injections of proper dilutions render the intravenous, oral, inhalation, and the dermic methods entirely unnecessary.

In the words of Lawrason Brown: "He who fails to consider that tuberculin is a most potent poison is a dangerous man, carelessness may be equivalent to homicide."

The smaller the dose to begin, the better, so there will be no reaction; susceptibility varies. Some patients react at one time

and not at another. Careful individual treatment is needed. Initial subcutaneous doses of tuberculins most frequently used 0,000,001. C. C., final dose 1/2 C. C., arrived at in six weeks with bi-weekly injections; many do better with one dose a week, for reaction may not come on for 60 hours. It is wise to give injections in afternoon as rise of temperature is not probable before 12 or 18 hours. I have noticed a case at the Louisiana Anti-Tuberculosis League Clinic that may be considered organic reaction in the bleaching in an old lupus growth in cheek as we increased the tuberculin as per enclosed scale.

TABLE OF DISTRIBUTION.

TUBERCULIN TREATMENT.

First dose.....	1/10	Milligram,	equals	15	M. Tuberculin	Sol.	No. 4
Second dose ...	1/ 5	"	"	30	M. "	"	" 4
Third dose	2/ 5	"	"	6	M. "	"	" 3
Fourth dose ...	1	"	"	15	M. "	"	" 3
Fifth dose	2	"	"	30	M. "	"	" 3
Sixth dose	4	"	"	6	M. "	"	" 2
Seventh dose ..	8	"	"	12	M. "	"	" 2
Eighth dose ...	16	"	"	24	M. "	"	" 2
Ninth dose	32	"	"	5	M. "	"	" 1
Tenth dose ...	64	"	"	10	M. "	"	" 1
Eleventh dose..	128	"	"	20	M. "	"	" 1
Twelfth dose..	256	"	"	40	M. "	"	" 1
Thirteenth dose.	500	"	"	7½	M. O. T. Undiluted		

In administering tuberculin, notice for personal symptoms of tolerence, viz. slight headache, pain in limbs or back faintness, insomnia and fatigue in advance of febrile reaction. If a greater rise of temperature than 100 or 101F. medication should be omitted for several days and dosage reduced. Temperature must be normal for at least five days before tuberculin is used. If tuberculin is the cause of the rise of temperature, will be after 6th or before 60 hours.

Marked tubercular immunity can be obtained in the majority of patients. This does not mean immunity to tuberculosis. Tuberculin is not an anti-toxin but a toxin, hence tuberculin immunization is active, not passive. The struggle seems closely connected with the cells where the tuberculin sets free from the cells about the tubercle sufficient toxin of digested T. B. to produce reaction when tuberculin has completed its work by giving an immunity to tuberculosis toxin.

Every effort should be made to improve the patient, rest, air,

food and stop the fever before resorting to the use of tuberculin. Some do well with tuberculin where temperature is 99° to 100°F. A persistently high pulse is a contradiction to use of tuberculin.

Tuberculin treatment retards the development of the disease in its earlier stages. "The mental leverage that the needle (Trudeau) treatment gives will sometimes carry anxious intelligent patients over rough places." This is a factor of no little importance.

Korezynski and Petruschky and Von Ruck and other competent observers believe the improvement is more permanent with tuberculin; relapses are less frequent; Napleness and Betruschky hold that patients that have been treated with tuberculin can marry without risk. The prophylactic value has the endorsement of Sabi, who recommends it in members of phthisical families and Dr. Seliro Von Ruck used it on his only child, who was born in Winyah Sanatorium (exclusively for tuberculosis), because of environment, though both the parents are entirely free from tuberculosis.

Conclusions.—1. It is from hygienic-dietetic treatment, coupled with judicious, specific treatment, used only in suitable cases, that best and permanent results may be expected.

We have learned the dangers and conditions of tuberculin therapy.

2—Do not promise positive results.

3—Tuberculin when properly used does no harm in a careful physician's hands.

4—Small doses carefully increased are best. The small doses are accurately graduated by standard firms so that any busy doctor can safely increase the dose to a desired strength.

5—Fewer relapses occur after tuberculin treatment.

6—A larger per cent lose the T. B. in the sputum in a given time.

7—Stationary cases are benefited by the use of tuberculin; that is the exhausted and cachectic whose nutrition is seriously impaired and whose general condition is one of decline, needle treatment should be withheld until there is no temperature and the decline is checked.

The above is the consensus of opinion of those who have most to do with this specific treatment.

Discussion of Dr. McGehee's Paper on Tuberculin Treatment of Tuberculosis.

Dr. S. Von Ruck, Asheville, N. C.: As most of you know, we have had many years' experience in the Winyah Sanitarium in the treatment of tuberculosis with culture products of the tubercle bacillus, beginning with crude tuberculin of Koch in 1891. The disappointment which followed the introduction of Koch's early preparation and the unfavorable results reported were not so much the fault of the remedy, but were due rather to its misuse and lack of experience in its application. With the introduction of better preparations, and a better understanding of the indications for, limitation of, and methods of application, more and more satisfactory results were obtained by those who continue in the use of specific remedies in the treatment of tuberculous affections. In consequence we now possess preparations which are not only of great value, but are safe, even in the hands of those whose experience is limited, and specific medication is again rapidly growing in popularity.

In the treatment of tuberculosis there are two chief indications to be met:

1st.—To increase the patients general resistance to accomplish which we must depend upon dietetic, hygienic, and symptomatic treatment, modified according to the requirements of the individual case.

2d.—To increase the specific resistance. Studies of immunity in tuberculosis in recent years have shown conclusively that the value of tuberculins and specific products of the tubercle bacillus lives in the increase of antibodies in the blood which results from such treatment, or in short, in the production of immunity whereby the organism is protected against extension of tuberculous infection in previously unaffected parts or organs.

Both the improvement in general nutrition or general resistance, and the increase of specific resistance, depends upon the function of the cell, and consequently are intradependent. Thus in patients whose general nutrition is fair and may be improved we find that with the addition of specific medication to the usual methods of treatment, there occurs a progressive increase in antibodies in the blood, to degrees that exceed manifold that which occurs spon-

taneously. We find that the sero agglutinating power, the opsonic index and the specific amboceptor all obtain high values under such treatment, and that the presence of antibodies is maintained many years after the treatment has been completed, owing to the persistence of the cell function in the formation of protective substances against the specific infection. It is for this reason that the results obtained are so much more enduring than when the dietetic and hygienic method of treatment is employed alone.

In the selection of the specific preparation to be employed, the indication is for such as produce bacterial rather than an antitoxic immunity, since in chronic tuberculosis, we are not dealing to any material degree with a specific intoxication. Such preparations are the tubercle bacillus emulsions, and the watery extract which represent the intra-cellular toxin of the bacillus, and *not* tuberculin or its modifications which are derived from the culture fluid upon which the bacilli have grown and which, since they contain but small amounts of cell substance in solution, are capable of producing chiefly antitoxic and but slighter degrees of bacterial immunity.

Dr. Wallace J. Durel, New Orleans: What I wish to emphasize is "that there is no antitoxin for the cure of tuberculosis." Tuberculin is a vaccine, not an antitoxin. Antitoxins have never been separated and found in the blood of the tubercular.

Tuberculins or "culture T. B. products"—act by stimulating and increasing—in the tissue and blood cells—chiefly the polynuclear leucocytes—the formation of antibodies—which, by their chemic actions on the tissue cells and bacilli increase the tissues resistance, and so rids the body cells of the invading host.

A point of interest was brought out by Eisner: "That all tuberculins contain fragments of the tubercle bacillus." This would substantiate the view—"that tuberculin acts by the presence of fragments of T. B.; and not by the action of toxins present in "old tuberculin," etc.

I have been using Koch's bacilli emulsion during the past three years and I must admit that my results have been 10% to 20% better than when I used the "old tuberculin, and the Watery Extract."

I am now making special observations as to the value of the

neutrophile blood picture, relative to the administration of the tuberculins.

I expect by this means, to have an index for the dosage and administration of tuberculins and "vaccines," in tuberculosis.

As for the action and value of the "culture vaccines" in the treatment of tuberculosis,—I will state, as I have already said before: "Tuberculins" or "vaccines" form the reenforcing treatment of tuberculosis."

"Diet, rest and open air" form the basis of the treatment of tuberculosis.

One (diet, rest and open air) treatment is the regular army force; and the other (tuberculins, vaccines, creosote, etc.), is the army reenforcement, the latter necessary in most cases to win the battle to victory. Best results are gotten by combining these forces, i. e. by the diet, rest and open air treatment, with the tuberculin-vaccine and creosote treatment.

DR. MCGEHEE (in closing): I wish to assure the general practitioners they need not fear tuberculin in suitable cases, since its dosage has been so well regulated by reliable manufacturers.

It is not claimed as a panacea for all cases, but seems to make improvement more permanent. Not like arsenic or quinin in malaria, does not cure all cases, when used properly, but is one of the means of increasing cell resistance in treating tuberculosis.

DR. HAMILTON P. JONES, read a paper entitled

Report of a Case of Acute Articular Rheumatism, Following Diphtheria, Cured by the Use of an Autogenous Vaccine.

T. S. W.—White male, 42 years of age, married, father of one child. Weight, about 168 pounds; height, 5 feet 10 inches. Had the usual disease of childhood. Fourteen years ago was treated by me for an acute attack of muscular rheumatism which lasted six days; there has been no further attack up to this time. General health excellent.

Was attacked by diphtheria the morning of February 1, 1910; on the appearance of the throat, and the smear made from the swab,

antitoxin, 5,000 units, was administered at once. Peroxid of hydrogen, weak solution of formaldehyde, tincture of chloride of iron, etc., were used in gargles and local applications to the throat. The course of diphtheria was the usual one, patient resuming his duties about fourteen days later. The accompanying tonsilitis was severe; large numbers of streptococci and other bacteria of the mouth were found in the tonsilar exudate. The slight soreness of the throat and redness persisted after the recovery from the diphtheria, although patient felt well and active up to February 26, when he appeared at my office complaining of pain in the chest and shoulders. Physical examination revealed heart and lungs normal. Chemical and microscopical examination of urine showed that normal. Throat at this time was rather deep reddish, dusky color, the mucous membrane somewhat swollen and soggy looking; the tonsils slightly enlarged, but containing no debris in the crypts.

February 28, the patient was compelled to take to his bed on account of fever, painful red swelling both knees, and the tarsal and phalangeal articulation of the great toes of both feet. The fever and joint pains continued, other joints being involved in rapid succession, while some of the affected joints returned to normal, as is frequently the case in true acute articular rheumatism.

Under purgation, and alkaline treatment with 15 grains of salicylate of soda every three hours for a few days, hot packs and sweat baths, patient recovered sufficiently to be carried to Hot Springs. Being, however, just barely able to walk with great suffering. Patient remained at Hot Springs for a month, with practically no benefit, and returned to New Orleans April 2, being advised by his physician in Hot Springs, Dr. E. H. Martin, that he should remain there for six weeks longer unless he expected to have his tonsils operated on at once.

Immediately upon his return, patient set in upon what proved to be one of the severe relapses of this attack. At this time his throat symptoms were not so prominent as they had been before his departure, although he still complained of sore throat and there was some redness and relaxation of the structure around the tonsils; tonsils slightly enlarged, but containing no debris in their crypts as was the case before.

Feeling that the tonsils might be the avenue through which the infection was taking place, Dr. Landfried was called in and the throat was carefully examined and treated by him; applications solution of nitrate of silver, 120 grains to the ounce, made to both tonsils by him on several occasions.

After this attack had lasted about four days, I decided to have a blood culture made, which was made for me by Professor Duval, on the 7th of April. Cultural methods applied to this blood showed that patient had a streptococcic infection. An autogenous vaccine was made for me by Professor Duval, and 40,000,000 cocci were injected on the morning of Sunday, April 10.

Patient stated at the time of the withdrawwal of the blood for the test that he experienced great relief, which, however, was only temporary. At the time of the injection all of the symptoms of the disease were in active progress. By Monday morning there was a decided improvement, reduction of temperature, diminution of swelling in joints, which included both shoulders, both elbows, both wrists, both hip joints, both knees, ankles and toes. This improvement was continued, and second injection was given on Wednesday, the 13th of April, when patient was well enough to be up in his room. On the 19th patient came to my office, feeling very well, except for slight pain and stiffness of both shoulders.

This visit to my office seems to have been imprudent, because patient had a return that night of all his old symptoms, and entered on another severe relapse. The former treatment was reinstated, and the treatment of the throat continued.

The third injection of the vaccine, 40,000,000, was given on the 19th of April, but without apparent effect, patient continuing to suffer with his various joints and to have considerable fever.

On the 22nd of April I decided to give him 90 grains of the salicylate of soda in six hours, associated with bicarbonate of soda. This dose was repeated on two consecutive days, but after the administration of the first 90 grains all symptoms cleared up, and the patient now seems to be, after a period of freedom from all evidences of the disease greater than any yet experienced in this attack, on the road to recovery.

His throat has been assiduously looked after and treated, his urine at all times during the attack kept alkaline.

My impression is that the vaccine would have cured this gentleman had it not been for the fact of continuous reinfection with streptococci through the tonsils, and, if the patient had been in the physical condition to withstand the operation for the eneucleation of his tonsils, I think no relapse would have occurred after the first injection of the vaccines. It is contemplated to remove his tonsils, even though he should have no further trouble.

The particular point on which I wish to lay stress is that it is of the greatest importance to determine, if possible, the source of the infection, because it is highly probable that, unless this source should be found and removed, that the vaccines will have only a temporary beneficial effect, owing to their destructiveness, probably on only those bacteria in circulation; the vaccine apparently, certainly in this case, not having any effect upon the bacterial growth in the diseased tonsils.

This case, as reported, is not true to title, but, owing to my momentary enthusiasm over the results of the vaccine treatment, and the shortness of the time before this meeting, I was led into a claim which, as you see, has not been justified.

Discussion of Paper by Dr. Jones on "Treatment of Acute Articular Rheumatism by Autogenous Vaccine."

Dr. Allen, New Orleans: I had a rather mild case of knee-joint disease some two or three years ago which I treated by this method. As I say, it was a mild case, and probably would have gotten well under any other treatment. I have been looking for other cases to try this treatment on, but none have come in.

Dr. Jones (in closing): In reply to Dr. Jacoby, I would say that in these cases of so-called articular rheumatism you do not have any pus formation. The inflammation is found in the tissues surrounding the joints, but there is no pus. It would be a serious thing to aspirate when there is no pus. So far as relieving pain is concerned, it does not make any difference how you do it, so long as you do not give something that is harmful.

DR. CARROLL W. ALLEN, New Orleans, read a paper entitled

Gradual Occlusion and Division of the Aorta; an Experimental Study.

I wish to present to you the results of some work done in vascular surgery in the experimental laboratory of Tulane University during the last two years, as a supplement to the great success achieved by my chief, Prof. Matas, in the same field, as the working out of his ideas and his advice have resulted in the accomplishment of what I present to-day.

By the use of an aluminum band, first used on peripheral vessels in a large number of experiments, we obtained knowledge of what could be done and could be expected from partial and complete occlusion of the arteries, whether temporarily or permanently. We next invaded the abdominal cavity and attacked the aorta. The aorta has heretofore been almost forbidden ground. Some work has been done upon it in an experimental way, but its surgical possibilities are, if I may use the expression, almost unexplored.

Carrel has been signally bold and successful in his experiments in vascular surgery. Abbe has also given us an idea, but in our hands this last did not prove a success.

I could take up much time, and possibly interest you, by relating the various experiments undertaken, but what will interest you more is the presentation of accomplished facts.

As a result of what we have done, I believe that the abdominal aorta can be fairly safely divided below the renal arteries and sections of it removed. This has been accomplished by the gradual occlusion of the vessel by bands, encouraging or forcing the development of the collaterals until their total equals that of the occluded aorta. The danger here is the same in kind, but of a more marked degree, that follows whenever a large vessel is ligated. We raise the intra-cardias tension, if the vessel is of very large size, such as the aorta, and too rapidly occluded, the heart is soon over-distended and arrested in diastole. In some of our first experiments the occlusion was too great, leading to the above condition. Autopsy would then show the heart immensely dilated and all of the larger venous trunks on the right side of the heart distended, evidently the result of regurgitation due to the relative incompetency of the

valves. This is one of the dangers to be avoided. But, by compressing the aorta only to about three-fourths or two-thirds of its original volume the strain is easily accommodated by the heart, the collaterals quickly developing to again restore the normal. Any time after five to seven days a second compression has proved safe, this time occluding about one-half of the remaining column of the aorta.

It has seemed that, after the development of the collaterals has been started by the first interference, the second and third compressions involve less danger. At the third interference, the aorta can then be divided and sections of it removed if desired.

In our work we found that cardiac paralysis from over-distension was more to be feared than gangrene of the parts below, as very little circulation through the aorta was sufficient to keep up nutrition and function until the collaterals could develop. In the human subject, if too great a strain was thrown on the heart, which could be determined by post-operative examinations, the wound could then be opened and the band loosened, as it does not injure the vessel, relieving the pressure above. It is impossible to make the necessary post-operative observations on the dog, and impossible to keep them still; their running around afterwards adds greatly to the danger, both from overtaxing the heart and adding trauma at the point of the band. So, safe rules could not be worked out except as the result of experience.

In the technic of applying the band, we never apply it directly to the aorta, and never open its sheath, but gather around the vessel in the grasp of the band as much cellular tissue from the surrounding parts as possible; this acts as a buffer, or cushion, and prevents direct traumatism from the band. The band, as used about the aorta, is different from that used on the peripheral vessels. Several kinds and shapes of bands were used, but I believe the specimen I present you to-day is the best, as we have never had a hemorrhage where it has been used.

The trunk of the animal I exhibit has the principal anastomoses dissected out, the deep epigastric and internal mammary form an important arch in front, the lumbars above and below anastomose freely, forming arches in the lumbar and abdominal muscles, as well as running forward to join the arch formed by the deep

epigastric and internal mammary; the circumflex iliæ and gluteal vessels also reach up to join these lumbar arches, the total collateral communications equaling the divided aorta.

A resumé of the work accomplished on the aorta below the renals is as follows:

RESUMÉ OF DIVISION OF ABDOMINAL AORTA BELOW RENAL ARTERIES.—Four successful cases, dogs allowed to live three to five weeks after; six deaths, two from hemorrhage, four from infections .

Two successful cases done in three stages, five to ten days allowed to lapse between operations.

Two successful cases done in two stages, allowing same interval between operations.

Deaths.—One hemorrhage at second operation by band cutting aorta during tightening.

One four days after second operation; dog found dead. Autopsy showed abdominal cavity filled with blood. Ulceration had occurred into aorta at upper edge of band.

Two occurred from peritonitis; one after second operation, one after the third operation, at which the aorta had been divided.

One from dog tearing open wound in abdominal wall after third operation, at which aorta had been divided, permitting the escape of a loop of bowel, followed by peritonitis.

One after second operation, from infection and sloughing of abdominal wall.

From the above cases, and experience elsewhere with the aorta, it was found to be just as safe to do the operation in two stages below the renals, at the first operation constricting the aorta to a point that would just permit the pulse to be felt below the band. This did not seem to be followed by any apparent disturbance in the temperature or movements of the hind limbs. After five to ten days the aorta could be safely divided at or near the band.

One advantage in doing this operation here in two, instead of three stages, is that a considerable plastic exudate occurs around the band, matting the tissues together, making subsequent dissections to expose the aorta difficult, and at times hazardous. These dangers and difficulties were much greater where the abdomen had to be entered a third time, instead of trying to complete the division in two stages.

It was found safer and easier, where space permitted, in the second or third stages of the operations, to attack the aorta at a

point just above the last applied band, rather than to attempt to dissect out the band for the purpose of tightening it or to divide the vessel at this point; such attempts, when made, were likely to be followed by hemorrhage. But by attacking the vessel above the mass of adhesions, marking the site of the first band and here applying a second, or, if ready, dividing the vessel here, then less danger attended the procedure.

Autopsies on these animals have always showed an apparent hypertrophy of the heart, but this did not seem to interfere in life with the spirits or movements of the animal. No animal was kept long enough afterwards to determine whether this would subside or not.

No deaths or gangrene resulted from the too rapid interference in the blood supply, except one case done intentionally for the purpose of determining a safe degree of primary constriction. This case does not figure in the series.

One of the above-reported successful cases, done in two stages on an old, mangy and poorly-nourished animal, there was a limp in one hind leg for two weeks afterwards; this cleared up. Otherwise, the successful cases were free from any apparent after-effects.

On the human subject, I would advise the operation in three stages; here you would have more room to work, and, by the better control of your patient after each undertaking, avoid many complicating conditions encountered in the dog.

So far, aneurisms of the common iliac and lower abdominal aorta, as elsewhere along the aorta, have been practically inoperable, and I believe this method offers a fair operative risk on the lower part of the aorta. Thus far, we have not been able to test it on the human subject. There will, of course, be some difference in operating upon diseased arteries in the human subject and upon healthy arteries in the dog, but this will be, no doubt, offset to a great extent by being able to control our patients and keep them quiet, which is impossible in the animal, as well as making the necessary observations on the action of the heart and conditions of blood pressure.

I may say that in a large number of cases in the human subject, probably approaching fifty, when the band has been used on large peripheral trunks, such as the carotids and subclavian, we have

not had a single accident, and some of these vessels must certainly have been diseased.

Of course, the most favorable form of aneurism for any operation is the traumatic. Here we can work on otherwise comparatively healthy arteries, and probably, too, a competent uninjured heart; but where we have, as an underlying cause, a general arteriosclerosis or syphilitic endarteritis, we must approach the case with more caution. The age of the patient must also be considered; it is certainly in this respect fortunate that most aneurisms occur in young and vigorous subjects.

I wish to express my thanks to Drs. F. R. Gomila and Henry Walther for their kind and constant assistance at all times during the past two years. They have been my constant assistants in all work undertaken, and without such ready and willing coöperation the tasks could not have been accomplished.

Dr. Allen (in closing): Practically all these cases were done under local anesthesia. We have found that the band may remain on an artery for seventy-two hours without any bad results. If there is any trouble, you can open up the wound and loosen the band, and no harm results. If they are going to have trouble it will be in twenty-four hours or forty-eight hours, at the outside.

Orleans Parish Medical Society Proceedings.

President, Dr. B. A. Ledbetter. *Secretary,* Dr. C. P. Holderith.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, Dr. C. P. Holderith, Chairman. Dr. Homer Dupuy and Dr. H. D. King.

Meeting of September 26, 1910.

Discussion of Dr. Menage's Paper on Hysterical Gangrene, Etc.

Dr. Dyer (Opening Discussion): It has been my privilege to see this case with Dr. Menage throughout his observation of her. The report is to be noted for the clear detail with which the doctor has related it. During the past few years, Dr. Menage and I

have seen several cases of dermatitis factitia, all of them women. We have had two cases of gangrene of neurotic origin following injury to the nerve at some vital point. The lesions were entirely different from those in the present case—and on this point hinges the opinion that I cannot accept this case as anything else than factitious, the means of the injury as yet undetermined. The only lesions on the whole of affected areas in this case which carry any suggestion of arrangement or lesions occasioned by a natural process, are those on the chest. The close grouping in clusters of what seem to have been herpes argues a resemblance to herpes, or herpetiform dermatitis. The habit of these diseases is different.

Some types of peliosis show grouped vesicles, hemorrhagic and degenerative, due to a nearby injury to a nerve; it may be possible that the more vital injury here may have caused these few areas of real explosion. Early in dermatologic experience I saw a recurrent herpes, following the spinal nerves, and progressively breaking out in one nerve after another. The patient later became violently insane and was placed in an institution. I submit this as a possible argument for the occurence of some of the lesions in this case. That is to say may it not be possible for the psychic influence on the central nervous system, produced by constantly repeated injuries, to create new areas of pure nerve lesions as a sequence of such combined injury and reflex? There is always some hysterical basis and often profound in character.

As a further argument I would submit the demonstrations of Luys at the Charité in Paris, during which he succeeded in producing very distinct hysterical blisters, through suggesting to a hypnotized subject that the supposed irritant substance in a bottle containing plain water would produce such blisters when brought in contact with the skin.

I would like finally to say that the lesions ought always to be studied definitely in these cases, to exclude other conditions, and we should always be willing to accept the simplest and plainest diagnosis, rather than to search for one impossible to prove.

Dr. Gurd: I had the opportunity about nine months ago of seeing the interesting case presented by Dr. Menage this evening. At that time the case was under the care of Dr. Bruns. The

eyelids presented patches of acute gangrenous areas. At first it was thought that it was possible that some organism such as the B. aerogenes capsulatus might be the cause of the lesion.

I employed aerobic and anaerobic cultures of various kinds, but was unsuccessful in isolating any bacteria which might have been considered instrumental in inducing the gangrene. The purulent conjunctivitis present was due to the ordinary pyogenic cocci. I requested that a portion of one of the lids might be given me for histologic study. If I had been given this tissue it is possible that some help might have been derived in coming to the proper diagnosis. To my mind there is little doubt but that Dr. Menage's idea of the cause is the correct one.

Dr. Cazenavette: Some time ago I was asked by Dr. Menage to examine this patient from a neurological standpoint. I found no hysterical manifestation at the time and no organic nervous disease capable of throwing any light on the peculiar gangrenous areas.

Although vasomotor disturbances are present in hysteria, they never amount to anything serious; and when gangrenous areas are found as in this case even though there may be hysterical symptoms, they are always due to some complicated condition.

Dr. Menage, in closing: My object in showing this case is because it is of a most interesting character. In reply to Dr. De Buys, beg to say that the case is right-handed. Originally, when the diagnosis of a self-inflicted disease was made, I was almost swamped by adverse opinions, mainly because, among the general manifestations the eyes were seriously involved. I wish to add that, in my opinion, and after looking up similar cases, the involvement of an important organ by the injuries inflicted by no means precludes the diagnosis of self-infliction. Again: The inaccessibility of regions involved, although confusing and creating doubt in one's mind, does not argue absolutely against mutilation. If you will notice, in one of the other photographs I sent around, the patient has five marks between her shoulders. She could not reach them with her unaided hand, but applied carbolic acid, as she afterwards admitted, with a stick wrapped in cotton.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

Philanthropy and Disease.

The daily and the periodic press have extensively noticed the recent increase in the endowment for the Rockefeller Institute by $3,820,000, bringing the total to the munificent figure of $8,240,000. Few of the reviewers have grasped the importance of the Rockefeller Institute and some have even appeared critical of the limitations of the institution.

The study of a group of hitherto unknown or uninvestigated diseases closely related to the vitality of the race should alone establish the importance of the Institute. That results in the study have been obtained which in some of the diseases have proven remedial only adds to the glory of the work. What stands out plainly, however, is that private philanthropy has made these things possible.

The governments of Europe have for now a long time reached out after original research and have afforded opportunity and reward for those who succeeded. The evidence is plain in the roster of names of those who have been recognized by notable rewards of merit in Germany and France particularly.

When the American people can see the possibilities of such institutions as the Rockefeller Institute there will be more of them and located at such geographic points in this country that they may serve their greatest usefulness.

The day may arrive when the National Department of Health will be established, but even then it will likely be long before the government can be made to see the necessity for institutions for research, with means enough to carry out such study.

Meantime, those who have fortunes beyond the possible needs of their immediate families and their near descendants should be encouraged to give in such a cause.

New Orleans is naturally situated as one of those geographic

points at which research study may be done and with profit. The constant intercourse with tropical countries, the latitude in which the city itself is found, and the abundant hospital provisions with a multitudinous variety of diseases from the Gulf States, as well as from the countries south of us, all offer the material and the opportunity for the investigation of diseases not found so abundantly elsewhere.

Just as Manilla has come to be the clearing house for the study of exotic diseases (indigenous in the Philippines) so New Orleans should be.

The work is going on now, but the need of larger facilities is pressing and the very interests of the city itself demand that these be enlarged. Some philanthropist, however, must arise among us, broad-minded enough to see and to answer such an obvious appeal and so liberally that his name may stand out as that of Rockefeller must in relation to the study of the prevention of disease.

Cui Bono?

The national Congress will soon meet and it is to be hoped that the Owen bill will proceed to a final passage.

So much newspaper agitation has arisen over this bill that we must pause to comment upon the effort made to show how the organized regular medical profession is creating a trust aimed at government approval and support.

If the medical profession wished to follow its own selfish ends the creation of a Federal Department of Health would be the last thing to be desired. The successful enactment of the Owen bill will tend above all things to reduce disease, to provide for its prevention and to study measures for its cure. More than this, it promises to reduce the need of physicians by controlling many diseases which now need the great army of physicians for their care.

The supervision of all that pertains to the healthfulness of the human being will gradually raise the type to that degree of excellence when the physician in his present capacity will be of no service. For all this the members of the "organized" medical profession is working and their altruism has been attacked upon the

ground that the real object is the control of a system which will provide nice fat positions for the constituted members of the medical "trust."

That day may come, to which we have more than once adverted, when there will no longer be any rivalry among physicians in practice, when all medical aid will be dispensed by a fatherly government, through physicians selected by a senate composed of the most learned, after competitive civil service examinations, and salaried according to rank and service. Such a department of health would be ideal and would for all time do away with the fee bills and the disputed claims of the medico, who has served and failed to collect his due.

Even under these conditions the field is open to all and if the mightier is a "regular" or an "insurgent" member of the tatterdemalion nondescripts organized under the title of "League for Medical Freedom," the best man would deserve the stipend Uncle Sam might pay. Meantime it must require exceedingly shallow minds to formulate the proceeds accruing to any man of any cult or sect who strives for a Federal organization under a proper authoritative head, with the right and with the purpose of improving the state of the human being in the United States upon the same plan of intelligent care under which the Bureau of Agriculture now concerns itself with domestic animals and farm products.

Outlet for Overcrowding.

Now and then the cry is heard that the medical profession is badly overcrowded in this country, especially in the large cities, and it is well known that in the latter there are in the ranks many who are barely making a living. To some such, especially among the young and adventurous, an opportunity is offered by the different missionary societies which are now calling for more than fifty physicians and twenty-six trained nurses for medical work in the foreign mission field, where there are whole regions without a hospital and millions that suffer and die without scientific medical skill or care.

Particulars regarding the work, qualifications, terms, etc., may be secured by those interested from Mr. W. B. Smith, acting candidate secretary, 125 East Twenty-seventh street, New York.

Vital Statistics.

Vital statistics, at their best in this country, in the so-called registration States, are deficient and inaccurate. In some other parts of the United States they are almost lacking, while in many deaths only are recorded with any degree of completeness. We have often commented upon this condition of affairs and argued upon the different phases of the subject, but we are led to refer to the subject again because it was brought out recently at a meeting of the Association for Study and Prevention of Infant Mortality that birth registration was so defective that reliable rates of infant mortality were entirely lacking.

A corrective has been suggested by the Advisory Board appointed by Health Commissioner Lederle, of New York. It consists of the verification of the birth registration of every infant dying under one year of age, in order to detect omissions, and of strict enforcement of a law providing a penalty for an omission to record a birth in every case thus brought to light.

It would be well for our State Board to consider this suggestion when framing a law on vital statistics, and our City Board of Health could easily have it incorporated in a city ordinance, thus enhancing the likelihood of complete birth recordation.

Abstracts, Extracts and Miscellany.

Department of Surgery.

In Charge of Drs. F. A. Larue and P. L. Thibaut, New Orleans.

Ablation of the Hypophysis Cerebri.—Mr. Vœcker, *(Revue de Chirurgie,* October, 10, 1910), in a communication to the German Surgical Society, held this year in Berlin, reports that in January, 1910, he performed a partial extirpation of the hypophysis cerebri with the curette through the nasal route.

The patient, a woman of 30 years, had acromegaly with left-sided blindness. Death ensued on third day. Autopsy revealed an incomplete ablation; the entire left half of the tumor had well in-

vaded the middle cerebral lobe and had not been reached by the curette.

Vœcker concludes that the nasal route is not sufficient and that the Hochenegg combined naso-cranial method would suit best.

In the discussion that followed Hirsch of Vienna said that, under local anesthesia, he had recently opened a cyst of the hypophysis without any disfigurement. He removed, in several sittings, the middle turbiuated bone, curetted the ethmoidel cells, broke through the sphenoidal sinus and reached the hypophysis after resecting the posterior portion of that sinus. The patient recovered.

LARUE.

TREATMENT OF CANCER AT THE SAMARITAN HOSPICE OF HEIDELBERG.—Mr. Czerny *(ibid)* reported having treated at this institution, for the year 1909, 434 cases of malignant tumors. Every form of treatment was applied; radical operations, palliative procedures, fulguration, X-rays and radiotherapy, each according to indications. Notwithstanding all these various methods, he is bound to declare that the only remedy we possess so far against cancer is the radical intervention, timely practiced.

LARUE.

OSTEOSARCOMA OF THE LOWER END OF THE TIBIA FOLLOWING A SUPRA-MALLEOLAR FRACTURE.—Mr. Blanc (in *Revue de Chirurgie,* Oct. 10, 1910), relates the case of a young man, at 42 years, who sustained a supra-malleolar fracture of the right leg in jumping from a carriage.

With classical treatment, union was perfect within two months, with no exuberant or painful callous.

Three months subsequently, a swelling was noticed at the site of the fracture. Incision revealed a sarcomatous fungosity. High amputation was done. Examination of specimen showed sarcoma of central origin, which had perforated the bony walls and invaded the soft parts.

Mr. Blanc incriminated the traumatism as the factor in the development of the sarcoma. The traumatism was severe, the parts prior to the accident were healthy, the location of the growth corresponded exactly with that of the fracture and the comparative quick appearance of the tumor.

Such cases should be reported and published, says Blanc, so as to settle definitely the causation of post-traumatic ossevus tumors.

LARUE.

Suppurative Cyst of the Urachus.—Mr. Arron (*La Tribune Medicale,* July 16, 1910, reported this case to the *Societe de Chirurgie* for Mr. Tricot, Surgeon-Major at Constantine.

A soldier entered the hospital with pain in the subumbilical region. A gradual inflammatory swelling appeared, forming an abscess which opened through the abdominal wall. The probe on being introduced, went behind the recti. On incising the pus sac Mr. Tricot found it lined with a tumefied mucosa, and exploring further down, he ascertained that it was a portion of the urachus. He cleansed it thoroughly with tincture of iodine, opened the peritoneum, resected the urachus in its entirety, separating it from the bladder by means of a circular ligature around its base. He then repaired the abdominal wall. Patient recovered.

Mr. Arron, after commenting on the rarity of such cases, discusses at length the technic to be observed. He prefers to operate in two sittings to avoid peritoneal injection.

How should the bladder be closed after removing the urachus? Should Delageniave's method of burying the pedicle be followed? Arron prefers Tricot's technic and still more Monod's way of resecting a circular piece of bladder at the line of implantation of the urachus to that organ and closing the gap by the ordinary tier sutures. Larue.

Department of Obstetrics and Gynecology.

In Charge of Dr. P. Michinard and Dr. C. J. Miller, New Orleans.

Conservative Surgery of the Pelvic Organs in Cases of Pelvic Peritonitis and of Uterine Myomata.—Clark and Norris present a review of the immediate and after results of 299 cases, together with an extensive review of the recent literature.

The following conclusions were drawn from their study of pelvic inflammatory cases:

1. It is advisable that almost all pelvic inflammatory cases be subjected to a course of preliminary treatment before operation. By this method, some cases will escape operation entirely, while others can be operated on more easily, more quickly, and with less

mortality. A greater number of cases will also be found suitable for conservative operation. If possible four to six weeks of normal temperature and blood counts should precede each operation.

2. If pus be present which can easily be reached without traversing the peritoneal cavity, it should be at once evacuated. In a small percentage of cases, the symptoms may be of such a character as to preclude the possibility of any delay. Accuracy of diagnosis and a careful study of the cases will, however, show that the proportion requiring emergency surgery is extremely small.

3. The end results of salpingostomies are disappointing. Pregnancy rarely takes place, as the newly formed ostii quickly become occluded and cause a recurrence of symptoms.

4. Conservation of a grossly normal tube in the presence of diseased appendages on the opposite side offers good results, especially if a course of preliminary treatment has been followed out prior to operation.

5. Conservation of macroscopically diseased tubes is unsatisfactory.

6. Conservative ovarian surgery offers excellent results provided that the ovarian circulation be not impaired and that the organ be left in a good position. This is strikingly exemplified in our series of forty-eight salpingectomies when one or both ovaries were spared, none of these cases requiring a second operation.

7. In selected cases, ovarian resection offers excellent results. A small amount of ovarian tissue left behind will usually avert the sudden onset of the menopause. The reason many resected ovaries become cystic is because of interference of the blood supply.

8. When it is found necessary to remove both ovaries a hysterectomy should also be performed. Such uteri are useless and often cause subsequent trouble.

9. If it is necessary to remove the uterus, and one or both ovaries can be spared, their preservation will prevent the unpleasant symptoms of the artificial menopause. For although menstruation will cease, the neuroses, which are the worst symptoms of the menopause, will be absent. MILLER.

Department of Internal Medicine.

In charge of Dr. E. M. Dupaquier, New Orleans.

Autoserotherapy—Gilbert's Treatment.—Practical interest attaches to this method; and, while we abstain from growing too confident in its application to other disorders than pleurisy with effusion (namely, ascites of hepatic cirrhosis, cancer and nephritis), we feel sure that in pleurisy it is of value, even if it does not extend beyond the amelioration of one symptom, leaving the initial process, unaffected. Since Gilbert of Geneva originated the plan, twenty years ago (1890), the application of his method has been wide, indeed, and, it has now passed into current practice. Hence the necessity of learning it. We take for guide Marcou's modus faciendi: on the day of the patient's entrance into hospital, as soon as any effusion was suspected an exploratory puncture was made with a 2 c.c. Luer syringe; if the liquid was yellow and transparent, or even hemorrhagic, Gilbert's treatment was put into effect, the only contra-indication being the discovery of a purulent or seropurulent fluid. Whenever the effusion was due to tuberculous pleuritis, influenzal pleuro-pneumonia, typhoid pleuritis, or hydro-thorax, the method was always used, pus alone being barred.

The technic followed was very simple and absolutely painless. Unusual aseptic precautions are not necessary, the only indispensable instrument being an easily sterilized glass syringe. The cleansing of the skin was the same as for any exploratory puncture, and among the 82 cases of Marcou reported about to-day, there was never the least accident. The needle must be long, as in very fibrenous exudates it is sometimes necessary to pass through as much as four centimetres of very thick and hard false membranes before reaching the fluid.

Two cubic centimetres (30 minims) of liquid should be withdrawn, and the needle then brought back slowly without coming out altogether; when the needle's point is felt to be beneath the skin, the syringe should be inclined and its entire contents injected into the subcutaneous cellular tissue. In this way the patient does not need to have two punctures: 2 c.c. (30 minims) of fluid are taken from the pleural cavity and injected into the subcutaneous lymphatic spaces. The needle can then be withdrawn, a slight

dressing is applied, and the patient should remain quiet for half an hour. A second injection should be made in a week.

The immediate subjective results are curious. All patients report relief during the hours that follow the puncture, especially when there had been dyspnea from a large effusion, or much pain, so much so that some patients demand another puncture. Marcou does not think that there is any auto-suggestion about this, as it is too constant a phenomenon.

In favorable cases, which are in the majority, the amount of urine rises suddenly from a few hundred centimetres to over a litre, and this diuresis corresponds to the drop in temperature. (From Austin's Monograph, Paris, on Reports on Autoserotherapy, *International Clinics* vol. iii, 20th series.)

Cacodylic Medication.—Most practitioners are now convinced that in the launching of this arsenical preparation, years ago, a good work ahead had been achieved. We say this, because the Journal was probably one of the first here to publish reports on the subject. And, while syphilis, at the time, had not been included in the list of diseases in which the cacodylate was used (namely: tuberculosis, malaria, anemia, asthma), John B. Murphy has given it a new momentum in its course of usefulness by using it in syphilis, prompted as he was, very likely, by the astonishing workings of "606" and Hectine B.

No one, at the present day, can have an excuse for not administering the cacodylate, since it can be procured now in ampullae (P. D. & Co.) ready for use. In fact, it is a pleasure to note here that information on the subject from local practitioners was asked the Journal through the writer of this note.

While the French preparations such as that of Leprince, among others, may be considered as perfect, it is absolutely correct to use the P. D. & Co. ampullae. E. M. D.

Department of Therapeutics and Pharmacology.

In Charge of Dr. J. A Storck and Dr. J. T. Halsey, New Orleans.

Tuberculine Treatment of Children.—Gouraud concludes from his experience that tuberculin may render great service in the treatment of tuberculous children, but that the best results may

be anticipated in the scrofulous, the children with enlarged glands, in those with inherited taint, and in those with tuberculosis of the bones or glands. He declares that tuberculin should be absolutely rejected when there is any involvement of the lung. The technic should be about the same as for adults except that the doses may be increased more rapidly; frequent intermissions are of advantage. The benefit is most apparent in the weight and general development; the local processes show the benefit more slowly. *Archives de Medecine des Enfants,* Paris.—*Jour, A. M. A.* J. A. S.

Ehrlich's "606" in Syphilis.—Kromayer reports 27 cases. In 3 cases some of the symptoms persisted after the injection and in 5 others there has already been a recurrence. A positive Wassermann reaction became negative in only 25 per cent. of the cases. His experience confirms the rapid reabsorption of the pathologic tissue of the syphiloma and the rapid healing over of ulcerations from the stimulation of the epithelium to proliferation.—*Berliner Klinische Wochenschrift,* Aug. 22, 1907, No. 34. J. A. S.

Remedy for the Pain of Insect Bites.—Maloney describes a treatment which at once relieves the pain of bites from mosquitoes and gnats, and the stings of wasps and bees, all of which produce much pain and discomfort. He has used for some time past iodin, in saponated petroleum (30 to 40 grains to the ounce). A few drops of this rubbed over a mosquito bite act as by magic. The pain from stings is quickly relieved.—*Therapeutic Gazette.*

J. A. S.

The Ehrlich-Hata Antisyphilitic Preparation "606" *(Dioxydiamidoarsenobenzol.)*—While from lack of sufficient data there are as yet few written reports upon the value of this new drug, yet in the discussions of medical societies an ever-rising enthusiasm marks the communications of Wechselmann, Alt, Kronmayer, Pick and Dorr. Neisser, in an open letter to Ehrlich (*Deut. med. Woch.,* 1910, xxxvi, 1212) "can to-day say with absolute certainty that this new drug exerts an extreme, an astonishing action, as well upon the spirochete as upon the products of syphilis." He used a single dose of 0.4 gram diluted in 20 c.c. of saline and given intravenously. The pain is far less than in intramuscular injection. No bad results follow. So far only 10 per cent have shown a disappearance of the Wassermann reaction.

Chreiber and Hoppe have now the most complete series to report

(*Munch. med. Woch.*, 1910, lvii, 1430), 150 cases, of which at least 50 have now been followed for over two months. Technique: As the drug is only stable as a dichloride, it must be made up fresh each time. The single dose, 0.6 to 0.7 gram of the dichloride, is put in a 150 c.c mixing cylinder, moistened with 0.5 c.c of methyl-alcohol, and then well shaken with 10 c.c. of sterile water. Sterile 1.24 per cent. NaOH is now added till after strong shaking very little undissolved residue remains; 3.5 to 4 c.c. more of NaOH is added, the amount made up to 60 c.c. with normal saline, and injected in doses of 30 c.c. into each gluteal region. The injection is very painful. Patients are kept in bed for four days and advised to do little walking for some days. Abscesses have not developed. Intravenous injection of a smaller dose, 0.45 gram diluted to 80 to 100 c.c., has, in 30 cases, proved almost painless and satisfactory. One dose suffices. The general reaction is marked; fever to 102 degree is common, to 104 degree occasional; it lasts but a day or two. No injurious action on the kidney has been noted. Methemoglobin is not formed; there is no neuritis or other ill effects. The primary lesson shows definite decrease in twenty-four hours and spirochetes are usually absent after forty-eight hours. About secondary lesions a well-marked Hexheimer reaction is frequent. In 52 cases in which the Wassermann reaction was positive at the outset, 84.6 per cent had a negative reaction within fifty days, and 92.3 per cent became negative in all. This is apparently not due to any direct action of the drug upon the reaction.—*Am. Jour. Med. Sc.*, September, 1910, p. 451. J. A. S.

Ehrlich's "606" in Syphilis.—Spiethoff states that his experience with 50 cases were all favorable, although the reaction of the drug was rather severe in a number of the patients. In one case, a man of 31, with secondary syphilis, stupor and positive Wassermann reaction had an attack of convulsions resembling an epileptic seizure four hours after injection of 0.3 gm. of the "606," with abolition of the corneal reflex and exaggeration of the knee-jerk. There was no history of epilepsy in this case, but at the age of 14 he had had a period of psychic disturbance similar to the stupor observed before the injection. Spiethoff had a similar experience with a psychosis developing in a patient during a course of treatment with arsacetin—in these cases the brain was evidently the point of less resistance. In two cases he observed sudden total

blindness for a few minutes; one in a tabetic 50 hours after the injection of the "606." In the second case an otherwise healthy syphilitic reported sudden blindness in the right eye and ptosis of the lid, the whole lasting for 10 minutes and coming on eight weeks after the injection. In a few other cases scotoma was noted on the day of the injection. But in all these cases the eye disturbances were briefly transient and never alarming. Tachycardia was also observed in a few cases, but subsided if the patients lay down. The treatment had an unfavorable action in the case of an anemic woman of 28, who was very poorly nourished, and had tertiary lesions in the throat. Three years before she had been treated with atoxyl for the same lesions. An injection of 0.5 gm. of the "606" was made in the afternoon, followed in the evening with 0.01 gm. of morphin. The patient was found dead in bed the next morning. Autopsy showed cicatricial stenosis of the throat and healed gummas in the liver with hypoplasia of the heart and aorta, but no signs of arsenic intoxication could be detected. Ehrlich attributes the death in this case to shock from the local painfulness at the site of injection. Duhot reports an experience similar to that of Taege's summarized in these columns Sept. 24, p. 1154. The infant was transformed under the influence of "606" taken by the mother nursing it. Ehrlich discusses the mode of application of the "606," stating that he has records of 300 cases in which it was given intravenously, while in the three fatalities of which he knows the route was different in each case, intravenous in Grouven's case, subcutaneous and intramuscular in the others. It is possible, he adds, that first an intravenous, followed in 48 hours with an intramuscular injection, thus dividing up the amount, may prove the preferable technic.—*Munch. med. Woch.*, Aug. 30, lvii, No. 35.

J. A. S.

The Action of Drugs and Foodstuffs on Gastric Secretions. —Rodare, in an exhaustive monograph (Volkmann's *"Klinische Vortrage,"* No. 482-4) has brought together the results of clinical and experimental observations on the action of various drugs on the secretion of the gastric juice. These observations have been made by many authors on human patients by using the stomach tube; or, in a number of instances, on human patients with gastric fistulae; and, also, on dogs with the so-called small stomach, as first devised by Pawlow. As a general rule, the conclusions are based on both types of observations, and wherever both dogs and men

have been studied, as to the effects of given agents, the results have been strikingly similar; so that, with some reservations, it seems safe to accept the results obtained with dogs as holding good for men. Briefly put, the more important conclusions are as follows:

C O_2 increases H Cl secretion in stomachs, whether or not there be a gastritis.

Na Cl (½ to 1½% solutions increases H Cl secretion in cases with or without gastritis, provided it be taken about one hour before eating. Taken with meals it exerts a distinctly depressing or retarding action.

Calcium chloride or carbonate and calcium hydroxid (lime water) contrary to widely held views, all strongly stimulate gastric secretion; as do the carbonate and oxide of lithium (1-10 to 1-3% solutions.)

Sodium citrate, in doses of 30 to 60 grains, strongly stimulates the flow of gastric juice, but also excites gastric motility.

Sodium carbonate and bicarbonate, formerly considered stimulants to gastric secretion, are held by all modern investigators to cause a marked delay and decrease of the gastric secretion. This action is greatest when these substances are ingested about one hour before eating.

Magnesium chloride and sulfate and sodium sulfate, the important ingredients of most purgative waters, are also to be reckoned among the depressants to gastric secretion.

Bismuth subnitrate has a slight depressing effect on the secretory activity of normal gastric mucous membrane, but in gastritis, especially in gastritis hyperacida, it exerts a marked inhibitory action.

Of bismuth subtannate about the same is true, but bismuth subsalicylate increases secretion in cases with or without gastritis.

Silver preparations, Ag N O_3 and albargin and protargol act differently in cases with intact mucous membranes, and those with gastritis. In the former cases they cause a marked stimulation of gastric secretion, but where acute or chronic gastritis is present they regularly cause a diminished secretion.

Among the iron preparations the chlorid has an inhibiting action, the sulfate little action either way, while the citrate slightly stimulates H Cl flow.

Escalin,* a recently introduced preparation for which great claims have been made, appears to act about as follows: On normal gastric glands it exerts a really extraordinary stimulation, but when gastritis is present the action is inhibitory. These differences in action of bismuth, silver and aluminum in cases with and without gastritis are considered by Rodari of great practical therapeutic importance.

Among the alkaloids stimulating gastric secretion, morphin and physostigmine do so after a short period of inhibition, dionin and pilocarpine stimulate without the preliminary inhibition.

That morphin stimulates gastric secretion is in direct opposition to views long held by clinicians and pharmacologists, but this contention seems fully sustained by recent investigations by several different authorities and holds good for both human and canine subjects.

Atropin and hyoscin are the only alkaloids with marked inhibitory effects.

Bitters, especially before meals, still hold their place as stimulants to gastric secretion, but it is to be remembered that too large doses depress this secretion.

The exact states of H Cl in its effects on gastric secretion is still unsettled. Evidence points to its acting as a stimulant in cases with gastritis, but it probably has no effect or only a slightly stimulating effect in cases without gastritis. The former clinical teaching of its depressing action on gastric secretion is no longer accepted.

Two local anesthetics frequently used in gastric conditions, orthoform and anesthesin, have been found to have some slight stimulating action.

Rodaré considers as especially important to the clinician the varying effect on gastric secretion of certain agents (especially Ag., Al. and Bi. preparations) in cases with and without gastritis. One conclusion which he draws is that these drugs will depress secretion in cases with gastritis, while in those without gastritis the bismuth preparations affect secretion but little and that the silver and aluminium preparations act as powerful exciters of secretion. Especially in the therapy of ulcer does he believe this of much practical importance. J. T. H.

*Consists of very finely powdered alum with glycerine as excipient.

Louisiana State Medical Society Notes.

In Charge of Dr. Joseph D. Martin, Secretary, New Orleans.

Minutes of House of Delegates.

Thursday, May 5, 1910, at 11 a. m.

House of Delegates called to order by Dr. Callan.

Dr. Joseph D. Martin, Secretary, in the chair.

Following members present: Drs. Roy, Mosely, Atkins, Dowling, Frater, Fletcher, L. O. Clark, S. A. Ayo, Williams, Chassaignac, Dupuy, Leckert, Seemann, Callan, E. D. Martin, Ledbetter, A. B. Brown, W. M. Perkins, Parham, Newton, Edgerton, Tatum, Jones, Montegut, B. Guilbeau, Joseph, Morris, A. Landry, F. H. Carruth, S. C. Fittz, Bass, Graner, Eustis, P. E. Archinard, Ragan, Simmons and Le Beuf (37).

Moved and seconded that Dr. Aldrich be made an honorary member of this society. Carried.

The name of Dr. John Lovett Morse of Boston, recommended by the general meeting for honorary membership, was voted upon and carried.

Nominations for officers:

For President: Dr. Chassaignac proposed the name of Dr. E. J. Graner, of Orleans; seconded by Drs. Archinard and Dowling. Motion made that nominations be closed and the secretary be instructed to cast the vote for the house. Carried.

In a few well chosen words, Dr. Graner thanked the House of Delegates for the nomination.

For First Vice President: Dr. S. A. Ayo, of Lafourche, nominated by Dr. Dupuy and seconded by Dr. Brown. Dr. Eustis, of Vermilion, nominated by Dr. Perkins, seconded by Drs. Newton and Atkins. There being no further nominations, a ballot was taken and Dr. Eustis was declared elected by a vote of 25 to 14.

For Second Vice President: Dr. Abramson, of Caddo, was nominated by Dr. Frater, seconded by Dr. Atkins. Dr. Eustis called attention of the house to the fact that this office should come from Orleans Parish and proposed the name of Dr. Homer Dupuy, of Orleans, which was seconded by Dr. Graner. Dr. Frater withdrew

his nomination. Moved and seconded that nominations be closed and the secretary be instructed to cast the vote. Carried.

For Third Vice President: Dr. Frater proposed the name of Dr. Abramson, seconded by Dr. Atkins. Motion made to close nominations and secretary be instructed to cast the vote. Carried.

For Secretary: Dr. Joseph D. Martin, of Orleans, nominated by Dr. Ledbetter, seconded by Drs. Atkins and Eustis. Dr. Archinard moved that nominations be closed. Duly seconded and the chair instructed to cast the vote for the house. Carried.

For Treasurer: Dr. Bass, of Orleans, present treasurer, was nominated by Dr. Dowling, seconded by Dr. Atkins. Moved and seconded nominations be closed and secretary be instructed to cast the vote. Carried.

Election of Councillors:

First Congressional District: Dr. P. E. Archinard, of New Orleans, nominated by Dr. Carruth, seconded by Dr. Ledbetter. Nominations closed and Dr. Archinard declared elected.

Second Congressional District: Dr. Ledbetter, of New Orleans, nominated by Dr. Simmons, seconded by Dr. Perkins. Nominations were closed and Dr. Ledbetter declared elected.

Third Congressional District: Dr. L. O. Clark, of Lafayette, nominated by Dr. Eustis, seconded by Drs. Simmons, Martin and Guilbeau. Dr. Sam A. Ayo, of Lafourche, nominated by Dr. A. B. Brown, seconded by Dr. Leckert. There being no further nominations, the ballot was taken. Dr. Ayo was declared elected by a vote of 21 to 15.

Fifth Congressional District: Dr. O. W. Cosby, of Ouachita, nominated by Dr. Ragan, seconded by Drs. Martin and Dowling. Dr. Newton, of Ouachita, nominated by Dr. Perkins, seconded by Drs. Atkins and Edgerton. There being no further nominations ballot was taken and Dr. Newton declared elected by a vote of 18 to 16.

Delegates to American Medical Association: Dr. Chassaignac, nominated by Dr. Ledbetter, seconded by Atkins and Guilbeau. Moved that nominations be closed and Secretary instructed to cast the ballot. Carried.

Alternates: Dr. Dowling, nominated by Dr. E. D. Martin, seconded by Drs. Frater and Perkins. Nominations closed and Dr. Dowling was declared elected.

Dr. Chassaignac moved, duly seconded, that the naming of all standing Committees be left to the President-elect, with full power to act. Carried.

Vacancies on State Board of Medical Examiners: Dr. P. E. Archinard stated that the candidate must come from Judicial Districts of the State. After considerable discussion, moved by Dr. Seemann, seconded by Dr. Dupuy, that a Committee be appointed to look into the matter. The Chair appointed Drs. Seemann and Dupuy on this Committee.

Place of Meeting for Next Session: Dr. Dowling extended an invitation from the Caddo Parish Medical Society, which was seconded by Drs. Ragan and Perkins, that the meeting be held in Shreveport. Motion was made by Dr. Ledbetter, seconded by Carruth, that meeting be held in New Orleans. After a free discussion of the subject, moved and seconded that we proceed to the selection of meeting place for next session. Carried. By a vote of 22 to 13, Shreveport was declared the place for the next meeting.

Moved by Seemann, seconded by Dr. Archinard, that the President-elect fix the date of next meeting. A substitute was offered by Dr. Chassaignac, seconded by Dr. E. D. Martin that the date of the meeting be fixed for the last Tuesday in May. Carried.

Adjournment to 4 P. M. this day.

Minutes of House of Delegates.

Thursday, May 5, 1910, 4 P. M.

Dr. Callan presided.

Dr. Joseph D. Martin, Secretary, at his desk.

Present: Drs. Joseph, Carruth, Ledbetter, Archinard, Newton, Edgerton, Leckert, Seemann, Brown, Ragan, Simmons, Fittz, Frater, Ayo, Jones, Mosely, Dowling, Bass, Owen, Gelbke, Landry, Chassaignac, Hummel, Lemann, Tatum, Eustis, Graner, Perkins, Eustis (29).

Minutes of previous meeting read and adopted.

The Report of the Secretary of the Council was read and adopted.

The Report of the Special Committee composed of Drs. Seemann

and Dupuy, appointed to look into the matters of vacancies on the State Board of Medical Examiners, read and adopted.

The Report of the Special Committee composed of Drs. Perkins, Morris and Atkins, on Amendments to Constitution and By-Laws to make the fiscal year begin January 1, was adopted as read.

Vacancies on State Board of Medical Examiners: Dr. L. G. LeBeuf, of Orleans, nominated by Dr. Chassaignac, and seconded by Dr. Archinard. Dr. Gelbke, of Jefferson, was nominated by Dr. Ledbetter, seconded by Dr. Jones. Dr. McVea, of East Baton Rouge, nominated by Dr. Dowling, seconded by Dr. Eustis. Dr. L. G. Stirling, of East Baton Rouge, nominated by Dr. Jones, seconded by Dr. Ledbetter. Moved and seconded that nominations be closed and that the above names be recommended to the Governor for vacancies on the Board of Medical Examiners.

The Secretary was instructed to transmit a vote of thanks to the clubs and other institutions for courtesies extended.

It was moved and seconded that an honorarium and a vote of thanks be give Mr. George Augustin, Assistant Secretary.

Adjourned *sine die*..

JOSEPH D. MARTIN, M. D.
Secretary of House of Delegates.

PARISH SOCIETY MEETING.

THE ATTAKAPAS CLINICAL SOCIETY: The tenth quarterly meeting of this society was held in Jeanerette, La., October 26, with twenty-one (21) members and two visitors, Drs. Hume and Bass, of New Orleans, present.

The program was as follows: 1. Report of case of Compound Fracture of Lower Maxilla treated by new method. Dr. M. L. Hoffpauir, Crowley, La.

2. Tuberculosis of the Kidney and a few remarks on acute hematogenous infections of the kidney. Dr. Joseph Hume, New Orleans.

3. The usefulness of the sphygmomanometer and daily practice as an aid to diagnosis. Dr. P. A. Boykin, Jeanerette.

4. Demonstration of the ova and methods of detecting the presence of the hook worm eggs in the feces. Dr. C. C. Bass, New Orleans.

5. Exhibition of specimen of extrauterine pregnancy. Dr. E. M. Williams, Patterson.

Clinical cases were exhibited by Drs. Boykin, Duperrier and Ellis.

The officers of this society elected at the July meeting in New Iberia are: Dr. E. M. Williams, Patterson, President; Dr. M. L. Hoffpauir, Crowley, First Vice-President; Dr. P. A. Boykin, Jeanerette, Second Vice-President; Dr. L. O. Clark, Lafayette, Secretary and Treasurer.

Next meeting will be held in Lafayette.

Dr. L. O. Clark,
Secretary.

Medical News Items.

Meetings.—The St. Landry Parish Medical Society met in Opelousas, La., November 11, and was well attended. A very interesting feature of the meeting was the question of the advisability of establishing a sanitarium in St. Landry, which question will again receive consideration at the next quarterly meeting, January 12, 1911.

The Board of Trustees of the A. M. A. have selected June 27, 1911, as the date of their next meeting, which will be held in Los Angeles, Cal. The House of Delegates will meet June 26, 1911.

The Southern Surgical and Gynecological Association will meet in Nashville, Tenn., December 15-16, 1910.

The National Association of Wholesale Druggists met November 16 at Dallas, Texas, and elected Mr. L. E. Lyons, of New Orleans, Third Vice-President.

The Fourth Annual Convention of the Southern Medical Association adjourned in Nashville, Tenn., November 10, with the election of the following officers: Dr. Isadore Dyer, of New Orleans, president; Dr. Seale Harris, of Mobile, secretary-treasurer. The vice-president for Alabama is Dr. T. D. Park; for Louisiana, Dr. J. B. Guthrie, and for Mississippi, Dr. A. G. Paine.

The Louisiana State Board of Medical Examiners held its semi-annual meeting October 18 and 19. The following are the names of those who passed out of 31 applicants: Robert H. Stewart, Ivy Robert Fowler, James D. Baucum, Thomas Walter Murphey, Maurice Bateman, Maud Loeber, Edward E. Archibald, Buck Donaldson, Gabriel B. Kramer, Paul T. Alexander, Ellison H. Williamson. The number of questions asked at the past examination was 50. In the future 100 will be given the applicants—ten questions on each of the following branches: Anatomy, Chemistry, Gynecology, Hygiene, Obstetrics, Pathology, Physical Diagnosis, Physiology, Surgery and Therapeutics.

The Louisiana State Board of Pharmacy met November 4 and 5 and the following successfully passed the examinations: F. A. Ameling, T. H. Peete, Henry Scroggin, B. F. Huck and P. J. Scully.

The Tri-State Medical Society met in Shreveport, November 15 and 16 and was well attended. This society is composed of doctors from Louisiana, Texas and Arkansas. Dr. Nettie Klein, of Texarkana, the only woman member, read a paper before the society. Dr. Sidney D. Porter, of New Orleans, read a paper on Hookworm.

Health Demonstration Train.—On November 12, 1910, the health exhibit cars, prepared by the State Board of Health, departed for North Louisiana. In the assembling and arrangement of the exhibits, which will be sent into every parish in Louisiana, the State Board has had the assistance of both the State and Orleans Parish Medical Societies and of Tulane University, while the wholesale druggists and other firms dealing in sanitary supplies and appliances and scientific apparatus have co-operated in the enterprise cheerfully and generously. In addition the railroads have rendered very great assistance in this State-wide educational campaign, of whose value and good effect there can be no doubt.

Mississippi Tuberculosis Exhibition.—Dr. J. W. Young, head of the Mississippi State Medical Society, addressed a communication to the county health officers throughout the State and to the entire medical profession, urging them to visit Jackson, Mississippi, and study the tuberculosis exhibition for the prevention of tuberculosis.

Lecture on Cocaine and Other Habits.—At the Second Methodist Church, on October 27, 1910, Dr. Geo. S. Brown, of Tulane University, lectured on the drug habit.

Merger of Medical Colleges.—The Epworth College of Medicine, of Oklahoma City, has been liquidated, and in its stead the State University of Oklahoma School of Medicine will open a clinical department in connection with the two years now given at Norman.

The Birth Rate of France.—It is stated that during the first half of the year 1910 the births in France exceeded the deaths by 21,189. During the year 1909 the deaths exceeded the births by 28,205.

Lecture on Skin Diseases.—Announcement is made by the governors of the New York Skin and Cancer Hospital that Dr. L. Duncan Bulkley will give the twelfth series of clinical lectures on diseases of the skin in the out-patient hall of the hospital on Wednesday afternoons, from November 2 to December 21, at 4:15 o'clock. The course will be free to the medical profession.

The Nobel Prize in Medicine for 1910 has been awarded to Dr. Albrecht Kossel, professor of physiology in the University of Heidelberg.

Ether Day was observed at the Massachusetts General Hospital, Boston, on Saturday, October 15. Ether was first used as an anesthetic in that hospital sixty-four years ago, and the anniversary was celebrated.

The New York and New England Association of Railway Surgeons were given a special clinic at the New York Post Graduate Medical School and Hospital, November 4, 1910.

A Testimonial Dinner to Dr. J. M. Bodine.—For forty-five years Dr. James Morrison Bodine, as dean and president of the faculty, has presided over the destinies of the University of Louisville Medical Department. Now entering his eightieth year he continues to devote his energies to the cause of medical education. His many friends and pupils scattered throughout the country have deemed this an appropriate occasion to show their appreciation of

his devotion and their affection for him personally. To this end it has been decided to give him a testimonial dinner on the 16th of December, 1910, at the Seelbach Hotel in Louisville. Those friends whom the committee has been unable to reach by invitation are cordially invited to attend and are requested to signify such intention at once writing to Dr. I. N. Bloom, chairman of the committee at Louisville.

The Shreveport Medical Society issues a monthly four-page bulletin of local matters. This society has a membership of sixty.

Personals.—Dr. Leon Cusachs has returned to this city from Arkansas.

Dr. and Mrs. John Marion Barrier celebrated their silver wedding at their home in Delhi, La., on November 23. The *Journal* wishes to extend its congratulations.

Dr. G. M. Corput has been transferred from Galveston to Quarantine, and Dr. R. H. von Ezdorf, U. S. P. H. and M. H. S., has been transferred to Mobile.

Dr. J. S. B. Pratt, of Honolulu, Health Officer of the Hawaiian Islands, visited this city in October.

Dr. Sidney D. Porter was chosen by the Rockefeller Commission to head the hookworm campaign in Louisiana.

Dr. J. L. Scales, formerly of Alden Bridge, La., has returned to this country, after an absence of nearly two years spent in England, and will locate in Shreveport.

Removals.—Dr. W. P. Hickman, from Sandy Hook, Miss., to Isabel, La.

Dr. Thomas Ragan, from Houston, Tex., to Shreveport, La.

Dr. W. B. Hunter has located in Shreveport, after spending a year in the Memphis City Hospital.

Dr. J. C. Phillips, from Fernwood, Miss., to Orange, Tex.

Dr. R. P. Thaxton, from Bernice to Boleyn, La.

Married.—On October 21, 1910, Dr. Henry Goldthwaite to Miss Amanda Moore, both of Mobile, Ala.

On October 22, Miss Myra Wilkinson, of White Castle, La., to Dr. Emmet Wilkinson, of Coushatta.

On October 31, 1910, Dr. Maurice Bateman to Miss Sadie Smith, both of Franklinton, La.

On November 20, 1910, Miss Violet O'Connor to Dr. Howard D. King, both of New Orleans.

In November, Dr. Oscar L. Norsworthy, of Houston, Texas, was married to Miss Sarah Sanford Gibbs, of Huntsville, Texas.

DIED.—On October 29, 1910, Dr. Francis Sterling Mudd, one of the oldest and most prominent citizens of Lafayette, La., at the advanced age of 81 years. The death of Dr. Mudd marks the passing of a unique and remarkable character in the medical profession of the State.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

The Practice of Medicine, by A. O. J. KELLY, A. M., M. D. Lea & Febiger, 1910.

We thoroughly approve of the author's plan in writing his book for the student and junior practitioner, namely, to offer a "well-ordered statement of existing knowledge as a basis for training at the bedside."

It is a fact that much of the baggage of medical riches is cumbersome, and that the mental ingestion of the mass results in mental indigestion and confusion in practice.

No book, we admit, can replace actual clinical experience, but clinical experience must be started on a slow speed, on the basis of well-understood principles.

All teachers know that the essentials and rudimentary facts of medicine are the real needs of every one of us. Interest in practice is proportionate to the grasp of principles and the observation of their connections in every-day clinical facts and occurrences. And clinical ability follows as a matter of course. Now, this sounds simple enough, but it is a fact that a superabundant lecture to students is not the most profitable to them. Kelly is a trained teacher. E. M. D.

The Practical Medicine Series. Vol. I and VI. *General Medicine.* Series 1910. The Year-Book Publishers, Chicago.

Vol. I and Vol. VI are two of a series of ten issued, at about monthly intervals, and covering the entire field of medicine and surgery, each volume being complete for the year prior to its publication on the subject

of which it treats. This series is published primarily for the general practitioner; at the same time the arrangement in several volumes enables those interested in special subjects to buy only the parts they desire.

Vol. I and Vol. VI contain the progress of the year in general medicine. E. M. D.

International Clinics. Vols. II and III. Twentieth Series, 1910. J. B. Lippincott Company.

These two volumes contain most valuable monographs on subjects covering the whole field of practice. In addition, we note a number of interesting miscellaneous topics and a series of clinical lectures and special demonstrations delivered at the University of Pennsylvania, under the head of "A Medical Home-Coming Week." E. M. D.

The Conquest of Disease Through Animal Experimentation, by James Peter Warbasse, M. D. D. Appleton & Co., New York and London, 1910.

Physicians favoring progressive medicine cannot do better than recommend the reading of this excellent little book to intelligent lay readers, more especially to those who are opposed to experimentation on the lower animals. To our mind, the proper presentation of this subject can but result in good to our cause and win over many of the opposing class of our fellowmen. The careful reading of this work will act as a powerful deterrent to many misguided ones who are engaged in spreading the propaganda of the anti-vivisectionist. Storck.

The Medical Visiting List for 1911. William Wood & Co., New York.

The 1911 edition of this popular physicians' visiting list has been revised and enlarged, while some things have been eliminated which were thought of little convenience to the practitioner. The most important change will be found in the list of remedies and their maximum doses in apothecary's and decimal systems, marked so as to show those that are official in this country.

In addition to the visiting list proper, and the changes mentioned above, the contents include a calendar; equivalents of temperature, weights, measures, etc.; solutions for subcutaneous injection, for atomization and inhalation; treatment of poisoning, and other emergencies, etc.

The Practitioner's Visiting List for 1911. Lea & Febiger, New York and Philadelphia.

This useful visiting list is offered again in four styles—the weekly, the monthly, the perpetual, undated, for thirty patients weekly; and the perpetual, undated and without preliminary data, for sixty patients.

It is pocket-sized, substantially bound, and contains thirty-two pages of useful information, together with blank pages for recording all details of practice, from the financial standpoint as well as the clinical.

Nephrocoloptosis, by H. W. Longyear, M. D. Published by the C. V. Mosby Company, St. Louis, 1910.

This is a monograph of 250 pages, containing the author's already well-known views on the subject of nephroptosis. An extensive study and description of the nephrocolic ligament, its action in the causation of

nephroptosis and the technic of an original operation termed nephrocolopexy, in which the nephrocolic ligament is utilized to immobilize both kidney and bowel.

The histories of fifty cases have been added in detail, in order to emphasize the important points of pathology, diagnosis and treatment.

A Text-Book of Pharmacology and Therapeutics; or, the Action of Drugs in Health and Disease, by Arthur R. Cushing, M. A., M. D., F. R. S. Lea & Febiger, Philadelphia, 1910.

The day of the proper appreciation of the rational use of drugs is fast approaching, and, in consequence, the teachings of the therapeutic nihilist has lost much of its force. For a time it seemed that clinical experience with the use of drugs would receive a hard blow, all because a brilliant pathologist was practically teaching therapeutic nihilism. But even his influence could not long prevail against well-estabished clinical experience, and now the common sense and good judgment of the English-speaking physicians are asserting themselves in assuming a healthy attitude toward the proper use of drugs. As to the rational use of drugs, lack of proper instruction in the medical schools was responsible for the number of poorly-equipped physicians who were graduated and allowed to practice. They were a long time learning their proper use, since they were not taught or shown the use of drugs on the human body.

We think the signs are healthy when a rationalist like Cushing says: "The amount and importance of the researches published in these (few) years testifies to the growing interest in the action of drugs and their application, and to the abandonment of the nihilistic attitude toward therapeutics, which was formerly so discouraging."

Physicians were often deterred from prescribing drugs of known chemical merit from the fear that they would be dubbed "old fogies." However, in fact, if the truth be known, owing to lack of proper experience, the no-drug doctors were the ones who required the spur; and these very estimable gentlemen, by their attitude toward proper drug medication, are responsible for the vigorous growth of some of the "cults" and "pathies" that are a pest at the present time. We are free to admit that many of the minor drugs still in use have no merit and should be discarded. On the other hand, drug therapy has been, and is now being strengthened by verification of the value of some of the old, and proof positive of some of the new, remedies.

That the present edition of Dr. Cushing's book makes for sane therapeutics cannot be doubted. Storck.

International Clinics. Volume IV. Nineteenth Series. J. B. Lippincott Company.

This volume is filled with interesting articles. Simon Flexner writes on Antimeningitic Serum and the results of its employment. He states: "The evidence at hand indicates that the earlier in the course of the disease the injections of the antiserum are made, the better are the results. A safe rule is to inject the antiserum at once if a suspicion of meningococcal meningitis exists, without waiting to complete the bacteriological diagnosis by film preparation or culture." The per cent mortality from first to third day is stated 25.3; fourth to seventh day, 27.8; later than seventh day, 42.1. An extensive bibliography is appended.

In the article on the treatment of cancer by fulguration, by Pierre Fredet, M. D., surgeon to the Paris hospitals, we read: "Fulguration has an elective destructive action on epithelial cells, while respecting connective tissue," within the limits of the intensities used; "it destroys all epithelial cells, without distinction of form and activity." To this has

been added that it shows no special predilection for tumor cells.

The destructive effect of fulguration has no period of latency and is quite superficial; what it destroys, it destroys from the start, but this layer is only a few millimeters in thickness.

In concluding, Fredet says: "It is evident that the last word has not yet been said concerning fulguration. Our present ideas can only be looked on as provisional and open to revision. But it certainly seems that Keating-Hart has enriched the palliative treatment of cancer, and that fulguration, performed according to a good technic and in properly-chosen cases, has a right to occupy an honorable position by the side of, if not above, X-ray and radium treatments."

Walter L. Bierring writes on the diagnosis and treatment of pernicious anemia. He mentions Herter as favoring colonic irrigation with normal salt solution, and has reported some very gratifying results by this means, noting particularly that, coincident with the improvement, the amaerobic bacteria became less in the stools. No mention is made in the article concerning the use of hydrochloric acid, which is now conceded to be of considerable value in the treatment of this condition.

Among the numerous other articles, is one on color photography in relation to surgery, by Dr. C. B. Longenecker. Another is on hypenolepsis nana in the United States, with report of two cases, by William H .Deadrick, M. D. He had reported five cases previous to these two. We recently had a case in our practice, making the second case we have seen in New Orleans. We are under the impression that this parasite would be found oftener if more carefully looked for.

We can only mention a few good things from among the many contained in this volume. STORCK.

Difficult Labor, by G. ERNEST HERMAN, M. B., F. R. C. P., F. R. C. S. Published by William Wood & Co., New York, 1910.

The chief aim of the author has been to produce a work which would give the reader more definite guidance in practice than can be obtained from the usual text-book. There has been no attempt to give a full representation of all correct opinions, nor to direct the reader to the original sources of information upon the facts described. The work represents the author's personal conclusions, based upon an unusually large experience in obstetric surgery. It is written in a clear, concise style and well arranged for quick reference.

Some teachers may find fault with the dogmatic views expressed upon many subjects, and may consider the book incomplete for students, but the busy practitioner welcomes a clear-cut pen-picture and well-defined principles of procedure that may be reviewed in a few minutes, and will find the present edition a valuable addition to his library. MILLER.

The Surgery of Childhood, by DEFORREST WILLARD, A. M., M. D., Ph. D. J. B. Lippincott Company, Philadelphia and London, 1910.

What a fitting apotheosis to the life of that noble and great surgeon, DeForrest Willard, who was but recently summoned to his last resting place! This almost posthumous work is a worthy legacy to the medical profession. DeForrest Willard was a scholar and master—the true teacher.

The preceding lines reflect the reviewer's opinion of the great value of the above-mentioned book. LARUE.

Borderland Surgery, by GUSTAVUS M. BLECH, M. D. Professional Publishing Company, Philadelphia, 1910.

This tiny book contains a great amount of logic and common sense. It was written with a laudable spirit, and as such deserves perusal and

commendation. Dr. Blech is undoubtedly a keen observer. He has been able to thresh out the good from the bad, presenting his results in an attractive style.

It is a signal to those who have, as Senn expressed it, and reiterated by Blech, the *furor operationis.* When not to operate is as important from a surgical standpoint as when to operate. LARUE.

General Surgery, by JOHN B. MURPHY, A. M., M. D., Ph. D. Year-Book Publishing Company, 1910.

This volume forms a part of the Practical Medicine Series, and could not be in better editorial hands than those of our brilliant American surgeon, Murphy. The preface to this surgical volume, as for the previous ones, is from his pen—a brief but intelligent comment on the text.

LARUE.

A Treatise in Orthopedic Surgery, by ROYAS WHITMAN, M. D. Lea & Febiger, Philadelphia and New York, 1910.

We had the pleasure of reviewing Whitman's previous edition, and, after comparing same to this present fourth edition, we can but compliment the author, and parenthetically recommend his book, for having brought it up to date. Whitman, who holds the chair of assistant professor in the Col. P. and S. of Columbia University, New York, needs no introduction.

This volume is a standard work, and none better can be consulted. As necessarily, in a treatise of this kind, the illustrations are numerous, and, I will add, clear-cut. LARUE.

Syphilis; Its Diagnosis, Prognosis, Prevention and Treatment, by THOMAS PUGH BEDDOES, M. B., B. C. (Camb.), F. R. C. S. (Eng.) Paul B. Hoeber, New York, 1910.

This little handbook will be welcome to the general practitioner who wishes a clear-cut presentation of the features of syphilis, with enough of technical differentiation of the types to be exact. The diagnosis from other conditions similar to syphilis is well set forth, and the various treatments essayed for this disease are given, including some of the recent forms of arsenic. The care of the author and his ability are present throughout the book. DYER.

Essentials of Laboratory Diagnosis, by FRANCIS ASHLEY FAUGHT, M. D. Second Edition. F. A. Davis Company, Philadelphia, 1910.

In reviewing the first edition of this work we were pleased to commend the practical character of the material and the way it was presented. This second edition fulfils the same field of a practical handbook for the laboratory student in clinical medicine. DYER.

Lippincott's New Medical Dictionary, by HENRY W. CATTELL, A. M. (Cal.), M. D. (U. of P.) J. B. Lippincott & Co., Philadelphia and London, 1910.

Among the several dictionaries which have been arranged for students of medicine in and out of school, Lippincott's has taken a high rank. The new edition has surpassed any former like publication from this house, and it must bid for a place among the standard medical dictionaries.

Every facility has been availed of to make the work contemporary, and many new words have been incorporated. A leading feature is the free use of illustrations of every conceivable character.

A thumb index has been provided, which will prove of material value to the busy man. DYER.

Vaccine Therapy; Its Theory and Practice, by R. W. ALLEN, M. D., B. S. (Lond.) Third Edition. P. Blakiston' Son & Co., Philadelphia, 1910.

Beginning with a definition and description of opsonins, the author, in a remarkably lucid text, carries the reader of this little book of some 275 pages into the application of the opsonins in establishing vaccines for various diseases. A considerable catalog of diseases is detailed, and in each the same exactness of descriptions make the reader understand what vaccine may do, and how.

Altogether a valuable contribution and, as its repeated edition would indicate, a book bound to remain standard. DYER.

Diseases of Infancy and Childhood, Etc., by LOUIS FISCHER, M. D. Third Edition. F. A. Davis Company, Philadelphia, 1910.

While the arrangement of the text in this book may be open to criticism, the mass of material afforded the student and reader more than compensates. There are nearly two hundred pages devoted to the feeding of infants and to the consideration of the substances employed, including most everything from the mother's milk to emulsion of nuts.

Of particular diseases discussed there are many, among which may be mentioned, notably, scarlatina and typhoid fever. The therapy in the book is well covered, and there is given, in addition, a dosage list of most drugs employed with children.

The chapter devoted to diseases of the skin should be revised or rewritten by some one qualified, for the anachronisms in the text in review are patent and unpardonable (chloasma is made identical with tinea versicolor; ringworm is given the ancient names of "herpes tonsurans" and "herpes circinatus"; scabies is descibed as a papular disease, etc.). No attempt is made to suggest the points of diagnosis in these diseases, and the treatment offered is evidently based upon the experience of the writer. It is a pity that an otherwise excellent text should be discounted by one chapter, which could so easily be made adequate or else eliminated from the book. DYER.

Diseases of the Colon, and Their Surgical Treatment, by P. LOCKHART MUMMERY, F. R. C. S. (Eng.) William Wood & Co., New York,

While this book is primarily intended for the surgeon, the internist will find much information that will be of value to him in practice.

The anatomy and the development, the physiology, the morbid physiology, and the bacteriology of the colon receive adequate consideration. Methods of diagnosis are carefully gone into. The chapter on chronic constipation and fecal impaction is well written and deserves close reading.

The author's conclusion that, owing to the character of our food, diseases and abnormalities of the colon are becoming more frequent, we believe can be sustained.

The colored and the other plates, and the numerous figures, contribute much to the elucidation of the text. STORCK.

Symptomatic and Rational Therapeutics, by GEORGE HOWARD HOXIE, A. M., M. D. D. Appleton & Co., New York.

This book contains the material collected for the course in general therapeutics which was recommended by the Committee on Curriculum of the American Medical Association, and adopted by the Curriculum Committee of the Association of Medical Colleges.

The arrangement of the subject-matter is good. The first part of the course has to do with a consideration of symptoms and their relief, and of the relations of symptoms to pathological processes. A distinction is made between symptomatic and specific treatment, with the injuncton to seek out the pathological cause of disease in all cases.

In the second chapter the treatment of disease in relation to the therapy of inflammations is well set forth.

We consider this book to be a distinct contribution to practical therapeutics, and well worth careful and frequent perusal. STORCK.

Practical Physiological Chemistry, by PHILIP B. HAWK, M. S., Ph. D. P. Blakiston's Son & Co., Philadelphia, 1910.

The present edition of this work, being the third, has been brought abreast of present-day knowledge. Dr. Hawk presents his subject in a pleasing manner, and his experience as a teacher of physiological chemistry has acquainted him with the needs of the student.

The student in search of a reliable, practical work will not go astray in purchasing this book. STORCK.

Some Common Remedies, and Their Use in Practice, by EUSTACE SMITH, M. D.

This little volume breathes a healthy optimism concerning rational therapy. The author, whose knowledge of the practice of medicine extends farther back than the mere making of a diagnosis, says some pertinent things regarding such old and tried remedies as tartar emetic, oil of turpentine, opium and sodium salicylate. He also speaks of the value of antispasmodics, and makes reference to the use of alkalies and the use and misuse of iron remedies. Dr. Smith has often been struck by the want of therapeutical knowledge shown by the young men, newly qualified, who apply for resident posts at our hospitals—men willing to learn, and probably familiar with the latest niceties of bacteriological research. Many of them seem to be of opinion that when they have made a diagnosis their duty is at an end, and that the most exacting patient can ask for no more; while those who proceed to treatment, if they order drugs at all, do so in a haphazard way, evidently little aware of the capability of the remedies they employ or of the necessity of suiting them to the conditions they are expected to relieve.

While Dr. Smith is speaking of conditions existing in London, his remarks could appropriately be applied to conditions nearer home.

STORCK.

A Manual of Diseases of the Nose, Throat and Ear, by E. B. GLEASON, M. D. Second Edition. W. B. Saunders & Co., Philadelphia.

This volume, of moderate size, should prove thoroughly satisfactory to post-graduate students who wish to refresh on these special branches and would serve well as a quick reference book. Clear and concise in

style, with numerous illustrations and a formulary as an appendix that will prove more than useful to general practitioners. This formulary is not merely a list of prescriptions, as is usual, but the author sees fit to give the local physiological action of the more common drugs and the rational of certain others that have proved especially satisfactory in his hands. DeR. AND L.

Diseases of the Nose and Throat, by D. BRAYDEN KYLE, M. D. Fourth Edition. W. B. Saunders & Co., Philadelphia.

In this volume Dr. Kyle has thoroughly revised the entire text, adding many new articles and enlarging and rewriting entire chapters, thus bringing the work absolutely up to date. His method of forecasting the contents of each chapter, by a systematic tabulation of the diseases, from a pathological standpoint, is of great benefit not only to the student, who thus gains system, but to the general practitioner, who may see at a glance that which concerns him most, and to the specialist, for whom this volume is also well suited, the plan will save much time.

Many of the old illustrations have been replaced by new ones, and many new illustrations added, thus again enriching the text.

While conciseness, as far as is compatible with clearness, is maintained throughout the work, this is not so on some of the more rare pathological conditions. Here the author has dilated to some extent the pathology, diagnosis and treatment. To those who will use this work as one of reference this will appeal strongly.

The chapter on the voice, one of the additions, is complete and filled with facts, suggestions and advice. DeR. AND L.

Publications Received.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1910.

Applied Anatomy, by Gwilym G. Davis, M. D.

P. BLAKISTON'S SON & CO., Philadelphia, 1910.

Practical Physiological Chemistry, by Philip B. Hawk, M. D. Third Edition, revised and enlarged.

Osteology and Syndesmology, by Howard A. Sutton, A. B., M. D., and Cecil K. Drinker, B. S.

THE YEAR-BOOK PUBLISHERS, Chicago, 1910.

The Practical Medicine Series. Under the general editorial charge of Gustavus P. Head, M. D., and Charles L. Mix, M. D. Volume VII, *Pediatrics.* Edited by Isaac A. Abt, M. D., with the collaboration of May Michael, M. D. *Orthopedic Surgery.* Edited by John Ridlon, A. M., M. D., with the collaboration of Charles A. Parker, M. D. Series, 1910.

MITCHELL KENNERLY, Publisher, London and New York, 1910.

Medical Chaos and Crime, by Norman Barnesby, M. D.

F. A. DAVIS COMPANY, Philadelphia, 1910.

Diseases of the Stomach and Upper Alimentary Tract, by Anthony Bassler, M. D.

D. APPLETON & CO., New York and London, 1910.

A Text-Book of Bacteriology, by Philip Hanson Hiss, Jr., and Hans Zinsser, M. D.

JOHN P. MORTON & CO., Louisville, 1910.

Obstetrial Nursing, by Henry Enos Tuley, A. B., M. D.

Miscellaneous.

Studies Upon Leprosy. Public Health Bulletin No. 39. (Washington Government Printing Office, 1910.)

Mortality Statistics: 1909. Bulletin No. 108. (Washington Government Printing Office, 1910.)

E. Merck's Annual Report of Recent Advances in Pharmaceutical Chemistry and Therapeutics.. Volume XXIII. 1909.

Internal Secretions From a Physiological and Therapeutical Standpoint, by Isaac Ott, A. M., M. D.

Thirty-third Report of the State Board of Health of New Jersey, 1909, and Report of the Bureau of Vital Statistics. (The News Printing Company, New Jersey, 1910.)

Proceedings of the National Confederation of State Medical Examining and Licensing Boards. Twentieth Annual Convention, St. Louis, June 6, 1910.

Index Catalog of the Library of the Surgeon-General's Office, United States Army. Volume XX, *Skin Grafting.* (Washington Government Printing Office, 1910.)

Monthly Bulletin of the Illinois State Board of Health.

The Carnegie Foundation for the Advancement of Teaching. Medical Education in the United States and Canada. Bulletin No. 4, 1910. (The Merrymount Press, Boston.)

The Taxonomic Value of Microscopic Structure of the Stigmal Plate in the Tick Genus Dermacentor. Hygienic Bulletin No. 62. (Washington Government Printing Office, 1910.)

Reprints.

Cases Illustrating the Origin of Hysterieal and Pseudohysterical Symptoms, by Tom A. Williams, M. D., C. M.

Coffee—A Drug, by R. M. Sterrett, M. D.

Acute Anterior Poliomyelitis, by Mario G. Lebredo, M. D., and Alberto Recio, M. D.

Further Observations on the Milk Supply of Washington, D. C., by G. Lloyd Magruder, M. D.

Infantile Paralysis in 1909. Report for the Massachusetts State Board of Health, by Robert W. Lovell, M. D., Lyman A. Jones, M. D., E. H. Bradford, M. D., E. G. Brackett, M. D., August Thorndike, M. D., Robert M. Osgood, M. D., Wm. P. Lucas, M. D.

The Occurrence of Infantile Paralysis in Massachusetts in 1908. Report for the Massachusettt State Board of Health, by Robert M. Lovett, M. D., and Herbert C. Emerson, M. D.

Some Remarks on the Treatment of Pellagra, by George M. Niles, M. D.

The Present Organization and Work for the Protection of Health in the United States, by Walter Wyman.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.

For September, 1910.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	6	3	9
Intermittent Fever (Malarial Cachexia)	1	1	2
Smallpox			
Measles			
Scarlet Fever	1		1
Whooping Cough	2		2
Diphtheria and Croup	2		2
Influenza	3	2	5
Cholera Nostras		1	1
Pyemia and Septicemia	5		5
Tuberculosis	45	49	94
Cancer	17	9	26
Rheumatism and Gout	3		3
Diabetes	5		5
Alcoholism	2		2
Encephalitis and Meningitis	1	1	2
Locomotor Ataxia	2		2
Congestion, Hemorrhage and Softening of Brain	12	5	17
Paralysis	1	1	2
Convulsions of Infants		2	2
Other Diseases of Infancy	16	14	30
Tetanus	2	3	5
Other Nervous Diseases	3	1	4
Heart Diseases	39	33	72
Bronchitis	2	2	4
Pneumonia and Broncho-Pneumonia	7	14	21
Other Respiratory Diseases	2	3	5
Ulcer of Stomach	4		4
Other Diseases of the Stomach	2	3	5
Diarrhea, Dysentery and Enteritis	20	15	35
Hernia, Intestinal Obstruction	3		3
Cirrhosis of Liver	8	5	13
Other Diseases of the Liver	3	1	4
Simple Peritonitis		1	1
Appendicitis	3	1	4
Bright's Disease	31	18	49
Other Genito-Urinary Diseases	6	2	8
Puerperal Diseases	3		3
Senile Debility	7	4	11
Suicide	6	2	8
Injuries	17	17	34
All Other Causes	32	14	46
TOTAL	324	227	551

Still-born Children—White, 31; colored, 22; total, 53.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 14.29; colored, 26.96; total, 17.72.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.02
Mean temperature 72.00
Total precipitation ..... 2.09 **inches.**
Prevailing direction of wind, north.

New Orleans Medical and Surgical Journal.

VOL. LXIII. JANUARY, 1911. No. 7

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Ectopic Pregnancy.

By J. D. BLOOM, M. D., New Orleans.

The subject-matter in this confirms whatever the reader may indulge in by way of abstractive doubt, and is corroborative of a true condition which may be considered.

The name, extra-uterine pregnancy, usually obtains when a fertilized ovum, in its travel to the uterine body, is obstructed in its course. This is a physiological reasoning that is frequently thwarted and replaced by introducing a pathology that is to be appreciated, and, when timely considered, must mean to offset the danger that does follow in one of two ways. To this the term ectopic pregnancy more fully relates, in that the physiological condition is not to be considered by a time limit, and operative interference alone is the alternative that can have us hopeful.

Tait first dispelled the evil tolerance of a primary tubal condition, and awakened interest in this condition that obtains well with us, and unfortunately is considered by time limit.

That observers have been misled by its frequency is, unluckily, not to be gainsaid, occasioned, as this may have been, by faulty methods of diagnosis which our present knowledge has overcome.

Mechanical, inflammatory and developmental conditions may be causative in the majority of cases, but as it has been said there remains a small number that cannot be accounted for, and must remain, for a time at least, a problem. Tubal, ovarian or abdominal pregnancy, the latter regarded as to whether primary implantation is possible on the peritoneum to the extent of a physiologic pregnancy, has been considered true in many opinions; the ovarian variety, and even as it is admitted, has been of rare occurrence.

The essentials named by Spiegelberg certainly give the necessary distinguishing features. It is true that an ovarian, or a tubal variety, may rupture, and a secondary abdominal pregnancy follow, resulting some times in a lithopedion.

A case in point was that of M. R., a negress, 19 years old, first seen with the following history: Always enjoyed good health, regular menstruation up to tenth month previous, ceasing at that time. Signs and symptoms followed which, to her, evidenced conception. She did have irregular, trifling uterine losses of bloody character. Eight months prior to being seen she suffered and began to weaken and lose in flesh. About three weeks before I saw her she began experiencing bearing-down pains that harassed her almost continuously. She gave no definite history of a tubal rupture. At the time she was seen her condition seemed precarious; emaciation, sordes and a temperature of 103°; in the effort of walking, very unsteady. On examination, the abdomen presented a large tumor, apparently out of the pelvis and extremely painful. By vaginal examination the cervix seemed small and hard, the cul-de-sac free from any pressure or bulging. She was so depressed that she was put to bed and actively stimulated for five days, when, through an abdominal incision, a 5½-pound fetus was removed, the placenta allowed to throw itself off, which it did, piece-meal, on the twelfth and fifteenth day after operation. The sac containing the fetus was completely adherent to the abdominal walls and the general peritoneal cavity was not opened.

The degree of decomposition led me to infer that the child had been dead about a week or ten days. She made an uneventful recovery.

Ectopic Pregnancy.
Illustrating Dr. Bloom's Article.

Tubal pregnancies are of the more frequent kind, and the order of frequency being of the ampullar, isthmic or interstitial sorts.

Of the isthmic variety, a case purely symptomatic of the condition, with the history of impregnation, was seen with Dr. E. J. Mioton, and together we confirmed our suspicion by an abdominal section.

The case was a three months' history of pregnancy, and we removed large clots from the pelvis and some from the general cavity. The right tube was ruptured about one and one-half inches from the uterine body, and was ligated and excised. The patient made an uneventful recovery, advantage being taken of the upper abdominal cavity by position for a non-clotting and absorptive effect on what blood there was remaining or possible by a further loss.

Tait countenanced the belief that the result was the same in either kind, namely, rupture, and not later than about three months, or, as had been shown, within this time. As seen in individual cases, as the result of protective attachments, the case has been known to reach a full term. Abortion, as it is called, of a tubal nature has many advocates, claiming as they do a majority termination of the condition. Both complete and incomplete is the known abortion in these instances, as the attending hemorrhage may influence, and a lessening of this factor influences the formation of a "fleshy mole" and hematode of a pelvic variety, or a hemato-salpinx. All must be regarded as a possible result.

The statistical facts in the matter do not have us believe that the opinion of Tait was invariable, though in general it is deserving of a full consideration.

The nature of a rupture must occasion the condition vulnerable by a tubal over distention or perforation of the tubal wall by villi in the ovum growth and degenerative changes in its wall that result. At the placental location rupture has more frequently been found and the ovum will be discharged into either the broad ligament folds or peritoneum. The majority of these cases receive no prompt attention, and death results.

Strange it is, too, that this hemorrhage which follows an extra-uterine pregnancy rupture within the peritoneal cavity may excite a peritoneal irritation that is usually severe, since it would seem devoid, as it must be, of an infection. It is supposed that the

blood acts as an irritant, chemical in nature or in itself a toxin of a sort not determined. Of course, the ovum condition in any event is precarious, and, by the way, it may be curious to note how in this connection relative to the supposedly primary abdominal type, known from *post-mortem* finds in the "pre-antiseptic" days, fetuses were found of complete development and carried long beyond the time of normal pregnancy. The state of this preservation is often questionable. Lithopedion has resulted, and the "Stone child of Lemzell," which was famous and supposed to be due to a rupture of the uterus of a patient, Anna Muller, was carried supposedly forty-six years, is a case in point. It is held that an escape of the entire ovum in the cavity of the peritoneum is usually followed by its death, and, unless beyond the twelfth week, absorption follows. This much for the conjecture, as is true of primary and secondary abdominal pregnancy.

A tubal pregnancy certainly could have no more favorable termination than a rupture between the broad ligament folds, in that the pregnancy is entirely without the peritoneal sac and the condition is literally extraperitoneal.

Primary abdominal pregnancies are extremely conjectural, as the associate functional congestion and alive nature of the generative adnexia make provision for the purpose of a nourishment of the ovum.

The work of Martin and, I believe, Zweifel, as some others, demonstrates a fertilized ovum implanted on a strip of fimbriæ of the tube, as well as the nature of the sac-wall in the cases spoken of as primary abdominal. This lends a confirmatory suspicion as to this surmise; the belief will exist, though, with a reservation. Absorption of the fetus of a certain size is not apparently possible, and the changes by way of a chance suppuration, adipodicere, mummification of lithopedion, must be reasoned for. The last-named, from indisputable records, has been carried by the mother for years, as in the noted case of Anna Muller.

A pregnant tube prolapsed into the Douglas cul-de-sac or the pelvis has us recall a possible error in diagnosis, and, too, the discharge by uterus of decidual cast is not infallible, as functional tube or ovarian troubles sometimes have occasioned this manifestation. In all, the condition, at best, can but be guessed at, strengthened as it must be by sterility and subjective symptoms.

Early rupture of tubal conditions has, as a rule, no attention given, particularly where the fetus has survived the damage; in a false labor is the awakening. The possibility of an extra and intra-uterine pregnancy is, of course, embarrassing.

I submit a photograph of an ectopic pregnancy that was seen by me in the throes of death that followed a rupture of its envelope, and of which no previous history could be obtained. The placental attachment was on the peritoneal side of its ovoid shape, and its fixity to the issue of the child's size, development, visibility and the abdominal tolerance that was incurred, for none of these could be disputed from the fact that the child was well developed, eyelids separated and its preservation perfect, presenting a beautiful picture, "rich with the spoils of Nature."

A Simple Expedient in Treating Complicated Fractures of the Lower Jaw Forbidding Intrabuccal Prosthetics.*

By LUCIAN H. LANDRY, M. D., Junior Surgeon, Touro Infirmary; Clinical Assistant in Surgery, Medical Department, Tulane University of Louisiana, etc., New Orleans.

Fractures of the lower jaw, and how to deal with them, has been quite an interesting problem to the surgeon from time immemorial.

In a great many clinics the fractures of the inferior maxilla that apply for treatment are turned over to the dental surgeon, who puts an intrabuccal plaster cast, which the patient has to wear from two to four weeks (much to his discomfort and annoyance), preventing proper cleanliness of the mouth, proper feeding, and interfering greatly with speech (in many instances totally).

The ideal treatment, of course, would be: First, to reduce the fracture accurately; second, to maintain reduction and immobilization of the fragments until firm union is obtained; third, to provide for the hygiene of the mouth, which suffers constantly from salivary stagnation and putrid decomposition; fourth, to meet the above indications with the least interference with the oral and maxillary functions (feeding and speech).

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To answer these conditions is impossible in all cases, depending on the extent and situation of the fracture. In simple fractures of the lower jaw, in front of the angle, these conditions can be very well met with the splint devised some five years ago by Dr. Matas, and which is constantly used in our surgical service with very good results.

The type of case with which I will deal is the case where the splint is contraindicated; that is, in multiple fractures of the jaw, or marked compound cases with separation of the alveolar process, or cases with marked swelling and hematoma forbidding any intra-buccal appliance owing to pain and inability of keeping the mouth clean, etc.

Within the last two months I had the occasion to observe and study two cases in the charity service of the Touro Infirmary, where we found the splint could not be used.

The first case, a hostler, who, while visiting a public dance hall, succeeded in getting in an argument, and received for his pains a blow with a brass knuckle, fracturing his lower jaw on both sides about one inch in front of the angle, and loosening most of his teeth. When he applied to the Touro Infirmary for treatment the next morning the jaw and face were so swollen and painful that a careful and complete examination was out of the question. We could not even get a finger inside of the cheek. At the suggestion of Dr. Matas, after reducing the fracture as much as possible, five or six turns of a thin Esmarch elastic bandage were taken around the head and chin, bringing the crowns of the teeth of the lower jaw in contact with those of the upper, in this manner splinting the lower jaw against the upper, and at the same time favoring and promoting the reduction and absorption of the hematoma and edema. The patient complained of inability to swallow, but this was due to the swelling and reactionary edema of the parts following the traumatism.

Special attention was given to the cleaning of the mouth, particularly with the immobilizing bandage in place, which favored salivary stagnation and putrefaction. An irrigating can armed with a female douche nozzle was attached to the head of the bed, and the patient instructed to use it himself every hour while awake, allowing the solution to go in as far back as possible and flow out-

ward. In two or three days the swelling had subsided enough to allowed him to take soft food. In four or five days, all the acute symptoms having subsided, the patient was allowed to walk about. The bandage was removed and readjusted whenever necessary to wash and freshen the skin. After seventeen days the patient was allowd to leave the hospital, with only a slight deformity and a good functioning jaw.

In the second case, this simple procedure is more forcibly and favorably illustrated. The fracture was in a small child (twenty months old), who was kicked in the jaw by a mule, fracturing the jaw close to the symphysis. In this case it would have been out of the question to apply any sort of intrabuccal splint or apparatus, as, first, the child would not allow it to remain, and, second, the milk teeth would not be strong enough to support any sort of prosthesis. About four turns of a wide Esmarch elastic bandage were taken snugly around the head and chin, in the same manner as described in the previous case, with the addition of a cotton bandage around the forehead and occiput, to prevent sliding of the elastic bandage. The child objected to the bandage for the first day and tried to get rid of it, but he soon cried himself to sleep. Subsequently, however, he became perfectly reconciled to his head-gear and seemed to be quite satisfied. He became quite a hospital pet, and in twenty-five days was reluctantly allowed to go home. The child had a firm union at the end of two and a half weeks, with no deformity but a slight deviation in the alignment of the teeth, which can be easily remedied at a future date by a dental prosthesis.

Diabetes Mellitus Among the Negroes.

By ISAAC IVAN LEMANN, M. D., Assistant Professor of Clinical Medicine, Medical Department, Tulane University, New Orleans, La.

Within the past two years five cases of diabetes mellitus in the negro race have come under my observation and a sixth case was seen by my colleague, Dr. C. L. Eshleman, in the Touro clinic, which we attend jointly. Until recently it had been my impres-

* Read before Orleans Parish Medical Society, October 24, 1910.

sion that diabetes is even more uncommon among the negroes than among the whites. This impression, I believe, has been shared rather generally by the profession at large. Osler, in his text book, says that "Diabetes is comparatively rare in the colored race, but not so common as formerly supposed."[1]

The fact that such a comparatively large number of negro diabetics have come to my notice in so short a space of time has led me to attempt to gather some statistical information as to the relative frequency of the disease among the negroes.

In trying to draw conclusions from any figures we may have at hand there are a number of facts that must be borne in mind. In the first place the figures available are chiefly those of the hospitals and outdoor clinics, in both of which places the poor exclusively are treated, whereas diabetes is well known to be a disease of the well-to-do. As Van Noorden puts it: "In Berlin the absolute number of cases in the upper ten thousand is greater than that in the lower hundred thousand and the same proportion is said to exist in London. In other words, wealth and culture increase the liability to diabetes tenfold."[2]

This statement conforms to the experience here as to the proportion between diabetes seen in private practice and those seen in clinic and hospital. So that in discussing hospital figures we must remember that we are not dealing with the true incidence of the disease among the whites, at any rate. Since the negroes belong so overwhelmingly to the poorer classes and can claim among their number such a very small fraction of a per cent of the well-to-do, hospital figures represent approximately the true state of affairs for them.

Another fact to be considered in viewing my statistics is that the urine of every patient has not been examined. In some cases it has been examined for sugar but once, and in many cases it has not been examined for sugar at all. Hence mild cases of diabetes without striking symptoms may and probably have been overlooked. The cases diagnosed represent, for the most part, those in whom general or local symptoms have directed attention to the possibility of the existence of glycosuria.

With these reservations, I venture to present the following result of my investigations:

DIABETES MELLITUS IN CHARITY HOSPITAL.

Year.	White cases.	Colored cases.	White Admissions.	Colored Admissions.	Total Admitted.
1898.....	2	3	4,738	2,996	7,734
1899.....	5	0	5,068	3,412	8,480
1900.....	4	0	4,614	3,114	7,728
1901.....	7	3	4,657	3,068	7,725
1902.....	7	2	4,928	3,248	8,176
1903.....	6	3	4,767	3,434	8,201
1904.....	2	0	5,300	3,299	8,689
1905.....	2	1	5,091	3,321	8,412
1906.....	1	0	5,027	3,425	8,452
1907.....	4	3	5,294	3,556	8,850
1908.....	3	2	5,874	3,666	9,540
1909.....	2	2	5,850	3,726	9,576
	45	19	61,298	40,265	101,565
	.72 per M.	.47 per M.	White and Colored .63 per M.		

Touro Infirmary Outdoor Clinic: In this clinic we have seen since April, 1907, 5,867 medical cases. Of these 1,272 have been white males, 993 white females, a total of 2,265 whites. There have been 1,549 negro males, 1,589 negro females; a total of 3,138 negroes. In 465 cases the race is not stated in the record, but from various clues in the individual histories I believe that the majority of the 465 were negroes. However, the figure is sufficiently small that it will not make much difference for our purpose. Among the 2,265 whites there were three cases of diabetes mellitus, one female and two males, none of whom were Jews.

Among the 3,138 negroes were five cases of diabetes mellitus. All five were males. In other words, there has been about the same proportion of diabetes among the negroes as among the white patients.

The type of diabetes occurring in these negroes has conformed in general to that which it has been my experience to find in white hospital patients. In practically every white diabetic whom I have seen in the Charity Hospital the grade of glycosuria has been high, the tolerance for carbohydrates small, the emaciation and prostration extreme and the course of the disease relatively acute. On the other hand, it has been my good fortune in private practice to see almost exclusively cases of mild grade. One of my negro diabetics was a young boy who had an extremely severe form of the disease. I give his history below:

No. 4,427. *Sammy H.,* colored, male, aged 14, farm hand. Seen for the first time January 15, 1910. Since one month prior thereto frequent urination, especially at night, when he had to rise four or five times. He had lost about 9 pounds. Appetite good.

Previous History: Beyond the usual diseases of childhood, he had never been ill. No venereal disease.

Family History: Without importance. No family disease.

Physical Examination: Well-grown boy, emaciated and weak, No organic disease discoverable. Weight, 105. Urine, while he continued on his usual diet, containing large amounts of carbohydrates measured 5700 cc. in 24 hours, with a specific gravity of 1041 and contained 7% glucose (=228 grammes in 24 hours). Acetone was present.

When all the carbohydrates but one ounce of white bread had been eliminated from the dietary the urinary output was 3,670 c. c. in 24 hours, with 3.9% sugar (=144 grammes). During the course of the gradual reduction of the carbohydrates the boy gained seven pounds in ten days. After all the carbohydrates had been eliminated from the dietary he passed 3,860 c. c. of urine, with 1.9% sugar (=73.34 grammes). Finally, when, in addition to removing the carbohydrates from the dietary, his meat was reduced to one-quarter pound (weighed cooked) he still passed 3,750 c. c. urine with 2% sugar (=74 grammes). An attempt was now made with an oatmeal cure. After this, the sugar percentage was brought down to .8% and the total amount of sugar for twenty-four hours to 35.6 grammes. But this improvement was of short duration, for immediately upon his return to a standard diet with 2 ounces bread per day the percentage went up to 6.6% and the total amount to 278 grammes for twenty-four hours. The tolerance for potato starch was then tested, but with much worse results. The patient was then returned to a second oatmeal cure, but this was not as successful as the first one had been. The sugar percentage continued 6% and the total output 150 to 180 grammes per diem, in spite of all we could do. Acetone and diacetic acid were practically never absent from the urine. The patient died within six months from the date of his first visit.

In contrast to this is the case of a negro woman, aged 40, very obese, a cook in the household of a member of my own family. She was a high liver and fond of the good things of life, especially

sweets. Her urine was examined because she had a carbuncle, and it was found to contain sugar persistently, even after the carbohydrates were cut down. She was informed of the presence of sugar in her urine and was urged to regulate her mode of living. She said that she had known for a long time that there was sugar in her urine, for, several years before, upon the prescription of a friend, she had taken some of her "chamber-lye" for a cold and had found it sweet. More than two years have elapsed since the clinical diagnosis was made, and in spite of the fact that no treatment and no regulation of the diet has been possible, she has continued in excellent health and with unimpaired nutrition. It is apparent that we are dealing here with a very mild form of diabetes—the usual diabetes of the obese.

The histories of the other four clinic patients are much less satisfactory, as they did not remain under observation long enough. One of these (No. 4,652) was a boy of 16, who came but once to the clinic, and was seen at that time by Dr. Eshleman.

No. 2,669 was a colored male, 28 years, who dated his trouble (loss of weight, weakness, frequent urination) to an attack of typhoid fever three years prior to his first visit (December 24, 1908). Before the typhoid he had weighed 174 pounds. At his first visit he weighed 118 pounds. He came principally because of a diarrhea which had continued for some months. His urine, while he was on a diet presumably free from carbohydrates, measured 3,880 c. c. and contained $\frac{2}{3}\%$ sugar (=58.2 grammes in twenty-four hours). This patient ceased his visits as soon as his diarrhea ceased.

No. 5,724 was a negro male, age 44, who, in the course of four weeks, had decreased from 245 to 195 pounds. He complained of great weakness, great thirst and profuse urination. He was usually constipated for two days at a time, and had a bad taste in the mouth, a thickly-coated tongue and a foul breath. The urine passed at the time of his first visit contained a large amount of sugar. Diacetic acid was not present. He was very much prostrated and could hardly walk. He returned a second time, two days later, but without his urine, which he had been instructed to bring. After this he did not come again. His previous history was without special interest. He had never been seriously ill.

There was no history of syphilis. He had been very fond of sweets. The family history was entirely without significance.

No. 5,793 was a negro, male, aged 49. He had been sick for four or five weeks. His complaints were great weakness in legs and arms, with great thirst. He had to rise a dozen times at night to urinate. In spite of a splendid appetite, he had lost considerable weight. His sexual power had been lessened in the past couple of years. Patient said that his only previous illness had been chills and fever and a gonorrhea twenty-five years ago. He denied lues. He was moderately emaciated. A careful physical examination revealed no organic abnormality. The amount of urine voided (while the patient was on restricted diet) in twenty-four hours was 1,830 cc., which contained 121 grammes of sugar (6.6%). This patient, too, failed to follow instructions, and after three visits ceased coming. It is fairly safe, however, to place all three of these (2,669, 5,724 and 5,793) in the catalogue of severe cases.

To recapitulate, then, there were among some 3,000 negroes five cases of diabetes, four of which were severe and one must remain unclassified. The mild case in the negro woman cook is not included in the series, as she was not a clinic patient.

I think it is fairly safe and reasonable to draw the conclusion from both sets of figures which I have submitted that there is no great difference in the frequency of the disease among whites and among negroes when we leave out of consideration the well-to-do overfed, living a life of great nervous tension. The negro certainly possesses no predisposition such as that of the Jews so well known, nor, on the other hand, can he be considered to enjoy any degree of immunity. His care-free life of hard manual labor, with a minimum of physical strain, might lead us to think such an immunity probable. On the other hand, the etiological importance attributed by many authors to syphilis and alcoholism certainly loses weight when viewed in the light of the negro statistics. The widespread existence of syphilis and alcoholism among the race has had no great effect in producing diabetes among them. And in my series of negro diabetics neither of these factors seem to have played any part in the causation of the disease.

Another interesting point worth our attention is the diet of the negro race. It is often preponderatingly carbohydrate with its hoecake, rice, hominy and sugar cane. On the sugar plantations

during the fall and winter months sugar cane is an extremely important part and often a major portion of a day's dietary among the laborers. Certainly their carbohydrate function must be capable of caring for huge quantities if it can stand this strain. However, it is no new observation that excessive indulgence in carbohydrates cannot be considered as a cause of diabetes. Naunyn, for instance, writes "That excessive nourishment, and especially excessive indulgence in starches and sweets, can be such a cause of diabetes—is certainly not probable for we by no means find diabetes especially frequent in those localities whose inhabitants consume especially large amounts of carbohydrates."

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Gunshot Wounds of the Abdomen.

By CUNNINGHAM WILSON, M. D., Birmingham, Ala.

Before taking up the surgical treatment of this subject it might be well to consider why we are called on to treat so many gun-shot wounds of the abdomen here in the South. The cause will probably be easier to find than the mode of application of a remedy for the prevention of this evil. That we have too much liberty in our form of government and too little respect for the laws that govern us goes without saying.

We are confronted with the proposition of two different races of people living together, one of high civilization, the other only a few generations removed from barbarism, with little or no possibility of ever reaching a state of genuine civilization, and with all the liberties that a civilized government offers.

The education of the negro has undoubtedly been misdirected. His moral character has not improved with his education. Since

his liberation from slavery he has grown up without respect for his parents, his fellow men or his government. With his inherent lower degree of intelligence it is impossible to say when he will be prepared for the liberties which our government has given him. It is a well-known fact that in civil life a large majority of the gun-shot wounds occurs among the negroes and the lower class of whites.

The proper treatment of gun-shot wounds of the abdomen was demonstrated to us by Miles, of this city, years ago, when he reported a recovery of a severe case on which he had operated. His brilliant success was followed by many failures, and for years afterward it was the advice of many eminent surgeons to let such patients alone. Statistics from some quarters still palliate the consciences of surgeons who are willing not to interfere in these conditions.

The statistics of military and civil life are entirely different, and should not be considered in the same class. The modern military rifle ball is much less harmful than the ball carried by the ordinary pistol. The soldier wounded on the battle field dies before he reaches the hospital, or else his injuries are of such nature that a good percentage will recover if let alone.

My apology for this paper is to put on record my experience in civil life of the treatment of gun-shot wounds of the abdomen. My percentage of recoveries is about the average of a rather large series of cases, not as good as some, and, I am sure, far lower than will be reached in the near future. In my series of twenty-six cases I have operated on all but one. Some of them were in a hopeless condition when operated upon. There are many problems that have not been settled in dealing with this class of accidents. It is definitely settled, however, that in civil life all cases should be operated upon.

The question of drainage is one of very great importance. Whether it is better to try to remove all contaminating matter from the peritoneal cavity by irrigation, or simply sponge it away carefully leaving the peritoneum, in a large measure, to take care of itself? Is an enterostomy advisable as a means of safety? What is the best method of doing an anastomosis when a re-section is necessary. Probably nothing will do more towards reclaiming a

few of the hopeless cases, where the hemorrhage has gone to an extreme, than the direct transfusion of blood, as advised by Crile.

There are no firm and fixed rules for handling gun-shot wounds of the abdomen, and no class of patients reach us presenting a greater variety of conditions, or requiring more serious judgment in their care. Every convenience and the best of assistants are most important, and getting such patients into hospitals is of the greatest help, as this makes quick and accurate work possible.

Where the patient is very weak the field of operation should be thoroughly prepared before the administration of the anesthetic. A preliminary catheterization should always be done for the double purpose, first of emptying the bladder, and second, for examination of the urine to see if there is any evidence of injury to the urinary tract.

Full anesthesia is desirable, as this insures easy handling of the abdominal viscera and consequently makes quicker work possible. A long abominal incision renders the inspection of the viscera possible without the necessity of evisceration and with the minimum amount of handling.

If the course of the ball is known it is better to make the incision follow, if possible, this course, for the damaged parts will be more accessible, as there is little tendency to peristaltic movement of the intestines after injury.

First, all bleeding points should be sought and controlled, and, at the same time, any intestinal perforations which come in the way should be lightly grasped with artery clamps, closing them later. After controlling all bleeding points, further search should be made for stomach, intestinal and other injuries. The intestinal injuries should then be repaired, small ones by purse-string sutures of linen or silk; large ones by means of Cushing's right angle suture, or, if the intestine is irreparably injured, by resection and anastomosis.

In doing resections I have preferred an end-to-end anastomosis to the use of the Murphy button or other methods of anastomosis.

With practice an end-to-end anastomosis can be done in three minutes or even less time. I have found, from considerable experience, that a single row of continuous linen suture, carefully placed, is all that is necessary with now and then a reinforcing suture at the mesenteric border.

The simplest method of doing an end-to-end anastomosis is to grasp with Kocher's intestinal clamps the intestine above and below the part to be resected, and then cut away the injured part of the intestine together with its mesentery. The ends of the intestine held by the clamps are now brought together, side by side, with their mesenteric borders in apposition. A running suture is begun at the free border of the intestine and is carried through the mesenteric border, where it is converted into a Cushing's right angle suture and carried around to the point of beginning. If this is carefully done it is rarely necessary to use reinforcing sutures.

In uniting the cut borders of the mesentery it is better to follow the suggestion of Littlewood and ligate its cut edges at short intervals, after having caught them up with artery clamps, thus avoiding the hemorrhage due to needle punctures, which necessarily follow the use of the suture.

When the patient reaches the surgeon some hours after the injury and there is a great deal of intestinal distention it is very important that this distention should be relieved. I have found that this can be most readily done by anastomosing a rubber tube to the side of the intestine by means of a Murphy button. This allows a free escape of the intestinal contents, with no possible danger of further contamination of the field of operation, and requires no attention, as it takes care of itself. When the operation is finished the button is removed and the opening in the intestine closed.

Liver wounds are readily sutured by means of a Kousnetzoff needle armed with catgut. Injuries of the spleen are liable to be fatal on account of hemorrhage, and, on account of its friability, suturing it is a difficult procedure. Because of this a splenectomy may be preferable, with less risk to the patient, although such hemorrhage may be controlled by packs. Wounds of the pancreas should be sutured. When the kidney is injured it is always well, after checking the hemorrhage, to drain from the loin. Bladder wounds should be sutured in layers.

Hot salt sponges and packs should be freely used as in all abdominal operations, and the abdominal cavity should be wiped out and protected with the same. I usually begin a normal salt infusion at the commencement of the operation, as fresh bleeding is liable to set in as soon as the viscera are handled.

The abdominal incision should be closed as quickly as possible, and this can usually be done by means of through and through sutures. I have drained all my cases where the intestines were perforated, but cannot say that this is absolutely necessary. I have used large wick pelvic drains, rubber wrapped, putting patients to bed in the extreme Fowler's position, and lately have kept up proctoclysis, as recommended by Murphy, until my patients are convalescent.

While the question of drainage is still somewhat unsettled, excellent results have been obtained without it. As yet I have not been bold enough to treat my patients without it, although my results have not been any better than have been reported by men who have dispensed with it. If transfusion of blood is indicated, it should be commenced as soon as all bleeding is checked.

Success in dealing with this class of patients may be summed up as consisting of rapid, accurate work, proper drainage, transfusion of blood, which so far I have not done in these cases, and the after treatment in the extreme Fowler's position with continuous proctoclysis. Patients are allowed to drink water freely when there is no vomiting. Food is withheld until the patient is able to take care of it, usually for forty-eight hours or longer.

A general summary of my cases may be of some interest. Of the twenty-six cases, twenty-five were operated upon. The twenty-sixth, a colored male, fell into my hands six days after he had received three pistol shots, one going through his left thumb, one through his chest and one through his abdomen. He was in a very serious condition, and had developed a fecal fistula through the abdominal wound. He made a very slow and tedious recovery without operation.

Of the twenty-five cases operated upon ten were white and fifteen colored. Twenty-three were males and two were females. The length of time from reception of injury until operation was from two to thirty-six hours, the average time being 9.8 hours. There was a mortality of ten, or 40 per cent. One death occurred on the twenty-third day after the operation from intestinal obstruction, due to a band of adhesions. This could have been relieved, but, unfortunately, I was out of the city and nothing was done for him. Another died on the tenth day from acute nephritis, three died from peritonitis within four days of operation, five died from shock

and hemorrhage within fourteen hours after operation. If transfusion of blood had been done in these five cases there is little doubt but that some of them would have been saved.

At the time of operation the general condition of the patients in seven cases was fairly good. Of these seven one died and six recovered. In eight cases the condition was serious, and of these two died and six recovered. In ten cases where the condition was very serious seven died and three recovered. Internal hemorrhage at time of operation was moderate in eight cases. Of these two died and six recovered. In seven cases where the hemorrhage was serious two died and five recovered, and in ten cases where there was extreme hemorrhage six died and four recovered.

The different viscera were injured as follows: Small intestine alone in five cases, large intestine in one, both small and large intestine in eight, mesentery with other viscera in seven. The liver alone was injured in one case, which recovered; the liver with other viscera in four, of which two recovered (in one of these the injury consisted of several perforations by small shot), and two died of hemorrhage. The spleen, with other viscera, was injured in two, in both of which a splenectomy was done. Of these one died from peritonitis and one from obstruction of the bowels on the twenty-third day after operation. The kidney, with other viscera, was injured in one case, which recovered. The bladder, with other viscera, was injured in two cases, one of which recovered, and the other died of peritonitis. Resection of the intestine was done in six cases; two died, four recovered. Of these there were five resections of the colon in which patient recovered. In seven cases there was injury of the diaphragm and thorax in connection with the abdominal injuries. Of these four died and three recovered. In one case there was acute dilatation of the stomach following the operation. This was relieved by lavage.

The size of shot with which the injuries were inflicted were divided into small shot, 22, 32, 38 and 44 calibre balls. Of small shot injuries there were two cases; in one there were many perforations in the intestines and stomach, and in the other in the liver and intestines. Both of these recovered. Of 22-calibre injuires there was one, which recovered. Of 32-calibre injuries there were eight. Of these four died, one of hemorrhage in pleural cavity, one of acute nephritis, one of hemorrhage and shock and the fourth

of peritonitis. Four recovered. Of 38-calibre injuries there were thirteen cases; six died, three from shock and hemorrhage, two from peritonitis and one from intestinal obstruction. Seven recovered, one without operation. Of 44-calibre injuries there were two cases, both of which recovered.

The small shot injuries were received from distances of fifteen and twenty feet. The pistol shots from distances of a few inches to several feet.

In presenting this paper I have purposely avoided collecting statistics on this subject, the principal reason being that most of the accessible statistics are found among the military records.

Discussion of Dr. Wilson's Paper on Gunshot Wounds of the Abdomen.

Dr. Wm. M. Perkins, New Orleans: There is a mistaken idea that the "Ochsner treatment" is intended only for cases of appendicitis. It has a much broader field and is applicable to abdominal traumatism or inflammation demanding physiological rest. It is based on the theory that whatever is taken by the mouth will start the peristaltic wave from the esophagus to the colon. Too little emphasis has been laid upon the great value of the "Ochsner treatment" in abdominal conditions other than appendicitis.

Another most important point for consideration is the lapse of time between the gunshot wound of the abdomen and the operation. In many cases the patient's last chance is lost because of the long and rough journey to the operating room. In many cases it would be far safer to send the surgeon and his emergency equipment to the patient rather than to jolt the patient over rough country roads, or even subject him to a rough railroad journey. Many of these patients suffer from internal hemorrhages which may be kept up by jolting. Besides, the surgeon and his assistants and equipment may, in many instances, reach the patient in less time than the patient can be brought to the surgeon. I believe that rough and prolonged transportation is largely responsible for the high death rate.

Dr. C. W. Allen, New Orleans: The old idea of irrigating the intestinal cavity has been given up by most men. Whenever water is put in there with the idea of washing out the contents it simply dilutes the contents and scatters it throughout the entire abdomen.

Dr. Genella: Lots of times we get calls to go miles in the country to see a case of gunshot wounds of the abdomen. I tell the sufferers that if they were in a good hospital I think it would be well to operate, but as conditions are they might better stay where they are and take the chances of no operative interference with rest.

Post-Diphtheritic Paralysis.

By L. L. CAZENAVETTE, M. D., New Orleans.

Mr. President, I have accepted with thanks the honor you conferred upon me by appointing me chairman of this important section of our meeting, because it affords me the opportunity to present before this representative gathering of general practitioners a subject which I hope will prove of interest to them.

The selection of Post-Diphtheritic Paralysis for the subject of this paper has been prompted by recent experiences with cases of this disease.

It is not my intention to burden you with a lengthy report of cases, but I shall endeavor to present the most salient and important points in the diagnosis and treatment of this condition.

Apart from the serious complications arising during the initial stage of diphtheria those met with at the wake of the malady should also deserve our attention. Of the latter the most frequent, by far, is paralysis. Its frequency has been variously estimated from 15 to 20% of severe cases. McCallom gives a much higher percentage. He estimates that paralysis, in some form or other, is present in about 40% of all cases of the disease, both mild and severe. It seems to affect children as well as adults. It generally appears between the second and eighth week after the disapparance of the initial symptoms.

It is true that the more severe the initial symptoms of the disease the more probably will paralysis supervene, but it has been frequently met with after what, at first, was thought to have been a mild case of tonsilitis. The paralysis is the result of a true neuritis, the inflammation being due to the direct action of the diphtheria toxins upon the nerve structures.

With this prefatory note I wish to call your attention to the

following observations, illustrating points in the diagnosis and treatment:

During the latter part of December, 1909, I was called to see R. F., white, male, 10 years of age, who had been confined to the bed for six weeks because of his inability to walk. He complained of being unable to move his lower limbs and of having frequent spells of weakness and dyspnea. His parents stated that this condition had come on gradually; that in a week after the first appearance of weakness in the legs he had completely lost the use of them. He had complained of very little pain in the limbs, but had had numb feelings about feet and toes.

The examination revealed a flaccid paralysis of both lower extremities. It was complete in the extensors and flexors of the toes, in the extensors and flexors of the feet and in the flexors and extensors of the legs. The flexors of the thighs, as well as the adductors, showed some paresis. The muscles of the back were very weak, but those of the neck were not affected. The arms were not affected. The soft palate showed some paresis, and there was a nasal twang in the voice. The muscles of the eyes were not affected. Accommodation was good. There was slight sensory disturbances about the feet, which were cold. The palate reflex was lost, so also were both patellar reflexes. There was marked atrophy of the muscles in the lower extremities, with some pain on pressure on nerve trunks. There was no affection of the bladder or rectum.

I had occasion to see him during one of these weak spells. It came on after the exertion subsequent to the examination. His breathing became entirely thoracic. The respiratory movements were rapid and shallow and ineffectual. There was some cyanosis with dyspnea. With voice reduced to a whisper, he asked to be fanned, though covered with perspiration. The anxiety, distress and apprehension of the patient were something terrible. After a few minutes these symptoms subsided and he again felt comfortable.

On the whole, the condition as described above presented a picture of paralysis due to peripheral affection. Here I wish to state that a few weeks before seeing this patient Dr. P. E. Archinard, in conversation, told me of his having seen a patient suffering with paralysis, the diphtheritic nature of which had been confirmed by bacteriological findings. On recalling this instance and because of

the gradual onset of the paralysis, I concluded that I was probably dealing with a case of post-diphtheritic paralysis. On inquiry, I was informed that the boy had had a slight sore throat in the latter part of September, which condition was not thought to have been diphtheritic by the attending physician.

At this time further information developed the fact that the boy's sister, E. F., five years older than he, had been under treatment for some throat affection. Realizing that her condition might throw further light on the cause of her brother's case, I asked to see her.

I found her to be suffering with a difficulty in swallowing, due to partial paralysis of the palate and pharynx muscles. She had been for the past four weeks taking nourishment under great difficulty because of regurgitation of food. She had had a difficulty in reading, which lasted two weeks. She had loss of palate reflex, and she had no knee reflex. She also gave a history of having had a mild sore throat some six weeks before my examination.

With both of these patients giving a history of sore throat during the preceding few months, and both showing evidences of paralysis, the ethological factor in both instances could not have been anything else but the diphtheric toxine.

However, to confirm my diagnosis, I took swabs from the throat of both of them, although neither presented any evidences of local lesions. These swabs were sent, with the usual culture tubes, to the Board of Health Laboratory for examination for the Klebs-Loeffler bacelli. After the usual period of incubation I received the report that both cultures were positive, and Dr. P. E. Archinard, who examined these, personally further informed me that the culture from the boy's throat was almost a pure culture of the diphtheric bacillus. This point, I believe, is of interest, showing that even several months after the initial throat lesion the bacilli were still present. During this period of time there was a constant and gradual absorption of the toxins, the products of their development, saturating the nervous tissues so susceptible to their action and giving rise to very severe and extensive paralysis.

The diagnosis of post-diphtheritic paralysis is never difficult when we are informed of the preceding throat infection. The peculiar distribution of the paralysis and the order in which different regions are successively involved, together with the fact that recovery

of power often goes on in the parts originally affected, while the paralysis is invading other regions, should give us a clue to the diagnosis.

The paralysis usually begins in the palate, the loss of power being shown by the nasal tone of the voice and the partial regurgitation of food. It then may spread to the external muscles of the eyes, but involves particularly the ciliary muscle and gives rise to loss of power of accommodation. About this time the loss of power may extend to the limbs; the legs are more often affected than the arms. Apart from these there is a symptom which is present in a large number of cases. That is absence of knee-jerk. The gradual development of paralysis of the palate, of the pharynx, of the muscle of accommodation, together with some weakness in the limbs, gives a characteristic stamp which is itself diagnostic.

It is true that most cases of post-diphtheritic paralysis recover, but they do so very slowly. When we consider that the cause is a neuritis which may terminate in degeneration in the affected nerves we are confronted at once by the possibility not only of a slow recovery, but at times permanent injury.

The treatment followed in my patients was suggested primarily by that followed in Dr. Archinard's case, and also by a paper read before this body by Dr. H. Dupuy, on the subject of "Anti-Diphtheritic Serum Medication in Post-Diphtheritic Paralysis."

The keynote to the successful treatment of any condition is the removal of the cause. In these cases, inasmuch as the bacilli were still present, it occurred to me that my first duty was to destroy them, and with this end in view I administered 5,000 units of diphtheria antitoxin to each patient.

The already weakened state of the boy was, unfortunately, not helped by the excitement attendant upon the injection of the serum. Some eight hours after the injection I was summoned to his bedside. He had had another attack of dyspnea, brought on by restlessness due to pain in the region of the injected area. At one time death seemed imminent from paralysis of the muscles of respiration. He, fortunately, rallied in a few moments.

It was my intention to repeat the serum in order to overcome the element of toxicity, but the experience following the first injection precluded any further use of serum. Forty-eight hours

after the injection, however, he felt much improved. He had not had any attack of dyspnea and his general condition was markedly benefited. He was then given strychnin internally. The improvement in the paralysis of the limbs was slow and gradual. At the end of the first week he was able to sit up; at the end of the second week he was able to move the flexors and the extensors of the legs. In another week he was able to stand and walk with crutches. Four weeks from the date of serum injection he walked alone. Recovery was complete.

Only one injection of 5,000 units was also given to his sister, who, at the end of forty-eight hours after receiving it, was able to swallow a glassful of water without difficulty, the first time she had done so for over four weeks. She was subsequently placed on strychnin internally, which medication was kept up for some time. Recovery complete.

I conclusion I would advise the necessity of a bacteriological examination in cases of multiple neuritis, especially in children, in order to ascertain the true etiology of the disease. This should be done notwithstanding the fact that the cases may be seen some months after the initial lesion. If the bacilli are still present the result of any treatment we may adopt will be hastened by the administration of anti-diphtheritic serum.

The internal administration of strychnin in small doses and the application of galvanic electricity have already proven their worth and should be used.

Discussion of Dr. Cazenavette's Paper on Post-Diphtheritic Paralysis.

Dr. P. E. Archinard, New Orleans: The doctor has thoroughly covered the ground in his paper and taken up all the practical points. Multiple neuritis is not rare. It is a common affection. I have seen a number of cases in children in my practice which I have never been able to diagnose the cause. I treat them according to the general rule of practice. Recently, however, I have had two cases following light cases of sore throat, in which examination of the throat showed the presence of the diphtheria germ. I believe the relation of those cases to Dr. Cazenavette suggested to him the possible cause of the disease in his cases and the examination showed the germs present. In these cases of paralysis early diagnosis is of the utmost importance.

Some Notes on the Treatment of Syphilis of the Nervous System by Mercurial Inhalations in a Thermo-diaphoretic Room.

By SALVATOR SCHIRO, M. D., New Orleans.

The importance of anti-syphilitic treatment in the various affections of the nervous system is clearly evident, since, of all the organic systems, this is the most often and severely affected by tertiary syphilis.

The results of curative treatment in some of these pathologic conditions have been far from satisfactory, particularly in the late manifestations, while the preventive treatment, when practicable, may accomplish a good deal, if sufficiently carried out, in all syphilitics, and more especially so in those subjects predisposed to nervous affections by heredity, by acquired tendencies or by nervous overwork.

Within the last year I have had under my treatment five cases of tabes in different stages in which syphilis was, no doubt, the predominant etiologic factor of the disease. Some of these patients were referred to me by Dr. P. E. Archinard, to whom I am very much indebted for his kind suggestions and moral support.

Tabes is one of the most common late manifestations of syphilis, 4% of all cases, according to Keyes and others, and specific treatment, as commonly used, is almost powerless against this affection.

In the medical literature are some cases registered in which specific treatment brought a marked relief and improvement (Leredde, Breda, Bertarelli and others), but the results I obtained in these five cases, I think, are more satisfactory, as Dr. Archinard and others have seen, considering the short course of treatment of ten inhalations.

Dr. Breda recently reported one case of tabes in which seventy-five intramuscular injections of calomel (5 centigr. each) enabled a man to walk without the support of crutches, which he was compelled to use before the treatment. Dr. Bertarelli reported a similar case to the Medical Congress of Madrid.

My five cases had been, before my observation, under specific treatment, by ingestion, by inunction, some of them at Hot Springs, and one was under various treatment and doctors for four years and a half. The results they obtained under these methods were negative or of little and temporary value.

For every one of these cases the results obtained by inhalations have been satisfactory and in some very good. Without going into the history and details of each case I will mention briefly the symptoms in the order as I saw them being influenced by the treatment and those that did not change at all.

Pains were promptly diminished in intensity and frequency, even after the first inhalation, disappearing gradually during the treatment. This means a great benefit to the patient when he is affected with severe fulgurating pains or gastric crisis.

Locomotion in the ataxic generally improved, patients gaining better control of their muscles, incoördination decreasing.

Anesthesia, or numbness, when present, improving.

Bladder disorders gradually diminishing.

General physical condition improved and, of course, the moral aspect of patients becoming brighter. *Intelligence* and *memory* much clearer and noted by the patient himself. *Sexual power* improving, while in one case it was completely absent for a year.

Knee jerk, pupillar reflex to the light and static ataxia (Romberg) remained unchanged or nearly so.

Time and further observations on these and other subjects will demonstrate what the future and permanent results of the treatment will be.

For the present I can only state, without being overenthusiastic, that the results so far obtained are more encouraging and superior to those obtained by other methods. This is well demonstrated by the clinical facts observed in the five cases which underwent the treatment.

How could the reasons of such therapeutic superiority or the mechanism of action of this method upon the tabes be explained?

Let us consider some points of syphilography and neurology which may be of assistance in our efforts in understanding some clinical facts.

It is well known that certain methods of mercurialization are not endowed with an equal influence at all periods of the disease, nor on all its manifestations (Fournier).

Tabes is one of the most typical parasyphilides and syphilis is generally recognized as the commonest cause in its etiology, in 90% at least. But there is a wide divergence of opinion as to the nature of parasyphilitic lesions. Fournier asserts that parasyphilitic and

syphilitic affections are of the same origin, but of different nature.

The two main arguments in favor of this hypothesis are: First, that in parasyphilis pathology shows no specific lesions, and, second, that the antisyphilitic treatment is of no value.

Many authors from the other side do not agree on this theory, and they consider parasyphilis as a continuation of syphilis (quartan manifestations of Lesser) and that both conditions are of the same nature and origin.

In fact, if pathology, on one hand, shows no specific syphilitic lesions in tabes, on the other hand it does not show any lesion which syphilis could not cause (Carnevali).

From the statistics of various authors, Fournier, Erb, Strümpell and others, syphilis is regarded as the cause of tabes in 90% of cases, though it is not yet demonstrated that all cases are post-syphilitic, or that other morbid causes (heredity, alcoholism, trauma, overwork, chronic intoxications of different kind) are to be discarded from the etiology of tabes.

Then, be it considered as predisposing factor or as a determining cause, syphilis plays, no doubt, an important role in the etiology of tabes.

The failure of anti-syphilitic treatment has been brought against the syphilitic nature of this parasyphilide. But this objection is not corroborated by the results obtained in some cases by various observers, and much less so by those acquired in my five cases.

In post-syphilitic tabes the presence of a poison or toxin is generally admitted, just as we admit, through clinical experience, that diseases, even when cured, induce some temporary or definitive changes in the affected organism, particularly in the chemism of cellular protoplasm, in proportion to their virulence, duration, individual habits and constitution.

By analogy, then, syphilotoxins have been supposed present in syphilitics and from the recent histologic researches of Marinesco on the nervous and vascular systems it seems that certain degenerative lesions are caused by syphilotoxin.

The Wasserman reaction in the great majority of cases reveals the presence of syphilitic products or antibodies.

How is it, then, that antisyphilitic remedies fail in parasyphilis? If the toxin is the result of syphilis it seems as if it must be secreted by the organism of syphilis, or by the tissues affected by

the poison of that organism (Mercier, Carnevali). C. A. Mercier advances a plausible supposition that the poison is elaborated in some recess of the body difficult to access by the circulation. Carnevali thinks it is probable that the toxin is not eliminated or neutralized through the various depurative glandular organs (kidneys), whose function may be impaired or deranged by the same cause.

It seems very likely that both these abnormal conditions may be present in parasyphilis and so hamper the therapeutic action of specific treatment. Recently Dr. Pisani observed in many cases that while the Wasserman reaction was affected by mercurial treatment in syphilis, becoming sometime negative, it was constantly found *positive* in parasyphilis.

In my five cases mercury was given by inhalations in the thermo-diaphoretic room.

It is well known that intense diaphoresis by heat, or by other means, exerts an evident eliminating action on deleterious toxic substances from the organism, and it is known that general active hyperemia in a dry, hot atmosphere induces a more complete circulation in the capillary system, which is one of the most affected in syphilis, particularly of the nervous system.

Now, if this physio-therapeutic action, peculiar to the Campailla's method, which I am using, is the keynote of its superiority upon the other methods of antisyphilitic treatment in tabes, I am unable to demonstrate at present.

But it certainly appears the most plausible explanation in the light of our knowledge.

It must also be remembered that in this method mercury is largely absorbed through the respiratory apparatus and largely eliminated through the skin, as I demonstrated last year to this society.

Then it would appear on one hand that the elimination or neutralization of syphilitoxins is better accomplished by diaphoresis under the influence of the large absorption and elimination of mercury and, on the other hand, the intense general hyperemia would allow this remedy to reach more thoroughly the diseased tissues, or those lesions otherwise not accessible to the same.

The above considerations and the clinical results in my five cases of tabes lead me to the following conclusions:

1. Mercury is a specific not only in the classic manifestations of syphilis, but even so in late syphilitic affections of the so-called parasyphilis.

2. Diaphoresis combined with mercurial inhalations is not only a valuable means of eliminating toxins, but reinforces the specific therapeutic action of mercury.

3. This method is to be tried before declaring that specific treatment is powerless only because other methods failed.

4. It is a method of special indication in severe or impending syphilis of the nervous system.

5. It is a method of preference because it does not disturb the digestive organs and it is of no discomfort.

6. An early diagnosis of tabes and an early energetic specific treatment may save the patients from the moral and physical sufferings of such a chronic and obstinate disease.

Discussion of Dr. Schiro's Paper on Mercurial Inhalations in the Treatment of Nervous Syphilis.

Dr. P. E. Archinard, New Orleans: I believe that is a very good paper. We have a good deal of trouble in administering this remedy. In the administration by mouth there is danger of salivation. It seems to me that syphilis of the nervous system is very little understood by us. We know very little about these cases, and when we see one we think it is incurable. We should get that out of our minds. If they are really cases of syphilis I do not think they are incurable. There is one stage of the disease where you can utilize the anti-specific and do good. I hail with pleasure these new investigations in the syphilitic line. There is much work to be done in this field yet.

Dr. E. M. Hummel, New Orleans: I am fairly familiar with what Dr. Schiro claims he can do in these conditions. He does not claim that he can cure locomotor ataxia, as that disease is ordinarily understood. Very frequently there are associated with the true pathology of tabes, or existing alone and giving pseudotabetic symptoms, active syphilitic processes which are amenable to mercurial treatment. It is in such conditions that the doctor claims he can cause improvement or accomplish an apparent cure. I think that such claims are quite reasonable, and his method of securing mercurialization is rapid and effective.

We know very well that when it comes to trying to accomplish anything towards ameliorating the degeneration in the posterior columns which constitutes the true pathology of tabes we are up against a dead wall against which no therapeutic agent has ever availed anything.

Dr. E. H. Martin, Hot Springs, Ark.: I have used mercury in nearly every way except by inhalation. It has not, so far as my knowledge goes, been given in America by this particular method of vaporization. The plan seems to be excellent and I have no criticism to make of it. But I hope that Dr. Schiro will not begin to think that he can cure locomotor ataxia. That disease, consisting, as it does, of organic changes in the cord, must be incurable, and I have never heard of a case in which a lost reflex was restored. On the other hand, we have many cases of active spinal syphilis, in some of which there has been improvement and actual "cure." I think the cases from which he reports his results were mixed cases; that is, tabes with active syphilitic complications. Such cases would probably clear up rapidly of any symptoms due to the active lues, but that is all he can expect.

Dr. Schiro (in closing): Dr. Hummel has answered Dr. Martin's remarks. I do not claim in my paper that I can cure tabes, but I do know that in my five cases I have obtained improvement of tabetic disturbances. Two of these patients were referred to me by Dr. Archinard, and both cases were undoubtedly of tabes, with history of syphilis twenty-four years before in the first case and twenty in the second case.

So far as the curability of tabes is concerned, we do not know at present when irreparable degeneration of the spinal tracts takes place and whether syphilis is the only cause or a concomitant factor in the case.

When cases of tabes present themselves, giving a history of syphilis or giving a positive Wasserman reaction, the treatment should be given.

I stated in my paper that patellar and pupillar reflexes remained unchanged or nearly so. I state further that I am awaiting future observations in these five patients and in others that may come to me, so that I can see the results and make a more definite report on this subject.

Neuralgic Pain in the Distribution of Nerves Pressed Upon by Inflammatory Exudate and Scar Tissue.

By E. M. HUMMEL, M. D., New Orleans, La.

One example of the condition I wish to treat of in this brief paper is the lesion described by Obersteiner in tabes. You will recall that, until the writings of this author and Redlich on this question, the nature and causation of the characteristic pains of tabes had not been satisfactorily explained. A great deal of light was further shed upon the degenerative processes of the posterior roots and columns of the spinal cord by the same findings. I refer to the chronic pachymeningitic process on the posterior aspect of the cord, especially marked in the membranes covering the roots and ganglia. It was found that a ring of thickened dura and inflammatory exudate frequently surrounded the posterior root and choked the nerve trunk, irritaing and finally blighting the nerve fibers in passing. This lesion has become known in literature as Obersteiner's ring. Its presence has been assigned as the chief direct cause of the lancinating pains of tabes.

It would be elaborating the obvious to call attention to the fact that inflammatory processes in tissues contiguous to nerve trunks, or richly supplied with nerve filaments, excite intense pain. However, I may here emphasize the fact that the causation of pain associated with inflammation in all of its stages is chiefly a question of mechanical pressure. It is a matter of common observation that, in instances where the inflammation takes place within an unyielding chamber like the fibrous sac of the testicle, the fibrous sheath of the eye globe, or any membrane surrounding bone, as the periosteum; or where the tissue involved lines, or is against the walls of the foramina of the skull and spinal column, the pain is of unbearable intensity. So limited is the space about nerve trunks traversing bony channels that the least conceivable amount of deposit persisting after inflammatory reaction is sufficient to excite pain. Interstitial neuritis is notoriously painful if involving a nerve with sensory functions. In this instance the fibrous epineurium and perineurium are thickened, and pressure on the nerve fiber is again an important factor in exciting pain. Pressure then is one of the commonest kinds of stimuli we find exciting pain associated with disease.

The deposit of exudate material is one of the inevitable and reparative steps in inflammation. Slow and long-persistent inflammatory activity, such as is most commonly seen in the nervous system and its membranes, is most productive of such exudate, and it is likewise slowest of removal through absorption.

Finally, when extensive scar masses encroach upon sensory nerve trunks, persistent and annoying pain is the result. Usually the scar must be so situated as to exert its contractile pressure against the hard surface of bone. Painful scars, after amputation, are too familiar to dwell upon. However, a large scar mass can give similar trouble without a bony point d'appui, as in the following case:

A, white male; aged 54; steamboat man by occupation. Rather excessive user of alcohol from early adolescence until the present; has also used coffee and tobacco moderately. Venereal sore about fourteen years ago, but no secondaries. Fifteen years ago he received an incised wound on the right side of the neck about on a level with the angle of the jaw. Wound was not stitched; suppurated and healed with a large cicatrix. For two years he has suffered from a constant pain at the back of the ear and radiating up the neck from the cicatrix. Associated with the pain was a sort of burning and smarting. His suffering had increased in severity during this time until it incapacitated him for any sort of occupation. When the scar was caught up between the fingers and pressed steadily, the pain was aggravated. Careful neurological examination of this man was absolutely negative otherwise. Upon study of the distribution of the pain it was recognized as corresponding to the course and distribution of the great occipital and major auricular branches of the cervical plexus.

Operation was advised, and, upon section into the scar mass, it was found that these nerve trunks, as they escaped from under the sterno-mastoid, which had been partially severed at this point, were caught in the cicatrix. They were freed and cut on the proximal side of the scar mass. Several branches going to the occiput were cut in the same manner. As much of the scar as could be removed was excised. The result was total anesthesia in the distribution of the cut nerves, with cessation of pain to date.

The next case serves to emphasize the likelihood of a nerve trunk being caught in a bony channel:

Miss L.; white; aged 32; family and previous history unimportant. Two years ago she was caught under a falling door and sustained severe trauma to right side of face. The cheek was cut and badly bruised, and this side of the face was greatly swollen immediately after the accident. Some swelling, discoloration, and intense pain persisted over the right middle segment of the face for perhaps two months thereafter. Although the pain subsequently became lessened, she has never been entirely free from discomfort over this area since. She has likewise frequently experienced burning, tingling, and other paresthetic disturbances in the region of the pain. Examination showed a slight depression of the malar bone, with unbearable pain to pressure over the infraorbital foramen. There is slight anesthesia to touch by cotton in the distribution of the second division of the trifacial on this side. It seemed conclusive, from the history and examination, that a condition of traumatic osteitis involving the superior maxillary bone had existed, and that the nerve, as it passed through the interorbital canal, had been encroached upon by inflammatory exudate. It was proposed to operate, with the purpose of freeing the nerve in the bony channel, but this measure was declined, and case was lost sight of.

Another case is that of a white man, aged 40; married; locomotive engineer by occupation. The circumstances leading to involvement of the nerve are alone important in the history. The patient, about five years ago, while operating a switch engine, was accustomed to lean from the cabin window, necessitating his resting all of his weight on the right buttock. The seat was rather hard, and, as the engine passed back and forth over rough tracks and the frogs of the switches, the right gluteal region was subjected to constant jarring and pounding. A short while at this work provoked a violent attack of pain over the gluteal region and down the posterior surface of the thigh, necessitating the patient's lying abed for over two months and causing him a great deal of agony. He subsequently got very much better and was able to be about again, but ever since then there has been some sensitiveness of these parts, which requires care on his part to prevent pain and discomfort. During the past month, after exposure to cold and wet, he suffered a return of his former symptoms in milder form,

and was advised to see me by his physician. Examination showed great tenderness to pressure not only over the points of Vallex, but over the whole course of the nerve from the sciatic notch to the knee on peroneal nerve and on the plantar trunk at the ankle. There is distinct diminution of sensation to touch and pain in the sensory distribution of the great sciatic. The peroneal and foot muscles are likewise distinctly weak.

My interpretation of the findings in this case are that an interstitial neuritis was excited in the sciatic nerve by trauma and pressure, and that, even after the acute inflammatory reaction had subsided, the fibrous stroma of the nerve trunk remained thickened, and the present attack was made possible by the pathological state of the nerve. The constant disturbance and slight pain since the accident are of the same causation.

Still another instance is that in which a young man sustained a fall from a bicycle and traumatized the right elbow. The ulnar nerve at the condyle is somewhat thickened, surrounded by dense tissue, and abnormally sensitive to pressure. Pain and paresthesia is felt in the ulnar distribution. His occupation as telegraph operator necessitated his resting the elbow on a hard table, often aggravates the pain. An X-ray picture showed no change in the contour of the bones. Operation for freeing the nerve at the elbow is contemplated.

I could cite other cases of this kind and refer to the literature, but this seems quite unnecessary. My purpose is to very briefly draw attention to the fact that pain in the course of a nerve must not always make us think of a true neuralgia. The importance of being clear on the diagnosis between conditions of this kind and neuralgia proper is great. In the case of neuralgia, our therapeutic measures are different, at least not so radical and energetic, whereas in cases in which we know the nerve is being embarrassed by extrinsic causes, therapeutic efforts are directed at the encroaching tissue by surgical methods or alterative medicines are usually resorted to, and, if persisted in, are productive of curative results.

A Study of the Blood in Certain Acute Infectious Diseases of Childhood and the Diagnostic Value Thereof.

By JAMES J. ROBERT, M. D., Baton Rouge, La.

In my opinion, the use of this branch of modern clinical diagnosis is not nearly so general as it should be, and in presenting this paper for your consideration I wish to emphasize its real value and importance, which, indeed, can scarcely be overestimated.

Of course, the diagnostic value of a blood examination is greater in some of the acute infections of childhood than in others—first, because some of these diseases present such a clear clinical picture that "he who runs may read"; and, second, because in some of these diseases the blood presents no features which are so characteristic and distinctive as to furnish any very definite diagnostic information. However, as a general proposition, the value of the blood examination cannot be questioned, for it will, in a large majority of cases, give valuable corroborative evidence, and in many cases it will furnish absolutely positive evidence leading directly to a differential diagnosis not otherwise obtainable.

Now, to avoid any misinterpretation of the findings in blood examinations in infancy and childhood, we must bear in mind two cardinal facts:

I. *The normal blood picture varies considerably with the age and degree of development of the child, and differs greatly from that shown in the case of normal adult blood.*

The chief features here to be considered are as follows:

1. In Case of the Leucocytes.—During the first year, excepting the first few hours of life, a differential count shows polynuclears 36%, lymphocytes and transitional forms 63%, and eosinophiles 1 to 3%. As the child increases in age, provided there is also a normal increase in physical development, we note a constant increase in the percentage of polynuclears and eosinophiles, with a corresponding decrease in the percentage of lymphocytes and transitional forms. This continues until the blood reaches the normal adult count, usually during the sixth year, as shown below. The following table gives a fair comparison of the differential leucocytic count in normal healthy individuals at different ages:

Age.	Percentage of Polynuclears.	Percentage of Lymphocytes, etc.	Percentage of Eosinophiles.
First year of life.....	36	63	1 to 3
Second year of life.....	42	55	3
Third year of life.....	48	48	4
Fourth year of life.....	52	43	5
Fifth year of life.....	61	33	6
Sixth year and upward..	66	31	1 to 3

We note again in adult life a decrease in the percentage of eosinophiles. It should also be noted that the number of leucocytes is greatest just after birth—12,000 to 14,000 per cubic millimeter—gradually decreasing to reach the normal adult number, 7,500 per cubic millimeter.

2. In Case of Red Cells.—We should remember that in the blood of the infant there are normally very great variations in the size, shape and staining reactions of the red cells; that normoblasts are frequently found; that megaloblasts are occasionally found, and that the total number of red blood cells per cubic millimeter is greater than in the normal adult. These variations are greatest in the newly-born, and as the child increases in age and development there is a gradual approach to the blood picture of the normal adult, which condition shows itself about the sixth year.

3. In Case of the Hemoglobin.—We should bear in mind that the hemoglobin shows its highest percentage just after birth and during the few weeks immediately following, after which time there is a marked decline. From this time on throughout childhood the percentage of hemoglobin is considerably lower than in adult life.

The second cardinal fact which we should bear in mind in our study of the blood in children is that:

II. *All blood changes are exaggerated in infancy and childhood—i. e., every sign by which sickness is shown in the blood of adults is exaggerated in infancy.*

The blood of infants is apparently more sensitive to any morbid influence. Causes leading to but slight anemia or leucocytosis in the adult produce grave anemia or marked leucocytosis in children. Comparatively slight hemorrhages, gastro-intestinal or respiratory disorders which would not impoverish an adult's blood may produce considerable anemia in a child. These exaggerated changes are likewise seen in the case of such physiological variations as the leucocytosis of digestion or that following a cold bath.

Having reviewed these general principles in regard to the blood during infancy and childhood, let us consider briefly the blood changes in some of the acute infectious diseases in childhood and the diagnostic value of such changes.

1. Scarlet Fever (Scarlatina).—All cases show a rapidly progressing anemia which lasts well into convalescence. However the chief interest centers about the leucocytes. Beginning shortly after the appearance of the eruption—usually about the third day of the disease—and lasting for a week or more, there is a marked leucocytosis. This is largely confined to the polynuclears, which now constitute about 85 to 90% of the total leucocytic count, instead of their normal proportion. After the fourth or fifth day the eosinophiles, previously showing a proportionate decrease, show a marked proportionate increase, sometimes constituting as much as 12%, or even 15%, of the total leucocytic count. This eosinophilia continues late in convalescence.

Diagnostic Value.—This lies in the distinction from measles and certain other eruptions of childhood which show *no leucocytosis.*

2. Measles (Rubeola).—Mild, uncomplicated cases show very little change; the more severe cases show more or less anemia. Contrary to scarlet fever, the eosinophiles usually show a slight decrease.

Diagnostic Value.—Blood examination here has its chief diagnostic value in a negative way, excluding, as it does, scarlet fever, diphtheria and syphilitic roseola, all of which show a leucocytosis. Furthermore, a marked leucocytosis appearing late in a case of measles is indicative of some complications, usually of more or less severity, though the absence of any leucocytosis does not exclude same. The blood examination, however, fails to show any distinction from German measles.

3. Chicken Pox (Varicella).—The red cells show some decrease after the first few days of the disease. Leucocytosis is present in some degree throughout the disease, but is most intense from the beginning of the vesicular stage until all pustules have disappeared. The characteristic feature of the blood picture, however, is the differential leucocytic count, which shows a marked relative increase in large and small lymphocytes, a marked relative decrease in polynuclears and eosinophiles, also the appearance in considerable numbers of certain entirely abnormal elements, viz:

myelocytes, including also Turck's "stimulation forms." These myelocytes are present from the very beginning of the disease, and persist well into convalescence, constituting a very distinctive element in the blood picture. The possible appearance of a polynuclear leucocytosis as a result of some suppurative complication should be borne in mind.

Diagnostic Value.—In excluding scarlatina, measles, purpura, syphilis and erythema multiforme, the blood examination furnishes conclusive evidence. Variola, on the other hand, shows blood changes of precisely the same type as those of varicella, though to much greater degree.

4. Whooping Cough (Pertussis).—Leucocytosis is early and constant, especially in very young children, in whom the count averages from 20,000 to 25,000 per cubic millimeter during the catarrhal stage and about 40,000 per cubic millimeter during the paroxysmal stage. In children over four years of age the leucocytosis is not so pronounced. The most striking feature, however, is the great relative increase in lymphocytes over the normal percentage for the particular case in question.

Diagnostic Value.—This lies chiefly in the fact that the large proportion of lymphocytes may point to pertussis in some cases of supposed broncho-pneumonia, which do not respond readily to treatment, and in which there is a tendency to spasmodic cough, with more or less cyanosis.

5. Mumps (Epidemic Parotitis).—In uncomplicated cases, any blood changes are exceptional, but there is usually marked leucocytosis in case of suppuration of the parotid gland or in case of severe orchitic or ovarian complications.

Diagnostic Value.—Owing to the lack of any marked blood changes, in most cases the blood examination apparently reveals little of interest as a rule. However, the blood examination does not have its value in the early announcement by marked leucocytosis, especially among the polynuclears, of the approach of suppurative or other complications.

6. Diphtheria.—Red cells and hemoglobin both show a moderate decrease, especially in cases treated without antitoxin, and their return to normal standard is slow. Leucocytosis is present to a degree roughly parallel to the severity of the case, and this leucocytosis is apparently unaffected by antitoxin treatment, but

gradually disappears as the disease passes off. It should be noted that no leucocytosis appears in some of the very mild cases (the stimulation not being sufficient to cause this leucocytic reaction), and likewise in some of the very severe cases (the system here being too depressed to show any reaction in the presence of the invader). Very severe cases may also show numerous myelocytes, though this is by no means an invariable rule.

Diagnostic Value.—This is really very slight, since the positive diagnosis of diphtheria depends solely upon the discovery of the bacillus diphtheriæ in the membrane at the focus of infection. However, the blood examination may reveal valuable information as regards a prognosis, in that the absence of lecocytosis (except in obviously mild cases) and the presence of myelocytes are of very grave significance.

In concluding these brief remarks on such an interesting field of clinical diagnosis I would call your attention to the fact that time has forbidden my attempting any exhaustive discussion of the subject, but it is the earnest desire of the writer that this paper may at least serve to call attention to some of the many interesting facts to be learned from the study of the blood, both in childhood and adult life. We are all familiar with the diagnostic value of blood examinations in typhoid fever, pneumonia, influenza, appendicitis, malaria, and many other conditions, all of which I have purposely omitted from this discussion—not that they are never seen in childhood, but in order that I might devote more attention to those infectious diseases most common to childhood. I hope we will all give due consideration and attention to the clinical examination of the blood, for, in failing to do so, we are neglecting and leaving unused one of our most important aids to correct diagnosis.

Treatment of Chorea.

By L. R. DeBUYS, M. D., New Orleans.

No hard and fast rule can be laid down in the treatment of chorea. It is necessary to determine what the course of each individual case is, and by so doing a plan to be followed can be arranged which may be modified from time to time to meet the requirements of the individual case.

In a case manifesting voluntary movements of the voluntary muscles without loss of consciousness it must be decided upon whether the case is true chorea or whether choreiform movements are a symptom of another condition. In the latter class are included (1) the cases due to gross lesions of the nervous system, such as are found in the post-hemiplegic and the congenital forms; (2) those cases in which there is some peripheral irritation, and in which instances the choreiform movements are entirely reflex. Examples of this group are the facial chorea (choreiform symptoms) from naso-pharyngeal irritation, errors of refraction and ocular insufficiency. Also included among the most common reflex causes are intestinal parasites, intestinal indigestion, phimosis, delayed menstruation, etc. As this paper is not intended to treat of cases other than true chorea, only mention is made of the above cases. In the cases presenting choreiform symptoms due to gross cerebral lesions, a favorable outcome cannot be expected. In the second group the irritating causes should be removed, and, with its removal, the prognosis becomes very favorable.

In true chorea, age, sex, race and season play an important part. Also emotional influences, acute neurotic conditions, and heredity must be remembered. Poor nutrition is an important factor. The age at which the disease is most frequently met is during the period of second dentition—that is, during the period of active growth, from the sixth year to puberty. The disease is more frequent in the female sex, and at the ages mentioned the ratio in the sexes is nearly two to one.

Chorea is uncommon in the lower races. It seems that in the more finely balanced nervous systems, with sensitive reaction to infectious agents or toxins, the disturbance of the function of the nervous system is more easily produced than in the more rugged types.

Spring is a time when the child's nervous system is exhausted and the general nutrition is poorer because of a prolonged confinement. It is at this time that chorea is more frequent. Also at this time nervous excitement incident to school examinations predisposes to the disease.

There are some children of an excitable temperament, usually of the female sex, who show an extreme condition of motor unrest. In these children, usually called nervous, a decided emotion, such

as fright or an excessive mental strain, may be the determining factor in bringing on an attack.

Chorea is not inherited, but a child may have an hereditary neuropathic predisposition which might be a favorable soil.

The greatest number of cases are found in those whose food is not sufficiently nutritious.

It is said that the acute infectious diseases are etiological factors in chorea. It is hardly possible that such is the case, but the infectious diseases may act as any other condition, whether infectious or not; if it lowers the vitality of the organism it lessens the nerve tone, and consequently the child is more susceptible not only to chorea, but to any other functional nervous disturbances.

The pathogenesis of chorea has been the subject of much discussion and investigation. It is now generally believed that chorea is the result of the effect of an infectious toxic agent upon the central nervous system. It has been designated an infectious chorea as differentiated from the other forms of chorea. Satisfactory conclusions have not been reached regarding the specific infecting agent or toxin.

In view of the fact that chorea is frequently associated with endocarditis, that the great majority of cases of endocarditis are of rheumatic infection, it must be believed that there is some relationship existing between chorea and rheumatism. Some hold that chorea is probably a particular nervous manifestation of a variety of causes, of which rheumatic fever is one. It has also been said that there is a common etiologic factor which, affecting the cortex, causes chorea, and, when involving the joints, gives rise to articular rheumatism.

While about 25% of cases of chorea are closely associated with rheumatic fever, a much larger proportion give a history of antecedent rheumatism; by some statistics, as high as 85%. However close the relationship between rheumatism and chorea, it cannot be said that all cases of chorea are due to rheumatic infection.

The predisposing factors in chorea are: (1) a rheumatic diathesis; (2) a neurotic constitution; (3) anemia; (4) severe disturbance of general nutrition. That, with these factors present, an attack may be produced by many things. Also the greater the predisposition, the more easily the attack may be excited, and the less important the cause.

As years go by, the tendency toward preventive medicine, rather than curative medicine, becomes more manifest. In chorea, though we do not know of any specific cause, we do know of the predisposing factors. We should, therefore, whenever the opportunity presents itself, caution parents whose children show a favorable soil for the development of chorea.

Especial care should be taken during the period from second dentition to puberty, particularly in girls, and in those children of neuropathic hereditary tendencies, and those in whose personal or family histories there exists rheumatism. The nutrition should be closely supervised during this period of most active growth and development, and a simple and nutritious diet should be given.

Children should not be pushed in their studies at this time of life, nor should they be forced to take up their studies too soon after a prolonged illness or toxemia, and especially after the acute infectious diseases—of these, more particularly scarlet fever.

After the disease has once become established, the treatment will depend more upon the general management than upon the administration of drugs, and will be further governed by the severity and course of the attack. Our aim should be to (1) provide rest, (2) secure freedom from excitement, (3) promote nutrition, and (4) to administer drugs judiciously.

The child should be removed from school at once, should not be ridiculed or punished, and should be placed in the hands of a nurse trained to handle nervous children. All forms of chorea, even the milder forms, should be under the supervision of a physician.

The milder cases, with rest, nutritious food and a well-regulated hygiene, will in all likelihood require nothing else. While it is not necessary to keep these patients in bed, they must not be allowed to run about, but must be carefully watched. Rest, should endocarditis exist, reduces to a minimum the possibility of damage to the valve segments. These cases do not need to be isolated; in fact, there is no objection to amusing them. Care should be taken not to cause excitement.

Disturbances of digestion and excretion must be regulated. Their diet should be simple, and nutritious; milk (4 to 8 ounces) should be given every two or three hours for several days. When the child asks for more, and when the digestive organs seem to be in good order, solid food may be added gradually; milk, however, always

being given as plentifully as possible. Stimulants, especially tea and coffee, should be interdicted. In those cases which are poorly nourished and in whom overfeeding is necessary, massage is of benefit to maintain the muscular tone. During convalescence, in some cases, gymnastics carried on regularly and systematically, may be advised. A daily cold sponge or warm bath is helpful in these milder cases. These cases should be carefully watched, that they do not progress into the severe types. In this latter type, the rest treatment is indispensable. Not only rest, but isolation is necessary, and at times the removal of the patients from the homes where they had been indulged and sympathized with, to a hospital, where they are more under restraint and made to control themselves, is of decided benefit. There should be absolute mental repose, and visitors, and even parents, if they cause any excitement, should be excluded. Sometimes it becomes necessary to pad the bed and to apply light splints to the limbs for protection during sleep.

In the most extreme form of chorea the exhausting effect of the choreic movements must be checked, and the administration of sedatives is necessary. Attention to the hygiene is essential. A daily warm bath is to be preferred to the cold sponging, which is too severe and causes a certain amount of shock, while the former is very soothing to the nervous system. Fresh air is essential. The room should be well ventilated, and the patients may frequently be rolled out of doors. When improvement occurs, the cases are treated as are the milder types. When the patient is allowed to be up, the period is gradually increased.

When there has been much wasting, massage, and even electricity, is of value, galvanism in preference to faradism, care being taken to watch the tendency to increase of the motor phenomena.

With reference to the use of drugs, it is well to separate from the other cases those in which rheumatism is believed to be associated. Also it is well to bear in mind the natural course of the disease, from six to ten weeks usually. Drugs administered in the third or fourth week are more apt to be thought beneficial, while probably they really have little influence upon the disease.

In those cases in which there exist (1) acute rheumatic manifestations, (2) a previous history of rheumatism, (3) cardiac disease, (4) pyrexia, a full treatment with the salicylates or aspirin will be found to give relief.

In the cases other than rheumatic, medicinal treatment is unsatisfactory. In these cases our attention must be given to tonic treatment.

Arsenic has for a long time been looked upon as the proper remedy for chorea. It is admitted, even by its closest adherents, that it does not act as a specific, but by probably improving the blood and general nutrition. In its administration it is always advised to begin with a small dose, the dose being gradually increased to the point of tolerance, when it must be discontinued, to be recommenced in two or three days. When given in larger doses it usually must be discontinued before any good has followed, because of vomiting and diarrhea. There is always great risk of peripheral neuritis following the prolonged and large doses of arsenic. I have but recently seen two cases of marked arsenical neuritis admitted into the wards of the Charity Hospital as the result of the treatment for chorea with arsenic.

In the administration of arsenic, either as Fowler's or Donovan's solution, or in any other form, care and close observation is absolutely essential. The unfavorable symptoms to be looked for are foul breath, coated tongue, diarrhea, abdominal pain, vomiting and puffiness under the eyes. To these I wish to add that frequent examination of the urine for evidences of irritation of the kidneys is absolutely necessary. In the presence of any of these, arsenic should be immediately discontinued.

For the anemia in chorea, iron in its various preparations is indicated.

Other medicines used in the treatment of chorea, and which have been recommended, are antipyrin, strychnin, belladonna, zinc compound, nitrate of silver, bromide of potassium, chloral, and especially cimicifuga.

In the most severe cases, with incessant movements, sleeplessness and delirium, the exhausting effect of the choreic movements are checked by means of chloral freely, and, if necessary, morphia. Chloroform may at times be required to control the intensity of the paroxysms. In these cases particularly, supportive treatment is required from the onset, because they sink rapidly.

The disease has a tendency to recur in the spring following the first illness; so especial care should be taken of the patients, and not only the prophylactic measures already mentioned in this paper

should be observed, but, at the first suggestion of involuntary muscular twitching, the child should return for active treatment.

Believing that there is a close relationship between chorea and rheumatism, the child should be placed upon a diet, as in a case of rheumatism, in which meat is allowed but once every other day and candy and sugar restricted. A mild anti-rheumatic treatment, consisting of some alkaline salt, should be continued throughout the year.

Rheumatism, in the articular form, does not manifest itself as frequently in the child as in the adult. In the child, tenderness of nodules is more frequently seen.

Some Remarks on Nephritis in Children.

By E. D. FENNER, M. D., New Orleans.

It is not my intention, when submitting the title of this paper, to present to you a dissertation upon nephritis. The etiology, classification, symptomatology, etc., of nephritis in children you will find discussed at length in the works of Holt, Carr, Pfaundler and Schlossmann, and many others, and I cannot see that you would be interested should I attempt to rehash and serve up to you as my own, the results of their experience and observation. All this you can, and proabbly have already, obtained at first hand. Neither do I propose to supplement my brief paper by a formidable bibliography, supplied to me by some hack in the Surgeon-General's Library at Washington, a large proportion of which I should probably never have read myself. But my own experience has taught me one or two lessons by which of late years I have begun to profit, and by calling your attention to them more particularly than you have yet given it, perhaps, I hope I may enable some of you to share in the benefit they have been to me.

In the first place, I would like to urge upon you the importance of examining the urine in children and infants more often than you do. Renal irritation and albuminuria is present in many a case in which you do not suspect it, because the urine has never been examined, and the unfavorable progress of the case is often due to this unrecognized complication. Not only is this true, but even

where there is no albuminuria an examination of the urine in young children, as a matter of routine, will point you straight to the cause and the way to relieve it, many a case of nervousness, of strange irritability and lassitude, of night terrors, of failing appetite, by showing the presence of indican or acetone, which are the indices of intestinal auto-intoxication, and systemic acidity. Many are deterred from attempting to examine the urine of infants and young children by the supposed difficulty of obtaining a specimen. But this diffiiculty is more fancied than real. In male children, an ordinary condom, secured over the penis by rubber strapping, or, in children of either sex, a large pad of absorbent cotton placed over the genitals, will enable you to secure a specimen sufficient for the usual test. Almost any mother can be relied upon to obtain such a specimen, if its importance is once explained to her.

In the second place, it is recognized by all that the usual and ordinary nephritis of childhood is scarlatinal nephritis, but I believe that it cannot be too strongly emphasized that scarlatinal nephritis is *post-scarlatinal nephritis,* that it develops, as a rule, after the little patient is apparently cured, that its attack does not depend upon the severity of the scarlatina which preceded it. As illustrated by the cases whose histories I shall shortly read to you, even the mildest type of scarlitina may be followed by nephritis.

In the third place, I should like to call your attention to a form of edema, which is a fairly frequent complication of acute ileocolitis. We all recognize that edema is a symptom which at once gives rise to the suspicion of nephritis. But I feel sure that most of you, in looking back over your summer experiences, can recall cases of dysentery which suddenly became swollen, as though they were in the last stages of dropsy, except for the fact that the swelling was harder than the ordinary edema of either renal or cardiac dropsy. Some of these cases show a little albumin in the urine; others do not. And for a long time I know that I was at a loss to understand what was the meaning of this symptom, which, unfortunately, was too often a signal that the fight would soon be lost. The references to it in text-books are very meager, but of late the condition is mentioned, at least. It is believed that this edema is in part toxic, and in part due to the failure of the body to eliminate the salty matters of the food. Under these circumstances, therefore, the salts should be eliminated from the food as far as pos-

sible, and, in particular, saline irrigations should be abandoned entirely. I well remember one of my little patients in whom I produced this edema, not once, but three times, by using saline irrigations. It took that much pounding to bring the truth home to me, and this is my excuse for repeating the fundamental facts "which are the subject of my story" to-day.

Lastly, I should like to bring home to you the tremendous value and importance of *"rest"* in the treatment of nephritis, which is nearly always acute nephritis, of children. And when I use the word in this connection I do not mean any half-way measures, such as I myself employed in the early part of my management of one of the cases I shall soon relate, but real rest—absolute and prolonged recumbency; a diet which will put as little work as possible upon the kidneys; free catharsis, and daily sweat-baths to invoke the vicarious action of the skin and bowels, so that the emunctory demands upon the kidneys may be reduced as much as possible.

One of the most instructive and beautifully-written books it has ever been my good fortune to read on medicine is the classic by John Hilton called "Rest and Pain." I shall make bold to quote from his first chapter two brief paragraphs, and should their literary flavor induce any one who has not yet enjoyed the privilege of reading him to give himself that pleasure, I shall feel that my draft upon your patience has been justified. He says:

> "Regarding this subject of rest in its highest, closest, and best relation to mankind, and looking at it by the aid of my feeble penetration, I would in all humility remind you that when God ordained that man should live "by the sweat of his face," as a punishment for his disobedience, it pleased Him, in the plentitude of His unspeakable benevolence, to permit man's fatigue and temporary exhaustion to be followed by his greatest earthly solace—the blessing of rest and repose, by calm and peaceful sleep; a blessing which should be the reward of his labor. Entertaining as I do the most exalted admiration of Nature's powers of repair, the thought has not unfrequently occurred to my mind, when watching cases of extensive local injury, "What would have been the condition of man on earth had it pleased the Creator to withhold from him this power of repairing his injured tissues?"

With this pregnant quotation upon the value of rest, let me recount as briefly as possible the histories of three cases, which were my excuse for presenting this paper:

CASE 1. Thomas B., age seven years, was brought to me on December 13, 1909. Three weeks before I saw him he was taken with an attack of fever, which was thought to be malarial. He was

never sick enough to be kept in bed, and about eight days ago the fever left him. Three days ago he caught a cold, and since then he has become edematous, the urine has been very scanty and dark in color, and his temperature has ranged between 99½ and 100° F. He complains of no pain, and seems to feel pretty well. His face is edematous, as are the limbs, but the dropsy is not extreme. Heart is slow in action, and the sound drum-like, but I cannot detect any murmur. The urine is high-colored, and contains a large amount of albumin.

Later on the child showed considerable desquamation of the skin, and I discovered that his mother had always thought he had had a mild attack of scarlatina, he having shown a bright eruption in the beginning, which had not, however, been recognized as a scarlatinal rash.

At the time he was first put under my care the urine did not appear to the eye to contain any blood, but within a very few days, and for many weeks afterwards, it was loaded with bright blood, which would separate in a thick layer upon standing. Every form of casts was present in great numbers. The quantity of urine in twenty-four hours for many days varied between four and eighteen ounces. On December 18, at 6 P. M., he suddenly went into convulsions, which lasted about ten minutes, when he recovered completely. On this day his temperature ranged around 101° F., and for the next two days it fluctuated between 101° and 103° F. During this time the anasarca had become very distressing, the scrotum in particular being painfully swollen; the urine continued loaded with albumin, casts, and fresh blood, the temperature remaining constantly elevated, and the whole condition seeming practically hopeless. I requested a consultation, and the child was seen with me by my friend, Dr. Jno. B. Elliott, Jr. The possibility of a malarial background for this bloody urine picture had suggested itself to us both, but an examination of the blood showed no plasmodia. Otherwise his examination simply confirmed the results of my own.

It would be monotonous to detail the subsequent history of the case. Very gradually the symptoms began to improve, the dropsy passed off, the quantity of urine increased, the blood ultimately, but only after many weeks, entirely disappeared, and finally, on February 25, 1910, the child was sent home cured. Every vestige

of blood, casts, and albumin was gone, and he was daily gaining in strength and vigor. Within the last few days, April 29, I heard from his father that he continued to be in perfect condition.

The treatment consisted in the administration twice a day of hot-air baths lasting for fifteen to twenty minutes. The effect of these was very striking. When they produced free sweating he would himself remark upon the relief experienced. He had a good deal of somnolence, and considerable headache during the worst of his sickness, and after one of these sweat-baths he would brighten up and say that his head was better. When the action of the hot air on his skin was not effective he would be very rebellious and difficult to manage. In addition, his bowels were kept moving three or four times a day with some saline, Epsom salts, apenta water, or an occasional dose of calomel. Once or twice the diuretic action of good-sized doses was sought, but, on the whole, the salines were so well borne, and produced such satisfactory watery evacuations, that they were adhered to throughout the case. For a few days after the consultation with Dr. Elliott hyposulphite of soda was given, and then diuretin tried, but, as neither seemed to have any favorable influence, they were abandoned for the older and well-proven drugs. Most of the time the child was taking a diuretic iron mixture in the form of mistura ferri et ammonii acetatis, and this was continued into the time of his clinical recovery. The remaining therapeutic measures were a rigid diet and absolute continuous physical rest. Up to the very time of his discharge he was kept in bed, and even after his return to his home this was enjoined for weeks. Free action of the bowels, and sweating by means of the hot-air baths, were secured every day. Fortunately, the child was endowed with a disposition of remarkable patience and sweetness, and the readiness with which he lent himself to the measures for his relief no doubt assisted materially in his recovery. The cheerful and intelligent coöperation of his mother also helped us greatly.

CASE 2. Etta B. S., age 11 years, was brought to me first on November 23, 1909. She had had a mild attack of scarlatina in February, 1909, which did not confine her to bed, but was followed by the development of nephritis and "heart trouble." She had been under the care of a physician, who had ordered a properly restricted diet, and medication directed to the kidneys. She is rather pale-looking, but is not edematous, and I cannot detect any

murmur over the heart. The urine is loaded (about 40% or more) with albumin. Casts are numerous. I ordered tinct. ferri chloridi, 10 minims three times a day. She is living upon milk, buttermlik and stale bread, to which, after a few days, I had fresh vegetables added.

November 27. I suggest keeping her in bed for a week, but at the end of that time the urine showed no particular improvement, and I relaxed enough to keep her in bed only three hours a day, letting her sit up the rest of the time. The bowels are kept open by moderate doses of Epsom salts.

December 28. This regimen has had no apparent effect, albumin about the same in quantity. I change the iron to Basham's mixture, two drams four times a day, and direct the daily use of sweat-baths at home.

January 25. She has been spending the greater part, but not all, of the day in bed; her diet has been carefully regulated, the bowels kept freely open with Epsom salts, and she has been having two sweat-baths a day. She seems to feel pretty well, and there is no edema, except occasional puffiness under the eyes, but the condition of the urine is about as it was. Albumin about 40% moist.

I now determined to see what absolute and continuous rest would do for this child, whose nephritis had lasted for almost a year, with little evidence of improvement. She was made to remain constantly in bed, every sort of exercise being prohibited. The other measures were continued. The result has been wonderful. The quantity of albumin has been reduced from somewhere in the neighborhood of 40% to a mere slight deposit in the bottom of the test tube. Casts are still present, but they are much fewer in number, and it begins to look as if this child may yet be cured if the present system of management can be persisted in.

Case 3. Grace K., 6 years old, was brought to me on October 15, 1906. She had been troubled with constipation, and irregular attacks of fever from time to time. A younger sister, aged 4 years, is affected in much the same way. Otherwise they are both plump, well-developed, and apparently healthy children.

November 30, 1906. I was called in because Grace's eyes appeared swollen, and she complained of severe pain in her belly. Before I reached the house she had vomited a quantity of undigested apple, and seemed to be entirely well. I insisted upon having a

specimen of her urine, and next morning I found it to contain about 5% of moist albumin, blood and numerous granular and epithelial casts. Sp. gr. 1020. She was put to bed, diet restricted to milk, Stafford water given, and the bowels opened freely.

December 4, Urinalysis gives Sp. gr. 1015; albumin very small in quantity, only a few casts; many blood cells.

There is a mitral systolic murmur at the apex of the heart. Pulse is slow and somewhat irregular. Face slightly swollen, but not as much as it has been.

February 4, 1907. The child seems to have entirely recovered from the nephritis. No abnormal elements have been found in the urine for a number of weeks. The heart-murmur, however, still present.

Since this attack, in the beginnig of 1907, this child has been through diphtheria, measles and influenza, but her kidneys have not shown any sign of weakness. The cardiac murmur has never, however, disappeared. No cause for this acute nephritis could be discovered, unless it was due to chilling.

DISCUSSION OF DR. FENNER'S PAPER ON NEPHRITIS IN CHILDREN.

DR. ROBERT, of Baton Rouge: One thing I would say in this connection, and that is that parents should be warned to guard against a recurrence of this condition for at least twelve months after an apparent cure. Children are so apt to catch cold, get themselves wet, play or sit on the damp ground, etc. Our results would be better if we always got those cases early. I had a case about the time of the first case reported by Dr. Fenner. The child was complaining of a headache, and an examination disclosed nephritis. She was put to bed and proper treatment instituted, resulting in a satisfactory cure. In that case her people had no idea whatever of the cause of her headache.

I remember another case where the parents thought there was nothing serious the matter. In still another case the parents did not even want to have me see the child. They simply came in three or four miles, described the child's symptoms and asked me to prescribe for the child's headache. I insisted on a urinary examination, and same disclosed an acute nephritis, with an unusually large amount of albumin. You will find the parents

ignorant, and they will fail to carry out your instructions, in spite of your best efforts to impress them with the gravity of the condition.

Dr. L. R. DeBuys, New Orleans: I agree with Dr. Fenner in his remarks, but I also firmly believe in the examination of urine in all cases of sickness in children. He speaks of indican. I think this is important, and we should include the examination for indican in our routine examination of the urine. If we do this we will frequently find the cause of conditions, which would otherwise have been unaccounted for. We must also bear in mind that the kidneys of children are easily irritated, and we must differentiate between nephritis and simple irritation.

Report of Anti-Tuberculosis League.

By L. SEXTON, M. D., New Orleans.

As President of the Anti-Tuberculosis League, I feel that the members of the State Medical Society, who have a deep interest in all sanitary work in the State, are entitled to some report of what the League has been doing during the past twelve months.

The original cottages at St. Tammany, La., had to be moved on account of inaccessibility, the railroad track having been taken up, because it was practically impossible to run such an institution without ice, fresh meats, vegetables and other things necessary to the management of a successful sanitarium.

We negotiated with the Great Northern Railroad for a change of site, and secured from them forty-three acres of land in the ozone piney woods belt, five and a half miles beyond Slidell, on what is known as the Shore Line of the railroad.

We augmented this amount of land by buying the adjoining forty acres, making eighty-three acres in all, immediately on the railroad, with four trains daily, and only about one and a half hours' run from New Orleans. The site is high and dry, and covered with pine trees, making it ideal for the treatment of first-stage cases of tuberculosis. Upon the ground we have erected eight two-room cottages, well ventilated and equipped for accommodating male patients, also an Administration Building 40x60 feet, two stories, with a

basement, with ten-foot screened galleries all around the building, both upper and lower stories. We sunk an artesian well 921 feet and have a flow of most delightful drinking water of two hundred gallons a minute at thirty-five feet above the ground, furnishing splendid waterworks and flushing facilities for the toilets and bath-rooms in our main building.

We have eight Jersey cows and many chickens, and a garden started, all for the benefit of our patients, which we hope to be ready to receive by July 1 or 15, 1910. We will have a trained nurse in constant attendance, and doctors will make weekly visits, or whenever necessary.

Our plan of treating these cases is by forced feeding of milk and eggs and nourishing cereals, generous diet, and out-of-door living as nearly as possible. As everything is well screened and ventilated, we insist upon the major portion of the time being spent on the galleries.

At our former site in St. Tammany we had eight recoveries from first-stage tuberculosis, and hope to do better in our new location, with better facilities for the treatment of these first-stage cases. We are going to ask the present Legislature for an increased appropriation for the Charity Hospitals at New Orleans and Shreveport to help care for the second and third-stage cases, which we are not prepared to either treat or take care of with our limited means, which are altogether voluntary, for the support of our camp. We expect to be able to take care of from twenty-five to thirty first-stage cases, but the question of caring for the second and third-stage cases, or, in other words, breaking up the nest or foci of infection, we will have to trust to the generosity of our State Legislature, and we hereby cordially invite and ask your coöperation in getting your immediate Representatives in the Legislature to favor the bill when it comes up.

[Since this report was made the bill increasing the appropriation for the Charity Hospital by $30,000 and the Shreveport Hospital by $5,000 passed the Legislature.]

We sent out notices for the observation of Tuberculosis Sunday, the 24th of April, to many of the ministers and priests of the State, beseeching their coöperation in spreading the educational propaganda in reference to the preventive measures in fighting tuberculosis. Different members of the League spoke at several churchs

and places twice on that day; members of the League have also delivered lectures at health conferences, schools and churches and club meetings, wherever they could get the opportunity of an audience.

One thing the President of the League earnestly solicits, and that is the active and working interest of every Parish Medical Society, and particularly the State Medical Society, in having more than a friendly interest in this crusade.

Our profession is such an altruistic one that we have learned to expect of our medical friends that they put their shoulders to the wheel in all sanitary regulations, and certainly there is no other cause in which they can accomplish greater good to a greater number than acting as a walking delegate, preaching and practicing the prevention of tuberculosis whenever and wherever they go.

It is to this end that we, as a League, appeal to your patriotic and coöperative assistance in this great fight against tuberculosis, in order that Louisiana may not lag behind other States in this crusade.

Orleans Parish Medical Society Proceedings.

President, Dr. B. A. Ledbetter. *Secretary,* Dr. C. P. Holderith.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, Dr. C. P. Holderith, Chairman. Dr. Homer Dupuy and Dr. H. D. King.

Meeting of October 24, 1910.

Discussion of Dr. Landry's Paper.

Dr. Walet: In discussing Dr. Landry's paper I can recall a case in which the man was struck by an athlete on the jaw, causing a compound fracture of the lower maxilla in front of the ramus. In the absence of the first molar and the bicuspid teeth, I realized that the fracture was a difficult one to handle; therefore I devised a method out of the ordinary. After he had been carefully shaved

I sewed up the internal flaps of the wound; then, to fix up the fracture, I used strips of Z. O. adhesive straps, applied much the same way as a Barton bandage, readjusting same from time to time. Results were excellent.

Dr. E. D. Martin: The plan suggested by Dr. Landry is, in my opinion, another valuable aid in the treatment of these cases. I have used dental-modeling compound in these fractures, and a bridge made of this and placed between the teeth before applying the rubber band will, I believe, in many cases, add materially to the comfort of the patient, as food can be taken and the mouth more easily cleansed.

Dr. Landry (in closing): In replying to Dr. Walet, I cannot see how he can make Z. O. adhesive hold on the face if he intends irrigating the mouth at all. He will necessarily have to change the straps possibly two or three times daily, owing to the repeated washings, and will, in most cases, be troubled with an irritable skin from the numerous applications of plaster.

Dr. Bass' procedure is not necessary if the fracture is in front of the angle, as he will be troubled with salivary stagnation, not mentioning the great inconvenience by having the jaws locked. The splint mentioned in the paper fills all the requirements in these kind of cases, with the least amount of disturbance to the feeding and cleansing.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

Pellagra and the Sand Fly.

Evidence tending to show that pellagra belongs to the class of insect-borne diseases seems to be accumulating.

The latest authoritattive contribution on the cause and transmission of pellagra comes from Sambon, who is already well known through, in addition to other achievements, his researches into the transmission of yellow fever.

As we have never been convinced as to the correctness of the corn-meal theory of the production of the disease, it is doubly gratifying to us to learn that Sambon nowhere found evidence that corn was a causative agent. He made investigations in several Italian provinces in which the disease had been endemic for many years, and presents strong testimony bearing out his view that pellagra is a protozoan infection, although no parasite was discovered, and that this infection is transmitted by the sand-fly.

The following facts were proved by Sambon to his own satisfaction, and, we are sure, to the enlightenment of many:

First, pellagra does not occur in the towns, but in certain rural districts, where a sand-fly is to be found; second, the endemic centers of the disease have remained the same since the disease was discovered in Italy; third, the appearance of the sand-fly and the recurrence of pellagra are coincident, when spring is early and the sand-fly appears early pellagra cases appear early, and *vice versa;* fourth, where pellagra prevails, whole families are often attacked at the same time; fifth, the arrival of infected persons from a pellagrous district does not cause the spread of the disease in a non-pellagrous district; sixth, while the children, in a given family, born during their residence in a pellagrous district will be pellagrous, those born after the removal of the family to a non-pel-

lagrous region will not be infected; seventh, the disease is not hereditary; eighth, pellagra is not contagious, but is transmitted to the individual by the bite of an infected sand-fly.

All of this will be very gratifying to those who are fond of their grits, hominy and corn-meal cakes, and have been uneasy ever since pellagra has been rediscovered and found to be somewhat prevalent in some sections of the country.

It should lead to further investigation, and especially as to the presence of the sand-fly, where and when cases of the disease are found.

A corroboration of the fact brought out by Sambon should lead to protective measures against the bite of the sand-fly and, if possible, to destructive measures against the sand-flies themselves.

Stray Dogs and Hydrophobia.

Paris furnishes a valuable lesson as to the utility of the systematic capture of stray dogs. The prevalence of hydrophobia has been shown to fluctuate in proportion to the zeal and thoroughness with which the service has been carried on.

The report of Letulle on hydrophobia before the last session of the *Conseil d'Hygiène et de Salubrité* gives some statistics as to the progress of the prophylaxis of hydrophobia. From the Pasteur Institute it is found that, during the six years from 1904 to 1909, inclusive, the number of persons bitten in Paris by animals known to have been rabid was 307, ranging from about 90 during 1904 down to 6 in 1909. The last human victim of the disease died in 1904—one out of 1,000 persons cared for in the six years. Within that same period only two cases of hydrophobia were found in the 68,000 stray dogs captured, against an average of 26 a year during the previous six years.

This means that Paris must capture over 12,000 stray dogs annually in order to extirpate hydrophobia; but the game is well worth the candle.

Also the moral is obvious.

Abstracts, Extracts and Miscellany.

Department of Therapeutics and Pharmacology.

In Charge of Dr. J. A Storck and Dr. J. T. Halsey, New Orleans.

Poisoning by Magnesium Sulfate.—For a long time laboratory workers have been familiar with the fact that magnesium salts, under certain conditions, were extremely toxic. In the last few years, chiefly through the investigations of Meltzer, we have learned that, injected intravenously, subcutaneously or intradurally, these salts produced various striking effects, among which, as of special importance, may be mentioned paralysis of the intestine, central respiratory paralysis, general muscular depression or paralysis, and anesthesia, both local and general.

In spite of this knowledge, we have been accustomed to give this drug as a cathartic with the utmost freedom and without any fear of consequences, justified, apparently in believing that poisoning could not occur when the drug was given by mouth or rectum. So good an authority as Cushny states, in the 1910 edition of his book, that "These effects (*i. e.,* the toxic actions) are not elicited when magnesium salts are given by mouth"—and such has been the general belief of clinicians.

Recently, Boos (*Jour. of A. M. A.,* December 10, 1910) has reported three new, and seven old cases of serious poisoning following the ingestion of magnesium sulfate, six of which terminated fatally.

The symptoms, as noted in different cases, are somewhat variable. Three cases died within one and a quarter hours. In all but one of the cases, who did not die suddenly, paralysis of the bowel was a prominent symptom. In two of the cases, the constipation was so absolute that laparotomies were performed for its relief. In half of the cases, vomiting was a prominent symptom. In all of the cases, diminution of urine, amounting in some cases to anuria, was noted. Marked depression or paralysis of the respiration was noted in six cases. Motor paralysis and partial anesthesia were noted several times. Saline infusion, apparently was the means of saving one of the cases which recovered, and is a logical therapy in these cases. As calcium salts are antagonistic to magnesium salts

in their physiological actions, hypodermaclysis with a lime salt solution is theoretically indicated, and should be tried. Meltzer also recommends physostigmin hypodermatically as likely to be of value in these cases.

Boos emphasizes that Epsom salts properly given *(i. e.,* well diluted) and under proper conditions, are absorbed but slightly, or not at all. He warns, however, that, when given in bulk or in concentrated solution, poisonous amounts may be absorbed. In cases of obstruction of the bowels it is likely to be absorbed and to cause paralysis of the bowel, as well as other undesirable or dangerous effects. The reviewer would add that he believes that post-operative ileus is sometimes caused or aggravated by the magnesium sulfate so often given in these cases. As far as our present knowledge goes, sodium sulfate is free from poisonous action, even when absorbed in large amounts. As it is nearly, or quite, as efficient a cathartic as the magnesium salt, it should be given instead of Epsom salts in any case where there is reasonable doubt as to the potency or peristaltic function of the bowel. J. T. H.

The Dietetic Treatment of Cholelithiasis.—Kolisch *(Med. Klinik,* 1910, vi, 531) believes that dietetic measures are very important in the treatment of cholelithiasis. The diet, according to Kolisch, should be so regulated that the liver is spared as much work as possible. Furthermore, it is important to keep the intestines active and free from catarrhal processes. He believes that intestinal catarrh may cause a similar inflammation in the gall-bladder. He ascribes the benefit derived from the Carlsbad cure to the effect upon the intestines of the Carlsbad waters. Kolisch forbids all highly-seasoned foods, very acid foods, raw vegetables and fruits, fat and salted meat, any fat that does not melt readily, and any food that is prepared with yeast or other ferments. The fats that are allowed are oil, cream, and butter. The amount of protein should be limited, and given in small portions throughout the day. Care must be taken to avoid protein containing a large amount of extractive or purin bodies. Cold drinks are forbidden, but hot drinks have as favorable action as hot external applications. Kolisch applies hot fermentation to the abdomen for two hours after dinner every day for two or three months after an acute at-

tack. He also forbids any active exercise for a year following the acute attack, during which time also the dietetic measures are to be kept up.—*American Jour. Med. Sciences.* J. A. S.

Pipe, Cigaret and Cigar.—The question as to which of the three forms of smoking—the pipe, the cigaret or the cigar—introduces the greatest proportion of nicotin into the smoker's system, has never obtained a completely decisive answer, although it has received considerable discussion from time to time. At one time it was freely asserted that the tobacco which contained the highest amount of nicotin necessarily tended to be the most injurious, no matter in what form it was smoked, but now we know that the form of smoking plays an important part. There was a theory that not in all three cases was the original nicotin in the tobacco conveyed as such to the mouth; sometimes it was destroyed by effective combustion, while at other times pyridin was responsible for the toxic effects. According to this theory, which was all on the right track, the cigaret was least harmful, because the tobacco along the thin paper wrapper was exposed freely to the air, and, as a consequence, the tobacco was well burnt and all nicotin was destroyed. Against this it was held that, in such a case, one poison disappeared, only for another one to be elaborated, and carbon monoxid was found in marked quantity as a poisonous constituent of cigaret smoke. As a matter of fact, carbon monoxid is invariably found in all tobacco smoke, and that circumstance should be sufficient to warn all smokers against inhaling it persistently. Theories as to what happens in the combustion of tobacco in the various ways it is smoked next took into account the extent to which condensation products were formed and retained in the tobacco. The most effective condenser, of course, is the pipe, and there can be but little doubt that, owing to the length of the stem, a comparatively small proportion of these condensation products reaches the mouth. In the cigar, on the contrary, the condensing process has a tendency to travel throughout the cigar; at all events, as the cigar gets shorter, the condensed product area gradually reaches the mouth, and eventually the products are conveyed there by the heat of the burning end. It has been said by connoisseurs that no cigar is worth smoking after one-half of it has been consumed, which seems to be a practical realization of theoretical considerations very suit-

able for application by millionaires. Again, a cigar that has been partially smoked and then allowed to go out, is decidedly unpleasant when relit, owing, doubtless, to the spread of condensation products to the mouth end. In the case of the pipe, the burning area is always in the same place; it never comes nearer the mouth, and therefore the probability is that the condensation products do not reach the mouth in, at any rate, appreciable quantities. In the cigaret the condensation products eventually reach the mouth, but there is, in this case, less chance of condensation products forming, since the combination is unhampered, the tobacco being freely in contact with the air. The question of moisture, however, must not be left out in these considerations, for it is obvious that damp tobacco will form condensation more readily than dry tobacco. It is probable, therefore, that a dry cigar or cigaret gives off less poisonous products than a damp one does, but not every one smokes from choice a new cigar or an old cigaret. It is reasonable to conclude that the amount of nicotin reaching the mouth does not necessarily depend on the amount in the tobacco, but on the form in which it is smoked. In drawing this conclusion regard must, of course, be had to the quantity of tobacco smoked; but, if the conclusion is correct, the pipe would come first as the least harmful form of tobacco-smoking, then the cigaret, and lastly the cigar.—*London Lancet—American Medicine.* J. A. S.

Department of Internal Medicine.

In charge of Dr. E. M. Dupaquier, New Orleans.

The New Preparations of Organic Arsenic.—Armand Gautier recalls the fact that as early as 1902 he proved the curative properties of the preparations of organic arsenic. His friends and disciples have requested him to express his opinion on the new therapy.

He believes in the curative action of 606 in syphilis, for he has demonstrated it with the cacodylates, arrhenal, énésol, though these medicaments had been used concurrently with mercury. But he also had very favorable results in using these arsenicals only.

Brocq was successful with the cacodylates, in obstinate cases of syphilis. Dourine, atoxyl, also contributed telling results. All these data have formed the basis for Ehrlich's researches, a statement vouched by two of his friends.

The date of a patent is no proof of its "paternity," and Ehrlich has found a new remedy, but he is not the originator of the method.

The cacodylates, though employed on a large scale, have never caused any fatal accident, while the 606 has already several death records on its debit sheet.

That is why Gautier suggests comparative experimentation from the point of view of curative action on the one hand, and toxic action on the other, between the new preparations of organic arsenic, and their predecessors or forbears, as it were, namely, the cacodylates, arrhenal and énésol. All of them have the same mode of action, viz: they act through the latent arsenic which they vehiculate. There remains to fix now which of them present the minimum of danger. To the latter, the physician shall look forward.—(Académie de Médicine, Seánce du 8 Novembre, 1910. *Médicine Moderne,* November 26, 1910.)

Department of Ear, Nose and Throat.

In Charge of Drs. A. W. deRoaldes and Clyde Lynch, New Orleans.

The Anatomy of the Larynx.—Brunetti studied anatomopathologically the changes in the nervous terminations in the intrinsical muscles of the human larynx. His studies differ from most of those on record to date in that they are made subsequent to the existence of a local morbid process in the organ itself, and not depending upon a general state. He concludes as follows:

(1) The nervous muscular terminations in the intrinsic muscles of the human larynx do not present any characteristic different from the termination in other muscles. The predominating form is that of terminal plates (or plaques).

(2) In the chronic laryngitis, either simple of specific, the terminations appear altered in their constitutive elements, no pathological lesions are found in specific forms.

(3) The intensity of the lesion is in direct proportion to the degree of inflammation.

(4) The lesions are of a degenerative nature, and end in progressive disappearance of the functional nervous element (the terminal expansion of the axis cylinder).

(5) The existence of these lesions in the nervous matrix organs explains the clinical fact of catarrhal paralysis and the alterations of the voice in chronic catarrhal laryngitis.—*Annales des Maladies de L'Oreille, du Larynx, du Nez, et du Pharynx.*

Local Anesthesia of the Mucous Membrane by a Solution of Hydrochlorate of Quinin and Urea.—Not being satisfied with the effects locally of the anesthetic value of this drug, the author began to experiment with various combinations containing the drug, with the hope of finding an ideal local anesthetic for mucous membranes. The first mixture was compounded as follows: 2 grams phenol, 2 grams menthol, 1 milligram of adrenalin, 1 milligram of quinin and urea. This solution was awkward, in that quinin does not dissolve readily; upon adding heat the solution is complete, but becomes solid on cooling. With the addition of alcohol to the above formula, the combination would remain liquid, but the alcohol will increase the *caustic effect* of the carbolic acid.

The most satisfactory combination was as follows: Acid carbolic, 2 grams; menthol, 2 grams; hydrochlorate of quinin, 1.50 grams; pure adrenalin, 5 grams. This solution remained liquid, at normal temperature, and was anesthetic; with the elimination of urea the solidifying agent was removed.

With the above the author was able to remove turbinates and septal spurs without pain.—Chouvanne.—*Revue-Hebdomadaire de Laryngologie, D'Otologie et de Rhinologie* (September 10, 1910).

Miscellaneous.

Treatment of Tubercular Cervical Adenitis in Children.—(Dr. Henri Hamel, *Thèse de Paris—Journal de Méd. et Chirur. Pratiques.)*—Dr. Hamel describes Mènard's method of treating tubercular cervical glands in children. General, systemic

treatment is, of course, indispensable. Local treatment consists chiefly of parenchymatous injections; also external applications of the following: Chloride of calcium, 300 grams; chloride of sodium, chloride of potassium, chloride of magnesium, of each, 15 grams; water, one liter. These applications seem to act chiefly on the periadenetis.

The parenchymatous injections are most important. At the *Hôpital maritime,* a solution similar to Lannelougue's is employed, as follows:

Iodoform	5 grams
Ether	10 grams
Guaiacol, creasote, of each	2 grams
Sterilized olive oil	100 cub. centimeters

Mènard has used this solution with excellent results for a number of years.

Dr. Hamel has chiefly employed camphorated thymol, which has none of the drawbacks of camphorated naphthol, and which he advised to be used in the following manner: Place 200 grams of camphor and 100 grams of thymol in a flask, and shake from time to time. A gentle heat facilitates fusion. The mixture is opalescent, and, under the microscope, is seen to consist of a number of minute globules. The addition of a small amount of ether makes a clear solution and removes all danger of capillary embolism. The amount to be injected at a dose is from one-half a cubic centimeter to one centimeter. Before injecting the liquid, the skin should be well cleaned; and then the operator guides himself by what he finds locally.

1. When the ganglion is hard and rolls easily under the skin, it makes no difference at what part of the surface he makes his puncture. The sterilized syringe is held in the right hand, the gland is grasped with the left hand; then, after the skin has been anesthetized with chloride of ethyl, he plunges the point of the needle into the tubercular gland, and injects the contents of the syringe into the parenchyma of the gland drop by drop. When there is no periadenitis, there is no danger of setting up a suppurating sinus along the course of the puncture. When there is little or no cessation of the gland, this quantity of liquid injected (half a cubic centimeter), the only sensation produced is one of

painful distension. This pain rapidly subsides, and the one of two things may happen. Sometimes a sclerosis of the gland results, which, later on, disappears; but, more frequently, the gland softens, and is then treated as a softened gland, which is the second condition that the surgeon has to deal with.

2. When the gland has become decidedly softened, the operative field is prepared, and the skin anesthetized; and the needle, held in the right hand, is plunged, at one stroke, through the skin about a finger's-breadth beyond the zone of projection of the diseased gland when the skin is intact, and a finger's-breadth beyond the area of redness when the skin is involved. The needle is pushed obliquely as far as the cortex of the gland, which can be easily traced out. Then, with a very gentle pressure with the right hand, the needle traverses the cortex of the gland, and the point of the needle can be felt to lie in the cavity containing the liquid part of the gland. Then screw on the body of the syringe, and aspirate the contents of the gland. Sometimes the gland can be evacuated at the first aspiration; at other times it is necessary to wait until the thymol has softened the gland before the contents have become sufficiently liquefied to be aspirated.

The injections should be repeated at intervals of four or five days. It may take two days for the thymol to act, and it is well to remember that its action continues for three or four days. Above all, it must be remembered that local treatment is only an adjuvant to general treatment. McSHANE.

EHRLICH-HATA PREPARATION No. 606 IN LEPROSY *(Deutsche Medizinal-Zeitung,* October 22, 1910).—Prof. Dr. Ehlers, chief of the Dermatological Poliklinik in the Royal Hospital of Copenhagen, reports (in the *Münchener Med. Wochenschrift,* 41/10) upon the experiments made on seven cases of leprosy in the Odd Fellows' Leper Hospital, founded by him in Reykjavik, Iceland. The treatment was given by Dr. Bjarylyédinsson. The doses varied from 0·4 to 0·6. There were six cases of tubercular leprosy, and one anesthetic. All of the patients are doing well. The pain of the injections was not particularly severe. No abscesses formed; there was but little fever. Up to the present there has been no very marked effect upon the disease. The injections had been given from several days to three weeks before the report. McSHANE.

Epilepsy Treated With Neuropsin *(Archivos de Terapeutica.)*—Trevisanello and Maragliano designate as *neuropsin* an extract of nerve-substance, which is a powerful reflex modifier, and, therefore, an efficient agent in epilepsy. It has been used with success in nine cases, in tablespoonful doses of the liquid extract, four times a day. Neuropsin also acts as a good nerve-tonic.—*Boletin del Instituto Patologico.* McShane.

Gonococcemia and Gonorrheal Endocarditis During Life.—Dr. Giovanni Marini (in *Il Morgagni,* 51) speaks of a patient in whom the diagnosis hovered between malaria, typhoid and septicemia. In favor of the malaria were the residence in a malarial district, the intermittent character of the fever, with vomiting and profuse sweating; also enlargement and tenderness of the spleen. Against typhoid were the absence of roseola, the character of the stools, the appearance of the tongue, and the pulses. By the absence of the amæbæ and the negative Widal reaction, both of these diseases were excluded, and septicæmia alone remained. But from what cause? Bacteriological examination of the blood showed the presence of gonococci, and the simultaneous insufficiency of the aortic and mitral valves must be ascribed to a gonorrheal endocarditis. Two days before death there occurred embolism of the right radial artery, exudative pleurisy of the right side, and edema of the lungs. The autopsy confirmed the diagnosis.—*Deutsche Medizinal-Zeitung.* McShane.

Louisiana State Medical Society Notes.

In Charge of Dr. Joseph D. Martin, Secretary, New Orleans.

Parish Society Meetings.

Bi-Parish Society of Natchitoches an Red River.—At a regular meeting of the Bi-Parish Medical Society held at Natchitoches on Wednesday, December 1, 1910, the following answered to roll-call: Drs. J. B. Pratt, Z. T. Gallien, T. J. Keator, Julian Curtis, E. L. Sanderson, D. F. Sibley, C. E. Edgerton, J. B. Hargrove and E. W. Breazeale. Dr. J. B. Pratt, president, called the

meeting to order, and requested the secretary to read the minutes of the last meeting. Same were read and approved. The Society then proceeded to business. Drs. Edgerton and Pratt, a committee to make arrangements for open meetings, to which the public were invited to attend, offered their reports, which were accepted and the committee discharged. On scientific subjects, Dr. T. J. Keator read a paper on "The Use of Chloroform in Child-birth," which was discussed by Drs. Gallien, Sanderson, Sibley and Edgerton. Dr. C. E. Edgerton read a paper on "The Bites of Venomous Snakes," detailing an interesting case of a bite by a rattlesnake on the finger of a stout, robust male negro, with severe symptoms and successful treatment. This paper elicited considerable discussion by Drs. Hargrove, Curtis, Gallien, Breazeale and Keator. There being no other papers, Dr. Z. T. Gallien gave an interesting talk on hookworm disease and its treatment, especially laying stress on the unsuccessful treatment with thymol tablets, as purchased from a leading pharmaceutical house. These tablets were passed whole with the stools. His talk created considerable discussion. The president announced that he would furnish the secretary with a list of appointments on scientific subjects for next meeting, at a later date. Dr. C. E. Edgerton rose on a point of special privilege and extended an urgent and personal invitation to all the members to come to Coushatta for the next meeting. Dr. J. B. Hargrove requested permission to retain his membership in the Society, although he expected to move to Coldwater, in Winn parish, shortly. This request was promptly granted by all the members. The president invited the members to a banquet at the Lecompte Hotel, where covers were placed for thirty members and guests. There being no further business, the meeting adjourned, to convene at Coushatta, La., on Wednesday, April 5, 1911.

(Signed) E. W. Breazeale, Secretary and Treasurer.

The Bi-Parish Medical Society of St. John and St. Charlles held its annual meeting at Reserve on Tuesday, December 6. The following members were present, viz: Drs. S. Montegut, of Laplace; J. P. Elmore, H. D. Cooper, Edgard; L. T. Donaldson, Reserve; E. P. Feucht, Garyville. After the discussion of interesting subjects the election of officers took place, resulting as follows: Dr. L. T. Donaldson, president, Dr. J. P. Elmore, vice-president;

Dr. E. P. Feucht, secretary and treasurer. Upon the duly-seconded motion that the Society take action against the illegal practice of unqualified practitioners not holding a certificate of the State Board of Medical Examiners, it was resolved that the secretary be instructed to report such cases to the State Board of Medical Examiners, and also to the State Board of Health. It may not be amiss to mention here that in some instances we are told such cases, after having been reported to the State Board of Medical Examiners, rested there, and the guilty party allowed to continue his illegal practice without molestation. Could it be that, in such a case, the political standing of the illegal practitioner qualified him for the practice of medicine in the eyes of the parish officials, and they not only tolerate, but permit him to practice? If this be the case, why would not the State Board of Medical Examiners take the matter in hand and put a stop to this illegal practice, and, if necessary, prosecute the unqualified practitioner? After the meeting the members were entertained at a banquet in the spacious dining-room of the New Sugar Belt Club.

(Signed) E. P. Feucht, Secretary-Treasurer.

The DeSoto Parish Medical Society met at Mansfield, La., December 5, and elected the following officers. E. I. Persinger, president; W. A. Nabors, vice-president; E. Davies (re-elected), secretary-treasurer. Drs. H. W. Jarrell, of Mansfield, and S. D. Kearney, of Pelican, were admitted to membership. We regret to report the recent death of our worthy brother, W. J. Headrick, of Logansport. Peace to him in the Great Beyond.

(Signed) E. Davis, Secretary-Treasurer.

Medical News Items.

The Jefferson County Medical Society held its regular monthly meeting at Fayette, Miss., on December 6. The election of officers was held and resulted as follows: Drs. J. C. McNair, Fayette, president; C. L. Simmons, McBride, vice-president; J. H. Carradine, Fayette, secretary-treasurer.

The Tri-State Medical Association—Mississippi, Arkansas and Tennessee—held a very successful meeting last month, with 400 in attendance, and elected Dr. J. W. Barksdale, of Winona, president.

Taylor County (Texas) Medical Society.—At the annual election of officers of the Society, held in Abilene on December 6, the following officers were elected: President, Dr. M. M. Carrick, Assistant Superintendent State Epileptic Colony, Abilene; vice-president, Dr. J. A. Adkisson, Merkel; secretary-treasurer, Dr. J. M. Estes, Abilene. The Society was banqueted by Dr. J. M. Alexander. Fifty guests were present. Dr. M. M. Carrick acted as toastmaster.

The National Confederation of State Medical Examining and Licensing Boards will hold its twenty-first annual meeting in Chicago, February 28, 1911. In the past the Confederation has met during the meeting of the A. M. A., but the Executive Council decided on this day between the meetings of the Association of American Medical Colleges and the Council on Medical Education of the A. M. A., as the interests and aims of the three organizations are so closely allied that it was deemed advisable for each to be familiar with the work of the others.

The subjects to be taken up at this meeting will be a consideration of the State Control of Medical Colleges; a report by a special committee on Clinical Instruction; the report on a paper presented at the St. Louis meeting by Mr. Abraham Flexner, of the Carnegie Foundation for the Advancement of Teaching, and some special papers on such subjects as Regulation of Medical Colleges, Necessity for Establishing a Rational Curriculum for the Medical Degree, and others, by men eminently qualified to prepare papers upon such subjects. An earnest and cordial invitation to this meeting is extended to all members of State Medical Examining and Licensing Boards, teachers in medical schools, colleges and universities, delegates to the Association of American Medical Colleges, to the Council on Medical Education of the A. M. A., and to all others interested in securing the best results in medical education.

Convention of the Association of State and National Food and Dairy Products.—At the fourteenth annual convention of the Association of State and National Food and Dairy Products held recently in New Orleans there were representatives present from thirty-seven State in the Union. A number of these representatives were taken to Reserve Refinery and inspected the making of sugar. A smoker was given them at the Elks. Dr. Hamilton P. Jones was chairman of the local committee.

The *Interstate Journal,* of St. Louis, announces a special symposium number on syphilis for January.

The Charity Hospital Training School for Nurses held its fourteenth annual convention on December 9 and presented diplomas to thirty-three nurses. Drs. E. S. Lewis and J. A. Danna and Rabbi Max Heller made addresses.

The American Society of Medical Sociology is an organization recently established for the purpose of studying radically all questions of a socio-medical nature. The officers are: Dr. A. Jacobi, honorary president; Dr. William J. Robinson, president; Dr. A. C. Jacobson, secretary. Requests for information should be addressed to 12 Morris Park, West, New York.

The Clinical Surgical Congress of North America closed its first meeting in Chicago on November 19, after two weeks of study in the big hospitals and medical schools of the city. The Congress was so successful that it was decided to organize permanently and hold an annual meeting in one or another of the medical centers of the country, along the lines of the Chicago meeting. More than twelve hundred surgeons from the United States, Canada and Mexico were in attendance, and clinics were held in all the large hospitals. Dr. Albert J. Ochsner, of Chicago, was appointed president of the new organization.

A National Tuberculosis Sanatorium for Negroes.—Announcement is made that James Polk Taylor, of Colorado Springs, a former slave, has given to the Charles Sumner Tuberculosis Association 480 acres of land at Calhan, near Colorado Springs, as a site for a national tuberculosis sanatorium for negroes. According to present plans, the building to be erected on this site will cost $300,000.

The Barnard Free Skin and Cancer Hospital (St. Louis Skin and Cancer Hospital) held its inaugural exercises on December 20.

Civil Service Examination for the Position of Anatomist.—The United States Civil Service Commission announces an examination on January 18, 1911, for the position of anatomist, at $1,600 per annum, in the Army Medical Museum, office of the Surgeon-General.

The Demonstration Train in Louisiana.—Dr. Oscar Dowling, in making the trip over the State with the demonstration train, reports great interest in the undertaking, and believes much good will be done for the cause of sanitation. Dr. Dowling is to be congratulated in his great enterprise.

Clippings.—Louisville, Ky., has voted one million dollars for a city hospital.

The January issue of the *American Journal of Surgery* will be composed entirely of original contributions from the pens of well-known Southern surgeons.

The December, 1910, number of the *Montreal Medical Journal* will be its last issue.

Sixteen State sanatoria, twenty-eight county hospitals and twenty-one municipal hospitals for tuberculosis have been erected and provided for since January 1, 1909.

The Southern Surgical and Gynecological Meeting.—An twenty-third annual session of the Southern Surgical and Gynecological Association met in Nashville, Tenn., December 13 for a three days' session, and a most interesting and profitable meeting was held. Dr. Rudolph Matas was elected president of the association.

The Orleans Parish Medical Society held its annual election of officers during December, and the result was that the same officers were retained for the coming year. The Society expects to occupy its new building in January.

Personals.—Among the New Orleans doctors who attended the Southern Surgical Gynecological Association meeting were: Drs.

Rudolph Matas, E. S. Lewis, P. Michinard, John F. Oechsner, W. M. Perkins and F. W. Parham.

Dr. Roy M. Van Wart has been elected Fellow of the Royal Society of Medicine.

The JOURNAL has received with regret the announcement of the death of Mr. Louis Dohme, of the firm of Sharp & Dohme, who died at Baltimore, Md., on Monday, December 12, 1910.

Dr. G. Farrar Patton is the new president of the New Orleans Anti-Tuberculosis League.

Dr. James Morrison Bodine, dean and president of the Medical Department, Louisville University, was tendered a "testimonial dinner" on December 16, the anniversary of his eightieth birthday, by his many friends and pupils throughout the country.

Dr. J. E. Mears, of Philadelphia, was in New Orleans in December.

REMOVALS.—Dr. C. L. Horton, from Ashwood, La., to 1423 Pleasant street, New Orleans.

Dr. R. C. Finlay, from New Orleans to Meridian, Miss.

Dr. V. J. Funderburk, from Jonesboro, La., to Hodge.

DIED.—On November 27, 1910, Dr. Landon B. Edwards, one of the best-known and most eminent physicians in Virginia, at the age of 67.

On December 3, 1910, in Meridian, Miss., Dr. O. A. Harrison, aged 65, one of the most prominent practicing physicians in the State.

On December 5, 1910, in Meridian, Miss., Dr. M. J. Thompson, aged 65. For twenty-nine years Dr. Thompson was recognized as one of the State's leading physicians and surgeons.

On December 6, 1910, in Philadelphia, Dr. John C. DaCosta, aged 76 years. Dr. DaCosta was a graduate of Jefferson Medical College and ranked among the great surgeons of the country. He has contributed much of importance to medical literature, and his death is to be deplored.

On Nov. 2, 1910, in Logansport, La., Dr. W. G. Headrick, aged 43 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

NOTICE.—In the review of "*Some Common Remedies and Their Use in Practice*," by Dr. Eustace Smith, published in the December number, the name of the publisher was omitted by oversight. The work is published by Mr. Paul B. Hoeber, No. 69 E. Fifty-ninth street, New York.

The Sexual Life of Woman, by E. HEINRICH KISCH, M. D. Translated by M. EDEN PAUL, M. D. Rebman Company, New York.

Well translated from the German, this work draws a general picture of sexual activity in women, divides her sexual life into three epochs: That called by the author the *menarche*, the first appearance of menstruation; the *menacme*, or the culmination or apogy of sexual activity; and the *menopause*, the cessation of menstruation and active sexual life.

Little space has been given to pregnancy, parturition, lactation, etc., which are adequately treated in works on obstetrics, and to ordinary gynecological topics, but the sexual impulse, copulation, fertility, sterility, sexual hygiene, and all subjects in line with these, have been given ample consideration and space, not only in the light of the author's own experience, but by numerous references to the writings of others.

Within the demands of the purity of the maiden, the faithfulness of the wife and the love of the mother, Kisch believes "the modern claim for a free development of the personality" and for accommodation of "the circumstances of the sexual life to the individual needs of the day, may be satisfied."

We advise our readers to get the book and read it. C. C.

The Physician's Visiting List for 1911. P. Blakiston's Son & Co., Philadelphia.

This is the sixtieth year that this interesting list makes its appearance. This fact alone testifies as to its merit. It is issued in three styles—the regular, the perpetual and the monthly edition. In addition to the blank leaves for the visiting record, memoranda, addresses, engagements, it includes the usual tables of signs, poisoning, dosage, etc.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1910.

Anatomical and Surgical Study of Fractures of the Lower End of the Humerus, by Astley Paston Cooper Ashhurst, A. B., M. D.

Modern Treatment in the Management of Diseases with Medical and Non-Medical Remedies. Edited by Hobart Amory Hare, M. D., assisted by H. R. M. Landis, M. D. In two volumes.

Progressive Medicine. Vol. XII, No. 4. Edited by Hobart Amory Hare, M. D., assisted by Leighton P. Appleman, M. D.

D. APPLETON & CO., New York and London, 1910.

A Manual of Nursing, by Margaret Frances Donahoe.

WILLIAM WOOD & CO., New York, 1910.

State Board Examination Questions and Answers of Forty-One States and Two Canadian Provinces. Third edition, revised and enlarged.

C. V. MOSBY & CO., St. Louis, 1910.

Diagnosis and Treatment of Diseases of Women, by Harry Sturgen Crossen, M. D. Second edition, revised and enladged.

THE YEAR-BOOK PUBLISHERS, Chicago, 1910.

Practical Medicine Series, under the general editorial charge of Gustavus P. Head, M. D., and Charles M. Mix, A. M., M. D. Vol. VIII: *Materia Medica and Therapeutics; Preventive Medicine; Climatology.* Edited by Geo. F. Butler, Ph. G., M. D.; Henry B. Favill, A. B., M. D., and Norman Bridge, A. M., M. D.

P. BLAKISTON'S SON & CO., Philadelphia, 1910.

The Diseases of China, by W. Hamilton Jeffreys, A. M., M. D., and James L. Maxwell, M. D.

Miscellaneous.

A Study of Melting-Point Determinations, by Geo. A. Menge, M. D., Hygienic Laboratory, Bulletin No. 70. (Washington Government Printing Office, 1910.)

The Preservation of Drugs, by Linwood A. Brown. (Bulletin No. 150, Kentucky Agricultural Experimental Station of the State University.)

A Manual of Clinical Pathology, by Richard Weiss, M. A., Ph. D., F. C. S., in collaboration with George Herschell, M. D., and Andrew Charles, F. R. C. S. (J. & A. Churchill, publisher, London, 1910.)

Physician's Pocket Account-Book and Practical Advice for Professional Success, by J. J. Taylor, M. D. (Medical Council, Publishers, Philadelphia.)

A Compend of Active Principles With Symptomatic Indications for Therapeutic Use, by Harold Hamilton Redfield. (The Clinic Publishing Company, Chicago.)

The Prevention of Sexual Diseases, by Victor G. Vecki, M. D., with introduction by Wm. J. Robinson, M. D. (The Critic and Guide Company, New York.)

The Third Annual Report of the Commissioner of Health of the Commonwealth of Pennsylvania, for the Year 1908. (C. E. Auginbaugh, Printer.)

Abstract of the Proceedings of the United States Pharmacopœal Convention of 1910. Published by the Board of Trustees, November 30, 1910.,

Some Experiments in Grazing and Soiling, by S. E. McClendon, B. S.; *Report of the Analysis of Commercial Fertilizers and Paris Green*, by J. E. Halligan, B. S. (Agricultural Experiment Station of the Louisiana State University and A. and M. College, Baton Rouge.)

Reprints.

Des Interventions Sur le Golfe de la Jugulaire, par le E. J. Moure, M. D.

Description of a Free Cuboides Secundarium, With Remarks on That Element and on the Calcaneus Secundarius, by Thomas Dwight.

Family Physician Refracting as a Factor in Medical Practice and Its Promotion During 1910; The Economic Value of Family Physician Refracting; A Conference of Ophthalmologists, With Organization; Officials and Family Physician Refracting, by Leartus Connor, M. D.

Tumor of Pituitary, by Isaac I. Lemann, M. D., and Roy M. Van Wart, M. D., C. M.

The Study of the Type of Infantilism in Hookworm Disease; A Study of a Case of Heart-Block, With Alternations of the Systolic and Diastolic Jugular Waves; Auto-Serotherapy in the Treatment of Collections of Fluids in Serous Cavities, by Isaac I. Lemann, M. D.

Report of Committee on Promotion of Family Physician Refracting, by Leartus Connor, M. D.; A. R. Baker, M. D.; J. Thorington, M. D.

Gastric Juice From the Living Pig and Its Therapeutic Application, by Maurice Hepp, M. D.

Physiologic Gastric Juice Obtained From the Living Pig in the Treatment of Digestive Disorders, by J. Darwin Nagel, M. D.

Malignant Rhabdomyoma of the Vagina in Children, by C. Jeff Miller, M. D.

Pernicious Vomiting, by S. H. Blodgett, M. D.

The Saw and Crushing Instruments in Surgery of the Nasal Septum, by Bryan DeF. Sheedy, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans

FOR OCTOBER, 1910.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	4	3	7
Intermittent Fever (Malarial Cachexia)	6	.....	6
Smallpox	.....	1	1
Measles	1	1	2
Scarlet Fever	.....	.....	.....
Whooping Cough	1	1	2
Diphtheria and Croup	5	.....	5
Influenza	11	16	27
Cholera Nostras	.....	.....	.....
Pyemia and Septicemia	2	.....	2
Tuberculosis	48	30	78
Cancer	17	9	26
Rheumatism and Gout	1	.....	1
Diabetes	2	.....	2
Alcoholism	.....	.....	.....
Encephalitis and Meningitis	6	.....	6
Locomotor Ataxia	.....	.....	.....
Congestion, Hemorrhage and Softening of Brain	21	5	26
Paralysis	3	1	4
Convulsions of Infants	.....	1	1
Other Diseases of Infancy	12	12	24
Tetanus	.....	4	4
Other Nervous Diseases	3	1	4
Heart Diseases	55	45	100
Bronchitis	6	4	10
Pneumonia and Broncho-Pneumonia	21	41	62
Other Respiratory Diseases	5	1	6
Ulcer of Stomach	2	.....	2
Other Diseases of the Stomach	6	4	10
Diarrhea, Dysentery and Enteritis	18	17	35
Hernia, Intestinal Obstruction	1	2	3
Cirrhosis of Liver	6	5	11
Other Diseases of the Liver	4	.....	4
Simple Peritonitis	.....	.....	.....
Appendicitis	2	2	4
Bright's Disease	30	29	59
Other Genito-Urinary Diseases	8	5	13
Puerperal Diseases	3	3	6
Senile Debility	11	1	12
Suicide	4	.....	4
Injuries	15	9	24
All Other Causes	19	13	32
TOTAL	359	266	625

Still-born Children—White, 23; colored, 14; total, 27.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 15.84; colored, 31.60; total, 20.10.

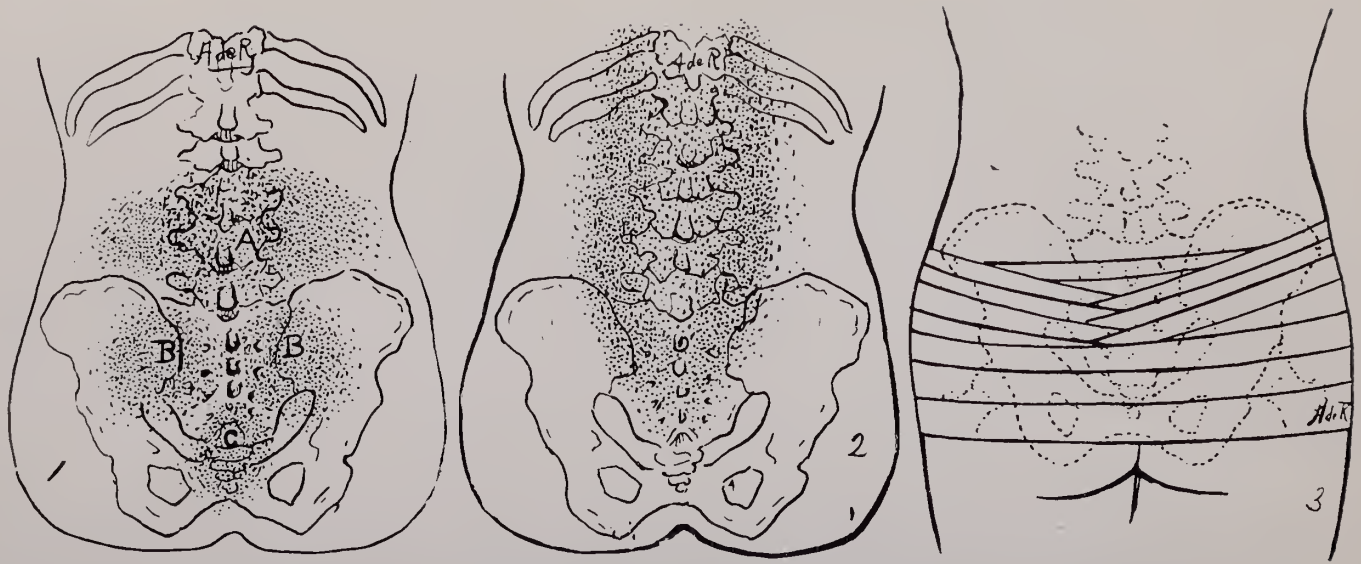
METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.07

Mean temperature 62.00

Total precipitation ..... 3.05 inches.

Prevailing direction of wind, north.



ILLUSTRATING ARTICLE OF ALFRED DE ROULET.

FIG. 1. Localization of pain in backaches due *(a)* to neurasthenic and pelvic conditions, *(b)* relaxation of sacro-iliac articulations, *(c)* coccygodynia.

FIG. 2. Distribution of pain in backache due to rheumatism.

FIG. 3. Showing method of applying adhesive plaster to support pelvis.

New Orleans Medical and Surgical Journal.

VOL. LXIII. FEBRUARY, 1911. No. 8

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Causes and Treatment of Backache in Women.

By ALFRED DE ROULET, B. S., M. D.

Clinical Professor of Diseases of Women, Loyola University Medical School; Associate Professor of Diseases of Women, Reliance Medical College; Gynecologist, Rhodes Avenue Woman's Hospital, Chicago.

While backaches in women between the ages of twenty and fifty are so common as to be almost universal, the literature on the subject is both meagre and unsatisfactory. The old theory that backaches in men were due to kidney trouble and in women to pelvic derangements, while beautiful in its simplicity, will scarcely pass muster.

In women, backaches occur in connection with rheumatism, neurasthenia, neuralgia, spinal troubles, as caries and fracture, relaxation of the sacro-iliac articulation, the various pelvic inflammations and congestions, constipation, hemorrhoids, pendulous abdomen, etc. The ache varies from an occasional muscular soreness to a continuous pain so severe as to be almost unbearable. It may be localized in a small area over the sacrum, in one or both

sacro-iliac articulations, in or about the coccyx, over the lower lumbar vertebræ, or it may involve the entire sacral, lumbar and lower thoracic regions.

Many backaches in women are undoubtedly rheumatic in origin, but more are neurasthenic. In young women improper or unsuitable footgear is a prolific cause of backache. The change from the broad, flat "spring heels" of early girlhood to the stilt-like French and Cuban heels of flighty adolescence seriously disturbs the normal poise and balance of the body, and, until the muscles of the back and legs have adapted themselves to the changed conditions, severe backaches and legaches are to be expected. Again, the unstable equilibrium afforded by the high heels keeps up a muscular and nervous strain very conducive to backache.

Among women of the poorly-nourished, hard-working type, an intrinsic weakness of the muscles of the back is a common cause of suffering, the distress being greatly increased by long-continued or fatiguing effort.

In the acute infections, backache is usually present in varying degrees of severity, while an exceedingly persistent and distressing pain often occurs in connection with spinal caries, certain spinal curvatures and in the crises of locomotor ataxia.

While backache is very common in all forms of pelvic disease, I am inclined to attribute this symptom to an impairment of the patient's general condition rather than to the pelvic disorder.

The rheumatic backaches are fairly characteristic. There is usually a history of previous acute attacks. The pain comes on suddenly following exposure to cold or damp or after some unusual exertion. The pain is usually worse at night, and may be excited by pressure on the affected muscles or by such postures as will render these muscles tense. The pain subsides rapidly under friction or massage and as the result of exercise.

Strains and subluxations of the sacro-iliac articulations produce a backache of an entirely different type. It should be borne in mind that these articulations are true joints with, normally, a very limited but definite range of motion, the mobility being decidedly increased during pregnancy and to a less extent during menstruation. Excessive mobility may be due to injury, arthritis, or to a general weakening of the muscles and ligaments. The symptoms vary with the degree of relaxation. In extreme cases the patient is

practically helpless, while in the mildest cases it is only during pregnancy, or possibly menstruation, that there is any noticeable discomfort. The majority of these patients complain of pain over the sacrum, which may or may not be more or less localized over either or both articulations. The pain often radiates downward along the course of the sciatic and internal pudic nerves, and is increased by any physical exertion carried to the point of fatigue, or by any movement involving the sacro-iliac articulations. It is usually worse at night, as long-continued rest on the back involves a certain flattening of the lumbar spine. To this cause also may be traced a large proportion of the post-operative backaches.

On examination, the attitude of the standing patient is quite characteristic. The lumbar curve is distinctly flattened, and where the relaxation is more marked on one side than on the other a slight lateral curvature of the spine may be present. Any movement of the spine, affecting the sacro-iliac articulation is both limited and painful. For example, a standing patient bends forward only with the greatest difficulty, but, with the patient seated and the pelvis supported, the body may be bent forward with ease. With the patient sitting and the knees bent to relax the hamstring muscles, the back has about the normal mobility, but the movements become both difficult and painful as soon as the knee is extended. On palpation there is tenderness over either or both articulations, and sometimes, though not always, it is possible to demonstrate excessive mobility. In many cases of chronic sprain there may be present very severe symptoms without appreciably increased mobility.

The pain of coccygodynia is localized in and around the coccyx. In most cases the patient is not only rheumatic or neurasthenic, but there is also a history of injury, as a blow or a fall upon the coccyx, preceding the onset of the trouble. In elderly primiparæ it is possible that the pain may be traced to coccygeal injuries incident to childbirth, but as a general rule parturition is a factor of very little importance.

The pain usually comes on gradually and varies in intensity from a slight dull aching to an acute agony. Cases of moderate severity are comparatively common, while the aggravated cases are, fortunately, rare. The pain is frequently of an intermittent neuralgic character, but more often is continuous, though the suffering may vary in intensity from day to day. The distress is always increased

by sitting down or getting up, and is almost always increased by walking or moving about. Defecation is likely to be very painful. As a rule, the pain is much worse during pregnancy than at other times. In the interval between the acute attacks the painful paroxysms may be exactly reproduced by manipulating the coccyx.

In backache due to intrapelvic disorders there is pain and tenderness of varying intensity across the lower lumbar vertebræ. It is not appreciably affected by movement or change of position, it is not relieved by exercise, and is decidedly increased by fatigue.

As a matter of course, the treatment of backache depends entirely on the correction of the underlying causes. If the backache is due to neurasthenia, the treatment is essentially hygienic, and recovery can result only from proper food and rest, with such medication as may be necessary to stimulate digestion and to control disagreeable symptoms. Iron, strychnin, arsenic and phosphorus are all useful.

In rheumatic and gouty conditions, hygienic measures are of great importance, but diet should be restricted, pork, veal, turkey, rich gravies, pastry, made dishes, malt liquors and sweet wines being entirely omitted. The patient should be encouraged to drink large quantities of pure water, and for this purpose the various "Lithia waters" are often highly recommended. The amount of lithia contained in any of these waters is so small as render the possibility of any therapeutic effect an absurdity, but the amount of water taken floods the kidneys and provides the body with necessary fluid.

Massage, when properly employed, is of the greatest value. The patient should lie flat on the abdomen on a table or hard mattress, so that the force applied will be expended on the aching muscles and not dissipated by a soft, yielding bed. The painful spots should be located and systematically kneaded, the force being moderate at first, but gradually increasing to a maximum. At first only the finger tips are used; later the whole hand. The kneading is followed by percussion, in which the muscles are struck with the edge of the open hand, the strokes being from the wrist, and should be rapid—light at first, but gradually increasing in force, the force depending on the duration of the trouble, the amount of subcutaneous fat, and the muscles involved.

In kneading the lumbar muscles, the operator works to the best

advantage on the same side as the structures under treatment. In percussing he works best across the patient. The treatment should be repeated daily; at first a seance should not last over ten minutes, but later may be lengthened to twenty minutes. There are few backaches due to rheumatism which will not readily yield to this treatment.

In many patients the local application of heat is beneficial, and for this purpose a very convenient device is a 100 c. p. incandescent bulb fitted with a highly-polished parabolic reflector, both bulb and reflector being mounted in a metal hood and suspended from a swinging crane. The treatment is applied daily, each application lasting from ten to fifteen minutes, the light being constantly shifted over the exposed skin to avoid blistering. Where the skin is delicate a wet towel may be interposed as a slight protection. The beneficial effects of this treatment are due entirely to the heat. With an incandescent bulb fitted with the carbon filament, there is practically no actinic effect, as the glass of the bulb acts as an efficient ray filter. Using the arc light, a full actinic effect is obtained, and a slight chemical effect is possible with the tungsten light. A decided progressive improvement of the patient's condition usually follows the use of the thermal lamp.

As regards the medicinal treatment, I have found a combination of potassium iodide and wine of colchicum root in syrup of sarsaparilla compound of considerable value in promoting recovery.

In backache due to relaxation of the sacro-iliac articulations, treatment by rest and support is by all means the most efficacious. A ready method of securing this rest and support is by strapping the pelvis across the sacrum and just above the great trochanters. The compression should all be below the level of the iliac crests, as pressure along the crests would tend to separate the articular surfaces. In applying the straps they should be drawn tight *toward* the median line of the sacrum. A properly moulded and judiciously padded leather belt across the hips may be worn as a more convenient but less efficient substitute for the strapping, and in mild cases is often all that is necessary. Occasionally cases are encountered where there is an actual subluxation of the joint. These cases resist all treatment until the spine is strongly extended and the subluxation is reduced, after which the pelvis is supported and immobilized in a plaster Paris dressing.

In sacro-iliac backaches, long standing should be avoided and a

correct attitude should be maintained. When lying down, a small, hard pillow or cushion should be placed under the hollow of the back to support the lumbar spine. When sitting, lounging should be avoided. The general condition and the balance of the body, as affected by high heels, should be considered.

Coccygodynia due to local causes, such as fracture, dislocation, laceration of the coccygeal ligaments, osteitis or necrosis, is amenable only to operative treatment. A much less common form due to general causes is occasionally encountered in which no palpable local lesion is present, and where the trouble seems to be due to rheumatism, gout, or possibly to some hysterical or neurasthenic condition. Under these circumstances, the constitutional trouble should receive appropriate treatment, while local treatment should be directed to the relief of the coccygeal pain.

Suppositories of opium, belladonna and iodoform, and of belladonna and iodoform, have been used with good results, but more often have proven entirely worthless. The same is true of ointments of aconite and belladonna, and of veratrine, which are rubbed into the skin over the coccyx and lower portion of the sacrum.

The actual cautery is the only certain remedy for the relief of the local pain, and, on account of the apparent brutality of the method, is resorted to with great reluctance. In applying this treatment a narrow strip of skin is deeply burned from the first sacral foramina on either side downward to the tip of the coccyx. By using a Paquelin or a narrow pointed cautery iron heated to a white heat, the actual application is not particularly painful, and the relief is immediate and often permanent. The burn is dressed with gauze moistened with picric acid solution.

Ehrlich's Arsenobenzol (606) in Syphilis.* Report of Cases.

By A. NELKEN, M. D., New Orleans.

The interest aroused by the announcement of Ehrlich that he had worked out a cure for syphilis, capable of destroying the specific organism producing the disease by a single injection, is almost unparalleled in medical history. Not since the announcement of tuberculin by Koch has the profession been so stirred.

* Read before the Orleans Parish Medical Society, November 14, 1910

The standing of Ehrlich gives him at once the respectful attention of the scientific world, and the enthusiasm with which his discovery has been received is not to be wondered at, when we consider that this is the first time in the history of chemo-therapy that scientific experimentation, carried out along clearly conceived lines, has resulted in a true specific for a definite disease.

Certainly, it opens a new field—the construction of chemical combinations scientifically adapted to the destruction of bacterial organisms within the body.

The literature dealing with arsenobenzol, or "606," as Ehrlich has rather unfortunately christened his discovery, is very recent and is growing so rapidly that I shall not, at this time, attempt to review it. There is a considerable difference of opinion among those who have had an opportunity to observe its action as to dosage and method of administration. There has been some dissent from Ehrlich's idea that the drug should be administered in a single dose, sufficiently large to destroy all the spirochetes, *"therapia sterilisans magna."* Some few unfavorable reports have been made. Some few unpleasant sequelæ have occurred. But a large number of the opinions so dogmatically expressed to-day are liable to sweeping revision to-morrow.

Administered to date to many thousands of cases, the almost uniformly favorable reports made by careful, competent observers are striking. Failures or unpleasant complications seem to be due, as Ehrlich maintains, to the use of the drug in cases where it is clearly contraindicated.

Of course, the important question is: "Are patients, in whom every visible evidence of the disease disappears after a single injection, permanently well?"

In spite of the remarkable advances made in our knowledge of syphilis in the past few years, we are not prepared to answer that question with any degree of positiveness. If, as seems plausible, a negative Wassermann reaction, persisting over a considerable length of time, means that the patient is well, I do not believe we have any right to say, in the light of our present knowledge, that a positive reaction means that he is not cured. Again, we know that syphilitic outbreaks may occur years after every outward evidence of the disease has disappeared.

So the absence of symptoms, even over a considerable number of years, is no guarantee against future relapses.

A proper conservatism would suggest that we preserve an open mind until further experience with this treatment establishes its true value and shows its limitations.

To date, I think we are prepared to say that "606" is the most important advance made in the therapeutics of syphilis since the recognition of the disease, some four hundred years ago.

I am prepared to believe that, as further experience improves the dosage and the method of administration, we shall have in this preparation of Ehrlich, efficient in the great majority of cases, a rapid and certain cure for what has been, hitherto, one of the gravest and most treacherous diseases with which we have had to deal.

As is to be expected, in those cases in which the lesions show considerable infiltration, where there has been destruction of tissue, or where there is a deposit of pigment, the process of repair is comparatively slow. Absorption of pathological material requires time, and ulcerations must first granulate before covering over with epithelium.

But the steady improvement in the local manifestations which occur after the injection must impress the observer with the idea that the specific cause of the trouble is no longer active.

Through the courtesy of Dr. Marks, of Ehrlich's staff, Dr. Kohlmann received a supply of "606" before it is available to the profession at large. This supply Dr. Kohlmann has generously offered to local physicians for use in proper cases.

I have treated to date twelve cases. I have restricted myself, save in one case, a suspected gumma of the brain, to patients showing superficial lesions, and in whom the pathologist found either the specific organism, or a positive Wassermann, or both.

The first series of cases were given the drug in solution made by the methyl alcohol method and injected deeply into the gluteal muscles. Recently, we have used the drug prepared by the suspension method and injected subcutaneously beneath the scapula, as advised by Wechselmann. As far as my limited experience goes, the latter method causes quite as much pain and gives rise to quite as much reaction as does the former, if especial care be not taken to make the preparation neutral.

My cases have had no complications following treatment more serious than pain at the site of injection or a more or less brief elevation of temperature.

The second case reported can only be claimed to be improved as a result of "606."

The case of suspected gumma was not benefited, but is hardly a fair case for experimental purposes.

The remainder of my cases have all shown rapid improvement after the administration of the drug; that is, all with the exception of the last reported, in which case the roseola became more generally distributed and almost papular in type immediately following the injection, and did not begin to fade until eight days after its administration. As shown to-night, the eruption in this patient is much more distinct than it was at the time of the injection. Such cases, however, are not rare in the literature.

A condensed report of my cases follows:

CASE I. J. E. H., aged 47, laborer. Applied for treatment because of difficulty in urinating. He had had a stricture of many years' standing, which he had neglected, and which occasionally caused acute retention. Examination showed that he likewise had a recent syphilitic infection of an aggravated type. There was a marked indurated erosion at the junction of the glands and prepuce, with a severe ulcerative balano-posthitis. His entire body, including his face, was covered by patches of confluent macular eruption. Throat was much congested, but contained no distinct ulcers.

Patient was admitted to Dr. Matas' service at the Touro on September 12. The following day he had partial retention of urine, and an attempt to pass even a filiform failed. However, the slight bleeding induced relieved the congestion, and he was able to urinate freely. Following instrumentation he had a chill and a rise of temperature to 103½°. The day following (September 14), temperature being normal, he was given an intra-gluteal injection of 0.5 Ehrlich's "606." That evening temperature rose to 102°, and he ran a remittent type of fever, ranging from 99¼° to 101½°, until the morning of the 18th, when it remained normal.

Examination of smear made from ulcer by Dr. Gurd showed treponema pallida. An examination made eight hours after injection failed to show any.

The second day after the injection, patient complained a good deal of throat, and there was considerable hoarseness. The skin lesions had faded markedly. Four days after there was considerable redness and soreness at the site of the injection. Throat was improved, eruption markedly fainter, and the balano-posthitis much better. Improvement was continuous from day to day, the most obstinate skin lesion being a patch on the posterior aspect of the right thigh.

The prepuce and glans rapidly took on a healthy appearance, leaving a small clean ulcer near meatus, which had covered over with epithelium in about fifteen days.

When the general condition of the patient justified, I admitted him to my service at the Charity Hospital, where I did an external urethrotomy under spinal. His after history is uneventful.

The Wassermann, done November 4, fifty days after the injection, was positive.

Case II. John H., white, aged 41. Patient presented himself for treatment at the out-clinic of the Touro Infirmary on August 15, 1910. He had a large sloughing ulcer, with a markedly indurated base, which had been present one month.

There was no definite eruption, but the ulcer was so typical that I felt no hesitancy in making a diagnosis of chancre, and instituting treatment. He was given gr. 1½ of mercury salicylate, intra-muscularly. One week later was given two grains.

The patient did not return to the clinic until September 12. He then had a papular vesicular eruption on arms and body. Some few papules on forehead and back. On chest there were a number of discrete pustules. His throat was considerably congested.

He was admitted to my ward at the Charity Hospital on September 17, and given a gluteal injection of 0.5 of "606."

Patient suffered a good deal at site of injection, and three hours later had a slight chill, lasting but a few minutes.

Two days after injection, eruption was fading. On the third day, the pustular eruption was gone. On October 5, eighteen days after the injection, the eruption was much less marked. Wassermann, done by Dr. Gurd, was then positive.

Patient's throat was normal, and he expressed himself as feeling much better. The primary lesion on the glans-penis had disappeared.

His temperature chart, from the day of injection to the time patient left hospital, showed that the evening of the injection temperature rose to 102°. It was normal the next morning, rising to 101° that evening. It continued to intermit, gradually declining, until the 22nd, five days after the injection, when it remained normal.

On November 9, fifty-three days after the injection, he showed numerous copper-colored spots on flexor surface, left arm. Few on right arm and on body.

Case III. Oscar L. colored, aged 29. Treated through the courtesy of Dr. Kohlmann. Had gonorrhea three years ago. Never had any other venereal disease; but about six months ago he had a sore in his left ear that lasted three weeks. Two weeks after ear got well eruption appeared on face and spread on body. When patient applied for treatment he had a large number of patches of coalescent, elevated papules on arms, shoulders, a few on back, and a line of eruption extending across forehead and running down to the left side of his face.

He had a large, deeply pigmented patch of skin on his right shoulder and upper chest, which he said was due to a scalding burn when a child.

Examination of blood made by Dr. Gurd showed a positive Wassermann. One of the nodules on his right shoulder was examined for treponema, but they were not found.

Patient was admitted to Dr. Gelpi's service at the Charity Hospital and given an injection of Ehrlich's "606" on October 5. He had no febrile reaction, and was permitted to go home two days later.

Seen on October 27, twenty-two days after the injection, the papules were all gone, leaving everywhere a level surface. The site of the lesions on the forehead is marked by brownish discolorations. The lesions on the body are either gone or leaving patches of slightly darker skin, with fading center.

Case IV. Robt. M., aged 21, white. Applied for treatment October 18, 1910. Previous venereal history negative. About two months before, patient noticed sore on penis to left of frenum.

One month after sore appeared his hands began to scale.

Examination showed faint, coalescent, macular eruption on body. Small circular scaling patches, covering both hands on palmer surface. The

throat was congested, especially in the region of the left tonsil, where there was a suggestion of ulceration. There was a small healed sclerosis in prepuce. Examination of the blood made by Dr. Gurd showed a positive Wassermann reaction. Treponema were not looked for.

Patient was admitted to the surgical service at the Touro and given an injection of 0.7 "606" on October 20.

This injection was given subcutaneously, under the scapula in two doses.

His only febrile reaction was a rise of 100.2° on the third day after the injection. This rise was of transient duration.

On October 24, four days after the injection, eruption on body was gone, scaling on hands was very much less, and induration on prepuce was noticeably diminished. The throat was still congested, but no ulceration, and no pain.

On November 7, seventeen days after treatment, patient showed no evidence of his infection, save a slight thickening in the preputial fold. Wassermann was still positive.

CASE V. Ernest G., colored, 29 years. Treated through the courtesy of Dr. Gelpi. Patient's previous history was of little value. According to him, the infection occurred one year before. This may have been a chancroid, and it had left a perforation into urethra, just back of frenum.

On his body, both legs and back of neck were large oval areas of infiltration, covered by rupia-like scabs. Other patches were free of scabs or scales, showing healed lesions having deeply pigmented borders, with pale, yellowish centers. On left shin was an impetiginous ulcer, scabbed over and showing pus. Wassermann, as reported by Dr. Pothier, was positive. He was given 0.5 of "606" on September 27.

Certainly, nothing startling was to be expected in this case, under any line of treatment, as far as his skin lesions were concerned. The scales cleaned off rapidly, leaving areas which were devoid of pigment, and which were not strikingly different from the previous condition. The most striking change occurred in the nasal complication of his infection. He had partial destruction of his soft palate and of the left nasal ala—conditions which were probably of many years' existence.

The examination of his nose and throat, as reported by Dr. Haspel, was as follows: Almost complete atresia of left nostril. On the anterior, inferior portion of right septum, was a small ulcer, scabbed over, and beneath the scab a little fetid, purulent secretion. This scab was removed, and on the second day after injection had not reformed—no secretion. On the third day this ulcer was practically well.

On the upper central wall of the posterior pharynx was a small, moist ulcer, surrounded by an inflammatory zone. Four days after he got this injection this ulcer healed.

CASE VI. Nicholas S., white, aged 26, laborer. Presented himself September 26 at the out-clinic of the Touro. He had a large, sloughing ulcer at the junction of the glans and prepuce. This sore had started about one month previous. There was no adenopathy, no eruption. Smear, examined by Dr. Gurd, showed the specific treponema.

Patient was admitted to the surgical service of the Touro on September 27. Temperature on admission was 100° F. That afternoon he was given 0.6 of "606." He ran a febrile course, usually highest in the mornings, and not rising over 100° F., until October 5, when his temperature remained normal. The ulcer rapidly took on a healthy appearance. On October 10 it was healing over rapidly, and on October 17, twenty days after the injection, it had completely covered over with epithelium.

Wassermann, done October 25, twenty-eight days after the injection, was still positive. The site of the primary lesion was still slightly indurated.

CASE VII. Isaac R., aged 22, white. Patient was first seen October 7.

He gave a history of a sore appearing three months previous. One month later he developed a rash. He consulted Dr. Kohlmann, who prescribed mercury and iodides, gr. 1/12 and gr. 10 t. i. d. When I saw him there was only a suggestive mottling of the skin. He had a small ulcer on his lower lip, and a characteristic ulceration, surrounded by an inflammatory zone, on the anterior pillar of the right tonsil. From this ulcer Dr. Gurd obtained the treponema pallida, and his blood gave a positive Wassermann reaction.

On October 14 I gave him 0.6 of "606." There was no febrile reaction. On October 25, nine days later, the ulcer on his lip and that on his tonsillar pillar were well. On October 28 the site of the injection under the scapula was still much raised, slightly red, but no longer painful.

Case VIII. Joseph S., aged 28, white. Patient showed a large induration in prepuce, the sclerosis being very marked with two small erosions in center. Examination of smear made by Dr. Duval showed the specific treponema. His blood gave a positive Wassermann reaction. Ulcer had been present twenty days when patient applied for injection on October 18, 1910. He was given 0.8 of Ehrlich's "606." Injection was given subscapular in two doses. Two days later his evening temperature was 100½°. The next evening it rose to 101½°. One day later it was normal in the morning, to rise to 99¾° that evening. Temperature remained normal on the 24th, six days after the injection. Injection caused a good deal of pain, which gradually subsided. On October 29, eleven days after the injection, the ulcer looked altogether clean, the epithelium was growing over rapidly, but sclerosis was still well marked.

On November 12 ulcer had healed over, and induration was much less. The sites of the injection were still markedly infiltrated, but not painful.

Case IX. negro, aged 30. Treated through the courtesy of Dr. Blum. This patient was the exception to the other cases treated, in that he presented no external lesions. But his condition was so critical that it was thought advisable to give him the benefit of the new drug. A diagnosis of cerebral tumor had been made by Dr. Van Wart, and he thought that this was probably a gumma. Wassermann, made by Dr. Gurd, was positive. His vision at that time was 14/10. Ophthalmoscope showed slight optic neuritis, double. He improved temporarily under iodides, but returned three months later with choked discs in both eyes. Vision in right eye was gone, due to optic atrophy. Vision in left eye 14/20. He complained of severe headaches. A decompression operation was done by Dr. Allen, which gave him relief as far as his headaches were concerned and improved his vision. However, he rapidly got worse, and just before the injection of "606" his vision was 14/80. He had not been helped by active administration of mercury and iodides. He was given 0.5 of "606" on September 17. He has not shown any signs of improvement since, and Dr. Blum is again giving him increasing doses of potassium iodide, with no especial improvement in his symptoms.

It is only fair to say of this case that while he shows a positive Wasserann there is some question as to whether or not his cerebral condition is syphilitic.

Case X. T. E. P., farmer, aged 47, white, married. Seen first on October 25, 1910. Patient denied, with evident sincerity, any extra-marital exposure. He noticed a hard, itching spot on his penis about two months previous. About two weeks ago these hard places had sloughed off.

He had two large ulcers on penis. The first, oval in shape and half again as large as a fifty cents piece, was situated at the frenum. The second, about half the size of the first, was on the prepuce, about one inch to the right. The edges of both ulcers were indurated, especially the smaller. He had a general macular eruption on body; none on limbs or face.

Examination for treponema, made by Drs. Duval and Gurd, showed them to be present. His blood gave a positive Wassermann reaction. He

was given 0.5 of "606" on October 28. He had no rise of temperature, but suffered a great deal as a result of the injection. Pain lasted several days, and it was necessary to give him small doses of codeine to permit sleep. Eruption began to fade in a week. On November 13, sixteen days after the injection, eruption was gone. The site of injection was still slightly painful, but much less swollen. The smaller of the two ulcers had healed, leaving some induration; the larger ulcer was clean, soft, and healing rapidly.

CASE XI. R. A. M., painter, aged 51, white. Applied for treatment January 29, 1910. Severe ulcerative balano-posthitis. Granulating, indurated ulcer at frenum. General macular-papular eruption.

Patient proved resistant to treatment. He was given inunctions, mercury by mouth, the bichloride hypodermically, and the iodides in large doses. He was readily salivated, and it was not possible to push mercury. On neglecting treatment for a short while he developed copper-colored spots all over his head, face and body, which refused to yield to treatment.

He disappeared for four months, during which time he took no treatment. He consulted me again on November 3. He then complained of feeling very weak and of suffering with vertigo. His right eye was giving him so much trouble that he was not able to attend to his work. His walk lacked elasticity, and it was evident that he was generally subnormal. Dr. Blum reported the condition of his eye to be a chronic iritis with adhesion of the pupil. Dr. Lemann, who examined him physically, reported a chronic endocarditis.

His entire body, with the exception of his head and face, showed numerous flat, brownish papules. Tongue was badly split and furrowed.

On November 4 he was given 0.5 of "606." He was not confined to bed, and no temperature record was kept. His temperature was not above normal at such times as he reported for observation. He suffered a good deal at the site of injection, and there was considerable swelling.

On November 14, ten days after treatment, he is feeling much stronger. His tongue is markedly improved. The spots on his body are no longer papular in type, some of those on his arms being still slightly raised. The site of the injection under the scapula, especially on the right, where most of the dose was put, is still much swollen and red, but not very painful.

CASE XII. N. P., sailor, white, aged 18. Admitted to Dr. Matas' service at the Touro November 1. There was a slightly indurated, scabbed ulcer at the base of the penis. His body showed a faint roseola.

Examination of smear made from ulcer by Dr. Gurd failed to show treponema either the first or third day after admission. His blood gave a positive Wassermann.

He was given 0.5 of "606" on November 4. He had no reaction at the point of injection, this being the first of my cases where it was absent. The roseola gradually became more prominent, on the fourth day many of the spots being distinctly elevated. One of these lesions was searched for treponema, but they were not found. No retrogression was noticed until the seventh day, when the eruption began to fade. On the ninth day improvement was very noticeable, although the spots are much more distinct than they were the the day the drug was administered.

Temporary aggravation of the cutaneous lesions following the injection of "606" has been reported (Janselme). This is the only case in my brief series which has taken that course.

The thirteenth case was given an injection of 0.8 only two days ago. He has typical indurated chancres in the prepuce, with double inguinal adenitis, but the time since injection is too short to make his history of any value. He has had no local reaction at the site of injection. This is probably due to the fact that our chemist is now more careful to make the preparation neutral.

Treatment of Cardiac Insufficiency.*

By J. BIRNEY GUTHRIE, M. D.,
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It has been my luck lately to see quite a large number of very badly working hearts in patients showing extreme pictures of heart breakdown, very large dilatations, general dropsy, swollen livers, pulse weakness, shortness of breath—all the well known signs of badly broken compensation.

Some men have the habit of drenching these poor creatures with water and diuretic mixtures. Even salt fluid, I have seen used under the skin or into a vein, forsooth to wash out the kidneys. Looking back on a number of recoveries from the dilatation under this method, which I have seen and some of which I was guilty of, I am astounded they all did not die. Searching for a wherefore, I must put it to the rest in bed and purgation which went along with the water and which they all got. It is the custom with many to use digitalis in every case of heart damage, excepting perhaps mitral obstruction, and at every stage. Now we know that in dilatation of a certain degree we get no result from digitalis, but an increase of the dilatation. We know that some of the excess vein pressure must be gotten rid of before our heart whip can act. To that end we purge and perhaps bleed these patients and restrict liquid drink before applying the heart whips. It is the writer's opinion that more of these cases are to be saved using this plan than from the routine use of digitalis or some of its near-of-kin drugs.

At times there are cases which are so far gone that we must take a chance on further dilatation and give digitalis; knowing there is no time for depletion. We are here even justified in using Digalen (Soluble Digitoxin) or Strophanthin into the vein. It is startling how some of these cases die after intravenous digalen. The end comes more rapidly, I am sure; but they would have died without the drug. It is really as near "kill or cure" as I know. On the other hand the response to the drug thus given is, at times, as strikingly beneficial as it is harmful in other cases. The conclusion is we do not know just how to select the cases for this treatment. I believe that we must use digitalis in all cases, tentatively, excepting those in such dire weakness that death is imminent and time

* Read before Orleans Parish Medical Society, November 28, 1810.

is lacking to do more than open a vein, let out from 250 to 500 c. c. of blood and simultaneously inject digalen or strophanthin into the circulation. We can stop digitalis given by mouth if patient's symptoms get worse under its use. Digalen and strophanthin given into the vein in dose of 1 m. g. allow no chance for further treatment if not well borne.

Where the kidney is the primary organ affected and the enlargement with or without dilatation is the result of increased blood pressure we see practically the same state of affairs as when heart and kidney have become diseased through hardening of the vessels. Here the problem is faced first by treating the vessels in such a way as to increase their elasticity. The giving of iodides apparently brings this about and they are useful in the greater number of cases of arterial hardening. In all cases where blood vessel disease is primary and in many of those in which vessel hardening is secondary the iodides are far and away the most useful of all drug measures. I am convinced that iodides in these condition have an effect entirely separate and distinct from their effect in syphilis although this may be the underlying cause of the artery disease. The effect on vessels of iodides would be even more striking if syphilis were the underlying cause. Small doses in my experience, have nearly always been enough in the absence of a determined syphilitic basis where any result at all was ever seen. It is my belief that the effect of iodides in arterial hardening will at last be shown to be due to a stimulating effect on the thyroid. When all is said that is known about this drug in arterial hardening there is much unaccounted for. It is to be hoped that the greater use of the Wasserman test will give additional clearness to our ideas regarding syphilis as an etiologic factor.

The second means to be used is ordering the life of the sick one so as to keep blood pressure as nearly as possible to a definite, steady height thus avoiding a very important cause which makes for vessel hardening—variation of pressure. This hygiene of the vessels means usually, giving up of alcohol, tobacco, coffee, excesses in the line of work or sport; a diet composed of non-stimulating and easily digested foodstuffs containing only a moderate quantity of fluids and a low quantity of nitrogen, purins and extractives. If the kidney is the first organ involved, more care is necessary in use of kidney irritants to get rid of fluids than if the

signs of kidney disease point only to venous engorgement of the kidney. As a matter of diet in these primary kidney diseases, it is wise to bear in mind the daily nitrogen need of the body and not exceed this in daily intake; to enforce rules of life which will aid in keeping an even and horizontal blood pressure curve (vessel hygiene) and be on watch for signs of kidney failure, meeting these as they arise. If this is done one may usually get along without such drugs as nitrites which lower blood pressure. Nitrites are only of use to lower the artery tension temporarily. They act only on vessels and are in no sense heart stimulants.

Many cases present themselves in which it is rather hard to say, at first, whether heart, kidney or vessels are at fault. The signs common to them all are dilated heart, scanty urine, swollen liver, rapid, feeble and irregular pulse. This combination means a broken-down heart which demands immediate treatment if the case is to be saved. Fortunately the treatment is the same no matter what the first cause. The withholding of fluids excepting in very limited quantity—24 to 30 ounces—is among the most valuable means to be used. I have abandoned the old drenching plan completely and no longer look for uremia to occur when fluids are limited. The solid diet must be solid in more than name or the quantity of water taken will be far more than the amount intended. Withholding of added salt from diet helps patient to endure thirst and I am sure changes osmotic conditions thereby hastening absorption. Even a slight shrinkage of the dropsy makes it easier for the heart to force blood through the capillaries, and very slight changes in pressure conditions often cause rapid vanishing of dropsy. Some of these cases which make little or no progress for a time seem suddenly to become changed as the heart muscle improves in tone and the greater part of the fluid vanishes in a day or two. Measure of the daily urine is the gauge of treatment and we sometimes see quite as striking change of appearance in these cases of broken-down heart on rest, dry salt-free diet and purgation as we see, with addition of digitalis. However digitalis is in demand at some stage of most broken-down hearts. It fulfills every indication. There is a chemic effect on the heart muscle which shows by a stimulation if sufficient fibers of heart wall are intact. It is impossible to tell whether there is enough digitalis sensitive substance in heart muscle to cause it to

respond to treatment without trying. Failure to respond to digitalis means rather advanced degree of muscle degeneration. Digitalis is almost an ideal agent. It slows the pulse; lengthens diastole, thereby lengthening the time when the heart muscle itself is fed through the coronary arteries; increases the height of pulse wave; increases artery pressure; and reduces vein pressure through increasing suction power of heart. Objections to digitalis are bad taste and smell and the tendency to cause stomach and intestinal catarrh after a time.

Standardized preparations must be used if we wish to avoid confusion growing out of variations, which have been found to be as great as 1 to 400.

Beyond doubt the law should require frequent testing of digitalis preparations by druggist himself by means of frog heart experiments in order to alter dosage to suit the strength of drug in stock. This cannot be while the present low standard of pharmaceutical education exists.

Purgatives in form of strong salines or jalap are of great use in these dropsy cases. Even venesection must be done sometimes in order to save life which is threatened by dropsy of lung due to too great pressure in the pulminary veins. I have used venesection and intravenous digitoxin with most striking effect in three cases of acute dilatation. Opiates, preferably in form of hypodermic injections of morphine or codein must be used fearlessly and pushed to effect in all these cases of broken-down hearts where there is air hunger, sensation of oppression or even a psychic disturbance due to fear. No hesitation need be felt in using this drug, no matter what the state of the kidney. I have never seen harm rsult from its employment. It makes possible the essential of rest which is so needful in these cases and which my colleague, Dr. Lemann, brought out in a paper read two years ago. All these are equally damaging to the heart. I have seen dilatation of a heart occur and very nearly end fatally on the patient receiving and reading a letter containing bad news, just as I have seen psychic causes contribute to fatal end in yellow fever.

Diet in primary heart conditions varies with stage of break down. If a break in compensation exists a fairly varied diet containing a generous protein allowance is best adapted to build up the heart muscle. To throw as little strain on the heart through

rise of blood pressure that would occur if gaseous fermentation or indigestion of food followed, it is necessary to give carbohydrates cautiously because of their tendency to gaseous fermentation in the bowels. I have record of one case when death resulted in a middle-aged obese man in whom no cardiac disease had been suspected, after a feast at night. Indigestion resulted and the pressure of gas in the bowel plus the pressure of a great mass of food in the stomach probably pushed up the diaphram and crowded the heart thus throwing increased work on the right heart by interference with diastolic filling of the ventricle. Death occurred from lung dropsy.

Diet where kidney is not damaged may well contain a larger amount of nitrogen stuffs than where this organ is the seat of an intrinsic change. Rest in bed must be insisted on wherever degree of break-down of heart is considerable until a change for better occurs. Tissue change is thus kept at a lowest level and tax on heart and kidney less.

If we bear in mind the fact that our heart patient suffers from an overfilling of the veins and a passive engorgement of lung and increase of pressure in the right heart we can see why he wishes to sit up in order to breathe. This is allowable and we find ourselves designing benches to be placed in bed and hammock strings for the head and arms to give support to head while sleeping sitting up. Here instinct prompts wisely and we should help. Orthopnea means right heart overfilling. It has long been my firm belief that we fail in our duty to these heart cases if we do not take them in hand after compensation is partly re-established and by Nauheim baths and exercise re-educate the heart muscle and so strengthen it that notwithstanding a leaking valve or a degeneration of a part of the fibers in the heart wall the organ becomes again equal to doing work even over and above daily need. This is a side of treatment very often neglected in America.

Treatment of heart conditions resolves itself largely into treatment of the heart muscle to secure a reserve of force. There is absolutely nothing to be done for a diseased valve and even when kidney or vessels are first diseased the heart muscle is the point toward which we direct our therapy.

To this end we must lighten the labor of the muscle by depleting measures, purgatives, diuretics if kidney is sound, rest in bed where

possible; by use of opiates if there is distress; by cutting down the drinking of fluids to lowest limit. Digitalis prolongs the rest period in the heart beat and in most cases is needed at some time or another. Rarely will nitrites have to be given at the same time to combat the constrictor effect of digitalis. Arterial hardening usually means that iodides will do good. Sweating is dangerous in great heart weakness; and if done should best be carried out while an ice bag or cold coil is over the heart. Salt (NaCl) restriction helps absorption of fluids or at least hinders their accumulation. The heart muscle must be well fed in order that it may build up and food must be such as to cause the least possible increase of blood pressure.

Notes on the Biology of B. Lepræ.*

By C. W. DUVAL, M. D., New Orleans.

Since an earlier communication on the cultivation of B. lepræ and the experimental production of leprosy considerable light has been gleaned upon further study into the biology of the organism, especially with regard to its pathogenicity and viability, properties little understood prior to the cultivation of the bacillus.

Soon after the cultivation of the specific organism the possibility of a serum therapy for the treatment of leprosy presented itself, and with this in view I set about to study the biology of B. Leprae in the hope that something might accrue which would aid in subsequent work upon the artificial production of an immune serum.

CULTIVATION—The initial growth of B. leprae from the human tissue upon an artificial medium is in all cases obtained with considerable difficulty. Multiplication of the bacilli outside of the animal body takes place more slowly in the initial transplants than bovine tubercle bacilli and it is necessary to transfer large quantities of the macerated tissue to the culture medium in order to insure growth, which at best is feeble and not visible macroscopically before several weeks. Again, transplantation of large numbers of bacilli from the tissues is necessary, because not one-third of the planted bacilli will multiply. The rods do not differ in size and shape from the parent organisms and grow in dense clusters

* Read before the Orleans Parish Medical Society, November 14, 1910.

which are broken up with great difficulty. In some instances, multiplication can be accelerated by rubbing up the bits of transplanted tissue after the first week or 10 days, which frequently is the occasion for prompt appearance of growth within another few days, as it seems to stimulate to further development certain lepra bacilli, perhaps the more saphrophytic forms in and around the tissue bits. However, once the bacilli are accustomed to the new environment there is no difficulty in increasing the rapidity of growth by frequent subculturing. In two of our older cultures the transfers now multiply with great rapidity and reach the maximum growth in three days.

Once B. leprae has started to grow rapidly special media such as trypotophane, amebae, etc., are not essential. The culture now does well on any neutral or slightly alkaline medium of human or rabbit blood agar and glycerinated serum agars.

Attempts have been made to cultivate the lepra bacilli from nasal secretions in cases where large numbers of them are found in the serous discharge, and even though contaminated with other bacteria, growth has resulted in two out of five cases which we have attempted. The contaminating bacteria, provided there are no spore bearing varieties present, may be first gotten rid of by suspending some of the infested secretion in saline solution and heating the suspension of 60 C for 30 minutes. It is much more difficult to obtain cultures of B. leprae from nasal discharges than from the tissues because in the latter, bits of tissue are unavoidably carried over in the transplants which serve as pabulum for the culture until growth is well started. The same, of course, holds true for other acid-fast species, more especially the tubercle bacillus whose initial cultivation in many respects is attended with the same difficulties as that of the lepra bacillus.

The organisms when freshly isolated from the animal tissues are slightly curved and distinctly beaded, a feature that is constant for all early cultures no matter on what medium they are grown. However in some of the older cultures, those many generations removed from the parent stem, the bacilli undergo a decided change in size, shape and manner of their arrangement. Not only is the growth more rapid, which naturally would be expected, but the arrangement of the bacilli is diplobacillary, the individual organisms resembling in size the young forms of bovine tubercle

bacilli. The difference is so marked that on morphological appearance alone it is quite easy to determine cultures of recent isolation from those that are many generations removed from the animal body. In the first dozen or so sub-plants from the parent stem the bacilli invariably grow in felt-like masses of slightly curved, slender, beaded rods while in cultures which are many generations removed they grow diffusely over the medium and occur in pairs of short, ovoid, plump rods. This diplobacillary arrangement of egg-shaped rods is a characteristic feature for the older cultures. In the examination of stained microscopic preparations it is difficult to find single bacilli or clusters of more than two pair. If such a preparation is stained by any of the ordinary aniline dyes it would be hard indeed to distinguish the organism from diplococcus lanceolatus.

Though this transformation indicates that a given leprae culture is rapidly growing and has become accustomed to a saphrophytic existence it is no criterion that the organism has lost its virulence. The same number of bacilli produce lesions in animals as quickly as they did when recently isolated. It is noteworthy in this connection that the bacilli passed through the animal body again become long slender "beaded" rods without a suggestion of pairing and their recovery from the animal upon artificial medium is accompanied with the same difficulty as in the case of the human tissue, growing at first slowly and only upon special media.

The staining reaction of B. leprae with respect to acid-fastness remains unaltered, in fact they retain more tenaciously the carbolfuchs in dye than those in the tissues, since they take the stain more intensely and resist for a longer period the decolorizing agents. Old cultures of B. leprae multiply rapidly on a variety of media, good growth occuring in 48 hours after incubation at 32° C or 37° C. The culture, however, never gives the luxuriant growth common to other bacteria that divide as rapidly. The growth reaches its maximum in three days and though smears show a diffuse scattering of acid-fast diplo-bacilli, the macroscopic growth is at best only a fine film. These older, actively growing cultures still retain their virulence for white and dancing mice.

In some cultures, especially where growth has attained its maximum, many of the diplo-forms of B. leprae undergo a change in morphology. Occasionally, in a given culture a great number of

the bacilli will show as spindle shaped rods with swollen centers. This central bulging often appears as an oval clear space with the chromatin densely massed at the poles. These cultures when heated at 70° C for 30 minutes are still capable of reproduction. In two of my older cultures this central bulging with the formation of egg-shaped central bodies has repeatedly occurred. Just what factors determine sporulation (assuming that these spaces represent spores) I have not been able to determine, but from analogy, the same factors that influence spore formation in well-known bacteria do not seem to apply to B. lepræ as all cultures under favorable conditions of food, temperature, etc., do not form "clear spaces." Spore formation with B. lepræ might account for successful cultivation after heating at 60° C but as in the case of tubercle bacilli the fatty envelope always has to be taken into account which in itself may sufficiently protect the organism against moderate degrees of heat.

In the cultures that change in morphology the transformation is easily followed. From the granular substance within the bacilli that are lightly stained and distinctly beaded, ovoid masses develop. The chromatin of the parent bacilli seems to undergo amitotic division into two equal parts which lie end to end in the long diameter of the organism. These chromatin masses become more and more definite in outline until two well-formed, deeply-staining oval bodies appear in the parent cell. The old cell membrane then undergoes metamorphosis, freeing the pair of oval bodies as a diplo bacillus. All forms from small irregular masses of chromatin to perfect diploid bodies can be seen in a single field of a preparation of B. lepræ. There is no mistaking the manner of reproduction of the bacilli during this period of transformation. However as soon as the culture has lost all its long-beaded forms, reproduction then occurs by simple fission. In stained preparations from cultures undergoing this transformation the contrast in density of coloring between the old slender beaded rods and the new oval forms is very striking; the new forms always take the carbol fuchsin stain more deeply and in consequence decolorize with more difficulty.

Under some conditions more especially when the organisms are grown in an acid medium or when they are associated with a too profuse growth of symbiotic bacteria, the diplobacillary forms un-

dergo still another change in which one organism in a pair will swell up to twice the size of its fellow and become distinctly spindle shaped; or both organisms of a pair will simultaneously show the same alteration, forming lancets that are pointed at the distal and flattened at the proximal ends, giving rise to the appearance of certain forms of pseudo-diphtheria (B. Hofmani). These so-called "involution forms" will take place in 48 hours when conditions are unfavorable. However in old cultures where growth has ceased they may be kept for months without showing any change in the size and shape of the bacilli. The question of how the administration of different amino-acids, as well as the direct and indirect supply of oxygen influence the growth of parasitic organisms is being studied by me in collaboration with Dr. Gustav Mann.

Pathogenicity—Heretofore the attempts to infect or produce lesions in animals other than the Japanese dancing mouse have been unsuccessful; but of late I have succeeded in producing the lesion in the white mouse not only with the infested tissue from human leprosy but with cultures. One strain of B. lepræ in particular readily gives rise to fatal infection in this species of animal. The success with this strain has led me to test again the infectibility for the white mouse of four strains isolated more than a year ago. To my surprise one of these (Culture II.) with which I failed in former experiments to infect the white mouse now proves infectious after more than fourteen months under cultivation, producing multiple lesions following intraperitoneal injection. The failure before to infect this species must be attributed to some error, for it cannot be conceived that a culture would alter in this particular feature under conditions of artificial cultivation. One is led to infer, however, from the present behavior of the culture that the infectivity of some strains of B. lepræ, at least, are not appreciably altered by a year's sojourn outside of the animal body. It may be stated that all strains are not capable of infecting either dancing or white mice.

Thus far the experimental work would indicate that there is a considerable range in infectibility for cultures with respect to these animals, and the same is true for the bacilli used directly from the human tissues. An illustration of this variation has been observed in a rather remarkable stem that was recently isolated from the necrotic tissues of an acute case of human leprosy which

had developed numerous soft subcutaneous leprous masses and had had repeated attacks of leprous fever. The initial growth resulted directly from bits of the transferred necrotic material on tryptophane and glycerinated blood agar. The acid-fast bacilli in the necrotic tissue were in enormous numbers and uncontaminated by other organisms as was subsequently proven by cultural tests.

A series of animals including four each of white and Japanese dancing mice and rats were inoculated, some subcutaneously and others intraperitoneally, with small quantities of the grumous material (0. 5 c.c. emulsified in 1 c.c. of normal saline solution). The two white mice which received intraperitoneal injection died fourteen days after the inoculation. At autopsy both showed a general infection of the peritoneum with a pure growth of B. lepræ, while the mesentery, omentum, visceral and parietal peritoneum contained numerous minute, firm greyish white nodules that on microscopic section proved to be typical leprous lesions. The most surprising feature was the occurence of a slightly turbid semi-gelatinous peritoneal exudate which microscopically consisted almost entirely of large mononucleated cells (macrophages). Great numbers of these cells were filled with acid-fast bacilli and scarcely any were found that did not contain a few. A pure culture of B. lepræ was recovered from the exudate on a variety of special media, including tryptopahne, amoebae, and glycerinated blood agar.

The ability of B. lepræ to cause a fatal infection in so short a period, and to induce the production of a peritoneal exudate is a new role for the organism in my experience with the eight stems now under cultivation. At first I was inclined to believe that the cause of death in these animals had resulted from the liberation of large quantities of toxines introduced with the necrotic material and augmented by the liberation of more toxic bodies due to lytic action on the injected bacilli. However, this hypothesis is hardly tenable if we consider the length of time that elapsed between the inoculation and death of the animal (14 days), and the fact that the bacilli had increased in number within the peritoneum and were cultivated from the exudate.

The rats which received injections of the necrotic material have not as yet developed any signs of infection; nor have the Japanese dancing mice which were injected subcutaneously, evinced any evidence of the disease. In two of the Japanese mice, however, which

were sacrificed four weeks after the inoculation, small 1 m. m. leprous nodules were found in the spleen, liver and inguinal lymph nodes. Unfortunately, no Japanese mice were inoculated intraperitoneally with the bacilli of the necrotic tissue.

With regard to dancing mice though lesions almost invariably develop after intraperitoneal injections of B. lepræ none of the animals dies as a result, although some of them are now under observation for more than eight months. However, the mice that have been sacrificed present small macroscopic lesions in various organs of the body. In some instances the mice killed five months afterwards have shown no demonstrable lesions; presumably in these animals the bacilli were destroyed and the lesions in consequence healed. This assumption is based on the fact that all dancing mice killed four to ten weeks after inoculation have shown small well defined leprous lesions. Experimentation with these animals has proved that no intermediate host is necessary in the transmission of the disease. Attempts to infect rats, rabbits and guinea pigs have so far given negative results.

The culture which produces fatal infection in white mice is now being used in the attempt to infect larger animals, more especially the macac rhesus monkey. In one animal of this species who has received at weekly intervals large subcutaneous doses of the bacilli have developed at the various points of inoculation firm subcutaneous nodules many of which have increased in size. The blood of this animal shows specific agglutinins and amboceptors in the presence of the culture antigen.

With the exception of two cultures (one isolated in Dec., 1909, and the other in Oct., 1910,) B. lepræ, in our experience, has failed to give rise to a fatal infection in any of the laboratory animals employed. Many of the animals shows multiple lesions after four to eight weeks, but the lesions are small and tend to retrogress after a period of several months.

The experimental lesions of leprosy are histologically identical with those in the human tissue. Although to the naked eye they appear as tubercles they are more minute and circumscribed than the lesions of tuberculosis and do not caseate. It cannot be said, however, that they are indistinguishable from early miliary tubercles because one accustomed to seeing the experimental leprous tubercle has very little trouble in recognizing even macroscopic dif-

frences and on microscopic examination any previously existing doubt is at once dispelled.

Viability—The question of the viability of B. lepræ outside of the animal body is of the greatest practical importance from the standpoint of preventive medicine. The fact that B. lepræ cultures will remain alive and virulent for months under the most unfavorable conditions would explain much heretofore not understood about the transmission of the disease.

The bacilli can be readily cultivated from bits of infested leprous tissue which has been kept in salt solution at room temperature for more than eight months. Again, they live and retain their virulence in culture associated with other bacteria for more than a year when precaution is taken to avoid against drying of the medium. Fresh growth can also be oftained from cultures which are more than a year old whether kept at 10° C—32° C—37° C. Even in material overgrown with saphrophytic bacteria the lepra bacilli remain viable for months and will multiply when separated from these and transferred to a suitable medium. There is no evidence to show that the ordinary pyogenic or saprophytic bacteria interfere with the longevity of B. lepræ; as a matter of fact, the organism seems to live and flourish best in symbiosis. Where the contaminator is a non-spore bearer it is an easy task to rid it from the culture by heating at 60° C for one hour. In order to obtain a pure growth of B. lepræ from a culture contaminated with saphrophytic spore-bearers, the mixtures may be injected intraperitoneally into mice and the animal killed in ten days to two weeks, and the acid-fast bacillus recovered from the peritoneum.

The leprosy bacilli will multiply slowly in transplanted bits of tissue kept at 25° C. We have found that the temperature conditions in which the bacillus will multiply range between 25° C to 29° C; the optimum being about 32° C. In a previous paper it was stated that the four strains then under cultivation failed to multiply at 37° C. I wish to correct this statement as recent work with cultures show that multiplication does occur at body temperature, though the best growth is obtained at 32°-35° C.

In my experience cultures will withstand higher degrees of temperature and for a longer period of time than any of the better known acid-fast bacilli; growth resulting after heating the bacilli for 30 minutes at 70° C or at 65° C for one hour. Heating at

these temperatures does not alter apparently the infectivity of the bacilli for mice. Whether the organism's resistance to high temperature is due to its fatty envelope as in the case of the tubercle bacillus, or due to spores is still undetermined. I do not doubt that the fatty substance in and about the organism protects it to a certain extent against moderate degrees of heat, but this in itself would not explain the resistance shown by some cultures. These higher resistant cultures possess "clear spaces" and deeply staining bodies within the bacilli which in many respects are morphologically similar to the ordinary bacterial spore. That certain cultures of B. lepræ, more especially those containing these "clear spaces," resist higher temperatures than cultures that do not contain them has been repeatedly demonstrated by us. The true nature of these bodies is, however, still problematic and work is now in progress to determine whether or not B. lepræ under certain conditions forms spores.

Summary and Discussion—B. lepræ are readily cultivated on a variety of artificial media, and are capable of living and retaining their infectibility for months under adverse conditions outside of the animal body. The bacilli can also be cultivated from contaminated leprous tissue and from the nasal discharge that has been kept at room temperature for more than a year. Remarkable as it may seem it is nevertheless the case that contaminating microorganisms have no appreciable effect on the viability and infectivity of some strains of lepra bacilli.

Pure cultures of B. lepræ can be obtained directly from the infested leprous tissue upon a variety of special media including tryptophane and glycerinated blood agar without first growing them in the presence of amebae and their symbiotics. From two cases of leprosy we have cultivated in pure growth the specific organism directly from the tissues on Novy-McNeal rabbit blood agar to which 1% glycerine had been added. As a rule multiplication of B. lepræ on artificial medium takes place slowly, but once the growth has started it can be readily accelerated by frequent transplantation.

At the present writing we have succeeded in cultivating B. lepræ from the cutaneous nodules in eight cases of leprosy, two cases of nasal discharge, and from the experimental lesion in a number of white and Japanese dancing mice. That the cultures

are leprosy bacilli, and not some other acid-fast species, has been definitely proven by cultural and animal tests.

The experimental study upon the virulence and viability of leprosy bacilli shows the necessity of early diagnosis and the need of strict segregation of certain types of the disease. The length of time B. lepræ will live and retain its infectiousness outside the body indicates plainly the risk to a community in allowing leper patients at large, in particular those who have open lesions. Especially dangerous from the standpoint of source of infection are the cases discharging the bacilli in the secretions from the nasal mucous membrane. These cases are a constant menace to those with whom they associate because of the possibility of indirect transmission of the bacilli that are unconsciously deposited on articles about the household where the leper resides.

The mere fact that the organism lives for so long a time outside of the animal body may explain why the disease continually reappears in households that have harbored a leper. The bacilli escaping from the infected individual who for months may not be aware of his malady are a constant menace to others of the household or to subsequent tenants, even though it be years after the direct surce of infection has been removed. The animal experiments do not tend to support the view that leprosy may reside for years in the human body before manifesting any outward signs of the disease.

Direct inoculation from man to man may occur but it is the exception. On the other hand in the light of our present knowledge the indirect evidence of transmission is by far the more significant. I believe that this is the most likely condition that renders transmission of the disease possible. It is recognized that other conditions such as virulence of the bacilli, suitable port of entrance and susceptibility play an important part, as they do in all infectious diseases. The investigations also confirm the belief that the mucous membrane of the naso-pharynx is the port through which the bacilli gain entrance to the body, as well as the chief source from which infection spreads.

The results of animal experimentation demonstrate the fact that direct communication of the discase may take place from individual to individual without the presence of the bed bug or other parasites as intermediate hosts.

On two occasions I have succeeded in infecting mice by rubbing

cultures into the nares after gentle scarification of the mucous membrane. These experiments support the view that the chief portal of entrance for B. lepræ to the human body is by way of the nasopharynx. There is also evidence to show from animal experiments that the bacilli may gain entrance to the human body through breaks in the skin without giving rise to lesions at the entrance site.

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The Practical Use of the Cystoscope in Differential Diagnosis.

By R. GORDON HOLCOMBE, M. D., Lake Charles, La.

The importance of reaching a pre-operative diagnosis in surgical lesions of the kidneys, ureters and bladder has received a notable impetus in the last few years. While it may be true that great progress has been made during this time in exact determination of diseased conditions of the female genito-urinary tract, yet it is a common occurrence to make mistakes in every-day office work, and anything which will lessen the difficulties in pelvic diagnosis is worthy of consideration. I refer to the improvement in cystoscopy and its application in every-day office examination.

The use of the cystoscope is growing more universal, and we have every reason to believe that, through the rapid improvement of instruments, a larger number of workers along this line, and more skillful technic, necessarily more reliable observations will accrue and the deductions be more logical. While history-taking in all these cases is important, still it is gradually being made subordinate to the phenomena, observations and investigations acquired through the methods of direct examination, for through this more information is obtained in a few minutes than through hours of collecting a minute symptomatology of the case. Again, it is a common thing for patients suffering from two entirely different affections to relate their troubles one to another, basing all on the fact that they are subjects of frequent urination, one possibly being the victim of a renal calculus, the other of a tubercular cystitis.

I often recall the experience of one of my doctor friends who, prior to the use of his cystoscope, it seems had a case of "pyuria," and after observing her made the diagnosis of a "tubercular kidney." This was removed and his patient succumbed from every symptom of uremia, the autopsy revealing he had removed the only kidney the subject possessed.

Knowing the importance of this work, from a practical use, the information obtained therefrom and the possibility of its more universal employment has prompted this subject.

The cystoscope of to-day is based on either water or air as a medium, the choice of a certain instrument and medium being a matter of personal experience and familiarity. From a practical standpoint the Elsner cystoscope has been chosen in the writer's work, and water being the preferable medium, for, through this there is a greater field of vision, the bladder more quickly observed, less pain inflicted, and the ureteral orifices more readily discovered.

The difficulties and harassments in this line of work are many, and I believe the chief among these are: an insufficient dilatation of the urethra, too much bladder distention and a regardless manipulation of the scope. The normal appearance of the bladder mucosa, the localization of the ureteral orifices and the position of the instrument having been once acquired, each successive inspection grows easier, less time is consumed, and necessarily less pain is imposed.

The routine technic employed by the writer, as well as by his associate, Dr. Sistrunk, consists in placing the patient in the lithotomy position, all the necessary precautions of asepsis being cared for. The urethra is slowly and well dilated, in the majority of cases no anesthesia, either local or general, being used. This accomplished, the instrument is gradually inserted until its passage through the vesical neck is realized, the bladder is well irrigated and all of the water is removed with the exception of about 150 c. c. The mirror is then inserted, care being taken that there is no air left in the barrel. The inspection of the bladder is then taken up, next the ureteral orifices, and catherization of these as the case demands. If there is any oozing of blood and formation of clots, rendering the medium cloudy, this is corrected by removal of the mirror and flushing with water, which only requires a few seconds. The average time consumed to each case occupies about forty-five

minutes or an hour, and where the services of a nurse can be had this period is greatly minimized.

With a view of emphasizing the points obtained through the instrumentation and its service from a differential pelvic standpoint, I have selected some seven or eight cases, each differing from the other, in order to convey some idea of its importance.

Case No. 1—Left Renal Tuberculosis. Diagnosed one and a half years prior to operation as "nephrolithiasis," no cystoscope being employed, depending entirely on the case-history. Principal complaint being left lumbar pain; attended later with temperature and accumulation of pus. Finally came for relief. Owing to the marked sepsis and bulging in kidney area, parts were well drained and patient permitted to gain some strength before resorting to nephrectomy. During this period of probation both ureters were emptied, right found to be normal, left discharging pure pus; removal of the kidney, and patient discharged cured. Ureteral catheterization was employed in this case to establish the function of the right kidney.

Case No. 2—Left Renal Hematuria (Idiopathic). Came to office on account of bloody urine, which had persisted periodically for about eighteen months. No history of pain or calculi, blood negative, bladder negative, both ureters catheterized, and left found to flow blood. Subsequently left kidney was exposed and palpated for calculi, none being felt; the organ was incised in the longitudinal axis to pelvis; nothing found; parts were closed. Hematuria continued for some five or six days, followed by a cessation, which has been complete now for nearly a year.

Case No. 3—Right Renal T. B. Complaint had been diagnosed on several occasions as one of cystitis; no pain except on urination. Bladder and ureteral orifices inspected, right ureter found to be discharging pus. Patient was afraid of operative procedure, and is at present in possession of her complaint.

Case No. 4—Chronic Amebic Colitis. History of pain in left lumbar area, with some disturbance in urination. Bladder and ureteral orifices found to be normal. Stools were examined and amebæ coli were present. Treatment for this was begun, attended later with cessation of symptoms.

Case No. 5—Right Intraligamentous Cyst. Patient complained of pain in right lower pelvis, attended with difficult and frequent

urination; vaginal examination negative; urine found to contain a trace of pus. Bladder and ureters normal. Exploratory advised, and found a deep-seated intraligamentous cyst. Had not the cystoscope been employed in this case there would have been some hesitancy as to whether or not to resort to this procedure.

Case No. 6—Left Renal Tuberculosis. Primarily diagnosed "nephrolithiasis" on account of case-history; no cystoscope used. Pain periodical and referable along course of ureter and bladder; frequent urination, urinalysis showing both blood and pus, but no T. B. Several months later sepsis began; urination became more frequent. Bladder and ureteral orifices examined, and the condition diagnosed tubercular cystitis; no catheterization of the ureters was employed; patient was sent West, but realized no improvement. Cystoscope was again resorted to, with catheterization of the ureters; the right found to flow clear urine, the left cloudy. Left lumbar nephrectomy, with partial resection of the ureter, was done; patient has improved very much, but still has manifestations of a T. B. cystitis. This case was observed by several different men, the cystoscope being used on two occasions only. With its first employment the cystoscopist felt sure that the condition was one of tubercular cystitis, and failed to catheterize the ureters. Had this been done, as it was at another later date, the patient would have had his health much hastened and been spared some eighteen or twenty months of sepsis and continual uneasiness as to his condition.

Only brief notes of these cases have been given. I trust, however, their citation will in some measure convey an idea of what may be derived through this instrument.

In conclusion, I would reiterate that while this procedure is more or less synonymous with many difficulties and disappointments, requiring ofttimes much patience, yet, having once located the ureteral orifices, this work gradually unfolds itself, and the experience of one case adds to the familiarity of the next.

(2) Reliable confirmation is what is sought for, and am sure many otherwise obscure conditions and incorrect conclusions will be avoided in its use.

(3) Inasmuch as modern cystoscopy represents so important an element, both from a urological and differential standpoint, its employment is essential in accomplishing good work in this field of surgery.

DISCUSSION.

DR. E. M. ELLIS, Crowley: I think this question is of vast importance to the general practitioner, because there is no one condition that causes us so much trouble as these bladder cases that constantly come to our offices. Case after case comes to the office day after day, complaining of trouble with his bladder. We, as general practitioners, give little attention to the whole subject-matter of urinalysis, and locating and diagnosing where the trouble lies. This paper has some valuable lessons. We should set about to learn to locate the trouble in these cases; if you have pus, find out where it comes from. By irrigating the bladder we can frequently tell whether the pus is from the bladder or kidney, but if we know it is from the kidney we must ascertain from which one it comes. I am sure that the proper use of the cystoscope has saved many a patient from dragging along over a great period of time.

Some Problems in Obstetrics.

By E. M. ELLIS, M. D., Crowley, La.

This is not the time nor the occasion to attempt a review of a subject whose art and science are grounded upon a knowledge of natural laws—laws fixed, immutable and eternal; laws enacted in the courts of omnipotence when the universe was organized. What it may have achieved as an art and a science is a matter of record, much of which has been so graphically set forth by our great teachers in obstetrics. All along the highways of centuries past stand the monumental labors of its great pioneers. Step by step the circumference of its beneficent influence widened in the alleviation of human suffering and the staying of untimely death.

In obstetrics we have a subject that has fired the ambitions of some of the best talent that ever wrought in the quarries of scientific investigation, the light of whose great efforts has long since flashed its burning rays across the waste of tradition and superstition and touched the real spring of action in the soul of man. Yet, in spite of mind, intellect, thought and honest inquiry after truth, which so often light the beacon fires of progress, are we fully prepared to cope with the real problems which arise in obstetrical practice?

I should not be surprised, after a logical deduction from our past

experience, if we found many serious mistakes—some, perhaps, that have cost the life of our patient. The fascinations of surgery, with its ever-oscillating pendulum, affords an enchanting field for the teeming multitudes, who would have their name written upon the walls of fame by some miraculous operation or by proving or disproving some advanced theory contrary to their inherited opinions.

Gynecology is in the vanguard, with its cohorts of soldiers, rebuilding, repairing and burying the unfortunate motherhood which has managed, by sheer strength, to emerge from the numerous complications of a misguided labor. Chemistry, laden with its cargo of cold and abstract facts, has its attractions; hygiene and preventive medicine are everywhere engaging the attention of the medical world; but nowhere in the annals of science and art is the opportunity so golden as it is within the sacred walls of the obstetrical chamber; yet, how many of us realize the grave responsibilities which we assume when we are called upon to pilot the life and destiny of two lives over the stormy tide and reefy coast of a complicated labor, where circumstances, without a moment's warning, may put us to the critical test?

In order that we may treat our subject in a more systematic way, let us divide it into three classifications: (1) pregnancy, (2) labor, (3) puerperium, and under each division we shall endeavor to consider such problems as may prove of most interest and value for discussion.

(1). Is the Woman Pregnant? This may seem a simple question, yet from a legal as well as a moral point of view this sometimes becomes vitally important. We have known of spurious pregnancies, where everything was made ready for the new arrival, and even the doctor called in, and at last the imagination which had so long indulged in the fruition of hope had to be dispelled in a cloud of disappointment. When we are consulted by a patient, and especially a primipara, as to the possibilities of pregnancy, we should go into the details of the case, and, if possible, ascertain the true condition existing, in order to relieve her of that anxiety and suspense which might otherwise be a constant source of worry; and, if found pregnant, the young mother-to-be given an intelligent but sympathetic explanation of her new phase of life, thereby creating a new inspiration and inoculating her with that fond hope which "springs eternal in the human breast," and more than aught else

steers the capricious will of pregnant woman to a happy termination.

(2). When Are We Justified in Producing Artificial Abortion? Williams divides this subject into three groups: (1) "As a direct means of saving the life of the mother. (2) To do away with a condition which may threaten the life if gestation continues. (3) To avoid certain dangers which may supervene if pregnancy be allowed to progress to full term."

In a recent article by Jewett, he states that there are some thirty odd complications of pregnancy which may justify its interruption. Kelly mentions five, and heads the list with "pernicious vomiting"; (2) acute Bright's disease (3) certain grave constitutional disease which must end fatally in the near future; (4) eclampsia; (5) severe pyelitis.

That therapeutic abortion shall be resorted to when the rights of the unborn are in unmistakable collision with the rights of the mother, is the consensus of medical opinion, but the great and momentous problem we are often confronted with is, How long shall we continue to respect the rights of the unborn? When shall we say to the mother that we shall have mercy and destroy one life to save another? In pernicious vomiting, what are the danger signals? Norris, who paints a graphic picture of this condition, states that "when all food and drink are monotonously rejected"; others state that when the ammonia co-efficient in the urine is greatly increased. Kelly states: "That in all cases of severe nausea it is extremely important to determine the relationship of the ammonia output during pregnancy to the total amount of nitrogen in the urine, that the necessity for inducing abortion must be decided solely by the increase of ammonia, and whenever this arises above ten per cent the uterus must be relieved of its contents without delay."

To those of us who depend upon our clinical experience to pilot us over the many difficulties which so sadly beset this incoercible vomiting, we might look anxiously to the advent of the typhoid state, with its rapid and feeble pulse, fever, restlessness, diminished urine with albumen, and perhaps casts, and finally delirium, followed by stupor, coma and death. In order to rescue our patient from the slowly, but surely approaching death, the induction must be performed before this stage is reached. Therefor, let the shadows

of our past mistakes be transformed into that light which only shines from the "lamp of experience," and in all probability we shall be able to use more discretion in the future.

Eclampsia, pyelitis, morbid heart conditions, tuberculosis, Bright's disease and many others come in for their share of consideration, but as time forbids comment upon so many indications for artificial abortion we shall next consider another very important problem which always first comes under the observation of the obstetrician, that of extra-uterine pregnancy, which was at one time thought to be very rare, but now known to be very common. As to its etiology we shall not dwell, but its diagnosis and treatment are so important that every man who practices obstetrics should be constantly on the alert for this abnormal phenomenon, which, no doubt, often has a tragic termination without being detected.

Bland-Sutton classifies the symptoms as they appear: (1) "Before primary rupture; (2) at the time of primary rupture; (3) from the date of primary rupture to term; (4) at and after-term."

We shall first observe a cessation of menstrual flow, followed by nausea and other symptoms which make the patient think she is pregnant. Following this event she begins to experience pelvic pain, and on examination a tumor may be felt about one of the tubes, with no enlargement of uterus. The presumption favors a gravid tube. If the diagnosis is made, there is but one thing to do, and that is to at once consign your patient to the care of a competent surgeon for immediate operation. Sometimes a primary rupture constitutes the first symptom; this usually comes on suddenly, sometimes from exertion or straining, and is manifested by pain, collapse, sudden anemia, with sighing and gasping, small, rapid pulse—in fact, all of the grave symptoms which usually foreshadow the approach of impending death. In fact, so rapidly does a ruptured gravid tube sometimes destroy life that it has caused some writers to describe the accident as "one of the most dreadful calamities to which woman can be subjected." Hence, should we be called upon to solve this unexpected problem, let us remember that we have no time to call the aid of some far-away surgeon, but duty would demand that we open the abdomen at once and try and arrest the fatal hemorrhage at the earliest possible moment. Perhaps there is nothing that would test the skill

and nerve of an inexperienced surgeon like a celiotomy for a suspected intraperitoneal rupture of a gravid tube, and yet few operations are followed by such brilliant results.

While we realize that we are leaving a field full of interest and many problems not yet mentioned, still we are anxious to come to that part of our subject that may be of more interest to you.

Labor and Its Manifold Problems. Normal labor and a routine practice are responsible, in a great measure, for our shortcomings in the more difficult cases. Because we have a normal labor to-day does not mean that to-morrow we shall not have a ruptured uterus, a high forceps operation, a badly lacerated perineum, a fatal postpartum hemorrhage or some other unlooked-for complication. That we fail to do our duty in many of these perplexing problems is vividly revealed when we draw back the curtains of the gynecological wards and hear the voices of more than 60 per cent of their inmates crying in unmistakable tones that "through the neglect of their family physician they had not been well since their first or last confinement." Many of the pelvic injuries during labor come from the use of forceps, especially the high operation, when the head fails to engage in the true pelvis. I believe that much of our trouble would be obviated if we would adopt the universal use of the Tarnier's forceps, with its axis traxis, in this particular operation. Still, in spite of every effort, the perineum is fraught with such danger until it oftentimes sustains great injury, one that is difficult to restore to its original function; nevertheless, we should endeavor to accomplish this purpose, if possible, as its neglect is too often the first inroad to the long train of symptoms which invariably follows, resulting, as a rule, in the patient finding herself in the hands of the gynecologist, with the loss of health, and also confidence in her family physician; whereas, if we are successful in handling these complications as they arise, if we restore a bright, bouncing babe to the mother's breast, a cheerful wife, with perineum and cervix intact, with well involuted uterus, healthy bladder and veins, to her new relations in life, we have the consciousness of knowing that our work was well accomplished and is worthy of the twentieth century progress made in obstetrics, especially as we know that modern fashion, habits and customs have robbed the pelvis organs of so many of our women of their normal physiological function.

As usual when we are in trouble we progress from bad to worse;

then, let us consider briefly, if possible, the delivery of these cases which cannot be delivered. It has been my misfortune to have several of these cases where, amid the circumstances existing, I was compelled to do a craniotomy upon a live child. This, I consider, one of the gravest problems which confront the obstetrician; yet it is one that will continue to be executed at times in the country and rural districts where facilities and accomplishments are not available for doing Cesarean section, but thanks to modern evolution in this particular operation, which is now rapidly coming to the front as an operation of choice, when the slight increased risk to the mother is more than compensated for by the rescue of her offspring, if the patient is seen early, before repeated attempts have been made to deliver, and a certain amount of trauma imposed upon the uterine tissue, which materially increases the chances of infection, I believe many of these cases could be operated upon with a fair chance of recovery to both mother and child, as the difficulties which endanger this operation are not necessarily greater than for laparotomy done for many other conditions.

Hence, I say when we look with horror upon the mutilated remains of some fine, well-developed baby, whose life was sent into eternity by one crush of the cranioclast, would we not be justifiable more often in attempting what looks to be not a very difficult operation, Cesarean section?

After a brief synopsis of some of the perplexing problems which are likely to anxiously engage our attention at some period of our career, we have now to consider for a moment, if you please, the last division of our subject, The Puerperium. He who feels that his duties end with cutting of the cord and delivering the placenta is but a rough ashler in the quarries of obstetrics, but he who looks well into detail bearing upon the welfare and comfort of his patient will achieve laurels that shall bloom into a justly earned and lucrative practice.

Of course, it goes without saying that we should see that the uterus is clear and all lacerations are duly repaired, and when this is done we should be constantly on the alert for that much-dreaded enemy, streptococcus infection.

While we are greatly improved along this line, yet there are many mothers sacrificed almost daily upon the altars of septicemia, greatly due, no doubt, to our negligence in manipulating our cases.

Since we have grown more cautious in the use of the curette in these infected cases, relying principally upon rest, hot and cold hydrotherapy, supportive treatment and large doses of serum, the mortality has largely been decreased. Other conditions, which we are less apt to meet with in the puerperium, are tetanus, thrombosis, cystitis, paralysis, puerperal phycoses, and so forth.

Now, after being called upon to contest the many phases of these various obstetrical problems, we come to the last, but by no means the least one—to know when to advise our patient to no longer lean upon the oars of the faithful ship which has thus far borne her through so many months of waiting, and perhaps suffering, but seek the advice of a competent specialist.

I believe that the general practitioner who, as a rule, has a large obstetrical practice often makes grave mistakes by allowing his patients to drag from time to time with some pelvic pathology constantly preying upon their nervous system and rapidly laying the foundation for years of suffering.

Let us remember the old adage that a "stitch in time saves nine," and if we find that our patient needs an operation—and the family physician should always be the first one to learn of this trouble, as the patient naturally turns to him for advice upon all of her physical disabilities—we should insist that such treatment, whether surgical or otherwise, should without delay be instituted, and not wait until the thistles of morbid anatomy sting the nervous system into a physical wreck.

Discussion of Dr. Ellis' Paper.

Dr. L. J. Genella: I want to disagree with the teaching that we should not examine obstetrical cases frequently. I think that is the source of the greatest failures in the whole range of obstetrics. I think if they would teach, "Don't examine after you are familiar with the conditions," they would be right. How can you tell the exact position of the child, of the uterus, or the bony parts, with only one or two examinations? As labor approaches, there is also change in the position. I think it is your duty, especially where there is any likelihood of any trouble, before the second stage comes on, to thoroughly familiarize yourself with the conditions. One or two examinations will very seldom be sufficient to give you a thorough knowledge of the conditions. I think you should make

repeated examinations, until you know the conditions that confront you. Another point is that of letting the patient get up. I think we would do better if we would keep them at perfect rest for the first twelve or fifteen hours, and then let them sit propped up in bed. If they want to use the vessel, let them get up and do it, but not exert themselves otherwise. They ought to be kept quiet for about two weeks.

Dr. Sexton: I was in hopes that this subject would be discussed by the gynecologists. I know doctors are criticized on account of not attending to these lacerations at the time of birth more severely than for any other cause, after the patient goes into the hands of the gynecologists at some future time. I do not mean they are criticized by the gynecologist, but by the patient. It is nearly impossible for a full-sized head to come through a primipara without some laceration, it matters not how well you may support the perineum or how well you may dilate the os. It is merely a question of mechanics; the head is too large to come through without some laceration. It is a serious matter to leave that tear, as it may impair the patient's health, and finally make it necessary for her to go to the hospital for mending these tears. The laceration can usually be repaired immediately with two or three sutures, without the patient knowing what you are doing, as the parts are so benumbed on account of the long pressure from the delivery.

Dr. Ellis (in closing): The subjects touched upon in my paper were, of course, the interesting points I have met with in my practice. One subject that engages our anxious attention in these labor cases is pernicious vomiting. I have lost two cases recently. I censure myself for delaying the emptying of the uterus so long. Perhaps it was not altogether my fault. These people lived a long way off and persisted in wanting to carry the child. In one case I went out one day to empty the uterus. I did not think the patient could survive the operation. I found that the fetus had been expelled about two hours before my arrival, and the mother was in a state of collapse, from which she died in two or three hours. It is difficult to decide just how long we should let them go before emptying the uterus, as this is a very grave responsibility.

The Advisability of Immediate Repair of the Cervix After Delivery.

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The immediate repairing of the cervix, if extensively lacerated, is with the view of lessening carcinoma of the cervix uteri, if laceration with its resulting cicatrical tissue (often causing a persistent leucorrheal discharge with ulceration) be one of the causes. It is a well-known fact that carcinoma of the cervix, in the undoubted virgin, is very rare.

The thing that suggested this as probably being one of the causes was the large number of carcinoma of the cervix seen in the colored clinic at the Charity Hospital among the multiparous women. Negro women seldom come to the hospital for plastic work, and we only see them when in pain.

With a little practice it is not very difficult to suture the cervix, if extensively lacerated, following delivery. As a rule, the cases that are most extensively torn are those of precipitate labor or following the use of forceps, when the cervix has not had time to fully dilate. I examined all women delivered at the Charity Hospital, in the colored department, in the past six months, and found very few lacerated cervices in multiparæ where the cervix had time to fully dilate, and also few extensive lacerations in primiparæ where the same condition could take place, and when there were lacerations they were generally small and unilateral, requiring no suturing, or only one or two sutures. In cases of precipitate or instrumental delivery the lacerations were more extensive, often bilateral, and requiring two to three sutures.

TECHNIC.—The patient is pulled to the side of the bed, or placed on a table and prepared as in doing a perineorrhapy. As a rule, the cases that require suturing of the cervix will also require perineorrhaphy. A carbolized or lysol douche is first given. An anesthetic is not generally required, as there is little pain in suturing the cervix. We introduce a Sims speculum and catch hold of both lips of the cervix with vulsellar forceps, or insert two bridles of silk, as in the secondary operation. In most cases we can draw the cervix well down, as the ligaments are stretched. The speculum may then be removed. If the cervix is lacerated the smooth vaginal

portion, instead of being regular and round, will be interrupted by a raw surface either on one side or both sides. With curved Emmet needles, threaded with silkworm gut, insert just enough (often two being sufficient) in the same manner as in the secondary operation. We must be sure to tie our sutures tightly, or, after a few days, when the cervix contracts, they will become loose and the cervical tear will fail to unite. It should not take more than ten to fifteen minutes to do this.

This procedure is being recommended by men here and abroad. Dr. E. S. Lewis has sutured the cervix after delivery, and thinks favorably of it, having obtained splendid results.

Prof. Edgar Cornell says: "The cervix is invariably lacerated during first pregnancy. In ordinary, slow delivery, very slightly lacerated. Precipitate or premature expulsion of the fetus before dilatation is complete, and operative extraction under the same condition both produce extensive injuries. Cervical hemorrhage is the greatest danger, and, after cessation, there is still danger of infection and the development of cervical catarrh, with resulting tendency to abortion." He therefore advises immediate suturing of the cervix in these cases.

Prof. Williams, of John Hopkins, says "that small tears heal rapidly, and rarely give rise to symptoms. Hemorrhage, after delivery of the placenta, is generally suggestive of cervical laceration, especially if the hand applied over the lower abdomen can feel the uterus firmly contracted. Deep tears accompanied by hemorrhage should be immediately repaired, the introduction of a few sutures readily checking the flow of blood."

Grandin and Jarman, of the New York Maternity Hospital, advise strongly the immediate repair of the cervix. Using silkworm gut and tying the sutures tightly, because, after a few days, when the cervix contracts, they become loose and the cervical tear will fail to unite. This, they believe, is the cause of the failure after the primary operation. They leave the sutures remain from ten days to two weeks The assumption that they may interfere with drainage of the lochia is untenable, since the operation simply restores the cervix to the shape it has when laceration has not occurred. If the immediate operation be not performed, in case of cervical laceration dense cicatrical tissue inevitably forms, so that when the secondary operation is called for there is not only

much more difficulty in performing, but it may, in the opinion of many, become not a question of mere repair of a laceration, but one of amputation, a more radical operation.

Prof. Bonney, of London, believes that, according to the Registrar General's returns, one in every eight women over the age of 35 years is fated to die of malignant disease of some kind or other. Carcinoma of the cervix will probably account for 20 per cent of those thus dying. Cervical lacerations of some degree, more or less, occur in most first labors. In these days every perineal laceration is at once sutured, but at present the same rule does not apply to the cervix. The time will come when labor will not be considered as adequately conducted in which a cervical laceration of any considerable depth is not at once closed.

Toxemia of Pregnancy, Its Nature, Cause and Treatment.

By DRS. O. W. COSBY and R. H. BLACKMAN, of Monroe, La.

We do not offer the following as original, but it has the virtue of being new. All writings up to the present lead us up to a certain point and there leave us, confessing utter ignorance of the whys and wherefores, and leave us in doubt and consternation. What we are about to offer fills this gap and acts, as it were, as a capstone to all the ragged ends of conflicting opinions. The conclusions of various investigators working alone and arriving at seemingly contradictory conclusions are explained and blended into a harmonious whole, and finally the best of all is to place in your hands a sure means of bedside success.

In the words of Williams, "Fortunately, in the vast majority of cases, gestation pursues a perfectly physiological course and is not attended by untoward symptoms. At the same time there is no other condition in which the border line between health and disease is less sharply marked, since a very slight irregularity often suffices to convert a physiological and normal into a pathological and abnormal state."

When a woman conceives, the entire organism is profoundly influenced. Metabolism is increased and hurried everywhere. The uterus begins to soften and then enlarge, the blood vessels become larger and more tortuous. Nutrition is increased. The connective

tissue increases. Muscle fibers enlarge and increase in numbers, each fiber hypertrophies to eleven times its original length and five times the diameter of those of the normal uterus. These fibers, in the non-pregnant uterus, are irregularly arranged; in the pregnant uterus they are arranged in three distinct layers—a longitudinal or outer layer, an oblique or mid-layer, and a circular or inner layer. The nerves and the peritoneum increase to meet the demands of the growing uterus.

The vagina and vulva are likewise increased and enlarged in all their elements.

The joints of the pelvis are relaxed and loosened. The *blood is increased in quantity,* especially its fibrous elements, water and leucocytes, so that while there is an actual increase in the red blood cells there is a comparative leucocytosis and an anemia. There is increased growth of hairs and enlargement of thyroid glands. The breasts take on new activity. In fact, the activity is universal.

So we note that metabolism is greatly increased and accelerated. There is an increase of catabolic products thrown into the circulation for elimination, making increased demands on liver and kidneys.

I will not discuss pathology, because that is a matter of common knowledge; will simply refer to Welch's article in the *J. A. M. A.,* October 23, 1909, in which he finds the same changes in women dead of toxemia and of eclampsia. In the same journal is a paper by Ross McPherson, which is fully discussed by nine physicians, all of which show so strikingly how incomplete and unsatisfactory is the present conception of the matters under discussion.

The disturbances of pregnancy have been variously classified into:

1. Reflex vomiting;
2. Neurotic vomiting, and toxemias of pregnancy.

The toxemias have been divided into:

1. Pernicious vomiting;
2. Acute yellow atrophy of liver;
3. Nephritic toxemia;
4. Pre-eclamptic toxemias;
5. Eclampsia.

With the first and second conditions we are not dealing. As to the toxemias we will endeavor to show that there is only one condition, simply with variations in degree.

That is to say, after the psychological and reflex elements are eliminated, we have but one condition left, that of toxemia, varying from slight headaches, disturbances of digestion, morning vomiting, a vague feeling of dread, "melancholia," lasitude, diarrhea, sweats, joint involvement, hyperemesis, edema, convulsions, coma, and death. If the liver suffers most, the case develops into "acute yellow atrophy" (so called "acute" because the termination is violent and sudden, but the beginning was weeks in the past). There is one of the sub-divisions which is worthy of distinction, inasmuch as there is a different cause, the toxemia remains very much the same, and that one is nephritic toxemia. This condition is due to an insufficient kidney, and while our patient is oxidizing her waste products more or less perfectly she is unable to eliminate them on account of the diseased kidney. It is in these cases that trouble comes on suddenly, with so little warning, slight albumen, urea and edema; it is really a uremia.

Theories: There are several theories as to genesis of toxemia gravidum. Veit considered it a production of poison in the maternal blood as a result of transportation of placental cells. Ascoli believed that these cells stimulate the production of a new substance, syncytolysin, which dissolves these cells. Wrichheardt thought that a new toxic body, "syncytiotoxin," was formed by the solution of placental cells, which, under normal circumstances, were neutralized. They are all similar and based on Ehrlich's biologic principles, and each had positive results to substantiate his theory, which fact lends suspicion, and besides the placenta and child are not foreign to the mother. Pinard and several others hold the entire disturbances, from slight headaches to eclampsia, are due to an auto-intoxication simply varying in degree.

That the toxemia of pregnancy is due to suboxidation seems extremely reasonable, when we recall the fact that metabolism is greatly increased and catabolic products are thrown with greater abundance into the circulation, and that oxidation is the only means by which the organism ever renders them inert and easily eliminable, and that suboxidation leads to a true toxemia, the symptoms varying in degree from slight headaches and acidosis to convulsions, coma and death.

The evidences of suboxidation are many. Zweifell says that lactic aciduria is a factor, and demonstrated crystals of zinc

paralactate in the blood and urine of seventeen cases of eclampsia. Hurth and Lockman found lactic and paralactic acid in the spinal fluids of eclamptics. This is due to imperfect oxidation of proteids. Dittman and Welker, in the *N. Y. M. J.,* May and June, 1909, in an exhaustive article, demonstrated that deficient oxidation give rise to all the kidney lesions noted in nephritis. They demonstrated also that in eclamptics the oxidation of uric acid and alontoin is deficient. Pohl and Von Noorden both point to evidences of suboxidation. Again, who of you have not noticed a dark, almost black blood, removed by venesection in eclamptics, due to an excess of reduced hemoglobin? Harbobitz, who recently reviewed all the works of the various observers in the eclamptic problem, states that the most important and essential changes occur in the blood in which there is more or less coagulation and formation of thrombi and emboli; partly dependent on these changes are the hemorrhagic infarcts and necrosis. This is significant when analyzed by the light of recent knowledge. J. W. Williams demonstrated the presence in the urine of an increase of ammonia and amido substances, sometimes as high as 48 per cent, and states that if the percentage of ammonia nitrogen raises above 10 per cent, with pernicious vomiting, abortion should be induced. Now, it seems to us that, by the foregoing, the suboxidation problem is pretty well substantiated, and we will endeavor to show how and why we place so much faith in this phase of the question.

When the adrenal glands are removed from an animal, or when they are destroyed suddenly in man by hemorrhage into the capsule, the animal or man dies suddenly and violently, with certain symptoms which are constant and always present. First, pallor, with consequent engorgement of all large internal vessels and viscera; and, second, severe abdominal pains due to the above engorgement, dyspnea, hypo-thermia, muscular weakness. If death does not too quickly follow, there is liquid stool, cold sweats, paralysis of the lower extremities, the blood becomes dark, almost black, and investigation shows that this darkness of blood is due to meth-hemoglobin. If the adrenals are functionally impaired by disease, but not destroyed, all of the above symptoms exist to a lesser degree. Oxidation is lowered, causing impaired cerebration, hypothermia, melancholia, fatigue and lassitude, decreased elimination by the kidneys, as manifested by decreased urea, etc. When

adrenal extract is injected into a normal individual, blood pressure is at once raised, all muscles of blood vessels contract and the skin glows with red blood. This contraction can and does take place, even when the cord in vagii are severed, showing that the nervous system is not needed for this effect. Even an artery removed completely from the body, when subjected to adrenal extract, will contract to one-sixth its caliber. We all know its typical effect in shock.

All this is to show that the adrenal secretion is of vital importance. The adrenals are situated just above the kidneys, and their veins enter directly into the vena cava, where it is carried directly to the lungs, and it can be traced that far and no farther. Many experiments have been produced to show that the absorption of oxygen from the alveolar air by the blood takes place when the oxygen pressure is greater in the blood than it is in the air; also that CO_2 is eliminated when the CO_2 pressure is greater in the air than it is in the blood. All of which demonstrates that the interchange of gases is controlled by something else than the law of transfusion of gases.

That this forcible interchange of gases that takes place in the lungs between air and blood is due to the adrenal secretion is proven from many sources. In Addison's disease, a known disease of the adrenal, pigmentation is general. It is also known that this pigment is derived from hemoglobin. We know that the removal of the adrenal or impairment of their function leads to suppressed oxygenation, and, since the removal of the adrenal does not remove any of the elements of the blood, hemoglobin, lungs or air, why does oxygenation not continue as before? Duval, Robbin, Verdiel, Garnier, Richart and Bohr all found the simple diffusion theory inadequate and suggested a hypothetical pneumonic acid. Let us point here to the well-known condition of eclamptics, the dark blood, due to meth-hemoglobin.

Suprarenal insufficiency from any cause gives rise to a condition of the hemoglobin in which it is said to be in loose combination, evidently the suprarenal secretion serves to hold the constituents of the blood pigment together.

Sajous concluded: "The adrenal glands secrete a chromogen, a colloid, hyalin fluid, which leaves the organs through the suprarenal veins and is mixed with the plasma of the venous blood in

the inferior vena cava. 2. When the venous blood reaches the pulmonary alveoli the marked affinity of the adrenalized plasma for oxygen causes it to absorb this gas from the alveoli air. 3. CO_2 in the blood is thus forcibly replaced by oxygen and expelled with corresponding vigor. 4. The red corpuscles, after this operation, bathed in an oxygen-laden medium and their hemoglobin became reconverted into oxy-hemoglobin."

When we study the disturbances of function of the thyroid gland we meet with striking revelation.

Robert Hutchinson said, some two years ago: "Briefly, then, it may be said that the effect of the administration of thyroid is to increase oxidation of the body. It makes the tissues more inflammable, as it were, so that they burn away with more rapidity. The products of the disintegration of nitrogenous tissue appear in the urine almost entirely in the form of urea, uric acid and the basis being neither regularly or appreciably increased, while the products of fat-destruction are eliminated as CO_2 by the lungs and water by the kidneys."

In studying the symptoms of exophthalmic goitre, in the early stages we find evidences of hyper-oxidation, hyperthermia, high blood pressure, exaggerated reflexes, irritability, emaciation, increased elimination of proteid waste, which symptoms are identical with those of hyperactivity of the adrenal.

In studying the symptoms of exophthalmic goitre in the later stages we find the tumor and exophthalmos, etc., as before, but we now find hypothermia, melancholia, evidences of diminished oxidation. Why this difference when the goitre still exists, Does it not point to an exhaustion of some substance that was in the beginning superabundant, and since the symptoms of hyperthyroidism represented by exophthalmic goitre, and also the administration of thyroid to normal beings, are identical with suprarenal overactivity, and the symptoms of hypothyroidism represented by cretinism, myxedema and thyrodectomized animal are all those of adrenal insufficiency, We cannot help but conclude, with Sajous, that the function of the thyroid is to stimulate the adrenals, governing their output.

Charles H. Mayo says that, in all normal pregnancies, thyroids are enlarged, and, in those cases in which they are not enlarged, are in grave danger of eclampsia and toxemia.

Treatment.—It is in the treatment that the beauty and correctness of the theory become manifest, and we will divide it into prophylactice, pre-eclamptic and eclamptic.

1. *The Prophylactic:* Hygiene, with all the good teachings that have come to us from the past, such as diet, dress, attention to elimination, and especially walks in the open air every day, so that our patient may be in a position to get all the oxygen she is capable of using.

2. *Pre-eclamptic:* When we are confronted with a manifest disorder in the pregnant woman we must first exclude the reflex, neurotic and psychological variety. When we are sure we are dealing with toxemia, restrict all diet, promote elimination until we have relieved our patient of the accumulated waste product, and at the same time administer dessicated thyroid in 3 to 5-grain doses three times a day, and as soon as the symptoms subside, which will be very soon, the diet can be increased and exercise begun and the rules of hygiene followed. The thyroid must be kept up for a week or more, owing to the severity of the symptoms, and again begun if there is any return of the symptoms.

During the eclamptic state we are dealing with an emergency which cannot wait on physio-chemical processes. One drachm of veratrum viride must be given at once to control convulsions; never chloroform, as this only increases toxemia. Rapidly open a vein and draw off a pint of blood, and then transfuse from one to two pints of normal saline solution; empty the uterus if the child is viable. When the patient is able to swallow, brisk cathartics and thyroid in five-grain doses every six hours until all signs of trouble disappear.

In conclusion, let us say that in a feeble way we simply stated what we believed to be the truth, and the mass of evidence at hand is so abundant that we were bewildered with its profusion, and could not in a paper such as this make use of even the most salient. We can only refer to Sajous' work on "The Internal Secretion," which gives not only his conclusions, but a most extensive bibliography.

When Is Gonorrhea in Women Cured? Report of a Case.

By W. B. CHAMBERLIN, M. D., New Orleans, La.

When is gonorrhea in women cured? The question is one which is extremely difficult to answer. Symptoms of acute gonorrhea are well known to all. Can an acute case of gonorrhea be absolutely cured? There is abundant evidence to prove that cases are so cured, and that the patient may be assured that, with proper treatment, the probabilities are that such will be the result in her individual case. She may appear cured, and, with good luck, she may remain cured; but there is always a possibility of a return, always a chance that some disturbing element light up an old, inactive focus into an acute condition, which may give us any one, or more than one, of the many well-known lesions caused by the gonococcocus. A woman may be infected with a latent gonorrhea and not be aware of the fact. The report of the following case will show that such a condition can exist. The following is the history:

Mrs. D., age 27, divorced, sporting woman; family history negative. Personal history: Typhoid fever when seventeen years old; since that time excellent health. Commenced menstruating at fourteen; always regular, though first two or three years suffered from dysmenorrhea, periods lasting from three to five days. Slight leucorrhea, but no history of veneral infection of any kind. Called to see patient early one night and found her complaining of rather severe pain in right thigh, about midway between hip and knee; pain deep-seated, somewhat worse on pressure, and steady. Headache, slight sore throat and general malaise. Temperature, 99⅗ degrees. Patient could give no history as to cause of symptoms. Examination of organs negative. No diagnosis made. Saline purge, hot bath and aspirin, salol and codeine for pain described, with orders to report condition next day. This she did, and stated that the pain had moved to her right knee. A call in the afternoon found her with a temperature of 100 degrees. Pain is described, which increased when motion was attempted, though not severe enough to immobilize the joint. Finding it impossible for her to receive the proper attention, she was advised to go to one of the local private hospitals, which she did that night. The next day the ankle on the opposite side became involved, with an abatement of the knee symptoms. Her case was then diagnosed as a mild

articular rheumatism. Hot baths, milk diet and anti-rheumatic treatment cleared up her condition within a week, and with one more week of rest she was discharged as believed cured.

Eight days after, was called again to see patient, and found her complaining of a pain near the labia. Examination showed an enlarged and painful vulvo-vaginal gland. She was advised to have the gland removed, but refused, asking that some treatment be tried to reduce the condition. Iodin douches, with compresses of lead and opium, for three days, failed, and patient again returned to the institution, where the offending gland was removed, care being taken by first inserting a pack around the cervix and in the vagina to prevent a spread of the infection towards the uterus.

The gland was filled with a thick pus which, examined microscopically, showed numerous gonoccocci. Here was an infected gland lying dormant, with no preceding history of an acute attack to account for the condition or for the previous systemic and joint infection, which had been unrecognized. There appeared no local trouble following the removal of the gland. The wound healed nicely. Two or three days after the operation a severe pain developed in the shoulder, with a slight rise of temperature. So severe was the pain that hypodermics of codein were necessary to quiet the patient. Immobilization of the joint with applications of heat also gave some relief. Twenty-four hours following the appearance of the shoulder symptoms the right ankle began to swell and give more severe pain. Her temperature was 100½°. A good case to try results with anti-gonoccoccic vaccine. Fifty million at one hypodermic given. Three or four hours following, a severe reaction took place. Increased pain in ankle, with a temperature of 103½°. The swelling and redness around the joint increased, with a resulting tension, to such a degree that it appeared aspiration would have to be done for relief. The ankle was immobilized, elevated in a sling, and alternating applications of heat and cold applied, with hypodermics of morphia, for pain.

Within six hours her temperature dropped to 100°, with some relief of pain in shoulder. The next morning the same dose of serum given. After noon, temperature of 101°. The condition of the ankle about the same, but the shoulder much improved, patient complaining only of slight soreness. The applications of heat and cold to the ankle were continued, the limb still remaining elevated.

The third injection of serum was given the following morning, and a Bier elastic bandage applied around and just above the knee, until an increase in pain made its removal necessary; but at short intervals during the day the bandage was reapplied. Much less pain during the night, and tension of ankle somewhat diminished. Fourth dose of serum given the next morning, with alternate use of heat, cold and Bier straps. Her temperature, ranging around 100 and 101°, caused some uneasiness as to the probability of pus being present in the ankle joint, but the day following, the temperature being normal in the morning, pointed to a better prognosis. Four more injections of the serum, fifty million dead gonococci to the injection, every other day, were given, with daily use of the elastic bandage and immersion of the ankle in hot and cold water, massage, applications of iodin and passive motion, enabled the patient to get about in three weeks, with seemingly no bad results. For several weeks she would report her condition once a week, and appeared in the best of health. Four months after the last attack she reported, complaining of leucorrhea. A micriscopical examination proved negative, and tampons of ichthyol and glycerin every other day, with iodin douches, improved the local condition to such an extent that nothing more for the present was thought necessary.

Two months later she again reported a return of the leucorrhea, and curettage was advised. Under ether, cervix was dilated and cervical canal and uterus well curetted and cauterized with pure carbolic acid, followed by alcohol. The discharge and scrapings from the cervix looked so suspicious that a specimen was taken and examined by the pathologist, but with a negative report. Evidently no gonorrhea. Some time after, and by accident, information from a fellow-practitioner showed this patient had infected a patient of his with gonorrhea, and the patient had reported to him for treatment about the time the woman had reported to be curetted. Three weeks after the curettage no trouble from the leucorrhea, but excessive menstruation, lasting twelve days, with pain in right side, not severe, but showing probable tubal complications. Rest in bed, ice cap and hot douches have apparently cleared up the trouble; but is she well, and cured? Can she be assured of a non-recurrence of any of the conditions which she is liable to—salpingitis, ovaritis, peri-uterine inflammations, pyo-salpynx, etc.? I think not.

A Successful Case of Ligation of the Ovarian Vein for Thrombo-Phlebitis of Puerperal Origin.

By C. JEFF MILLER, M. D., New Orleans, La.

Mrs. H., aged 19, was admitted to the New Orleans Sanitarium October 16, 1909, two months and three days after the delivery of her first child. Her labor was not severe, and was completed without the use of instruments. The only complication was a medium perineal laceration, which her attending physician repaired immediately after delivery. Five days later she began to have a rise of temperature, which ranged between 99° to 106° F. On the seventh day of the puerperium her physician curetted the uterus, but without apparent result. The temperature continued for four weeks, fluctuating between 99° and 106°, remaining low for days at a time, then rapidly rising after a chill.

At the end of four weeks the temperature subsided to normal, and remained so for eleven days, only to return and rise as high as 106° during the next four days. After another seven days of normal temperature a similar chill and high temperature curve followed. She recovered sufficiently to be removed to her home in a neighboring town, but soon after her journey another severe exacerbation occurred. As soon as she could be removed she was brought to New Orleans, where I first saw her. At the time of her admission her temperature registered 104° and rose to 105° six hours later. She had every appearance of profound sepsis, and her life was despaired of. Stimulants were administered, and the temperature was controlled by sponging and cold packs.

In spite of her illness of two months' duration her general condition was fairly good, with the exception of a marked hematogenous jaundice. The heart, lungs, spleen and liver appeared normal.

Owing to her thin abdominal walls it was possible to make a satisfactory examination by palpation. There was slight muscular rigidity and some tenderness found upon deep pressure in the right hypogastric region on a level with the pelvic brim.

Inspection of the vagina revealed little, if any, evidence of infection. The perineal laceration had healed fairly well, the urethra and vulvo vaginal ducts appeared normal, and a small cervical tear was found to be slowly healing by granulation.

The uterus was in mid-position, fairly well involuted and fully movable.

The appendages on the left side were normal; on the right there was some tenderness, but the tube did not appear to be involved. At the outer end of the broad ligament, and high up near the pelvic brim, was found a small, irregular mass, slightly sensitive to pressure, but not fixed, as is usual with such conditions. It corresponded to the area of tenderness elicited by palpation over the abdomen.

As no definite surgical indication was revealed, she was treated for two days according to indications by stimulants, light diet, sponging for temperature and ice-bags over the abdomen. She rapidly improved, the temperature subsided, and a very noticeable improvement followed in her general condition. It was difficult to explain why she appeared so much better. This only lasted three days, however, until she had another sudden chill, followed by a rise of temperature which reached 104° during four hours, and changed this picture rapidly to that of a very serious condition. Twelve hours later the temperature dropped to 99°. Thinking there might be a malarial infection, blood examinations were made for plasmodia, but proved negative. During the next exacerbation, two days later, her condition became so serious that she was given 16℥ of saline solution intravenously, which seemed to have a very decided beneficial result. The temperature dropped to 97° and remained normal for seven days, during which she appeared quite cheerful, even when the temperature was as low as 96°.

On October 28 she had another chill, followed by temperature which ranged between 103° and 104° for two days.

The tenderness in the right hypogastrium increased and extended some distance down the pelvic brim in the line of the ovarian vessels.

Dr. George Dock examined her October 20, after I had decided that the condition was one of septic thrombophlebitis and was considering the advisability of making an exploratory incision. He thought the condition one of grave sepsis, but advised delay for a few days. In the meantime Dr. C. W. Duval made a bacteriological examination of the blood. The cultures proved negative.

Realizing that she was not improving, although she seemed unusually cheerful between the attacks, I finally urged an operation and opened her abdomen October 30.

The peritoneum was normal, the uterus, left tube and ovary and left broad ligament were of normal size and appearance. The right

tube was free from inflammation, although slightly larger than the left. The right ovary was normal. The right ovarian vein was thickened to the size of the thumb, tortuous and thrombosed from the outer edge of the broad ligament to within a short distance of the vena cava. There was considerable edema of the tissues around the vein the entire length of the thrombus.

I next examined carefully the hypogastric veins of both sides, but found them uninvolved.

The thrombosed vein was ligated with No. 3 twenty-day chromic gut as near the vena cava as was possible, and also about the origin of the veins in the broad ligament. I first considered removal of the thrombosed section, but owing to the edema I thought it best to trust to ligation.

The operation was completed in thirty minutes. The temperature remained below normal for twenty-four hours, then rose to 104°, and fluctuated between 101° to 103 2/5° for six days, after which it remained below 99°. She rallied rapidly and was able to return home on the twenty-third day after the operation. Some days after returning home she had a flurry of temperature for four days, probably the result of the trip, after which she had no further trouble.

Extension of puerperal infective processes from the endometrium as a rule occurs in two ways, viz: through the lymphatic or venous channels, causing lymphangitis, which usually terminates in peritonitis, or, in cases of venous involvement, in thrombophlebitis.

The clinical picture presented when septic processes involve the venous plexuses and the large veins leading from them is a variable one. This variation depends upon many factors, chiefly among which are the site and extent of the affection and on the virulence and quantity of the micro-organisms at work. When large quantities of streptococci, the usual infecting agent, gain entrance into the large plexuses, the patient, as a rule, succumbs to septicemia in a very short time before marked local changes can develop. The ordinary condition of phlegmasia dolens is a good example of the mildest form of infection, when the process is closely limited to the affected vein and the infection of a mild type.

Between these extremes there are several degrees of thrombophlebitis, often difficult to differentiate clinically. The above case belongs to the class usually described as subacute or chronic pyemia,

a type often distinguished by a late onset, a prolonged course and much slower effect upon the general condition.

In such patient, a few days after abortion or confinement, a septic endometritis develops, attended by raised temperature, some tenderness and a foul discharge. Just when the original trouble seems to be subsiding, septic symptoms supervene, chills repeated daily or with intervals of several days, with marked remissions of temperature, high pulse and heavy sweats, indicate the onset of a serious state of affairs. These symptoms may last weeks or months, and beyond the increasing feebleness, with perhaps some slight parametritis or a small mass of thrombosed veins in the pelvis, no other symptoms arise.

This class of cases has been the subject of considerable discussion during recent years, owing to the success that has attended ligation or excision of the involved veins. Any treatment that would reduce a mortality of 50 to 80 per cent necessarily demands our attention.

The first practical question that arises is, What percentage of the cases of severe puerperal infection belong to the class of chronic pyemia, and what is the average mortality rate?

In investigating this subject I found two valuable contributions that cover the entire literature to date, viz: the articles of H. Vineberg and Whitridge Williams, which appeared in March and May of 1909.* Upon inquiry at the Surgeon-General's library I find that nothing has appeared upon the subject since. I shall, therefore, quote the results of their extensive investigations, more or less in detail.

Williams states that it is difficult to give exact figures as to the comparative incidence of chronic pyemia, but it is safe to say that its lesions can be demonstrated in at least one-third of all autopsies upon women dying from puerperal infection.

Lenhartz, of Hamburg, found 50 per cent of his autopsies to have septic thrombophlebitis, agreeing exactly with the results published by Frendelenberg, from the Leipsig Pathological Institute. In only four out of forty-six cases reported from the Leipsig Institute was there any associated affection of the lymph vessels.

Statements as to the mortality are conflicting. Cuff, who reported a successful operation in 1906, states that Bumm's cases

* *American Journal of Obstetrics*, March and May, 1909.

showed nineteen deaths out of twenty-three chronic cases, 83 per cent.

Less than one-third of Williams' cases recovered under expectant treatment. As a general estimate, the mortality is about 66 2/3 per cent (Williams). It is generally recognized that the more chronic the case and the longer the period during which the disease has lasted, the more likely is recovery.

The second question which naturally arises is, Can the diagnosis of the septic thrombophlebitis be made with sufficient degree of certainty to justify the surgeon in recommending such a serious operation? Most of the authorities agree that a diagnosis can be made in a large percentage of cases.

The most constant symptom is chills, accompanied by marked remissions of the temperature within the twenty-four hours. The temperature may rapidly rise, as in my case, to 106°, and drop to normal within a few hours. The chills may occur daily or may be separated by intervals of days. The appearance of the patient between the exacerbations is quite suggestive. During the rigors they appear profoundly septic, with a rapid, thready pulse, yet a few hours later they feel quite comfortable and hardly appear to be seriously ill.

In some few cases no chills were reported. One of Williams' cases died without a chill or an alarming rise of temperature, yet at autopsy a solid thrombus was found which extended from the dorsum of the foot to the vena cava beyond its junction with the renal vein. Vineberg calls attention to the good quality of the pulse, especially in the protracted cases, until the very last stages, showing that the heart remains comparatively strong for a long time. It is this feature, he thinks, that makes surgical intervention less hazardous than in other forms of septic infection.

It is true that the boundary line between these cases and the more acute ones is not well defined, but when, in addition to the above symptoms, we find, upon palpation, thrombosed veins appearing as irregular, worm-like masses in the outer and upper portions of one or both broad ligaments, the diagnosis is fairly conclusive. In Lenhartz' series he was able to find the masses in thirty-one of thirty-nine cases.

The masses of veins may not be particularly sensitive upon palpation; in fact, as a rule, the pain is very slight, until in advanced

stages the area about the vein becomes edematous, or suppuration occurs. In my case I found the mass some days before any special pain could be caused by pressure. In some cases a pelvic examination will be absolutely negative; in others, if the abdominal walls are thin, the veins can be recognized lying like cords across the pelvic brim.

Vineberg sums up his remarks upon diagnosis by saying that on the whole it may be stated that when a puerperal woman runs high temperature, with marked remissions, and has severe chills and no exudate, and no mass is felt in the pelvis, there being no evidence of peritonitis, and the uterus is empty and well involuted, a diagnosis of septic thrombophlebitis may be made by a process of exclusion.

There has been quite a difference of opinion as to the value of bacteriological examination of the blood as an aid in diagnosis.

Lenhartz found blood examinations positive in thirteen of sixteen cases, but states that the findings may be negative even at *post mortem*.

The explanation offered by different contributors of the negative findings is that micro-organisms have been limited by obliterating thrombosis, or, as shown by Bardeleben, that in chronic thrombophlebitis the streptococci, either through being less virulent or from other reasons, have a great tendency to adhere to the lumen of the veins and remain localized in their activity.

According to the present conclusions, micro-organisms may or may not be found in the blood; the more chronic the case, the less likely will the cultures prove positive.

Therefore, the diagnosis of pyemia must not be altogether dependant upon bacteriological examination of the blood.

The futility of the methods of treatment generally employed, and a consideration of the success which followed the cutting off from the general circulation of similar infections, venous foci in lateral sinus and jugular thrombosis following middle ear suppuration, prompted surgeons to apply a similar line of action in pelvic thrombosis.

The idea of limiting the infection to the involved veins by operation is by no means new, but the present conception of the operation and the first successful case dates from Trendelenberg's publication in 1902. All of the cases reported prior to that time had ended fatally.

It must be confessed that the procedure has not as yet produced any marked reduction in the mortality. The latest and completest statistical review published by Williams contains the results of fifty-six cases treated by excision or ligation of one or more pelvic veins. Adding Vineberg's case, published two months before Williams' paper, and the one now reported, furnishes fifty-eight cases. No other cases have been published since Williams' paper appeared.

While no appreciable reduction of the mortality was shown, Williams believes that any operation which offers a chance of reducing it should be welcomed. He found that many of the reported cases belonged in the class of pyemia, and were not susceptible of cure, and the technic often faulty; that a corrected mortality gave 40 per cent in extra-peritoneal and 21.4 per cent in trans-peritoneal operations. In five of his personal cases the gross mortality was 20 per cent.

Something should be mentioned regarding technic.

The trans-peritoneal route seems to have a decided advantage over the extra-peritoneal operation, both from the standpoint of allowing free access to the entire venous system of the pelvis and the mortality rate as well. The objections to the extra-peritoneal operation need only be mentioned, viz.: that no opportunity is afforded to inspect other veins, so that the operator cannot be certain that he has ligated the proper veins; and, furthermore, the operation is difficult. By the trans-peritoneal route the entire field of operation is exposed through a median laparotomy incision, enabling the surgeon to closely inspect the uterus and appendages, as well as all thrombosed vessels.

Experience has shown that excision of the affected vein is only necessary in exceptional cases, as, for instance, when the wall of the vessel is on the point of breaking down or is already the site of perivenous suppuration.

If metastatic abscesses have developed, the operation will be unavailing. The prognosis depends to a great extent upon the vessels involved.

If the thrombosis is confined to one or more spermatic vessels, the patient has an excellent chance for recovery. It appears that this manipulation necessary to isolate and secure the larger pelvic veins adds considerably to the risk.

If the necessity arises, the spermatics, together with the internal iliac veins, may be safely ligated. In one case the common iliac vein was tied without serious consequences. Williams states that in none of the reported cases did gangrene follow ligation of the hypogastrics, and refers to Trendelenberg having ligated the lower end of the vena cava in two instances, and that the patients lived for six and fifteen days, respectively. This was explained upon the theory that the thrombosis had probably developed very slowly, allowing sufficient time for collateral channels to be found.

The chief difficulty that will arise in fixing the indications and comparing the results will be the proper selection of cases. That it may be often advised in cases that are absolutely hopeless is already apparent to those who are familiar with the protean manifestations of puerperal infection. Early operation is already placed as one of the requisites for success, and even in this small collection of cases many reports occur of the operation having been performed in hopeless cases of acute septicemia. Even Trendelenberg suggests operation after the first chill,an indication no experienced obstetrician is willing to accept.

The operation will find its proper place, and will, no doubt, be successful in proportion to the surgeon's ability to differentiate pelvic pathology and to interfere before the condition becomes widely disseminated.

Discussion of Dr. Miller's Paper.

Dr. H. S. Cocram, New Orleans: Early in October I was called in consultation to see the case reported. At the time we saw her the condition seemed to be general. After that the temperature dropped and staid low for several days. Later there was another rise in the temperature, and marked septic conditions developed. It seems to me that in these cases, if we just knew how much of the vein to excise, just where to put the ligatures, just where the fremitus is, we might have more success. It may have been especially indicated in this case that the doctor reports. The pelvic examination was negative when I examined the patient. We have an opportunity to examine a large number of cases, and I have yet to see a case where you can definitely feel the thrombosed veins in the ligaments.

ILLUSTRATING DR. COCRAM'S ARTICLE.

Report of the Removal of a Ninety-five Pound Fibroid of the Uterus.

By H. S. COCRAM, M. D., New Orleans.

The only excuse I have for reporting this case is the very unusual size—ninety-five pounds—and the remarkable part of her living in a large neighboring town within a radius of a few hundred miles of this city, and having escaped the surgeon's knife so long.

She is 48 years of age, an American-born, and a woman of unusual intelligence in many ways; but unfortunately when she first noticed the tumor, eight years ago, some kind physician told her there was a leader from the growth to the heart, and "if it was cut she would surely die." So she had preciously guarded her tumor for many years—in fact, until her vitality had been sapped to such an extent that she was a confirmed invalid.

A fellow-practitioner brought her to my service in the hospital a week after his first visit. As you will see by the picture, the abdominal distension was very great, the skin and muscles were unusually stretched; quite a large umbilical hernia had developed; constant irritation and friction had caused considerable ascites. The heart, lungs and kidneys were normal; she had a pinched expression and the appearance of great emaciation, though she weighed 197 pounds. A vaginal examination revealed very little, except showing the entire pelvic cavity filled by a soft, fleshy, semi-fluctuating tumor.

The operation proved much simpler than I had anticipated. Quite a large incision was made in the median line through the hernia, and, to my surprise, I only found the descending colon adhering to the growth. Realizing the amount of blood contained in the tumor, and the probable shock when it would be removed, I was careful to have as little bleeding as possible, in separating the firmly organized adhesions of the colon. When entirely freed, the uterus was amputated at the internal os.

She stood the operation remarkably well and made an uneventful recovery, and I received a letter yesterday saying her condition was perfectly satisfactory and that her weight at present is ninety-eight pounds.

Discussion of Dr. Cocram's Report.

Dr. S. M. D. Clark, New Orleans: This is a most unusual size for a tumor of the fibroid type. I believe New Orleans, with her large negro population, furnishes more cases of fibroid than any city in the civilized world. We have many, many cases, but to have one weighing ninety-five pounds is so unusual that I think we are fortunate in having the case put on record. The doctor is now having the literature reviewed so as to determine the largest fibroid reported. It would be interesting to me to know what rank this one would take as to size. This was a non-cystic fibroid.

Hygiene and Sanitation.

By I. J. NEWTON, M. D., Monroe, La.

My commission as chairman of this section reached me at too late an hour to enter into correspondence with the sanitarians for the contribution of papers, or even to give to it myself that thought to which it is entitled by its importance and its relation to the welfare of society.

It is unnecessary to remind a body of medical men that hygiene is that branch of medical science that relates to the preservation and improvement of health. In the words of Chaumont, "It aims at rendering growth more perfect, decay less rapid, life more vigorous, death more remote." In its purview it contemplates man from the cradle to the grave in his relation to nature, to his environment, to the community not only in which he dwells, but to all other communities that may in any way have relations with his particular community, and likewise in his individual impulses, habits, desires and passions that bear either directly or reflexly on his bodily or mental health, and through him on the other factors that enter into the complex body of society. It is, therefore, the most important branch of medical science. Its chair should be the most honored in every medical college, and its teachings should be disseminated broadcast throughout the world, while, as a matter of fact, it is the least considered, its chair in the university is usually an adjunct to some other chair and far below the chairs of medicine and surgery in rank and dignity, although the former is nothing but a knowledge of physiology, the first step in hygiene—

that is to say, a knowledge of the normal processes of growth, repair, decay and death; and of pathology, with which the hygienist must be familiar in order to formulate the laws which will insure the *"mens sana in corpore sanco";* while surgery is simply a knowledge of anatomy, a proper appreciation of the physiology of the parts and their pathology—with, since the days of Lister, their hygienic handling, coaptation of broken lines of continuity, removal of necrosed tissue, and normal replacements. It is not desired to *"mens sana in corpore sano";* while surgery is simply a knowledge necessary for their successful practice, but simply to point out how that successful practice is intimately blended with that of hygiene, for no one in this progressive age will deny that the highest function of medicine is prevention, and that the surgeon of to-day boldly enters cavities, and even brain tissues, and obtains brilliant results by aseptic methods—that is to say, by the hygiene of surgery that Ambrose Paré and that brilliant galaxy of pre-Listerites would not have dreamed of attempting. Covering, therefore, so wide a range, it is impossible, within the compass of a brief report, to do more than to consider some one phase of the vast subject. So let us consider the other heading of this section, SANITATION, or the practical appreciation of measures for the promotion and preservation of public health.

Modern sanitary science is based upon the knowledge of the existence of specific and non-specific infectious agents which cause diseases, and the more we learn and the further advanced we get in the etiology of disease the more we recognize that bacteria, motes or protozoa are the causes of infectious disease, and that their destruction by antiseptics, or, still better, by asepsis—that is to say, the freedom from septic infection, especially sought as a condition precedent to prevention and cure—the more successful will we be in saving life, while in the vast surgical field the skilled anatomist with an aseptic knife, aseptic hand, sterilized water and sterilized dressing, has lifted that noble branch of medical science from the plane of barber-surgeon and phlebotomist of medieval times to the very apex of modern medicine; but these are all truisms familiar to all of you since your school days.

What I wish particularly to call your attention to is the duty of the profession to enlighten the masses in the fundamental laws of hygiene, and especially in the cause and prevention of con-

tagious and infectious diseases, by what is known as the "Louisiana System of Hygienic Education," an historical review of which is to be found in Augustin's work on yellow fever. At the New Orleans meeting of the American Public Health Association, in 1902, in a discussion of the report of the Committee on Sanitary Aid Societies, Dr. F. J. Mayer, of Louisiana, said:

"We have reached the stage that sanitarians and medical men of the country must realize that the existence of a contagious or infectious disease in any community is the sanitary remorse of that community, not only of desecration of the sacred order of Hygiea, but of criminal neglect to educate the masses and to give them that public instruction in sanitary science which is the highest duty of the State."

And Dr. Hurty, of Indianapolis, Ind., the State Health Officer, said:

"In Indiana we have been using this method for four years of lecturing before the public whenever the opportunity could be secured. * * * We have had so many invitations in the last year from different bodies to hear us upon the subject of sanitation that we have not been able to meet one-tenth of them. We have only two lecturers, and their time is well occupied in lecturing to the people, so it seems to me that people are hungry for sanitary knowledge. * * * Of course, we have been severely criticised by the politicians on account of the expense, but, nevertheless, the work has gone on in spite of what these politicians have said."

And Dr. Juan Guiteras, of Havana, said:

"It should be remembered that malaria and yellow fever are introduced by the skin, and a study of the mosquito introducing these two diseases should be throughout the South a very important educational feature."

To-day the first principle of the Louisiana System of Hygienic Education is recognized throughout the medical and sanitary world. namely, the necessity therefor; but the second and equally important principle, the duty of the State to furnish the instruction, is ignored. Boards of Health in some States, like Indiana, are carrying it on; in others crusades have been started against tuberculosis along educational lines. In this State, Dr. Mayer, as Medical Inspector of the Board of Health, carried on a series of hygienic institutes in 1906 in the infected areas of the year before. Then the work practically stopped, when the fear of other infection passed. In the adjoining State of Mississippi the same sanitarian conducted a vigorous campaign for eight months, which came to a close for want of adequate revenue. In Texas, through the exertions of State Health Officer Brumby and the State Medical Society, some public instruction has been furnished, but nowhere

throughout this great area is there that systematic instruction needed to bring about the conditions that, as medical men, we should hope for. There are two reasons for this—general indifference and lack of funds—the latter condition, of course, dependent on the former. It seems to me if the medical profession of this State and of the South would take the proper interest in the matter that they should, if they would encourage the boards of health in their educational efforts, instead of remaining listless, that there would be a great awakening. We cannot blame the business element, absorbed as they are in making money, nor the pedagogical element for their indifference to school hygiene, nor the politician, who hears no public demand for it, when our own profession is so indifferent that they will not take the trouble even to attend the institutes which boards of health endeavor to supply. The American Medical Association, by sending out Dr. McCormack, officially endorsed the plan, but it remains with the individual States to carry on the work in their respective territories. In no other way can the medical profession get closer to the masses and re-establish that public confidence, which seems to be lost, if we are to judge by our impotency before legislative bodies, where an osteopath is in better odor. *"O, tempora, oh! mores."*

Discussion of Dr. Newton's Paper.

Dr. Sexton: This is without question one of the most important papers coming before us. It is in the field of the popular education of the masses that our most brilliant results on behalf of the public health and preventive medicine will be achieved. But there are practical difficulties to be met. Mr. Carnegie has given a large amount of money to eradicate hookworm. While it may not be as prevalent as has been thought, we believe if Mr. Carnegie would give poor children shoes that hookworm disease would be greatly reduced, as it is known that it is sores on the bare feet through which the infection enters. If we will educate the people to the fact that by wearing shoes they will avoid hookworm infection we will have less of this disease.

Take the subject of malaria throughout the South, which has caused a great amount of suffering. If we could educate the people to the importance of getting the swamps drained and cisterns screened and mosquito-bar coverings used, the amount of the dis-

ease would be greatly decreased. Teach the people that the mosquito transmits malaria, and that the mosquito breeds in these swamps, ponds and cisterns. The same thing is true of yellow fever. However, yellow fever disturbs business and causes quarantines, and we are able to get action; we can get money appropriated to fight yellow fever; we can get money donated to carry on the work. You have seen the brilliant results we have achieved in stamping out yellow fever. Now, malaria is with us all the time, and it has done far more harm than yellow fever ever did.

The subject of tuberculosis: Statistics have been prepared to show that one-eighth of all deaths are due to it. You all know how Osler stands in the medical profession, and he says that it is an absolutely preventable disease. Osler says if you will destroy all sputum you will not have a single case of tuberculosis in ten years; that is Osler, whom you all respect as quite an authority on preventative medicine. This is the reason why the Anti-Tuberculosis League is asking funds; we want to break up these nests of infection. We are working backwards if we limit ourselves to the treatment of first-stage cases and allow these second and third-stage cases go on scattering the infection. Help us to break up the foci by your efforts. We find that the people are anxious to be instructed along this line; they are always willing to hear us. In this work of instruction throughout the parishes it is a serious question who is to work up the meeting and invite the speakers. We physicians are reserved, and not inclined to butt in on public gatherings. We think the local Board of Health should take the matter up and arrange the meetings and invite speakers from all over the State. We do not think there are any physicians who will not respond to the call. It is a duty they owe the people of our State, and we have always found them ready to help in this work.

Dr. Dempsey: As to Dr. Dillon's remarks about the buildings on the grounds of the Charity Hospitals, I have made a thorough study of this subject throughout the United States and the principal countries of Europe, and I believe I am also as familiar as any man with the local conditions we have to contend with. I want to say, in view of my study, knowledge and experience, I am in favor of putting these buildings for second and third-stage cases on the grounds of the Charity Hospitals. We are establishing new buildings out on the ozone belt for the treatment of the incipient

cases. Here in the city we propose keeping these second and third-stage cases in separate buildings, to prevent them from infecting the other patients. We have got to take them somewhere for treatment, and that is the only practicable means we have of breaking up these nests of infection.

I would like to tell you of the educational work we are doing if time permitted. We are distributing literature, and have formed twenty branch Leagues. We want to get branches established all over the State, and we want to take up the work actively and aggressively in every locality. We have been disappointed in only getting a report from one of the branch Leagues formed. We need more complete coöperation. We do not know where the fault lies, but we are going on with our work.

Dr. Sidney Porter: As State Medical Inspector, I want to take exception to Dr. Newton's statement that the work of hygienic instruction has been discontinued by the Louisiana State Board of Health. I want to say that one of my first acts was to take up this work and systematize it more thoroughly and get into closer touch with the parish or local Boards of Health and Superintendent of Public Education. I also prepared a pamphlet on school hygiene, which was sent to every school teacher in Louisiana. It deals with such questions as school-room ventilation, proper method of cleaning rooms, exercise, etc. I have visited twenty-eight of the parishes, and in every place that I have visited I have made a personal appeal to the physicians to keep up this work. I have also visited a number of teachers' institutes. I believe it is important to get the teachers to take up this work. I believe that forty teachers in forty different parishes can do much more good in those forty parishes than I can do by getting up and addressing an audience of 2,000 people in one parish or in one neighborhood.

Dr. D. W. Kelly, Winnfield: I think that the yellow fever scare of three years ago has done more to eliminate diseases of all kinds, especially malaria, than anything that has occurred. The people now realize the necessity of many sanitary precautions that would have been entirely ignored except for that. If you go into the country now you will find that they keep their places screened. The improved conditions in this respect are all due to the work that has been done as a result of that outbreak. If you will go into the postoffices you will find bulletins posted, and I think these

do much good. They apply to yellow fever. I think it would be a good thing if that could be done with reference to tuberculosis and hookworm.

Dr. Gelbke, of New Orleans: In regard to disseminating knowledge through the public school teacher, I want to say that I believe it is the duty of the family physician to reach the family direct. I find the physician hesitates to tell the patient that he has tuberculosis, allowing the patient to go on and get worse. I think we should do all we can to stamp out the infection in the present generation; we ought to lessen the danger to the present generation, and not limit our efforts to the future generation.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

State Medical Society.

It is timely to call attention to the next meeting of the Louisiana State Medical Society, which will take place in Shreveport from May 30 to June 1.

No doubt the officers of the Society and the various committeemen and chairmen of sections are bestirring themselves duly, but it devloves on the rank and file, after all, to make the meeting a success, or not. If each individual does not do his best to be there, all else avails little and the meeting will not accomplish much.

Our Shreveport friends are anxious to give us a great reception; we know by experience that they can do it, and we must give them the opportunity to make good.

There is no necessity for each one to try to have a paper. We consider a multiplicity of papers a bad feature, and while we would like to have the record for attendance broken once more, we almost hope the number of papers will be reduced. All a body need do, if he has nothing of special interest to write, is to listen to the others, be prepared to take part in an intelligent discussion of what is presented, and ready to contribute his share of good humor and fellowship.

The delegates, as usual, will have to sacrifice themselves to the general good, and do the necessary routine work, as well as study the problems of medical interest. We would suggest that each one of them give some thought to the status and membership of the American Medical Association. A good deal of discussion on the equity and legality of the election of officers and the rules of membership has been going on, and it would be well for our State Society to be prepared to express its honest opinion and make recommendations thereon. It is true that the communication of our Society to the national association was absolutely ignored last

year, but experience teaches, and, if we have something to say, there is no doubt we can manage to be heard this time.

There are many other questions to be considered, and every one should begin right now to think over what has been suggested and anything else timely. Should this be done, we can accomplish a great deal, and this 1911 meeting would go down as one of the best and most important in the history of the Society, even if there are not quite as many papers read.

The New Medical Member of Tulane Board.

At a recent meeting of the Board of Administrators of the Tulane University, Dr. John Callan was elected to fill a vacancy created by the death of Rev. Beverly Warner. The Board is as much to be complimented upon its choice as Dr. Callan is to be congratulated upon the honor conferred.

It was time that the medical profession should have more than one representative on the Board, when it is considered that the medical department, under-graduate and post-graduate, is one of the most important of the University. We are sure that the other medical member will be glad to have Dr. Callan's coöperation.

The choice of the Board is excellent. Dr. Callan stands high in the estimation of the profession; he has always been a zealous worker wherever his duty has placed him, and he has given earnest thought and labor to the problems of medical education.

Interested in his calling, devoted to the University, a good citizen, we are pleased with his election for his sake, that of Tulane, and that of medical education.

Abstracts, Extracts and Miscellany.

Department of Internal Medicine.

In charge of Dr. E. M. Dupaquier, New Orleans.

A Link Between Ante and Post-Partum Infections.—The cases we see in daily practice are seldom extraordinary; yet, simple and common as they are, it seems we hardly understand them, and

the result is that, repeatedly, mistakes are made, as if improvement and progress in general practice were so hard to obtain. Now here is a common occurrence met again quite recently:

A woman of 44 years of age, pregnant for the fifteenth time, including three miscarriages, has signs of pregnancy nephritis for the first time, albuminuria, dyspnea, edema, dropsy—the latter so common in the multipara, so rare in the primipara. Labor was uneventful; indeed, usually pregnancy nephritis, with dropsy, in the multipara does not culminate in eclampsia. The child was still-born, the placenta being found already detached by the attendant, who related the detail of this case to me when we met in consultation later on. Puerperal infection followed, a most severe one, and for two whole months this woman was confined to bed.

When I saw her the apparently remnant sign of a phlegmatia alba dolens which she had still kept her in bed with fever now and then, suffering from the least motion of the entire limb.

What was striking, then, was not the phlebitis, which I thought existed no more, but the sore joints of the foot, ankle and knee. The hip was free. What was striking, also, was the condition of the urine drawn by catheter (to avoid errors), and the laboratory findings indicating cystitis, with quite an amount of pus cells. The small amount of albumin found then was not *renal,* as it was during pregnancy, but *extra-renal* (pus cells from bladder), and the renal condition, the signs of kidney disease, from the time the woman was delivered had cleared up entirely. In short, the woman, when I saw her, was suffering from an infected bladder, with a *series* of infected joints (septic arthritis, absurdly called by some rheumatic). The pregnancy nephritis had gone, the puerperal infection had spent itself.

The evolution of this case is a succession of links from start to finish, from the time the woman was taken sick during her pregnancy until two and a half months after her *full term* delivery. Many general practitioners seem to forget (1) that a pregnant woman, who was otherwise healthy, and who has an abnormal pregnancy, whatever may be her form of morbidity, *is infected* from within or from without; and (2) that to avoid trouble, either at labor or subsequently, the woman had better be put to bed, observed closely and dealt with intelligently, saving her from subsequent infections, possibly death, thus preventing domestic and economic disaster.

Yes, there is a link between a disease (I prefer to say infection) of pregnancy and the subsequent post-partum infections, in *all cases,* mild or severe.

If the practitioner of general medicine would or could practice every day and at all times with interest in his work, as the surgeon does in his technique, as do the mechanic, the writer, painter, sculptor, instrumental and vocal executionist, repeating and repeating the same difficult, though *routine* stages, in his daily work with thought and attention, life or biologic evolution is nothing else but a repetition, with gradual changes, he would understand his practice much better after a while, just as our friend, the omnipresent and omnipotent surgeon, to restrict our comparisons to our family, knows more about the technique of appendectomy after 500 operations than upon the occasion of his noisy début.

Referring back to the case mentioned, there is no doubt that this woman should have been seen in consultation earlier, at the time she was taken apparently sick, eighth month of her pregnancy (the present attendant had not been called then). Her pregnancy should have been interrupted, and labor, induced carefully, with the greatest asepsis of the vulva and bladder. Very likely no subsequent infection would have occurred.

Labor must be induced in more than one instance in sick women, not because, as, for instance, in this case, eclampsia should be dreaded, for seldom indeed pregnancy infections produce this extreme manifestation in the multipara, but because minor, yet threatening infections, puerperal and others of various kinds, may follow, bringing about sickness and possibly a disaster which intelligent prophylaxis and timely intervention might have prevented.

There are, again, a point or two that in relation to this and to other similar conditions we should have the courage to take up and support with the best of our practical ability nowadays. It is, first, that when most of a severe infection has spent itself, leaving in its track subsequent septic condition, with its usual lingering clinical features, we general practitioners must have once for all the courage to throw away all kinds of drugs, take the moribund out of his bed, bring him forth in the open air and sunshine and feed him with more substantial food than beef tea and other liquid stuff, regardless of the nurse's clinical thermometer, which we must have the courage to order back, once for all, into its little

case, for use on some other occasion; second, that even in the course and acute activity of an infection, puerperal and typhoid included, when the mouth, stomach and bowels are in a fair condition, we must have the courage substantially to feed our patients, thus saving them from the old-fashioned lingering convalescence. These are facts, and no dream. (A lecture to the Polyclinic Class.)

E. M. D.

Department of Therapeutics and Pharmacology.

In Charge of Dr. J. A. Storck and Dr. J. T. Halsey, New Orleans.

Hectine—At the meeting of the "Société médicale des hopitaux" in Paris on June 4th of this year Balzer and Mouneyrat reported on a new preparation of arsenic called "hectine." The author stated that the preparation was the sodium salt of benzol-sulphone-para-amino-phenyl-arsenic acid, a chemical substance nearly allied to atoxyl (the sodium salt of para-amino-phenyl-arsenic acid). It is said to have the advantage over the latter of being less poisonous though equally efficacious. The preparation consists of white crystals readily soluble in water. The aqueous solution may be sterilized by heat without fear of decomposition. The comparatively slight toxicity of the remedy was proved by animal experiment. It was then used in man, and was found, even in large doses, to produce no harmful effect upon the eye, as has been observed with atoxyl. In some cases Balzer gave 0.8 gramme (12 grains) a day for 10 days by mouth without observing the slightest ill effects. In any case hectine produces no cumulative action, for, as the authors have shown, it is very rapidly eliminated by the organism. A further advantage of hectine is said to be that its aqueous solutions on subcutaneous injection cause no appreciable inflammation. As far as the results of the author's trials with this preparation have shown, the new arsenic preparation is a useful drug in the treatment of syphilis. Injections of hectine were found of good service in malignant secondary syphilis and in tertiary syphilis. Balzer states that it is best to begin by injecting 1 gramme (17 min.) of the 10% solution every second day, continuing after 6 days with injections of 1 to 2 grammes

(17 to 34 min.) of this solution daily. After 20 to 30 grammes (1-3 to 1 oz.) of the solution have been used an interval of 14 days is allowed. For children the authors give the daily dose as 0.05 to 0.1 gramme (¾ to 1½ grains) of hectine, and for infants 0.02 to 0.05 gramme (1-3 to ¾ grain). By mouth hectine may be given in doses of 0.05-0.075 gramme (¾ to 1 1-6 grain) in which case 20 to 30 drops of a 5% solution are given. The injections of hectine may also be combined with mercury, and the following formula is recommended:

Rp. Hectine ..... 1.0 (15 grains)
Hydrargyr. oxycyanid ..... 0.1 (1½ grain)
Aq. destill. steril ..... 10.0 (1-3 oz.)
Of this 1 to 2 c.c. (17 to 34 min.) are injected daily for 10 days.

J. A. S.

Alcohol Vapor Mixed With Oxygen.—Willcox and Collingwood call attention to the remarkable stimulant effect on the heart and circulatory system produced by the inhalation of oxygen containing alcohol vapor. When this combination is used, it can be readily demonstrated in cases of cardiac failure that the addition of alcohol vapor to the oxygen administered produces a stimulant effect on the circulatory system much greater than that produced by the breathing of oxygen alone. These are the good effects of the oxygen plus an additional marked stimulant effect on the circulation caused by the contained alcohol vapor. Oxygen which has been bubbled through absolute alcohol contained in an ordinary wash bottle was administered in several cases of illness in which cardiac failure was a prominent symptom, and it was found that the mixture produced a marked stimulant effect on the heart and circulation, decidedly greater than that produced by oxygen alone. In some of these cases the administration appeared to have been the cause of the prolongation and saving of life. In cases of pneumonia with cardiac failure the mixture of oxygen and alcohol vapor was found to be a valuable remedy.—*British Medical Journal.*

Fatal Lead Poisoning in a Two-Year-Old Child from Sucking a Painted Bedstead.—Hirsch *(Berl. klin. Woch.)* reports a case of lead poisoning in a two-year-old child which was brought to him with the history of continued vomiting and colic for six weeks. The child vomited all food and was constipated.

There was great pallor and emaciation and a scaphoid abdomen very painful to palpation. He elicited the history that for weeks the child had been gnawing and sucking at its bedstead, which had been painted by the child's father. Inspection of the bed showed that the paint had been sucked off an area about 4 by 8 inches. Scrapings of the paint and a small portion of the child's feces both showed a large percentage of lead by chemical analysis. The child developed a weak, irregular pulse, and fatty renal epithelium and casts, with traces of lead, were found in the urine. Pneumonia developed and terminated fatally. No blue line was found on the gums. Autopsy and microscopic findings showed fatty degeneration of the myocardium, the liver, and especially the renal epithelium, with the presence of pneumonia.

Hirsch points out the danger from bedsteads painted with any preparation containing lead or zinc, since children often have the habit of gnawing and sucking at their bedsteads. He advocates laws forbidding the employment of paints containing lead or zinc for such purposes. J. A. S.

Louisiana State Medical Society Notes.

In Charge of Dr. Joseph D. Martin, Secretary, New Orleans.

Calcasieu Parish Medical Society.—At the last meeting of the Calcasieu Parish Medical Society, the following resolutions were unanimously adopted:

"Whereas, It has pleased the Great Architect of the Universe to remove from our midst our confere and fraternal brother, from the scene of earthly labor, Dr. Temple B. Smith, who died in Lake Charles, October 3, 1910, page 46;

"Be it resolved, That the Calcasieu Parish Medical Society mourns the loss of its most worthy president, who was a valuable and energetic member, and the community a capable practitioneer and benevolent citizen. That these resolutions be spread upon the minutes of the society and copies be sent to the official journal of the State Society."

At this meeting the following new members were elected: Drs. A. J. Reynolds, De Ridder; A. L. Carlton, Singer; Otto Braun,

Lake Charles. Dr. Thomas R. Sartor, of Oberlin, was elected president, to fill the vacancy caused by the death of Dr. Smith, and Dr. A. J. Perkins, of Lake Charles, was elected vice president, to fill the vacancy caused by the elevation of Dr. Sartor to the presidency.

Shreveport Medical Society.—At the last meeting of the Shreveport Medical Society, the following new members were elected: Drs. C. C. Sims, Mooringsport; J. K. Sheppard, Belcher; I. B. Rougon, W. B. Hunter, E. A. Welsh, Thomas Ragan and J. L. Scales, Shreveport.

(Signed) A. A. Herold, M. D. Secretary.

East Baton Rouge Parish Medical Society.—The society met in regular session on the night of December 14, 1910. Quorum present. The amendment to the by-laws of the society, regarding contract practice, was carried through the third reading and adopted. The amendment reads as follows:

"Whereas, It is well known that there exists in Baton Rouge and other cities of Louisiana certain secret societies whose purpose is to exploit the medical profession by a method of contract practice which works great loss and indignity to the profession, both collectively and individually; therefore, be it

"Resolved, That it is the judgment of the East Baton Rouge Medical Society, that after January 1, 1911, no member of this society shall enter into any such contract on any terms lower than the regular physicians' rates; and, be it further

"Resolved, That no one shall be admitted to membership in this society who is violating this resolution, nor shall any member of this society consult with any physician who has such a contract with said secret societies after January 1, 1911."

The following officers were elected to serve during 1911: Dr. P. H. Jones, president; Dr. R. C. Kemp, vice president; Dr. A. S. J. Hyde, secretary-treasurer.

The dues of the society were reduced from $15 to $10 per year.

(Signed) A. S. J. Hyde, M. D. Secretary.

Communications.

Albany, N. Y., Dec. 28, 1910.

To the Editors:

Ehrlich's advocacy of the use of "606" in syphilis has attracted much attention to the various organic arsenic preparations, and many practitioners have suggested the use of the latter as a substitute for the former.

As one of the authors of the only article thus far published, (Dawes and Jackson, *Journal of the Am. Med. Ass'n.*, June 22nd, 1907, p. 2090), which gives an authentic description of the physiologic action of sodium cacodylate based upon pharmacologic investigation and clinical observation, I would esteem it a favor if you would publish a request in your valuable journal that anyone who desires information on sodium cacodylate or anyone who has used the drug, successfully or not, communicate with the un-

I am, respectfully yours,

Spencer L. Dawes.

New York, Jan. 5, 1911.

To the Editors:

He who is not a frequent visitor to radical clubs, does not come in contact with newspaper men, with New Thoughters, and does not read regularly the numerous naturopathic, health culture and physical culture journals, and other allegedly advanced publications, can have no idea how the medical profession is ridiculed, how it is maligned, how it is lied about, how it is misrepresented, how it is "knocked" on every possible occasion.

We are pictured as ignoramuses, grafters, butchers, anxious to operate whether there is a necessity or not; drug dopers, etc. etc. We are denounced as a trust, monopoly and any attempt of ours to organize, to pass laws protecting the public health is characterized as an attempt at class legislation, a desire for special privileges, inspired by our fear of the competition, by our fear of the superior skill of our irregular rivals.

And the average physician who has not given the matter any thought, has no idea what effect these unceasing slanders and persistent lies have on the public mind, how suspiciously a large part of the public is beginning to look at the medical profession,

how we are losing the confidence of the people, how the ground is slipping from under our feet.

As an illustration we need only mention the reception that has been accorded to the suggestion of a Federal Department of Health. The motives that actuate us and the objects of such a department were at once misrepresented, the people were made to believe that their freedom to choose a medical adviser was threatened, the forces of reaction and obscurantism, masquerading in some instances under the guise of liberalism, were quickly marshaled and in a short time a society was organized, which now claims a membership of one hundred and fifty thousand.

We, physicians, are ourselves to blame. When the irregular, fantastic and pernicious cults began to make their appearance, we paid no attention to them. We thought they amounted to nothing, and would soon dry up and shrivel away of themselves. When the malicious attacks began to appear in the various quack publications, we remained silent. We considered it *infra dignitatem* to pay attention to them, and we thought that the public would have no difficulty in seeing through their falsity and meretriciousness.

Our long and patient inactivity has been due to the false idea that truth will always triumph and error is bound to die. Yes, eventually. But if error is allowed to grow and spread unhampered, while those who see the truth will not take the trouble to proclaim it and expose the error, then it can take centuries before the correctness of the truth and the falsity of the error will be perceived.

In this as in every other line of human activity prevention is immeasurably superior to cure, and the right way to fight error is not to permit it to get a firm foothold. Error and superstition are hard things to uproot after they have attained the dignity of a universal belief.

It is time that the medical profession change its tactics and assume a wideawake, militant attitude. It is time that we actively attack error wherever it shows its head. By reading papers before lay audiences, by participating in discussions, by writing to the newspapers, by refuting the false arguments of the false prophets wherever they appear, we can do much toward destroying the influence of the quacks and the irregular cults. In short, we must throw off our exclusiveness, we must go out to the public and take it into our confidence.

The truth is with us—that we know; only we must not hide it under a bushel, and expect that its light will, without any effort on our part, penetrate into the darkest recesses of ignorance and quackery.

Wm. J. Robinson, M. D.
President of the American Society of Medical Sociology.

Medical News Items.

North Texas Medical Association.—The North Texas Medical Association held its sixty-second semi-annual meeting at Dallas. Dr. C. A. Gray, of Bonham, was elected president. The next meeting-place will be McKinny, Texas.

Chi Zeta Chi Medical Fraternity Meeting.—The Chi Zeta Chi Medical Fraternity closed its national convention on December 31 at Little Rock, Ark. Dr. Hugh M. Lokey, of Atlanta, was re-elected supreme exalted grand master. Richmond, Va., was chosen as the place for the 1911 meeting.

The National Confederation of State Medical Examining and Licensing Boards will hold its twenty-first annual meeting in Chicago on Tuesday, February 28, 1911, at the Congress Hotel. An important feature of the programme will be a "symposium" on the State Control of Medical Colleges.

Free Clinic at the Presbyterian Hospital.—The Presbyterian Hospital, 730 Baronne street, opened a free clinic on January 16, for the poor only.

Harvard Medical School's Free Public Lectures.—The Harvard Medical School will give a series of free public medical lectures for four months. These lectures will be given on Sundays at 4 o'clock in the afternoon.

The National Society for the Prevention of Blindness and the Conservation of Vision was organized in New York recently.

The Interstate Medical Journal of St. Louis issued a large special edition in January on Syphilis.

Insane in the State of New York.—The State of New York has 32,658 insane—a proportion of one lunatic to every 289 of the population.

Meeting of the American Society of Tropical Medicine.—

The eighth annual meeting of the American Society of Tropical Medicine will be held in New Orleans on Thursday and Friday, May 18 and 19, 1911.

Registration of Births and Deaths.—The Census Bureau of the United States is issuing to the health officers and medical students of the country a physicians' pocket reference to the International List of Causes of Death. The Census Bureau will, upon request, supply physicians' reference leaflets, specimen copies of the Revised United States Standard Certificate of Death, and of the model registration law.

The American Proctologic Society's Prize for the Best Original Essay on Any Disease of the Colon.—The American Proctologic Society announces through its committee that the cash sum of $100 will be awarded, as soon as possible in 1911, to the author of the best original essay on any disease of the colon in competition for the above prize. Essays must be submitted to the secretary of the committee on or before May 10, 1911. The address of the secretary is given below, to whom all communications should be addressed.

Each essay must be typewritten, *designated by a motto or device, and without signature or any other indication of its authorship, and be accompanied by a separate sealed envelope, having on its outside only the motto or device used on the essay, and the address of the author.* No envelope will be opened except that which accompanies the successful essay.

The members of the committee are: Dr. Dwight H. Murray, chairman; Dr. Samuel T. Earle, Dr. Jerome M. Lynch, Dr. Alois B. Graham, Dr. Lewis H. Adler, Jr., secretary, 1610 Arch street, Philadelphia, Pa.

Report of the State Medical Examining Boards.—In reading the report of the State Medical Examining Boards one notices more doctors admitted by reciprocity each year. This is an encouraging sign.

Personals.—Dr. John Callan was elected a member of the Board of Administrators of the Tulane Fund.

Dr. H. W. Wickes, past-assistant surgeon of the New Orleans Marine Hospital Service, has been promoted to surgeon, and was transferred to Cairo, Ill. His friends wish him much happiness in his new field of duty.

Dr. J. A. Devron, formerly captain and assitant-surgeon of the Louisiana National Guards, Second Regiment, has been promoted to major and chief-surgeon.

Dr. John T. Vick, of Fort Towson, Oklahoma, is doing post-graduate work in Europe.

Dr. J. L. Robinson has resigned from the Hammond Board of Health.

Dr. W. E. Tatum, president of the Board of Health of Many, La., has resigned and Dr. Edmond Dillon has been elected in his place.

Dr. N. B. Witherbee announces his retirement as a collaborator of the *Charlotte Medical Journal.*

Dr. J. H. Barham was elected president of the Nacogdoches Medical Society at its last meeting.

Dr. George Dock, Dean of the Medical Department of Washington University, St. Louis, is now in Southern California, where he will remain for a few months to recover his health.

Dr. Henry J. Scherck, formerly of this city, is now a member of the faculty of the St. Louis Medical School.

Dr. Z. T. Gallion has been elected parish physician of Natchitoches.

Dr. E. L. Sanderson has been elected president of the Board of Health of Natchitoches.

Prof. A. L. Metz has been appointed a member of the Organization Committee of the Eighth International Congress of Applied Chemistry.

Dr. Hamilton P. Jones has resigned from the Louisiana State Board of Health, as Food Commissioner.

Dr. John B. Murphy, of Chicago, president of the American Medical Association, gave a special clinic at the New York Post-Graduate Medical School, January 6th, on Bone and Joint Surgery.

Removals.—Dr. J. E. Bailey, from Haile, La., to Strong, Ark.

Dr. W. A. Nabors, from Naborton to Mansfield, La.

Dr. D. Y. Willbern, from Alice, Texas, to Runge.

Dr. J. C. Phillips, from Orange, Texas, to Meridian, Miss.

Dr. James Adams, from St. Joseph, La., to Duncan, Ark.

Dr. B. F. Hand, from Battlefield, Miss., to Meridian.

Dr. J. M. Brown, from Compte, La., to Washington.

Dr. J. B. Hargrove, from Natchitoches, La., to Coldwater.

MARRIED.—On January 4, 1911, Dr. Jerome E. Landry to Miss Llewallan Benoit, both of this city.

On December 29, 1910, Dr. R. H. Davis, of St. Louis, to Miss Ora May Lewis, of Ocean Springs.

On January 5, 1911, Dr. James M. Smith to Miss Irma Robinson, both of Magnolia.

On December 27, 1910, Dr. W. M. Lawrence, of Farmersville, La., to Miss Bessie Burt.

DIED.—On January 11, 1911, at Pittsfield, Mass., Dr. O. S. Roberts. Dr. Roberts was one of the best-known practitioners in Western Massachusetts and a reader of the JOURNAL since 1877.

On December 27, 1910, at Benton, La., Dr. Braxton Wise. Dr. Wise was one of the oldest practitioners in Bossier Parish.

On December 21, 1910, at Dodson, La., Dr. Harry Thomas.

On January 15, 1911, at Clinton, La., Dr. Emmett Lee Erwin.

On December 26, 1910, at Shubuta, Miss., Dr. J. C. Spinks, in his eightieth year.

On January 14, 1911, at his residence in this city, Dr. Albert J. Mayer, aged 33 years. The JOURNAL extends its sympathy to his family and friends.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

NOTICE.—In the review of "*Some Common Remedies and Their Use in Practice*," by Dr. Eustace Smith, published in the December number, the name of the publisher was omitted by oversight. The work is published by Mr. Paul B. Hoeber, No. 69 E. Fifty-ninth street, New York.

The Examination of the Function of the Intestines by Means of the Test Diet, by PROF. DR. ADOLF SCHMIDT (HALLE), A. S. Authorized Translation from the Second Revised and Enlarged German Edition, by CHARLES D. AARON, M. D.

The first edition of this publication was well received, and proved a distinct contribution to medical literature, but it left much to be desired. In the present edition the author has simplified the general plan of examination of the feces to such a degree that much which was unsatisfactory has been overcome.

The importance of the systematic examination of the feces for the determination of the function of the intestines and of disturbances due

to a perversion of the function of the stomach, liver and pancreas is being more clearly recognized, and to the author of this booklet (a pioneer) the profession owes much in this direction.

I desire to introduce all progressive members of the profession to this splendid contribution by a master of his subject. STORCK.

A Compend of the Active Principles, by HAROLD HAMILTON REDFIELD, A. B., M. D. The Clinic Publishing Company, Chicago, 1910.

This little volume is dedicated to the memory of Adolph Burggraeve, whose genius gave to the world of medicine the first definite knowledge of active principles of therapeutics.

In an intelligent manner the author presents the use of alkaloidal materia medica, based largely upon his own clinical experience. We feel that this contribution will assist progressive practitioners in some measure to clear away that species of nihilism which has so long beclouded the therapeutic horizon. Furthermore, that it will help to place rational therapeutics in its rightful position in the armamentarium of the physician. STORCK.

E. Merck, Annual Report, 1910.

We desire to commend the enterprise of E. Merck in issuing this useful report of recent advances in pharmaceutical chemistry and therapeutics. STORCK.

Publications Received.

P. BLAKISTON'S SON & CO., Philadelphia, Pa.

The Treatment of Disease, by Reynold Webb Wilcox, M. D.

Practical Bacteriology, Blood Work and Animal Parasitology, by E. R. Stitt, A. B., Ph.G., M. D.

Induced Cell Reproduction and Cancer, by H. C. Ross, M. R. C. C. S., L. R. C. P., with the assistance of John Westray Cropper, M. D., M. Sc., M. R. C. S., L. L. R. C. P.

J. B. LIPPINCOTT, Philadelphia and London, 1910.

International Clinics, by leading members of the medical profession throughout the world. Volume IV, twentieth series, 1910.

D. APPLETON & CO., New York and London, 1910.

Principles of Therapeutics, by A. Manguat. Translated by M. Simbad Gabriel, M. D.

THE YEAR BOOK PUBLISHERS, Chicago, 1910.

The Practical Medicine Series, under the general editorial charge of Gustavus P. Head, M. D., and Charles L. Mix, A. M., M. D. Volume IV: *Skin and Venereal Diseases, and Miscellaneous Topics,* edited by W. L. Baum, M. D., and Harold N. Mayer, M. D. Series 1909.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1910.

Hydrotherapy, by Guy Hinsdale, A. M., M. D.

Dislocations and Joint Fractures, by Frederick J. Cotton, A. M., M. D.

Practice of Surgery, by James Gregory Mumford, M. D.

Diseases of the Stomach and Intestines, by Robert Coleman Kemp, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans

FOR DECEMBER, 1910.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	2	5	7
Intermittent Fever (Malarial Cachexia)	2	.....	2
Smallpox	.....	.....	.....
Measles	1	.....	1
Scarlet Fever	.....	.....	.....
Whooping Cough	.....	1	1
Diphtheria and Croup	1	.....	1
Influenza	22	12	34
Cholera Nostras	.....	.....	.....
Pyemia and Septicemia	.....	1	1
Tuberculosis	51	35	86
Cancer	11	8	19
Rheumatism and Gout	2	1	3
Diabetes	2	.....	2
Alcoholism	1	.....	1
Encephalitis and Meningitis	3	3	6
Locomotor Ataxia	1	.....	1
Congestion, Hemorrhage and Softening of Brain	25	1	26
Paralysis	5	.....	5
Convulsions of Infants	.....	.....	.....
Other Diseases of Infancy	7	8	15
Tetanus	3	1	4
Other Nervous Diseases	2	2	4
Heart Diseases	69	46	115
Bronchitis	5	5	10
Pneumonia and Broncho-Pneumonia	32	36	68
Other Respiratory Diseases	4	2	6
Ulcer of Stomach	2	1	3
Other Diseases of the Stomach	5	2	7
Diarrhea, Dysentery and Enteritis	19	14	33
Hernia, Intestinal Obstruction	4	1	5
Cirrhosis of Liver	7	5	12
Other Diseases of the Liver	2	3	5
Simple Peritonitis	1	2	3
Appendicitis	4	.....	4
Bright's Disease	29	20	49
Other Genito-Urinary Diseases	11	5	16
Puerperal Diseases	1	2	3
Senile Debility	6	3	9
Suicide	6	.....	6
Injuries	22	24	46
All Other Causes	23	16	39
TOTAL	393	265	658

Still-born Children—White, 18; colored, 18; total, 36.

Population of City (estimated)—White, 272,000; colored, 101,000; total. 373,000.

Death Rate per 1000 per annum for Month—White, 17.34; colored, 31.48; total, 21.17.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.18

Mean temperature 54.00

Total precipitation ..... 3.45 inches.

Prevailing direction of wind, east.

New Orleans Medical and Surgical Journal.

VOL. LXIII. MARCH, 1911. No. 9

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Importance of Regulating the Diet in the Treatment of Disease.*

By ALLAN EUSTIS, M. D., Abbeville, La.

I am presenting this paper to-night with the full knowledge that I am running the risk of being classed as an iconoclast by some of the members of this society, but I have seen so little attention paid to the diet in these cases in which I have been called in consultation, that I feel that not enough importance is paid by the general practitioner to this particular branch of medicine. To me the diet of a patient is as important as any medicines which I may prescribe, and by this I mean a knowledge of not only the quality of nourishment but also quantity as represented in heat units.

I may be excused if, by way of introduction, I refresh your memories as to the fundamental principles underlying dietetics. A calorie

* Read before the Attakapas Clinical Society, meeting Lafayette, La., January 25, 1911.

is the unit heat, being the amount of heat required to raise one gram of water 1° Centigrade, or from 15° to 16° Centigrade; and inasmuch as all food ingested generates heat in the body on combustion, the calorie is taken as the unit of energy in the various foodstuffs. One gram of proteid on combustion will generate 4.1 calories, one gram of fat will generate 9.3 calories and one gram of carbohydrate will generate 4.1 calories; which as you remember are the coefficients first propounded by Rubner, and from which I see no reason to deviate, although Atwater has since obtained somewhat lower values. For all practical purposes the Rubner coefficients are sufficient to enable us to calculate the energy in any given diet. It will be noticed that proteids and carbohydrates are isodynamic or yield, on combustion, the same amount of energy, but it must be remembered that while combustion of carbohydrates is, as a rule, attended with little or no toxic material; on the other hand proteids yield a long list of substances all more or less toxic to the organism, the specific action of which, we are at present not fully acquainted with. The older physiologists, headed by Voit, taught that a working man required 118 grams of proteid, 56 grams of fat and 500 grams of carbohydrate in twenty-four hours, but Chittenden in his work with the U. S. Army squad showed that our previous ideas of the great necessity of a high proteid diet were erroneous, and that a man could do better and more work on only 36.6 grams of proteid, and that a man could do moderate work on only 1,600 calories instead of 3,000 calories per 24 hours. In regulating a diet, it must be understood that the greater the muscular work the larger number of calories are required, while in fevers, where there is a derangement of the heat centres, there is a great increase in proteid metabolism with corresponding increase in energy requirements.

In presenting this subject, it is best that we take up the more common diseases and consider the dietetic treatment of each.

Typhoid Fever—No disease taxes the ingenuity of the physician in its dietetic treatment more than typhoid fever, and while I am a believer in intestinal antiseptics in certain cases in which they are indicated, I am firmly of the opinion that, if proper attention is paid to the diet, there will be no necessity of intestinal antiseptics. I have long since discarded milk in the dietetic treatment of this disease, except when it is previously peptonized. In typhoid fever we

have not only a bacteriemia with resulting absorption of the specific toxins, but there is also a profuse growth of the colon and typhoid bacillus in the intestines. It is a burden for the body to eliminate the specific toxins of the typhoid bacillus, but when the products of intestinal putrefaction are also to be eliminated, it causes an unnecessary and often fatal amount of work upon the human organism. And yet such are the conditions which exist in fully 90% of the cases of typhoid fever which are treated by feeding upon milk, raw eggs and soup. The intestinal putrefactive toxins can be easily demonstrated in the urine, and when present in large amounts, I have never failed to find a delirious patient, with high temperature and dry coated tongue. By eliminating proteid from the diet in these patients for a day or two, and substituting carbohydrates and fats with an abundance of water, an improvement in the general condition of the patient will be noticed, as evidenced not only by a drop in temperature, but also by a disappearance of the delirium and the appearance of a moist, clean tongue. During the past year, I have had sixteen cases of typhoid fever in my own practice, one only of which was delirious, and this case was first seen by me on the eighth day of the disease. The importance of diet is well exemplified in this case. When first seen the young lady had a temperature of 104.5°, there was violent delirium and the tongue was dry and coated. Indicanuria was so excessive that the urine turned black on addition of the oxidizing agent, but in two days the delirium had vanished, her tongue was moist, and fairly clean and her temperature had fallen to 101.5°. The treatment had been total abstinence from all proteid food, a dose of castor oil and three bottles of vichy in each twenty-four hours.

As mentioned formerly, proteids and carbohydrates contain the same heat equivalents; and while the human organism requires a certain amount of proteid to maintain life, carbohydrates and fats can replace them to a certain extent. One of the best and most palatable sources of carbohydrate for a typhoid fever patient is pulled sugar candy, flavored with perpermint or vanilla, as its acts as a mechanical means of cleansing the mouth as well as supplying abundant calories, a half pound containing 926 calories. Besides this, cornmeal mush, "couche-couche" and molasses, which is a creole dish prepared by parboiling cornmeal, orange juice, grape juice, lemonade and oatmeal pap, obtained by straining the boiled

oatmeal through cheese cloth. Tapioca pudding, cornstarch pudding, molasses candy, lemon drops, as well as sugar cane, will be greatly relished by the typhoid fever patient and will add considerably to the calorific value of the diet. Where there is not excessive intestinal putrefaction, moderate amounts of proteid are indicated, but these should be given in as an assimillable a form as possible and not as is often done in the form of milk, which quickly forms a dense curd and becomes a very dense mass of proteid material which is digested slowly and becomes a good pabulum for the growth of the colon and typhoid bacilli. Proteid is best given in the form of whites of eggs mixed with orange juice or grape juice with cracked ice, calf's foot jelly, which is on the market and can be obtained from any wholesale grocer, chicken or beef broth, the juice expressed from rare meat, ice cream made from peptonized milk or malted milk, and so-called "kisses" made by beating the whites of eggs with sugar and baking. I have found cake chocolate well borne and on account of the large amount of fat, it yields a high calorific value.

While many cases of typhoid fever are undoubtedly over-fed with proteid material, many more are literally starved. It must be remembered that ordinary bouillon is simply a solution of gelatin with extractives, and that while gelatin will, to a great extent, save tissue proteid, the body cannot maintain itself long on an exclusively gelatin diet.

In typhoid fever, as in all other febrile conditions, water plays as important a part as do the three foodstuffs just mentioned. I endeavor to introduce half a gallon during the twenty-four hours, and if unable to do so by means of the mouth this can be accomplished by the Murphy drip or by hypodermoclysis.

Pneumonia—In pneumonia, there is a greater increase in tissue metabolism per twenty-four hours than in any other disease, followed by rapid emaciation and rapid loss of vitality. Our aim, therefore, should be to crowd proteids as much as possible with abundance of water to carry off the large amounts of waste products from tissue katabolism. When the heart is laboring, however, and has lost strength liquids should be diminished so as to ease its burden. Each case of pneumonia is unique and no hard and fast rules can be laid down for its dietetic treatment. As Atwater has shown, alcohol can replace carbohydrates and fat in combustion in

the body, and my clinical experience coincides with this fact. In this connection, I wish to caution against the many so-called liquid foodstuffs on the market. Most of these are alcoholic solutions of creatin, creatinin, xanthin, albumoses and peptones and sugar, Whatever food value they may possess is due to the albumoses and peptones, the sugar and the alcohol.

I had occasion once to analyze these several preparations and in only three were there any albumoses or peptones, these containing 5%, 8% and 15% of secondary albumoses, respectively, and their alcoholic content ranging from 15% to 25% by the volume. The paste "extract of beef, containing in glass jars, is nothing but the extractives from the meat, and while Leewi was able to maintain a dog in nitrogenous equilibrium for a short time on a diet composed of these amino acids, his experiments have not been fully corroborated, and it is doubtful if the human organism can build up tissue proteid from creatin, xanthin and the like, on account of their tendency to produce diarrhea.

NEPHRITIS AND DIABETES MELLITUS—The diets for these diseases are too well discussed in our modern textbooks to need elaboration here, but I wish to caution against the total withdrawal of carbohydrates in the latter disease. Fifty-two per cent of the proteid molecules is split up in the body into a carbohydrate radical with formation of glycogen and, subsequent formation of glucose, diacetic acid and acetone if carbohydrate metabolism is at fault.

Many cases of diabetic coma are caused by this sudden withdrawal of carbohydrates, and a certain amount of carbohydrate food is always indicated.

ACUTE SPASMODIC ASTHMA—For a discussion of the dietetic treatment of this disease I will refer you to my paper before the State Society in 1909, published in the proceedings, since when I have seen many more cases of this disease which I have been able to relieve purely on dietic line. I see no reason to recede from the position I took at that time, although my views were not in accord with the views of that time or now.

TUBERCULOSIS—In this disease it is a well understood fact that the *sine qua non* is forced proteid feeding, but caution should be exercised lest this is overdone, leading to intestinal putrefaction of proteids with engorgement of the liver, elevation of temperature, and loss of appetite. The urine should be closely watched for

evidences of this condition, and when found, a brisk purgative should be given with total abstinence from proteid food for from three to four days, but with forced carbohydrate and fatty feeding. Fats play as important a part in the dietetic treatment of tuberculosis as do proteids, and such dishes as bacon, sardines, chocolate, sausage, spare rips, ice cream and oily salads serve as admirable sources of fats. There is no rational reason why vinegar in moderation should be thinning and yet such is the generally accepted belief among laymen.

Arterio Sclerosis—Restricted proteids with regular meals is the sheet anchor of success in the treatment of arterio sclerosis. In 1905, in a paper before the Orleans Parish Medical Society, I suggested that this condition was produced by the action of the proteolytic toxins upon the intima of the arteries, which was received with smiles, but since then Metchnikoff has expounded the same view and I believe in time this will be proven. There are vast opportunities in research along the metabolism of this disease as well as all others, and our knowledge at present is in great part theoretical reasoning from analogy from experiments on dogs or other lower animals.

Pernicious Anemia, Chlorosis and Allied Conditions—Foods which are rich in iron should be given, such as red meat, spinach, apples and pears, mustard greens, tomatoes and string beans. In these conditions, as well as in any other disease, the condition of the digestion and the condition of the liver and kidneys must of necessity alter the diet.

Hepatic Insufficiency, So-called "Biliousness"—In the treatment of this condition which is so common, the diet plays as important a part as the purgative which is administered. I have had many patients present this condition who informed me on being told that I would give them a mercurial purge, "Doctor, I took a purgative last week, but I don't feel any better." Questioning invariably elicited the fact that they had followed up the purgative with a diet rich in eggs, milk and meat. An attempt to relieve this condition without enforced abstinence from all proteid foods for a few days amounts to an attempt to clean a dirty ditch into which one is constantly allowing dirty water to enter. The condition which we call auto intoxication and which the layman knows as biliousness is due to the excessive accumulation of proteolytic toxins,

which are ordinarily detoxicated by the liver cells, but unless the latter are allowed to rest up, they can hardly be expected to regain their normal function very rapidly. While we have all been taught that the prime cause of cirrhosis of the liver is alcoholic excesses, I believe that it will be proven that this condition is caused by the constant irritation of the liver cells in their effort to detoxicate the toxins generated from over-indulgence in proteid food. Besides the above mentioned diet, there should be given an abundance of water to assist in the elimination of the circulating toxins.

CHRONIC GASTRITIS—This condition presents such a varied symptomatology and is so often associated with malfunction of some other organ, that I have almost begun to believe that there is no such disease as such, but that it is always secondary to some other condition, viz: Hepatic or renal insufficiency, duodenal ulcer, gall stones or chronic cholecystitis, chronic cardiac disease, appendicitis, or the excessive use of alcohol or tobacco. As a general rule it may be stated that where there is a hypochloridia or an achloridia a diet free from carbohydrates is indicated, or one in which these are in small proportions and in a form in which they are not easily fermented. It is well agreed that in this condition, fats are not well tolerated and should be eliminated as much as possible from the diet.

It is impossible to cover the dietetic indications of every disease in a paper such as this, and I have purposely left out of consideration a discussion of the dietetics of the principal diseases of the stomach, gall bladder and intestinal tract as these are covered in our textbooks. I have merely attempted to bring out the more common diseases in our climate as examples of what can be accomplished by dietetic means.

One's aim in obtaining an ideal diet for a particular patient should be one with not less than 1,500 calories per twenty-four hours, containing the foodstuffs in as an assimilable a form as possible, entailing the least work upon the eliminative organs in ridding the body of waste products.

Extirpation of the Lachrymal Sac.*

By T. J. DIMITRY, M. D., New Orleans.

A lachrymal sac which discharges pus for any length of time, which necessitates repeated probing to keep the canal open, and which does not respond to syringing with saline solution nor instillation of argyrol justifies its removal.

The danger that a diseased sac occasions to the eye is tremendous, and an experienced ophthalmologist always looks on with great fear when the lachrymal drainage apparatus is at fault, and has to contend with that condition in which a mixed infection pus is readily pressed from the sac. In chronic dacryocystitis there is constriction and stoppage of the nasal canal, which passes through a long and very vascular network into the nose. This constriction forms a reservoir of stagnant tears, and many organisms are washed from the eyes and conjunctiva into this container, and ultimately there is decomposition.

The contents of the sac, occluded from below, and this retained secretion, at the body temperature, offers a most excellent medium for the development of microorganisms. The irritation produced by these microorganisms and retained secretion on the mucous membrane which lines this sac, causes it to pour out a substance which, when mixed with the decomposed contents of the sac, much resembles pus. This pus-like fluid contains microorganisms that one fears so greatly and has in it the cause of ulcer serpens which is thought to be caused by pneumococci.

Parson cites the different microorganisms found in this pus. They are the staphylococci, streptococci and the pneumococci, which are frequent and of the most virulent form; ozena bacilli, bacilli coli, bacillus pyocyaneus, actinomycosis, xerosis bacilli and others.

Extirpation is the only real method that assures a positive cure. The operation is not one of great difficulty and when carefully performed is one of the most satisfactory operations to the eye surgeon.

This operation, historically, dates from the earliest part of the eighteenth century when one Planter extirpated the whole sac. Planter's technic was not readily taken up, for that operation is

* Read before Orleans Parish Medical Society, January 9, 1911.

again performed in 1862 by Magni; but it was due to one Berlin that the operation became popular, though it met with much opposition by the great authority Ault, who considered the operation very difficult of execution. The removal of the sac as an operative procedure has progressed greatly with most of the modern ophthalmic surgeons and the consensus of opinion is very favorable.

Planter in removing the sac also made an opening into the nose; so did Aubreat, who perforated the lachrymal bone. Paul Egene perforated the bone and attempted a fistulous opening without removal of sac; to-day there are some who are reviving this operation. The mucous route of extirpation is performed by Van Hoffman, who advocated his principles before the Heidelburg Congress in 1896. The operation is difficult and offers no advantage over the cutaneous route. The advocates of removal by the cutaneous route are Shrieber, Volkes, Kuhnt, Roelet, Valude, Muller and others. Shrieber made a vertical incision from the inner canthus and 2 centimeters long. This occasions hemorrhage by cutting branches of the angular artery. The palpebral ligament was cut by Kuhnt and by others; Roelet and Lyons did not cut the ligament. Valude removes the sac with the periosteun, as does also Czermark.

I have had much experience in operating on this part of the lachrymal apparatus, and have operated a number of times for the removal of this canal. My first technic was that so clearly described by Muller in his recent book of operations from the clinic of Fuchs of Vienna. After several trials I have altered, and added to this method, features from the technic of others which I have found excellent and which I believe offer an opportunity for better results. I have performed this operation a number of times privately, and have had the opportunity for further work at the clinic of Dr. Bruns at Eye, Ear, Nose and Throat Hospital, for which I am thankful.

In first taking up this operation I made it my duty to become thoroughly conversant with the anatomy of these parts, for I felt that with a thorough understanding of the details of the anatomic relations there would be less danger, and with definite landmarks the rapidity of operating could be increased and would enter as a factor; that is, there would be less traumatism and a better opportunity to extirpate the sac, with less confusion. I beg your indulgence to call your attention to the blood vessels of these parts, for they

are important, and influence the extent and direction of your incision, thus preventing any disagreeable oozing and bleeding which should be avoided.

Fig. No. 1 shows the relationship of the blood vessels of the lid and side of nose. That which concerns us most is the angular artery which is the termination of the facial. It ascends to the inner angle of the eye just a few m.m. within the inner canthus and is accompanied by a large vein, the angular. This artery by small branches supplies the lachrymal sac and the orbicularis palpebrarum muscle, terminating by anastomosis with the nasal branch of the ophthalmic.

The incision that I find best is made as per dotted lines in Fig. No. 1, starting from the lower border of the palpebral ligament and curving downward on the line of the inferior orbital ridge. The ligament is not cut under any circumstances. By this incision the larger vessels in this vicinity are avoided. If the incision is too far inward from the inner canthus there is more hemorrhage and an ugly scar; if higher than the canthal ligament the hemorrhage is also great. The sac is just beneath the anterior palpebral ligament with the deep fascia intervening.

Figures 2, 3, 4 and 5 show the relationship of the sac to the ligament. In Fig. 2 one can see the anterior as well as the posterior branch of this ligament. The sac is contained just within as is seen in Fig. 3. Fig. 4 shows the muscle of Horner, the posterior ligament and part of sac.

Fig. 5 shows a transverse section through the sac and ligament, as well as the intervening tissues separating the sac from the ligament, showing that it can be readily removed from the ligament by blunt dissection. A large incision offers no advantage and I believe interferes with the technic, necessitating at times the removal of fat which has forced itself into the field of the operation and detracting from points (or landmarks) which occasions delay to an otherwise simple technic. I present a copy of a cut from Morris and Oliver taken from de Wecker, Fig. 6. It shows two lachrymal probes introduced into lachrymal sac and nasal duct, the direction is shown to be downward and outward. The careful consideration of these points offers assistance in the location of the sac and deciding the direction of the incision.

The lining of the lachrymal sac is continuous with that of the

Fig. 1

Vessels of Lids (Testut).

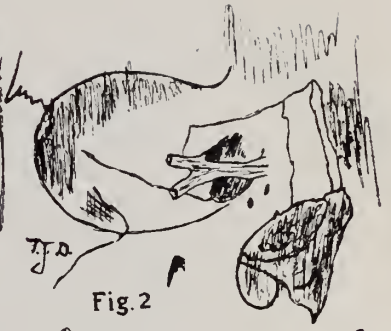


Fig. 2

Tendons of the orbicularis (Testut)

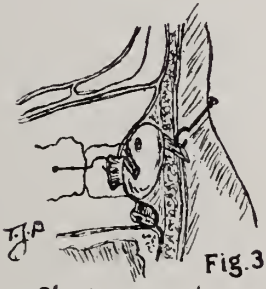


Fig. 3

The sac with tendons (Testut)

Fig. 4

Muscle of Horner (Testut)

ILLUSTRATING DR. DIMITRY'S ARTICLE.

Fig. 5

Section of Sac and Tendon

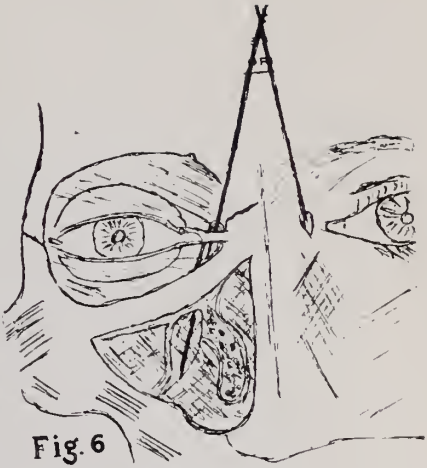
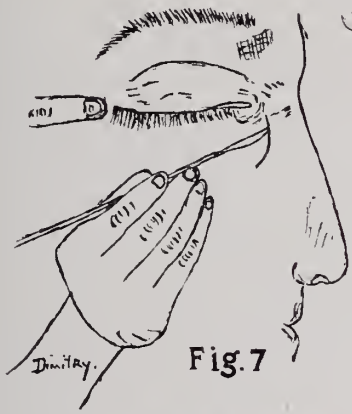
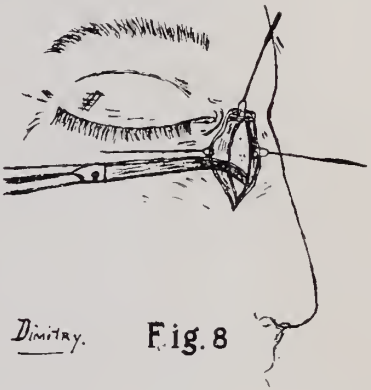


Fig. 6



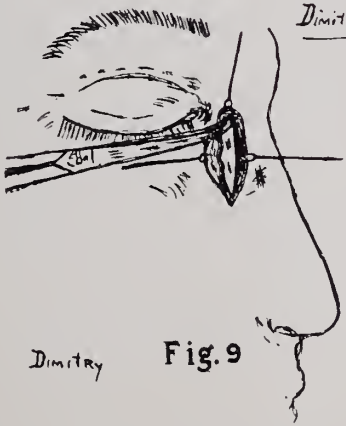
Dimitry.

Fig. 7



Dimitry.

Fig. 8



Dimitry

Fig. 9

ILLUSTRATING DR. DIMITRY'S ARTICLE.

nasal duct. The sac proper is free and is readily distended. The duct is enclosed in a bony wall with vascular tissue intervening, the duct cannot be distended and the usual place for constriction is just at the junction of the two. The engorgement of the veins which surround the canal is enough to occasion its closure, as set down by many authorities in textbooks as to rhinitis, etc., occasioning closure of the duct. The lachrymal sac is said to contain only sufficient lachrymal fluid to keep the sac dampened. The tears are a secretion from the lachrymal gland, and are brought about by psychic excitation, or, reflexly by irritation of the trigeminus or the optic nerves. Man is the only animal which sheds tears in crying and yet in the infant's howl and cry the eyes are free from tears. Reflexly one can produce tears in infants and any of the lower animals by putting an irritant into the conjunctiva, such as dionin. It is not long before tears flow and the powder dissolves. Any irritation of the trigeminus or the optic nerves produces tears. In an eye free from irritation the quantity of tears is just enough to keep the eye moist, any excess disappears by evaporation.

If the sac is removed with little or no sear tissue left, particularly in the palpebral ligament, we will very seldom have an excessive flow of tears, hence no necessity for the removal of lachrymal gland, or any part of it. The explanation given by many that the tears will disappear reflexly or by atrophy of the lachrymal gland is incorrect. We know in an eye, which has been previously flooded with pus, and epiphora constant, that, with the removal of the sac, the epiphora is practically cured.

The lachrymal sac fits just inside the little fossa of the lachrymal bone, and this bone is to the inner side, while to the outer side there is merely a framework of the tissue, which we designate as the deep fascia and which starts from the anterior crest, surrounding the sac to the posterior crest. The palpebral ligament lies anteriorly to the outer side and posteriorly. The tarso-orbital fascia which is immediately behind the sac plays an important part, as it separates the orbit from the sac. It is not well to open up the orbit, for one can easily occasion suppuration, cellulitis, thrombosis, etc.

In removal of the sac one first presses and so manipulates the skin towards the nose in this region as to expel the pus retained in it. Then, using argyrol, attempts are made to wash the sac as carefully as possible, flooding same with saline solution.

The local anesthetic which has been used at the Eye, Ear, Nose and Throat Hospital for a number of years is to be preferred. It is a solution advocated by Prof. Robin, of the New Orleans Polyclinic, and consists of 10 m. of a 4% solution of cocain; 10 m. of 1 to 1,000 adrenalin chloride, and 20 m. of normal salt solution. One can readily see the small amount of cocain contained therein. This operation is always done under local anesthesia unless it be a child, when general anesthesia is employed. Very seldom are more than 40 minims required. First a small quantity is injected under the skin along the course of the incision and the balance injected deeply into the surrounding tissue of the sac, but greater quantity in towards the nose, for it is to the nasal side of the sac that we perform most of the blunt dissection.

The use of adrenalin chlorid certainly diminishes the bleeding and its combination with cocain adds to its effectiveness. With this small amount of fluid thrown into the tissue it does not create confusion of the parts, for one requires a nice differentiation. The advantage of this local anesthesia over that of general anesthesia in this operation is so great that it is useless to make comparison. There is seldom any pain during the operation. No solidifying solutions or substances are used to assist in the isolation of the sac. I have never used any and doubt their utility in assisting the technic.

The incision that I have adopted starts at the lower border of the palpebral ligament and would be equal to about one-quarter of a circle, Fig. 6. I do not make an incision above as does Muller, nor do I bring it across the ligament, but start it at the lower border of the ligament. One can for purposes of demonstration of this ligament, make vertical incision, as does Muller, that would allow of dissecting around the ligament and possibly remove the cupola of the sac with greater ease and demonstrating the relations. The ligament and its situation under the skin can be readily seen by pulling the lid outward. My first and only use of a knife is to make one cut, and that down to the crest of the lachrymal bone. In this way all structures are cut at the same incision. The slow and deliberate dissection as it is usually practiced presents disadvantages such as traumatism occasioned by unnecessary pulling and cutting. The introduction of the Muller forceps necessitates an undermining of tissue for the entrance of the little prongs. The

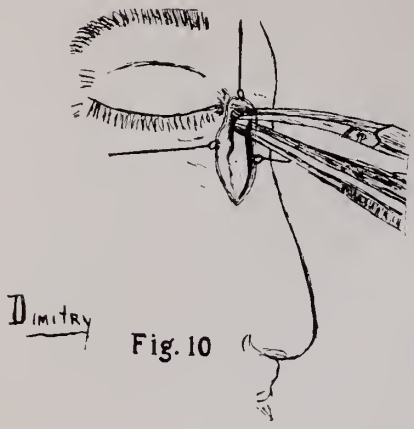


Fig. 10

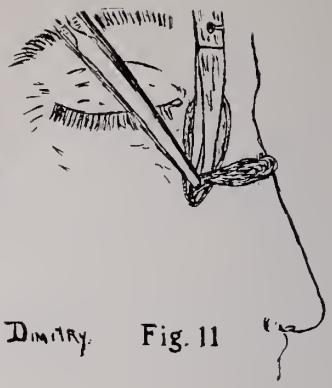


Fig. 11

Fig. 12

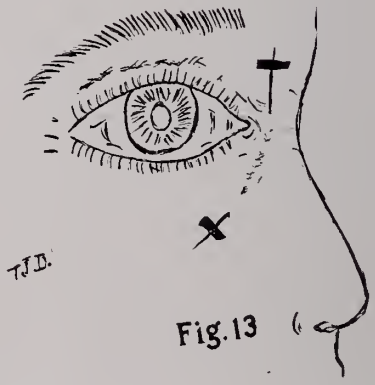


Fig. 13

ILLUSTRATING DR. DIMITRY'S ARTICLE.

double crochet hooks are very desirable little instruments and lessen the danger attached to Muller's little speculum, for Muller himself warns us against certain injuries that can be occasioned by its use. One assistant is always needed and this assistant can as readily take care of these little hooks as he could of the speculum. After the incision I take the "BLUNT" scissors; I have no further use for the scalpel. The slower technic of dissection of each part as it is reached, so well described by Muller and so easily recognized in the normal eye, is not the case in the diseased sac. I have heard a confrere once say when dissecting out the sac calling the attention of his class to the fact that he could show each dissection but very poorly, for most of the time he found the relationship as clear as mud, "BUT REMEMBER, GENTLEMEN, YOUR LANDMARKS AND HENCE DO NOT FEAR." The advantage of cutting to tearing and slow dissection offer rapidity and less traumatism. The removal of the sac can usually be done in about 15 to 20 minutes by one fairly experienced. After the sweeping incision I then make an opening into the deep fascia with a nick made to the nasal side and this extended vertically. If one fears opening up this membrane, remove the sac with the periosteum of the lachrymal bone, as suggested by Czermark. Be sure always to free the nasal side first, with the sac grasped firmly with the dissecting forceps one need have no fear in proceeding, for the difficulty is in picking up all sorts of membrane and believing them to be the sac. Go no further till inner side is well dissected and then pass a strabismus hook around the sac and dissect the other side. Figs. Nos. 8, 9, 10, show the technic to this point. Do not go to the outer side too quickly for before you know you will be confused with the fat found in this section, but first free the cupola and then turn the sac on itself and dissect from behind. If you will use blunt instruments you need not fear rupturing the sac. It is the sharp-pointed instruments and knife which do the harm. It is not difficult to dissect the sac from the slight attachment to the ligaments. The divisi from the canaliculi should be cut and not torn and the remains of the canaliculi are left alone. I do not find it necessary to curette or cauterize the canaliculi as some do. Fig. 11. After the sac is well dissected up, then one should remove it as low down into the lachrymal canal as possible, the blunt curved scissors are used, and one cuts from behind, as in cutting the optic nerve in enucleation of

the eye. The sac removed, one can readily see the lachrymal fossa bare and can examine the uncut ligament. One should try not to rupture the sac in removing it for it occasions some inconvenience, increases the duration of time, and makes difficult what would otherwise have been a simple operation. At times we find cases with no sac, but merely the remains of one with its fibrous and secreting masses. Each has to be carefully removed. In closing the wound interrupted suture is not used, but in its stead I use subcuticular, which I believe adds greatly to the success in these cases. The subcuticular is inserted as in Fig. No. 12 as near to the skin surface as possible, and each end of the stitch is passed through the skin. This subcuticular suture provides for a more accurate apposition of the cut tissue, and certainly this is a great advantage, for, if the inner cut side is pulled slightly downward, even say one m. m., the tears that are secreted undoubtedly run through the gutter down onto the face, while with a proper position the tears if excessive are held in the conjunctival folds. Any swelling following this operation is more evenly distributed and free from the little puckerings of skin seen in the interrupted suture.

Clinical evidence seems to confirm my belief that there are great advantages attached to this subcuticular suture. It has been my idea that if you prevent formation of scar tissue you will also prevent the conjunctival irritation which frequently follows similar operations. The bandage used is the one usually advocated by different authorities; that is, a small compact bolster of gauze, this held snugly with cotton and a bandage of flannel and afterwards the moulding mosquito netting bandage that is so extensively used in this section.

The bandage is kept on for about three days; on the fourth day the suture is removed, and usually within seven days the patient can be discharged.

To sum up: The anesthesia is cocain; the incision takes into consideration the anatomy of the parts; one deep cut to prevent manipulation of parts and thereby reducing the traumatism. The palpebral ligament is not cut which does away with the possibility of an irritable cicatrix in a tendon which is constantly in motion. The use of the subcuticular suture lessening the tendency to cicatrization, lessening disfigurement, and improving the result from a cosmetic point of view.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,
DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

Biography of Dr. Gordon King.

By OSCAR DOWLING, M. D., New Orleans,
Chairman Section on Otology, Rhinology and Laryngology.

A most honored custom obtains in our Senate and House of Representatives at Washington that when one of the active members is called to that Eternal Sitting a day is set apart on which no business is transacted, but the time given over for the expression of tributes to the distinguished dead. The fitness of such action has oftentimes appealed to me and I have contemplated with satisfaction the character of the monument thus erected.

True, it is not a monument in stone, bronze or metal. It partakes not of a substantial nature. But it is a monument in record, history and literature! The eulogies delivered are incorporated in the record of the proceedings; they become a part of the body's history; they are oft quoted as giving to literature striking examples of polished style and dignified utterance. It is a monument, such as Cicero desired, erected in the minds and hearts of his countrymen.

Moved by feelings following such a trend of thought as the above, but more especially by a personal desire to add mine, humble as it is, to the many tributes to his memory, I have, as chairman of your section on Otology, Rhinology and Laryngology, elected to dispense with other matters of report and confine myself to a few remarks concerning the late Dr. Gordon King, at the time of his death a member of this section.

While engaged in a practice game of polo at City Park, New Orleans, on Saturday afternoon, March 26, Dr. King was thrown from his horse—a high-spirited animal—and sustained an injury to the base of his skull from which he died shortly before midnight. He was never conscious from the time of the accident.

Dr. King was a son of Alabama, and in the soil of his native State he now lies buried. His dust will remingle with that of the

land which was his former home, and where his parents now reside. He was thirty-four years old and unmarried. A father and mother, Col. and Mrs. H. M. King, and two sisters survive him. Col. King and his ancestors were natives of Virginia, from where they removed to Alabama. Col. King was a schoolmate of Gen. J. B. Gordon, with whom he served with distinction as an officer of the Confederate Army, and he was also Chief of Staff of Gen. Joe Wheeler, familiarly known as "Fighting Joe." He had a high school education, but on its completion elected to begin his professional course rather than continue his literary studies. Notwithstanding this, however, he was a man of much learning beyond the confines of his chosen profession. Keenly observant and quick of understanding he gained a liberal education of to-day from his varied contact with the world. Much of the time he could command, aside from his imperative duties, he spent in reading and making himself acquainted with the learning of the past. In his profession, as a contributor to its literature, he was a man of letters as to style, a giver of information as to substance. He exemplified the happy faculty of writing learnedly and interestingly on scientific subjects.

He was a man of broad mind, big heart and congenial nature; a man of individual honor and personal character. He inclined to no narrow prejudices, but faced the questions of his hour with calm reason. He acceded readily to any meritorious undertaking, but his discretion was never lost in blind enthusiasm. He was a prince in making friends and a knight in serving them. He never betrayed the confidence of one who trusted him, nor gave one aught to do him harm. A wealth of the "hidden gold of a cordial hand-clasp" was his and that right hand was extended alike to the high and to the low. He was qualified to mingle with the most proud; he did not deny himself from the most humble. He was a doer of good. But, at the age of thirty-four years he is called from his labors and a life of brilliant service to mankind is cut short.

In the social world he was a man of sunshine. His name was on the rolls of a number of clubs and carnival organizations in his adopted city and he was prominent in their activities. He was a fine horseman and an expert at polo, being a member of the New Orleans Polo Club and playing a leading part in its games. It was in the last named recreation that he lost his life. Before mounting

his horse on that Saturday afternoon to begin play he remarked that that was his last game. In this he spoke more truly than he knew; the sun went down on him unconscious; day broke on him lifeless. It was, indeed, his last game!

In the professional life he stood forth most brilliantly. His history as a man of medicine is one of continued achievement. He graduated from the Medical Department of Tulane University with the class of 1897, after having served with marked ability as a resident student of Charity Hospital. During the entire time he was devoted to his college duties as a student, he was constantly giving attention to diseases of the ear, nose and throat, spending much of his spare time at the office of Dr. de Roaldes, where he assisted in the regular routine work.

After receiving his medical degree, he resigned the surgeonship to Charity Hospital when he was unanimously elected a resident surgeon to the Eye, Ear, Nose and Throat Hospital. Shortly after being tendered this place he was granted a leave of absence that he might go abroad for the purpose of following the clinics of those who are masters of the branches they teach. For eighteen months he bent all his energies to acquiring the knowledge of those across the waters, visiting the clinics of all the important centers.

Returning to his adopted home, New Orleans, he became associated with Dr. A. W. de Roaldes in the practice of his specialty, shortly after which he was elected Surgeon-in-Chief of the Ear, Nose and Throat Department of the Eye, Ear, Nose and Throat Hospital. Later he was elected to the chair of Ear, Nose and Throat, succeeding Prof. A. W. de Roaldes in the New Orleans Polyclinic, the Post-Graduate Department of Tulane University. When it was first thought of establishing a chair on diseases of the ear, nose and throat in the under-graduate department, the thoroughness of his preparation and his general ability are best attested by the fact that he was highly endorsed for the professorship by men of note in America, Italy, France, Germany and England.

Among his intimate friends he numbered Bosworth, Knight and others, of New York; Fletcher E. Ingalls, of Chicago; Browne, of London; Luc. of Paris; Moure, of Bordeaux, and Massei, of Naples, as well as a large number of leading lights from all sections of the world. As a man of scientific training and practical experience

he stood shoulder to shoulder with men much beyond himself in years. He was a large contributor to medical literature and enjoyed the distinction of having his papers copied in the foreign journals. He was a member of the Orleans Parish Medical Society, of the Louisiana State Medical Society, of the American Medical Association, Fellow of the American Laryngological Association, member of the American Otological Association and corresponding member of the French Rhinological, Otological and Laryngological Society. The associations in general, and this one in particular, lose a man whose place will be hard to fill; his influence and power will be sorely missed. The State, yes, the world, is made poorer by his death as it was enriched by his living. We shall not soon look upon his like again.

Sad is the hour to us and to those related to him, there is yet another on whom the loss falls most heavily. He was engaged to be married. She who had promised to be his wife was a spectator at the game in which he was so untimely injured. It was she to whom he said: "This is my last game." With her we bow in sorrow and pray that the richest blessings of the Ineffable may be hers. To her he had given his heart and he was happy in the thought that

"God above
Is great to grant, as mighty to make,
And creates the love to reward the love."

We would hold out to her the hope of a future meeting as so tenderly expressed in "Evelyn Hope:"

"I claim you still, for my own love's sake!
Delayed it may be for more lives yet,
Through worlds I shall traverse, not a few:
Much is to learn, much to forget,
Ere the time be come for taking you!"

We have it from sacred pen that three score years and ten is the allotted life of man. As those near to us approach that age we conspicuously resign ourselves to the reality that they will soon reach their resting place, as ships drop anchor in a distant port after a long and sometimes too weary voyage. But we are seldom prepared for tidings that the ship has been lost at sea. We know full well the voyage is fraught with many perils, but reassuring hope abides that no mishap will befall. The gods of Fate, though, had willed otherwise for Gordon King. He had but begun his

voyage when disaster overhauled him and his good ship went down forever. "Death feeds on his mute voice, and laughs at our despair." We yield in submission to the Unseen Power. Such has been the fate of many a man. We are reminded that "in the midst of life we are in death."

He was not a man who "seeks a little thing to do, sees it and does it," but a man who, "with a great thing to pursue, dies ere he knows it." Of him we might say, as Shelly said of young Keats: "O, weep for Adonis; he is dead!" That elegiac poem stands out to me as typifying the beautiful possibilities of our language when handled by a man of inspiration, and the transcendency of a monument of words to a lamented friend. If I were a Shelly I should plead for his name against Oblivion and recount his virtues in lasting lines. He is no more.

> "To that high capital, where Kingly Death
> Keeps his pale court in beauty and decay,
> He came; and bought with price of purest breath
> A grave among the Eternal."

Vocal Rest—Formol and the Galvano-Cautery in the Treatment of Laryngeal Tuberculosis.

By HOMER DUPUY, M. D., New Orleans.

An experience of some four years with these agents in the treatment of laryngeal tuberculosis forms the basis of this personal contribution. The scope of this paper does not permit me to give a detailed account of my results. I hope to do this at some future date. Suffice it to say, with strongest emphasis, that my personal experience controverts Sir Morel Mackenzie's dictum enunciated some twenty-five years ago; laryngeal tuberculosis is incurable. The most unexpected results, in suitable cases, can be obtained through the persistent and intelligent use of formol and the galvano-cautery. To appreciate what is meant by suitable cases it is important to give laryngeal tuberculosis a clinical grouping. We have: First, an incipient form with the local picture of hyperemia diffuse, persistent with no visible tuberculosis lesions; some vocal disturbance would be the first signal of laryngeal trouble. Second, that in which the larynx apparently bears the brunt of the infection, the lungs being only slightly involved; third, the larynx extensively

affected and the lungs moderately; fourth, the larynx slightly and the lungs hopelessly involved, in which instance to cure the larynx would mean a fruitless victory; fifth, larynx and lungs extensively affected with marked dysphagia present. Aggressive local treatment under such a distressful condition would be adding insult to injury. Another grouping would be that of the intra-laryngeal and extra-laryngeal types of involvement. When the lesions develop and remain within the larynx with no extension to the epiglottis, to the superior extremities or to the posterior surfaces of the arytenoids, we have the intra-laryngeal type which presents a favorable field for topical treatment. Extensions to the posterior surfaces of the arytenoids are to be regarded as extra-laryngeal types and as such are not generally amenable to aggressive treatment. It is, therefore of the utmost importance to recognize the SELECTED CASES. On this must hinge the particular form of treatment, whether or not it is to be aggressive, and what are the results to be obtained.

1. Vocal rest is indicated in all types and in all stages of laryngeal tuberculosis. It is the splint of the larynx. It is actually underestimated and gives particularly brilliant results in the incipient forms before loss of laryngeal tissue is present. It is all the more indicated when actual ulceration and infiltration have occurred, as every vocal effort means movement of diseased parts with increased strain to perform even their physiological work. Absolute rest of the voice, while ideal, is practically impossible, yet much could be accomplished by reducing the use of the voice to a minimum and then let it be that of the soft whisper. The forced whisper is a greater strain even than the conversational tone. The paper and pencil communication could be made to answer the average wants of the tuberculosis patient who is really trying to get well.

2. Formol in strengths of 5%, 10%, 15%, 20%. Even the weaker solutions sting, while the 20% burns considerably. The pain is evanescent and can be greatly assuaged by spraying the larynx with a two per cent solution of menthol in liquid albolene. Where the lesions are extensive and dysphagia is threatening the formol is applied two or three times a week, beginning always with the weaker solution (5%) and working up quickly to the highest (20%), being the maximum I have thus far used. Remember that a 20% solution is destructive and its effects must be

watched. The local reaction will be the best guide. The white eschar at the point of application must first disappear before we attempt another treatment with the maximum solution. The 10% is a reliable application for a larynx not too extensively involved. Moreover, it can be applied for a great length of time without injury to the parts not actually infected. Formol acts energetically both on ulcerated surfaces and on infiltrated areas. Its effect is more decided and prompt on ulcerations than on the infiltrations. It is, however, the only drug I know of that has such penetrating powers and this is especially needful in tubercular infiltrations.

3. The galvano-cautery is especially applicable and effective in the infiltrations along the posterior commissure of the larynx. These infiltrations are really a fibrosis. They are neoplastic in appearance and toughness. These tumor-like masses melt away rapidly under the galvano-cautery applications. Nothing surpasses this agent in this particular field of usefulness. I have seen no untoward results follow its application.

I have purposely reserved the technic of these laryngeal applications for the close of this contribution, as it is of supreme importance and I wish to give it special emphasis. Thorough anesthesia of the larynx is the first step. To secure this the throat is first sprayed with a 10% solution cocain. The soft palate and pharynx being anesthetized the tongue is held out and the spray with the same strength of cocain is directed towards the larynx. To further insure the effect on the larynx a 10% solution cocain is applied to the whole laryngeal surfaces by means of cotton tipped applications. This is repeated until any part of the larynx can be touched without exciting the slightest movements of the parts. It must be rendered absolutely insensitive. This result obtained, the formol is applied ONLY on the affected area. Should the vocal cords show any tendency to close in against the application, we should be ever on the alert to quickly remove it. One thorough application—rubbing the solution into the affected parts—usually suffices at each sitting.

Nothing can be accomplished in laryngeal tuberculosis when topical treatment is indicated in selected cases without attention to the slightest detail in the matter of desensitizing the parts so as to make the application just where we wish it. If this is done, harmful traumatism is avoided, laryngeal spasm does not occur, and formol will give us the promised brilliant results.

Discussion of Dr. Dupuy's Paper.

Dr. Williams: I think that one of the most encouraging things brought out in the paper is the fact that the dictum of McKenzie that laryngeal tuberculosis is incurable has now been overthrown. We have progressed so far in twenty-five years that we cannot only say that it is curable, but that it is as easily curable as is tuberculosis of the lung, if we have an early diagnosis. I can bear out everything the Doctor has said as to the use of formol in the treatment of this form of tuberculosis. The emphasis he places on vocal rest should be considered seriously. That is important. It would be all the better in these cases if we could have absolutely complete vocal rest, even letting the patient communicate by means of pencil and paper.

There is one question I would like to ask, and that is as to the form of the applications. I have had the best results by rubbing it into the parts. I believe some use the drop method. I had one case I want to report where I had a rather unusual accident, possibly due to the formol or possibly due to the method of rubbing it in. He had aphasia and arrested deglutition. I was called to the house and found that he could not swallow. There was some little dropping into the opening of the larynx and this caused a spasmodic coughing.

Dr. Oechsner: I would like for the Doctor to tell us his idea of the effect of the formol. I believe it tends to develop a leucocytosis. We use it in pyogenic infections of joints. We account for its effects on the ground that it sets up a leucocytosis. Has it also an irritant effect?

A New Method of Local Anesthesia in Tonsilectomy.

By ARTHUR L. WEIL, M. D., New Orleans.

At the present time when tonsilectomy has almost replaced tonsilotomy as the operation of choice in removal of the tonsil the question of anesthesia looms large on the horizon. Tonsilotomies required little or no anesthesia since the operation was quickly though imperfectly done. On the other hand, tonsilectomy is a painful operation, demanding for its perfect performance a deliberate and painstaking dissection. The exigencies of the situa-

tion call for as perfect anesthesia as possible. The general anesthetics, especially ether, have their advantages, and in some instances, indeed particularly in children, are indispensable. But the surgical axiom that local anesthesia wherever practical is to be preferred, applies equally here. In adults and older children a very satisfactory local anesthesia may be obtained by injections of cocain or its substitutes, such as novocain, alypin, etc., in combination with adrenalin, directly into the tonsilar tissue and the pillar,.

This method, though satisfactory as far as anesthesia is concerned, is attended with two obvious disadvantages. First, the comparatively large amount of cocain necessary to produce a perfect anesthesia is sufficient to cause occasionally unpleasant after effects and sometimes serious cocain poisoning. Second, the contractile power which cocain, and especially adrenalin, exerts upon the small arterioles wears off in a few hours and is followed for a time by a proportional dilation of the vessel. This is apt to cause hemorrhage. Though the operation may be practically bloodless at the time it is performed, due to the ischemia produced by these preparations a delayed hemorrhage is made more likely by the dilatation of the vessels when their exsanguinating effects have worn off. To be sure this fact is not universally conceded. Some observers report no such disadvantage. Rupreont, of Bremen *(Archiv fur Laryngol, p. Rhinolog. XXIII, 1, 13),* reports 110 cases in which 196 tonsils were removed with 2% novocain-adrenalin injections without noting any cases of delayed hemorrhage. Though others concur with him, the consensus of opinion seem to agree that this danger is by no means merely imaginary. It is certainly unsafe to allow patients who have been thus anesthetized to pass from the surgeon's control in less than twelve hours after the operation.

The method which I have to report obviates both these difficulties. For whatever merit may be contained in this procedure I can lay claim to no credit, since I have simply followed the suggestions of Yankauer *(Laryngoscope,* 1909, XIX, 329) and have worked along the lines indicated by him. By his method the trunks of the nerves enervating the tonsils are injected while none of the fluid enters the tonsilar tissue or the pillars.

The nerve supply of the tonsil and the adjacent tissues is derived from the circumtonsilar plexus, which in its turn is made up of branches from the following sources: from below the tonsilar

branches of the glosso-pharyngeal nerve and from above branches of the middle and posterior palatine nerves which originate through Meckle's ganglion from the trigeminal, or fifth nerve. The glosso-pharyngeal, the smallest of the cranial nerves and moreover essentially a nerve of special sense, has little part in furnishing sensation to this area. Its tonsilar branches as far as sensation is concerned may for all practical purposes be neglected. The middle and posterior palatine nerves, after leaving Meckle's ganglion pass downward through the sphenomaxillary fossa and emerge into the mouth through small bony openings in the hard palate in its junction with the alveolar process. It is at this point that the trunks of the nerves are injected.

In describing the technic it will perhaps be better to quote directly from Yankauer. The two bony openings for the middle and posterior palatine nerves are very close together, but their location is not marked by any special landmarks on the surface of the mucous membrane of the month, so that the point for injection must be determined by arbitrary measurements. The development of the parts varies considerably with the presence or absence of the last molar tooth, so that two separate methods of finding the points for the injections are necessary.

When the last molar tooth is present, we begin at the posterior end of the margin of the gum of the last molar tooth and measure 1 c.m. upwards, *i. e.*, at right angles to the free border of the teeth, and then 1 c.m. backwards. When the last molar tooth is absent, we first determine the position of the hamilar process by placing the finger upon the soft palate. The process can be distinctly felt as a sharp point of bone. We then measure 1 c.m. in an oblique direction upwards and forwards. When the last molar tooth is present these two measurements usually lead to the same point; when they do not an intermediate point is selected. As the mucous membrane in this region is situated about 1 c.m. from the bone, the direction in which the needle is inserted is important. A needle with a long shank is used. It is applied to the mucous membrane at the point stated, the shank lying across the tongue and resting in the angle of the mouth on the opposite side. In this position it is inserted until the point touches the bone, when about 15 minims of a 1% solution of cocain is injected.

In about five minutes anesthesia is at its height. Testing the

parts at this time with a sharp point we find that the tonsil, both pillars, and the closely adjacent tissues are insensitive. The separation of the pillars and dissection of the tonsil can be accomplished with little or no pain. The gagging is sometimes a little troublesome, but no more so than with other methods of local anesthesia. Indeed, the gagging causes the patient more discomfort than the pain of the operation. The only actual pain experienced is during the completion of the operation by means of the snare. This pain is not great and since it completes the operation the patients do not object. Where the scissors is employed for removal of the tonsil instead of the snare the pain is minimal, but I prefer the snare as safer and more expeditious, even at the expense of a little pain.

I remove only one tonsil at a sitting as I consider that advisable always in tonsilectomy under local anesthesia. A sufficient proof that the discomfort is not excessive is the fact that the patients occasionally request to have the second tonsil operated at the same sitting, also that the patients have always returned for the second tonsil, with one exception, and I later learned that she had left the city.

I have employed this method about fourteen times in the past six months. In two instances the results were unsatisfactory; that is, the anesthesia was not complete. I attributed this rather to faulty technic than to any inherent defect in the method. In one case I found by testing afterwards that the mucous membrane of the anterior part of the mouth was anesthetised, proving that the anterior instead of the middle and posterior palatine nerves had been injected.

In the other there was no demonstrable anesthesia. In the former case only one tonsil required removal. In the latter the same method, better executed, gave an entirely satisfactory anesthesia with the second tonsil. In all the other cases there was no difficulty. Two especially were exceedingly adherent and submerged tonsils requiring five to eight minutes for their dissection, and in one case, due to repeated pulling out of the snare wire, the operation had to be completed with the scissors. In spite of all this manipulation the patient complained of only slight discomfort. Of the patients operated most of them by chance were women and some of the nervous, apprehensive type, with whom local anesthesia

is apt to be unsatisfactory, yet none of them complained of excessive pain.

In calling the attention of the society to this procedure which, as stated above, is not original with me, it is not with the idea that it contains anything very new or startling, but with the belief that it is a distinct advance in the technic of local tonsil anesthesia. It has proven so in my hands and I am sure if some of the members will give it a trial they will find it likewise. Its chief merits are the small amount of cocain necessary—15 minims of a 1% solution of cocain, *i. e.,* less than 1-7th of a grain to a tonsil, and the diminished likelihood of a delayed primary hemorrhage by injecting the cocain into the trunk of the nerves rather than into the tissues of the tonsil and pillars.

The Mechano-Therapy in the Diseases of the Ear, Nose and Throat.

By OTTO JOACHIM, M. D., New Orleans.

In the routine of our daily practice some very obvious instructions are frequently given. They are, as a rule, received with so much astonishment and surprise that I have often wondered if they are the common property of the profession in general. To the specialist of the ear, nose and throat, they are, of course, elementary, but they are of sufficient import in the cure of existing abnormal conditions, and in the prevention of complications, as well as in the prevention of some diseased conditions, to deserve the attention of those who do not already appreciate their importance. I can only mention a few of the more common and useful methods of the mechanical means aiding toward a restitution and cure, and only such do I desire to mention as are within the scope of the general practitioner. All of you have, I am sure, frequent occasion to order the syringing of the ear. I believe I am safe in saying that it is more frequently done so inefficiently that it does not accomplish the purpose, and constitutes, therefore, a delusion. It is one of various recognized methods of treatment, a valuable, and in uncomplicated cases, a most efficient method of treatment, if done in the right way. Without detailing the errors observed, I will briefly say that a safe and efficient way of syringing the ear is

by using the modification of the rubber bulb, I here show you. This modification, every druggist, or yourself, can make. It has the advantage of a smaller and more effective stream, and what is of still greater importance, the free return flow of the water is assured. In this form, the instrument is better and freer from liability to harm than in its original form. The ear canal, being a curved tube, should, of course, be straightened; in the case of an adult by pulling the outer ear gently upward and backward, and in the case of children by pulling the outer ear directly backward. In the class of cases where syringing should be used to remove pus or other foreign material—and *in no other* should the ear be syringed—the inflation of air by the Valsalva or Politzer method for the purpose of dislodging the pus from the middle ear into the external auditory meatus is a valuable adjunct, and should be the property of every general practitioner. We find, entirely too often, that patients are directed to syringe the ear for most any trouble. We might insist that to syringe for any other purpose than the removal of pus or foreign material constitutes an abuse here, as well as in other cavities of the body. If my confreres would only play with the reflector until they can throw the reflected light into any of the orifices of the body, they would acquire a most valuable asset in their practice—one that would light up many dark places, and illuminate and thereby simplify conditions which they now approach without satisfaction, and without certainty. To those who have our medical education in charge. I dare to say that no one should in these days be permitted to practice who cannot satisfactorily inspect the superficial orifices of the body.

For this purpose, I advocate the use of a reflector—the proper use of which can be learned by anyone of you in a few hours—as an essential part of your equipment. It is a handy and dependable instrument, and for its use some artificial source of light is to be found everywhere.

Surprise and amusement are almost always aroused when we undertake to tell a patient how to blow his, or her, nose; or, more often, how not to blow the nose. The faulty way of blowing the nose has usually become so fixed that it takes a good deal of explanation to make the patient recognize what he is not wanted to do. It seems strange that the most inefficient way to blow the nose is the usual way, and in effectiveness altogether in inverse proportion to

the hardness of the blowing. It would be a splendid subject for a medical caricaturist to depict the various styles and methods of ineffective attitudes and hurtful ways of blowing of the nose; and in this, like in some other things, the esthetic citizen of the city is far oftener at fault than our country cousins. To be brief, the rational way to blow the nose is exemplified by the method of the plainsman, who closes one nostril and lets the other one untouched, while he blows with his head bent forward. Compare with this the method which, with many variations, consists in rapidly opening and closing both nostrils under the handkerchief, while blowing with varying degrees of intensity to dislodge nasal contents. The sanitary and ethical aspects of the questionable adjunct of civilization, the handkerchief, I would rather leave to the field of medical satire. The mechanical compression and relaxation, especially of the cavernous tissue of the nose, results in a gradual relaxation and dilation of the nasal mucosa, forming a causative feature in the conditions we have to treat as swelled membranes. If the eustachian tubes are at all patent we hear many patients who blow the nose in this faulty manner complain, that they always feel the air going into one or both ears when blowing the nose. This naturally leads to an over distention and relaxation of the drum-membranes, with sad consequences to the ear.

If the patient happens to use a spray, or especially a douche, and blows the nose in this fashion, it is the exception when this patient does not, at some time or other, get a middle-ear inflammation by dislodging such fluid into the ear, and if it carries infectious material, a middle-ear abscess is what we have to treat as a consequence. A serious condition arising from this cause, having septico-pyemic symptoms, I have at present under observation. Just like the ear, any one or more of the accessory sinuses or cells may become infected by forcing infected material into these cavities, where the condition for growth and development of disease producing germs are extremely favorable. Of course, this is not always the cause, but it is so at times.

The inflammatory conditions of the upper air passages, productive as they are of excessive secretion, are especially in early infancy a source of great concern to the practitioner. The great variety of remedies are recommended, and this, by itself, shows how little we may rely on them. Some of the more active ones, as the opiates and

its derivities, abate the cough, but also prevent thereby the expulsion of the phlegm which, if permitted to accumulate, threatens the child's existence; the expectorants add, not rarely, to the existing catarrhal conditions of the air passages, and upset a disordered stomach; while the emetics are so uncertain in their direct or indirect action, and so upsetting to a child in early infancy, that few use them nowadays. The vital indication in these conditions is to get rid of the phlegm, especially in the upper air passages, as often as the need arises, and in doing so without detriment to the little patient, we meet the most urgent indication of treatment, inasmuch as respiration at this time of life is altogether nasal. To meet this emergency, I desire to suggest to you some mechanical means to accomplish it. If the nose and post-nasal space are obstructed by excessive secretion, we may dislodge these by aspiration. This can be accomplished by using a rubber tube sufficiently large to fill the nostril, and by gentle suction it may be dislodged into the rubber tube. This is the simplest way of doing it. It may be improved by the use of a small bottle fitted on the principal of a wash-bottle, with the rubber tube divided and fit on both ends of the protruding glass tube. If suction is made through this, the phelgm will accumulate in the wash-bottle. The phelgm may be also dislodged by using the rubber tube for the purpose of air compression in the nose. For this purpose the close fitting tube is inserted into the nostril, and by gently, steadily, blowing into the tube, the phlegm can be dislodged and forced out mostly through the other nostril. The nose and post-nasal space can be well cleansed by these means. The force necessary should be just sufficiently great to attain the effect to be accomplished, and caution is necessary in order to avoid, in the latter procedure especially, danger to the ear. It is astonishing to see the quantities which may be dislodged in this manner, and the child which was restlessly tossing in bed and unwilling to take the bottle, or the mother's breast, will now greedily do so, and go quietly to sleep until re-accumulation, restlessness and cough indicates that the process should be repeated. Restitution takes place more quickly, and leaves the child in an altogether better nourished condition. After the cleansing process, it is of advantage to use in the child's nose some emollient agent. I would recommend liquid paraffin, albolene, or liquid vaselin, containing some antiseptic to be used in

a vaporizer in small quantity. Or an ointment of lanolin, white vaselin with orthoform, anesthesin, or adrenalin flavored with menthol, or any of the suitable essential oils may be used. This should be applied with the kind of glass applicator which I show you. This has been made for me by the local druggists for years. Its advantages for application and cleanliness are obvious. When the conditions above described are subsiding, and eczematous sores and crusts form around the edges of the nostril, and in the nose, the white precipitate ointment has served me in good stead. The systematic cleansing of the nose and post-nasal space not only meets the most pressing indication of these troubles and improves the chances for nourishment, but reduces the liability to ear complication. If they are existing, has a decided beneficial influence on the healing process. I have at present under observation a baby which had a grippal inflammation of the entire air-tract, and which now has a suppurative middle-ear abscess in both ears; it is teething, and on top of this, acquired whooping-cough. The secretion from this child's respiratory mucosa is enormous, and one could hear the mucous rales a foot away from the chest. The simple procedure of depressing the tongue, causing the child to gag, brings up enormous quantities of phlegm, and the almost incessant cough which existed, ceases for a while after this dislodgment. This procedure of depressing the tongue and the causing of an expulsory throat reflex, I advise as an entirely helpful procedure, not to be under-estimated on account of its simplicity. The mother states that the child never coughs up phlegm, but when we employ the nose inflation and this method we get out a lot, and the child is free from cough, without medication, for a while. The repetition of this procedure is certainly harmless. The excessive accumulation of tenacious secretion in the lungs of this child has proved to us the value of another procedure, having the same end in view. This consists of the frequent change of position of the child, so as to prevent accumulation of infected material in the most dependent part of the lungs, thereby preventing hypostatic infiltration. These changes should be from side to side, and by the carrying the child in upright position. In addition to this, I suggested that the child be carried at intervals lying on its stomach over the shoulder, so that the head almost hangs down. In this position the phlegm will gravitate to the upper part of the lungs and its ex-

pulsion is greatly favored. This should naturally be done when the child's stomach is not full of food, and should be omitted if contra-conditions exist. There are other abnormal conditions which come under observation in which mechanical expedients are frequently used as an aid in our therapeutic endeavors. But to restrict myself to such means as are well within the reach of the general practitioner, I will mention in a general way the use of massage and hydrotherapy. The indications and uses for them in ear and throat diseases are entirely analogous to their use in general practice; I believe, however, that they do not, as a rule, get the attention which they deserve. Their proper use presupposes in this, as in other fields, a good diagnosis, and when exact indications for their use are present, they constitute valuable aids in our resources. As to the preventative capacity of these measures, I want to cite an experience at one of the Orphan Asylums in which I am doing the special work. About a dozen of the children were, in short succession, attacked with an infectious tonsilitis, and I am convinced that the fact of "no further case" was due to the systematic spraying twice daily with an antiseptic solution of all the childrens' upper air passages. I concede that this goes a little further than mechano-therapy, but I think it is worthy of mention. I believe, too, that infectious diseases, especially diphtheria, can by this means, if done efficiently, be restricted in its spread. And infectious throat diseases, ear and other complications, can be often prevented by proper antiseptic cleansing; and in the cases so treated at the Charity Hospital, we had no subsequent complications of this character. Altogether, I believe that a rational toilet of the nose, by blowing of one side at the time, and a regular toilet of the throat and post-nasal space, by spraying, are at least as important and as essential, especially in children visiting schools, as is the attention to the teeth.

If this message meets with your approval, I feel that I have rendered a sufficient service.

Diphtheria in Children.

By E. M. TOLER, M. D., New Orleans.

Diphtheria is an acute infectious and contagious disease due to presence and development of the Klebs-Loeffler bacillus. Characterized by false membrane on mucous membrane, especially on nose, pharynx, larynx, trachea or tonsils. Laboratory research has proven, by injecting cultures of Klebs-Loeffler bacillus or their toxins there will be produced on animals paralysis due to nerve and muscular degeneration. We sometimes have this in clinical diphtheria. As a rule this is a late manifestation.

Due to specific germ the Klebs-Loeffler bacillus. The growth of the bacillus produces a toxic substance, the absorption of which produces the disease. Diphtheria bacillus is generally associated with other bacteria as streptococci and staphylococci.

Disease of children, but does occur in adults. May recur in same patient. Bad hygiene increases virulence and diffusion, chief cause spread by contagion, poison floats in air for considerable distance, adheres to clothing, furniture, toys, etc.; more common in cities than rural communities; usually endemic in cities, epidemic in country.

Bacillus may remain in throat of patient for weeks or months after disappearance of clinical picture. Thus we find cause of other cases we cannot very easily trace mode of infection. Authorities claim pigeons or some animals may be probable source from which some cases originate.

Pathology—Exudation upon and within mucous membrane. First, redness associated with swelling and increased secretion of viscous mucous. Redness spreads, giving glazed appearance, membrane spreading from place of beginning uniformly or in separate patches, which speedily coalesce. Color: gray, white, slightly yellow, brownish or black. Remove membrane, have bleeding surface or ulcer which quickly reforms. Examination by microscope usually shows presence of Klebs-Loeffler bacillus. Submaxillary glands and cervical lymph nodes enlarged. Changes in heart, kidneys, liver, spleen and blood.

Varieties—The classification of the acute inflammations of the nose, throat, etc., has not reached a satisfactory stage. The distinction based on presence or absence of pseudomembranes have lost

their significance. Great majority of pseudomembranes are due to action of diphtheria bacillus. Yet many of these inflammations are due to action of streptococci and staphylococci. Then we may have action of diphtheria bacillus without presence of pseudomembrane. Therefore, to have true case of diphtheria we must have the presence of a sufficient number of diphtheria bacilli with accompanying inflammation with or without membrane. We must also have the clinical picture of diphtheria. We speak of diphtheria as nasal, tonsilar pharyngeal or laryngeal.

SYMPTOMS—These vary considerably with the site of the lesion. Nasal diphtheria is generally an extension from fauces or larynx. It may, however, be the beginning of the trouble. We may or may not see membrane in anterior nares. We have almost complete obstruction of nares with thin watery, mucopurulent discharge, often bloody, with more or less toxemia. Discharge usually very irritating, excoriating nares and lips. When affection is primary toxemia is not so marked, temperature not so high, 100°-101° F.; prostration not so marked, danger is that disease may extend to larynx or pharynx or development of pneumonia. These are the cases that may more easily escape our notice, until late in disease. Where there is only involvement of nares cases generally get well, but discharge is very stubborn.

PHARYNGEAL, OR TONSILAR DIPHTHERIA—There are many cases reported in epidemics where there is no membrane, yet tonsils and pharynx become reddened and slightly swollen sore throat with slight rise of temperature. Cultures from throats would show presence of Klebs-Loeffler bacillus. Here is where microscope may clear up diagnosis for us. If we are in epidemic we may suspect diphtheria; if, not, we may fail to make diagnosis. These mild cases may show complications or may be communicated to other patients and have virulent type. We may have mild cases of pharyngeal or tonsilar diphtheria. These cases have small patches of pseudomembrane on one or both sides or fauces or pharynx. Moderate toxemia, sore throat, temperature 100-102° F. Moderate prostration. Throat shows tonsils to be reddened and swollen with membrane on one or both tonsils; color of membrane: white, gray, or grayish green, sometimes yellow. Remove membrane, have bleeding surface, membrane reforms. With this appearance in throat usually have swelling of submaxillary glands and cervical

lymph nodes. These mild cases generally get well without any bad after effects. Great trouble in handling such cases is controlling patient and preserving proper quarantine. In the severe cases, outset may be sudden chill, vomiting and fever, severe sore throat, temperature 103°-104° F. Great prostration or affection may be mild at first and gradually develop severe symptoms. If seen beginning, usually find membrane on one or both tonsils submaxillary and cervical lymph nodes swollen and tender. Child looks and acts sick. Membrane rapidly spreads to pharynx, uvula and fauces then to nares, having thin, bloody, foul-smelling discharge. Constitutional depression becomes more and more marked, pulse feeble and rapid. Throat becomes more and more swollen, respiration interfered with, urin scanty, containing albumen. Mind may remain clear, but usually patient becomes dull and listless, or may be very wild and restless or even convulsions. Many patients die from toxemia, yet most deaths are due to complications.

Mixed Infection.—We have symptoms of septicemia—Temperature high, feeble, rapid pulse; extremities cold and pale; urin scanty, sometimes bloody, sometimes suppressed; usually patient is stupid, but some are restless and delirious.

Laryngeal Diphtheria—Does not present such variety of symptoms. Mucous membrane of larynx has little absorptive power as long as process is confined to larynx have little toxemia. Diphtheria of larynx is generally gradual, croupy cough, gradually growing more hoarse, with complete loss of voice. Child restless, jumps up to try to breathe better, finger tips blue and face pale.

Complications.—Otitis media, broncho-pneumonia; heart complications, especially myocarditis, heart failure, hemorrhages from nose, stomach, intestines or bladder, nephritis, paralysis. With investigation we have been taught many things about diphtheria. By finding diphtheria bacillus in throats otherwise healthy and not always finding bacillus where we have good clinical picture, may lead us at times to doubt correctness of diagnosis. But with clinical picture and proper bacteriological test we can be absolutely positive of diagnosis.

Taking one of my first cases as example, child four years old: Exposed by playing with playthings of another child's I had previously treated for diphtheria. Third day begin to feel languid, slight rise temperature, liver and kidneys inactive. When I saw

case first time temperature 103°, this 3rd day of illness; sore throat, membrane on tonsils, submaxillary and cervical lymph modes enlarged, removing membrane left bleeding surface; membrane fourth day extending to uvula (pharynx), fauces and nares, thin, mucopurulent tinged with blood discharge from nose; pulse first few days rapid and feeble; throat very red and glazed looking and swollen. Great depression, toxemia great, albumin in urin. About fifth day pulse slow, irregular and feeble; child very restless, swelling extended downward until throat was a veritable band; urin almost suppressed; respiration interfered with.

With this picture we could hardly mistake our diagnosis, even without bacteriological test. We have two tests. One may take membrane from throat and make microscopic test at once. This is unreliable. Other test, have sterilized swab, rub firmly over membrane or inflammation in throat. Send to laboratory, or if equipped make cultures and examine yourself. Be careful in swabbing over membrane not to touch tongue, for if this is not properly done may have negative report from true case diphtheria.

PROGNOSIS—GRAVE—Age has great deal to do with prognosis. Infants' prognosis bad. Happily, children under six months rarely have diphtheria. Since introduction of antitoxin death rate greatly reduced. Laryngeal cases more grave prognosis. Time you see patient earlier, better your prognosis; degree of toxemia, some cases slow, others rapid. Extent and development of membrane complications, pneumonia, cardiac symptoms, etc., surroundings of patient.

PROPHYLAXIS—All cases that have been exposed should be watched from time to time and examined. Should not be allowed to mingle with other people as long as there is any danger. Have carbolic acid solutions, bichlorid solutions to bathe hands and face. Boil all instruments used in examination or treatment. All swabs should be placed in bichlorid solution 1-1,000. All clothing, bedding, etc., should be boiled; disinfect sick room. Anything that cannot be disinfected should be burned. Length of quarantine varies, but usual time after membrane disappears is three weeks. In minimizing doses of antitoxin have done a great deal toward checking the disease, 100-1,000 units according to age. But there was advanced the theory before the last Louisiana State Medical Society meeting that it was dangerous to use antitoxin on patient

where patient had been previously injected. The claim was made that there were cases of death where second administration of antitoxin was used.

Dr. Lebeuf reported case where second administration of antitoxin had been given and death was imminent for hours.

From the *Alienist and Neurologist,* of February, 1910, we have this explanation, under anaphylaxis. It has become known that it is sometimes dangerous to repeat the hypodermic injections of an antitoxic serum at an interval more than ten days from the original dose, provided, of course, that period of several months or longer is not meant by the interval referred to. If a patient has diphtheria and is treated with antitoxin and has a recurrence in three weeks, it might seem wise to use antitoxin, but quite the reverse is true. Not only is it unwise, but dangerous when ten days or more have elapsed after the first dose.

It is not the antitoxin which is concerned in this phenomenon, but the proteids of the horse serum, and not only horse serum injections give us this undue and even fatal sensitiveness to a repetition after a certain number of days have elapsed, but it seems to be a phenomenon common to many proteid substances. Anaphylaxis may last for a year or more.

General Measures—Have well ventilated room, good nourishment, let patient be quiet; milk, beef juice, raw eggs, Ducro or liquid peptonoids, chicken broth and soups.

Local Treatment—Gargle throat with peroxid hydrogen, normal salt solution, glycothymolin. Swab out mouth and throat as best you can every few hours. May wash out nares with normal salt solution; child placed on side wrapped in blanket to control hands and feet, then start flow gently with solution in ordinary fountain syringe. Keep this up until solution returns clear. This will carry out mucus, mucopus and bits of membrane. This treatment every few hours as needed.

Other Solutions—Boracic acid, etc., care being taken not to injure nasal membrane. Nasal hemorrhage may preclude this treatment. If much swelling of lymph nodes, use ice cap.

General Treatment—With the introduction of antitoxin most of the other remedies have gone. The chlorid of iron in tincture still holds a place with many where child can tolerate it. I gen-

erally give my cases a course of mercury, followed by saline. After which I prescribe the following:

℞ Chloride of iron..... ℥iv
Chlorate potash ..... ℥iv
Glycerin ..... ℥ii
Aqua q. s..... ℥iii
M. Sig.: Half teaspoonful in water every three hours for child ten years old.

I also watch kidneys, if needed acetate or citrate of potash, sweet spirits nitre and other drugs may be employed. All cases, as a general rule, need stimulation from the beginning. I use whiskey, digitalis, digitalin and strychnin.

But above all is antitoxin. There is a great difference, as to dose, we should employ. In all cases, especially over two years old, I give 4,000 units and repeat every eight to twelve hours until I give three or four doses, then watch for results or any bad effects we may get from injections. We may even give larger doses. First case I saw, membrane all over throat, mouth and nares had been sick about one week. This case yielded readily to 4 doses of 4,000 units, repeated every eight hours.

Where antitoxin is used early we generally have a change for the better within twenty-four hours, fever drops, pulse better, mind clearer, breathing freer. Rarely have to resort to intubation or tracheotomy. Some authorities claim we should not be satisfied with mere disappearance of membrane, but watch toxemia or any signs of a paralysis to readminister antitoxin which will greatly reduce subsequent paralysis. Some physicians claim we have more paralysis since use of antitoxin than before. Explanation—toxemia was so great nearly all these cases died. Dr. Homer Dupuy, of New Orleans, claims to have given antitoxin to case post-diphtheritic paralysis several months after supposed case of mild tonsilitis, but peculiar nasal twang, paralysis of palate, shuffling walk. He diagnosed case as one of post-diphtheritic paralysis (concurred in diagnosis, Dr. P. E. Archinard.)

Dr. Dupuy gave 5,000 units antitoxin every other day for four or five days with complete recovery. His belief is toxemia of nerve tissue persists for quite a while after disease, and that nerve degeneration does not always take place at once. French

observers report favorable cases even eight months after original infection.

Dr. Smith, of Arkansas, claims to use iodinized calcium as a diagnostic measure for other forms of throat trouble. He says by the use of this drug for twelve hours if no improvement he knows he has case of diphtheria, then he pushes antitoxin.

One writer suggests where cases are so far advanced where it seems antitoxin can accomplish little, he advises the hypodermic use of caffein, camphor and digitalis for effect on circulatory center. Adrenalin chloride for constriction of blood vessels, infusion of normal salt solution. This may turn the tide from fatal termination to recovery. Some of our almost hopeless cases may be saved by intravenuous injections of antitoxin serum. We get the maximum concentration at once, while on subcutaneous, intramuscular and intraperitoneal we must wait 24 to 72 hours.

With those who have tested this mode of administration the results rave been good and several desperately sick patients doubtless saved. The one objection of any consequence against the intravenous method is the increased danger of anaphylactic shock in susceptible persons. But in order to still further reduce the mortality in diphtheria this risk may be taken in desperate cases. We should watch our patients during the convalescing period for complications that may arise and treat them accordingly. From use of antitoxin we may have urticaria 15 to 20 days after use of serum. May have arthralgia or abscess. Most all cases in convalescing period need tonics, iron, wine, cod liver oil, etc.

Correspondence.

Vienna From a Medical Viewpoint.

Editor New Orleans Medical and Surgical Journal:

No doubt, you have already had many letters concerning Vienna as a medical center and descriptive of its beautiful surroundings, but changes are constantly occurring. I thought it might be of interest to those who contemplate a visit and to those who have already enjoyed this privilege to note some of the changes.

Of course, everyone has heard how beautiful and fascinating is dear old Vienna, and how very gay is the life here. Situated in

a valley, with the beautiful blue (?) Danube bisecting the city (which, by the way, reminds me of a book I read on Medical Europe, in which the author, speaking of the Danube, says: "It is neither blue nor beautiful, but a narrow, dirty stream," and I, to a certain extent, fully agree with him; but as one proceeds down the river towards Budapest, where the river widens, one finds it a very beautiful and interesting stream). The Danube originally ran through the city, but the main channel was diverted to prevent inundation of the city, and a series of canals were constructed to take its place.

Vienna is very cosmopolitan and noted for its music and art, and besides the innumerable theaters, opera houses and music halls, one can enjoy art in all its phases.

The environs of Vienna, I think, are the finest in the world. Within an hour or so one can reach the Austrian Alps (such as the famous Semmering), where there are so many beautiful resorts, with snow-capped mountains, where the Viennese go in summer to avoid the heat and in winter to enjoy skating and all winter sports.

One who has a knowledge of German will be impressed by the Viennese dialect, which at first is somewhat difficult to understand. One of the most frequent salutations heard is *"Habe die Ehre,"* which, you know, means "I have the honor," but which sounds like "Top of the airy." Another expression which one often hears is *"Küss die hand"* (kiss the hand), which custom still prevails.

Enough about the city, but a line about the "pensions," as the boarding-houses are called. If one is not already recommended to a particular one, the secretary of the American Medical Association of Vienna has always a list of them on hand and will readily furnish you with a number of addresses. The usual pension charge is about 8 kronen (or $1.60) a day, which includes board, lodging and light; bath and fires are extra. The former costs ½ k. (20-40 cents) and the latter 1 k. (20 cents) per bucket of coal. Up to the present time there are not, to my knowledge, any steam-heated pensions, and those that have elevators are the exception, for, as a rule, one must walk up two to four flights of stairs to get to his quarters. One of the peculiar customs here is that the janitor locks the door of the apartment promtply at 10 p. m., and any one wishing to get in or out after that hour must ring the bell and pay a fee of 20 hellers (5 cents) a person for this service.

The Vienna American Medical Association, mentioned above, formerly had its headquarters at a public café (Café Klinik, in Lazarethgasse), but for the past six months has been domiciled in its own home on Schlösselgasse, where they are nicely equipped with reading, writing and reception rooms. In the "bulletin room" the different courses are posted under their respective headings, and one signs his or her name to the list of the course desired. The usual course is about twenty hours' duration, and the average fee is about 100 k. ($20). Individual instruction or courses are to be had, for which there is a charge of $5 per hour. They have a nicely-furnished room for ladies, and every Thursday is the reception day, when the wives and daughters of the doctors who are studying here may congregate. On the ground floor of the building is an excellent café, from which the club is served.

The "Blue Book" is the official guide of the association, and contains the rules and regulations of the society and the principal medical points of interest to visitors. It gives the names of all the men who give courses in the different branches of medicine and surgery, the price and duration of courses. It also gives the hours when the different university professors give their lectures, which are free to the visiting medical men. It is seldom that the professors themselves give courses to the American medical men, but the courses are usually given by one of the assistants.

The student in search of work should be grateful to the excellent organization of the A. M. A., for they have systemized the manner in which the courses are to be had. Through their efforts they have succeeded in securing the best men in all of the special branches to give courses. These courses are posted on the bulletin board, stating whether they are to be given in English or German, number of men to which the course is limited, the price, and number of hours to be given. When a course is once assigned, the signers are responsible to the giver of same for the fee. Every Friday night one of the prominent medical men of Vienna gives a lecture under the auspices of the society.

The fees of the A. M. A. of Vienia are 20 kronen initiation and 5 kronen monthly for dues. In the club rooms they have a small, but nice, medical library and many periodicals, together with the Paris New York *Herald,* London *Times* and local papers.

Too much praise cannot be given the present administration for

their excellent service. In my travels all over the continent I have not as yet found a place to compare with the facilities offered by Vienna, for doctors not familiar with German, for in all branches courses may be obtained, given by most capable men, who are thoroughly familiar with the English language.

The majority of the courses are given at the Allgemeine Krankenhaus, which, with its dependencies, is one of the largest hospitals in the world, and of which I hope I will be able to write more fully in my next letter. Yours truly,

(Signed) Milton A. Shlenker, M. D.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

The Council on Medical Education.

On Wednesday, Thursday and Friday, March 1, 2 and 3, the Council on Medical Education will meet in conference with the Council on Health and Public Instruction of the American Medical Association, at the Congress Hotel, in Chicago.

Considerable interest attaches to the meeeting of these bodies, as the evidence of their labors for the past few years has been reflected in the extensive report of the Carnegie Foundation, promulgated June last. The American Medical Association, through its Council on Medical Education, has been busy for several years in raising the standard of medical education in the United States, and more especially in urging and organizing a basis of common agreement among institutions willing to place medical education upon a high standard.

The investigation of medical colleges by this Council has created among the colleges themselves a desire to benefit by the knowledge of usages elsewhere, and an undoubted comity has resulted among institutions willing to adopt better and newer methods.

Since the organization of the Council on Medical Education some medical colleges have moved into a class requiring preliminary entrance qualifications which are prohibitive to the average student, but, as has been wisely stated by one of the most prominent educators in the State of New York, Mr. Augustus S. Downing, of the State Board of Education, the university medical college may raise its standard for entrance as high as it pleases, but there should be a standard for the qualification of students which can be met by the vast majority of those students who intend to take up the field of medicine as a livelihood.

The program announced for the conference in Chicago presents a number of phases of the question, and the discussion of various topics on preliminary education, the method of medical courses and

its equipment, as well as on State examinations, should produce valuable material to work upon for future conclusions.

It is too soon to arrive at any judgment as to the way in which medical education shall be finally adapted to the needs of the intending practitioner of medicine, but the wide variations which have developed in the opinions extant regarding the predominance of laboratory training, or, conversely, the predominance of clinical training, would indicate that the time must come either for a longer course for medical students or for some common ground of requirement for entrance to a medical college, and for the curriculum afterwards.

Formal Opening of the Presbyterian Hospital.

On the afternoon of February 4 the Presbyterian Hospital of New Orleans was auspiciously inaugurated at a formal opening. A considerable gathering of New Orleans people, including dignitaries of the various churches, representatives of the city authorities, of the medical profession and of the general public were in attendance. Various addresses were delivered by citizens of each of these representative classes, all interested in the welfare of the institution.

Specific attention was directed by more than one speaker to the value of the institution which the Presbyterian Hospital had taken over, viz., the New Orleans Sanitarium, originally the Hospital for Women and Children, inaugurated in 1889 by women of all religious denominations for the purpose of establishing a training school for nurses. Later, the New Orleans Sanitarium was developed from this foundation, and during the period of nearly twenty years has grown into an institution occupying a distinct position in the South.

Under the auspices of the Presbyterian Church, and with a broad charity, associated with the original purpose of a training school, which is still to be maintained, the future of the Presbyterian Hospital would seem assured.

Already the new institution has inaugurated dispensary clinics, an obstetrical service and charity beds, with the intention of expanding these to a greater usefulness.

The JOURNAL joins the profession, which it represents, in wishing a continued success to the new institution.

A "Nigger in the Woodpile."

We are in receipt of a bulletin from the Committee of One Hundred on National Health of the American Association for the Advancement of Science which calls attention to a bill introduced in the House of Representatives by Congressman Mann and in the Senate by Senator Martin *"to change the name of the Public Health and Marine Hospital Service,* to increase the pay of officers of said service, and for other purposes."

In a recent editorial the JOURNAL called attention to the fact that the Marine Hospital Service and its representatives had been apathetic with regard to the Owen Bill, in spite of the fact that the Owen Bill was strenuously urged by practically all associations and individuals interested in humanitarian purposes in the United States.

Whenever any attempt has been made to introduce legislative disposition of questions related to the public health, the Marine Hospital Service has usually, quietly, sooner or later, found the occasion to provide a substitute. The appearance of the new bill in Congress would tend to show that the same factor has been at work in antagonizing the Owen Bill.

The Committee of One Hundred urges all who are interested in the establishment of a National Department of Health to write their Congressmen and Senators to *"oppose the Mann-Martin Bill* and to SUPPORT THE OWEN BILL."

The Marine Hospital Service has, by one or another method, arrayed itself in a typical Joseph's coat, until to-day the definition of its usefulness, of its purposes, and of its intentions is indeed difficult to discover.

The Owen Bill, on the other hand, has been carefully aimed at covering all of the various divisions of public service related to the human being, with the avoidance of any interference whatsoever with the functions of the medical services of the Army and Navy. It is planned to attain a proper dignity for a health service in the United States, comparable with like departments in Governments occupying as great a relation to the world as does this country.

The Owen bill provides for a coördination of health functions throughout the cities and States of the Union—a consummation absolutely impossible with the Marine Hospital Service, which has

been demonstrated repeatedly and on every occasion when the attempt has been made. As the Bulletin of the Committee of One Hundred states: "The present lack of coördination in Government health work cannot be offset by enlarging the scope of one of the bureaus and making it possible to duplicate their work."

WRITE YOUR CONGRESSMEN AND SENATORS AT ONCE TO OPPOSE THE MANN-MARTIN BILL AND TO VOTE FOR THE OWEN BILL!

The American Society of Tropical Medicine.

A most important meeting of the American Society of Tropical Medicine is to be held in New Orleans, May 18 and 19. The gathering will not only be representative of the United States, but men from other countries are expected.

For many years New Orleans has occupied an exceptional position in the opportunities for the investigation of diseases of tropical nature, and from time to time valuable contributions have been made to the literature relating to such diseases.

At the season selected for the meeting there should be a most interesting clinic possible, derived from the various institutions in New Orleans receiving patients from the Southern States and from the countries south of us.

The recent laboratory advances made in the study of the leprosy bacillus, together with the observations upon hookworm, pellagra, malaria, and the dysenteries prevalent in this section, all offer an interesting program for those who may make up the meeting.

The profession of the Southern States should be particularly anxious to take part in the deliberations of so distinguished a body, and it is to be hoped that the occasion will be marked by a gathering of many of our profession from those points in the South where the problems of exotic diseases offer difficulties.

The JOURNAL hopes to publish a program of the meeting in the next issue.

Compulsory Vital Statistics.

It is indeed a trite subject, the discussion of vital statistics, but the lack of interest on the part of the medical profession makes the revival of such a subject a perennial necessity. The Washington Bureau of the Census has been active in the past few years in

eliciting the coöperation of the medical profession, and they have succeeded in awakening the authorities to the need of some method by which better statistics may be had.

A recent announcement that the registration of births should be made compulsory is in point. Most of the Southern States have been particularly derelict in this regard; so much so as to have occasioned severe stricture in more than one printed article on the subject. In the State of Louisiana the death rate is fairly well estimated, and the burial permit necessitates the proper filing of a record of death.

The question of birth registration is another matter, and, except in the parochial registration among those who are religiously persuaded, a general indifference prevails among the laity. Until now this indifference has been fostered, perhaps, by the requirement of a considerable fee for the registration of births. If this fee were abolished there might be more willing to obey the custom, and a law might not require enforcement. Various methods have been instituted in one and another country to encourage proper birth registration, but as yet no premium has been put on such a procedure. So long as a tax is levied, the enforcement of a law, if enacted, will be difficult, and it will require many punitive procedures to start the observance in the right way.

There are, of course, possibilities of laying the burden of registration on the physician or midwife under penalty, or, similarly, to make the householder responsible, but in either case it will require a certain amount of espionage to determine when and where the law applies. Under certain monarchical and republican Governments the individual must have identification papers, giving officially-attested information regarding birth, parentage, etc., and such might be established in our own country if the authorities of the central Government would provide for it. A simpler way would be to require all children applying for admission to any school, public or private, to provide a birth certificate before they would be permitted to attend, and this would recover many neglected registrations.

In any event, our State Board of Health is to be commended for the effort to rehabilitate the status of vital statistics, and we trust that this attempt may prove successful.

Abstracts, Extracts and Miscellany.

Department of Internal Medicine.

In charge of Dr. E. M. Dupaquier, New Orleans.

A Medical Clinic.—The cases I shall show you to-day afford the opportunity of commenting on certain current practices.

First, here is a convalescent from pneumonia, with delirium as a very marked feature in his clinical picture. This man is thirty years old, alcoholic. It is regarding this case I wish to comment upon the misuse of the constant application of ice-bags in general, and in particular in the use of the ice-bag over the heart in pneumonia, which is called, in French, *"frigotherapie précordiale,"* supported by eminent clinicians, like Legendre, Ledru and others. No doubt it is an excellent measure, but it should not be used in all cases of pneumonia. I have also seen it applied in a very loose way, with no intelligent direction, no technic. The idea and object are to progressively refrigerate the spot over the heart and to gradually decrease its refrigeration, and for that purpose it is absurd to simply place or dump a heavy ice-bag over the heart and let it stay there *constantly*—that is, it is expected to stay; but things done that way, with so little care and attention, must fail, and the ice-bag, then, never remains over the heart long, no more than the domestic poultice does over the chest, for the patient is usaully found *sitting* on them when next seen.

Here is the right way of using precordial frigotherapy: Place one ice-bag of ordinary size to fit the chest of each case, not on the skin, but separated from it by a number of flannel compresses, say two thicknesses for one compress; well, say six of those are used. Now the ice-bag must remain *constantly* in place, and as the correct posture for a case of pneumonia should be, more than half the time, the sitting posture, 45° (avoiding, thus, passive congestion), the ice-bag must be held in place either by a gentle support with the hand (nurse's hand) or a snug sling over the shoulder, and not a bandage around the chest. One by one the compresses are removed, until only one or two remain. When the lowering of temperature, which was sought, is obtained, do not remove the ice-bag

at once. No; remove it gradually, by putting back the compresses one by one. This mode of applying the ice-bag is done for the purpose of reducing a high temperature, and it usually does that in from twelve to twenty-four hours.

The constant application of the ice-bag in one particular spot has its special indications. It is entirely wrong to take the habit and make it a routine of applying ice-bags either over the head, heart and abdomen, at one spot, in succession or in all three at the same time; and a sad thing to look at. We often see typhoid fever cases laden with the burden of three heavy ice-bags at one time *("pauvres malades")*. The ice-bag (1) over *the head* has its *special* indication, congestion, delirium; (2) over the *abdomen,* acute myocardial insufficiency, deficient systole, which occurs not only in typhoid fever, but in all infectious diseases, the ice-bag to the abdomen acting upon the abdominal reflex, increasing blood pressure and reducing frequency of systole; (3) *over the heart,* prostration. Referring to this case, precordial frigotherapy is indicated in penumonia, particularly when there is marked prostration, severe toxemia, no extensive pulmonary lesions or involvement in contrast with severe general condition.

So, in this case now before you, in which delirium and restlessness were so marked, I did not place the ice-bag over the heart, but over the head.

The routine of placing the ice-bag over the heart in any kind of old way in all cases of pneumonia, indifferently, regardless of *special indications,* as pneumonia does point out to the clinician, namely, old people, children, adults, prostration, agitation, etc., is just as bad as the reprehensible practice of applying the ice-bag to the abdomen in all cases of typhoid fever, indiscriminately. It may be convenient for the attendants, but crude, indeed, from the point of view of the art of practice.—(From the Medical Clinic, New Orleans Polyclinic, Tulane University.)

Miscellany.

Treatment of Neuralgias by Hypodermic Injections of Air.—*(Revista de Medecine y Cirugia de la Habana.)*—In 1894 Dr. Cordier (of Lyons) praised the use of injections of air into the subcutaneous cellular tissue in the treatment of certain neu-

ralgias, and various medical journals have since reported good results from this method. In spite of this, it seems to be but little known, and this fact has impelled Dr. Karoubi (of Oran) to draw attention to the method in an article in the *Montpellier Médical.*

Dr. Karoubi recalls that Dr. Cordier obtained good results in the majority of the painful nervous manifestations in the neuralgia following herpes zoster (shingles), in the femoro-cutaneous neuralgia that complicates metritis, in gonorrhea, and especially in gonorrheal epidydimitis. It has also been used in traumatic neuritis, in lumbago, in the articular or tendinous manifestations of gonorrhea, in arthritis of the wrist, and in hydrarthrosis of the knee-joint. The injection of air almost always gave marked relief of pain and brought about a favorable modification of the trophic disorders, such as dermatitis, varicose ulcers, perforating ulcer of the foot, etc.

The technic of the gaseous injection is extremely simple; no special instruments are needed. It is only necessary to use a hypodermic needle, a rubber tube and the bulb of a syringe (like a Davidson syringe), which is used to pump the air into the subcutaneous tissue. The bulb of a Paquelin cautery might be used for the purpose, and even a small bicycle pump could be employed.

In order to sift out atmospheric microbes, a piece of glass tube should be injected between two lengths of the rubber tube, and filled with sterilized cotton. The patient's skin should be fairly well disinfected at the place of injection.

The quantity of air to be injected varies. It is, above all, desirable to produce a good distension of the subcutaneous connective tissue of the region injected, which is easily ascertained by the eye. However, it is well to learn beforehand the cubic capacity of the bulb of the syringe.

At what points and at what depths should the injection be made? As a general rule, the air should be injected *loco dolenti,* where the patient locates the greatest pain. In sciatica the injection should be made at the level of one of the points of Valleix, and, if the pain be clearly localized in various places comparatively distant from one another, it is advisable to make several injections, one at each of the painful spots. Generally, three injections suffice—one in the buttock, one in the middle of the thigh, the

third at the level of the calf of the leg. The larger the number of injections, the larger is the number of nerve-ramifications that are subjected to the gaseous distension. The air should be injected until the whole of the posterior aspect of the thigh becomes emphysematous.

It is useless to inject the air close to the nerve-trunk, since it has been shown that injections into the subcutaneous cellular tissue gives as good results as deeper injections, if not better.

As much as two-thirds of a liter of air has been injected in order to obtain favorable results in multiple injections, and even this quantity may be exceeded without causing the patient any discomfort.

Massage of the emphysematous region should be practiced three or four times a day, for the double purpose of diffusing the injected gas and of providing its absorption. When massage is practiced daily the crepitation disappears in three or four days; without massage, crepitation may sometimes be felt at the end of fifteen days. In this way the injections can be repeated every few days in obstinate, prolonged cases. McSHANE.

THE PATHOGENIC ROLE OF THE TICKS.—It was believed for a long time, and many persons still believe, that the ticks are inoffensive parasites. This is an absolute error. It has been completely established, indeed, that they are the necessary agents in the propagation of many parasitic diseases—for example, piroplasmosis, spirochetosis, and "water-heart."

The rôle of the ticks in the transmission of piroplasmosis and spirochetosis is to-day irrefutably demonstrated as much by fact as by observation and experience. Notwithstanding, it is contested by some biologists, at whose head is an indefatigable practitioner, Mégnin, who, to the time of his death, remained one of the most ardent and persevering adversaries of the ixodid theory. It is necessary to confess that this hesitation is comprehensible, because a goodly part of the history of the intimate mechanism of this transmission still escapes us, while another part is very strange.

However, here are some of the peculiarities which are observed:

(a) The study of the evolution of ticks has shown us that in species having a single large mammalian host the adult female alone sucks blood. Consequently, they alone can inoculate the

parasites which this fluid contains. The males, nymphs, and larvæ remain ordinarily on small wild animals. At all events, they never bite men nor domestic animals. They are, therefore, inoffensive, and the females alone are dangerous. That the noxiousness is confined to one sex is the first peculiarity; the second is as follows:

(b) A priori, the rôle of a carrier of virus seems to necessitate for ticks, as for insects, successive transfers from one host to another. Thus it can easily include the species of groups 2 and 3, which, in turn, are transferred to two or three hosts. One can conceive, for example, that equine piroplasmosis may be carried by *Rhipicephalus evertsi,* which has two successive hosts, and which, consequently, may be infected as a nymph and inoculate as an adult. Thus, also, *Piroplasma parvum* may be inoculated by *Rhipicephalus appendiculatus* and *R. simus,* which have three successive hosts, and may be infected as larvæ, or nymphs, and in consequence transmit the infection in the succeeding stage; that is, when nymph or when adult. But for the species of the first group, which during their whole life have only a single large-mammal host, and consequently never pass from one to another, the rôle of necessary carrier which is attributed to them is in direct contradiction to their habits. However, this rôle is an incontestable reality, but it is carried out by an indirect process of a most singular nature. It is known to-day, owing to experimentation, that the young female ticks of an infected mother are themselves infected, and that they can inoculate their parasites when, having become adult, they in their turn, like their mother, pierce the skin of an animal. The proof is furnished from different quarters so far as piroplasmosis is concerned. For example, Lounsbury writes that the progeny of adult ticks *(Hamaphysalis leachi)* fed on sick dogs can transmit the disease when they become of adult age, but at this age only. In the larval and nymph stages they are absolutely innocuous. The same has been established for bovine piroplasmosis by Smith and Kilborne and for ovine piroplasmosis by Motas.

It results, therefore, from these researches, that the ixodids of the first group can only transmit the germs of disease by the intervention of their descendants when the latter arrive at adult age. These parasites can only be inoculated by the young female ticks

of those which are infected, and the propagation of piroplasmosis affords the particular information that the piroplasm passes from invertebrates to vertebrates, not by the invertebrate itself, but by its progeny.

In order to understand this it is necessary to admit that the disease germs gathered by the young acarian progeny of an infected mother have been transmitted to them by their parents, which is equivalent to saying that among ticks piroplasmosis is hereditary. This, then, is the peculiarity in the mode of action of ticks, that the transmission of the parasites is effected not by the acarians which have sucked blood, but by their descendants as the result of heredity. How is this heredity produced? This is a question which science has not yet answered.

One may believe, however, a priori, that it is due to the fact that the infection of the body of the tick by the piroplasms affect, among other organs, the ovary, and in consequence the embryos. In return, the eggs derived from these ovules are themselves parasitized, as the infection may then be transmitted from the egg to the larva, from the larva to the nymph, and finally from nymph to adult.

If this supposition be correct, all the individuals born of an infected mother should be infected, but as among these individuals the adult females alone bite domestic animals it results that they alone are dangerous. This is a fact which we have already noted, and which here finds its explanation. The hypothesis of an infection of the eggs received valid support from the observations made by Siegel in 1903 on an hematozoan allied to the piroplasms—*Hemagregarina stepanovi.* It lives in the blood of the marsh tortoise, and its immediate host is a leech, *Hæmentaria costata;* for Siegel found the germs of this parasite in the esophageal glands and in the embryos of the leeches, which proves that there was an infection of the egg.

Similar facts were pointed out by Schaudinn in the same year, as regards the hemogregarine of the lizard, but they are more convincing, because this time the intermediate hosts, as far as observed, are not only leeches, but ixodids like the piroplasms. The strong light thrown on the subject by these discoveries clearly permits us to suppose that for the piroplasms, as for the hemogregarines, heredity is due to an infection of the egg.

The question may be asked, Is it the same for the spirochetes? No one knows at present, but at all events it is indicated by the researches. Already in 1905 Borrel and Marchoux showed that spirochetosis of Brazilian fowl indicated a generalized infection of the tick by the spirochete and that this infection involved especially the ovary, so that it is probably hereditary, like all the piroplasmosis. However that may be, the heredity of piroplasmosis among ticks is of prime importance, as without it these diseases would not be contagious, being produced by ixodids of the first group, which attack only a single animal and do not pass from one to another, consequently being unable to carry the virus. It is, then, alone due to the heredity of infection among arachnids that piroplasmosis is transmissible from a sick animal to a healthy one, and this heredity appears to us, therefore, as the necessary condition of the propagation of infection.

Piroplasmosis is the best type of hereditary diseases, in the proper sense of the word; that is to say, those which are transmissible from parent to offspring by means of infection of the eggs, an infection sufficiently limited, of course, not to arrest the development of the eggs, cause their death, and hence produce a parasitic castration. On the contrary, many of the diseases considered as hereditary—tuberculosis and syphilis, for example—are transmissible from mother to child only through an accidental lesion of the placenta, permitting passive passage of germs.

(c) Finally, a third point in the ixodian theory will detain us, namely, Under what form is the parasite transmitted by the ticks? Is there a simple inoculation of germs, as by a lancet, in the same form in which they have been received by the acarian, or rather is there a veritable development of the *Plasmodia* in the mosquitoes? This question is still one of those which it is impossible for us to answer, because, in spite of the most assiduous efforts, it has not yet been possible to find the least trace of piroplasms in the body of ticks. Quite recently, it is true, the celebrated German microbiologist, Koch, announced that he had seen "something," but the description which he gives is so vague that really nothing positive can be gathered from his communication.

Simple inoculation, that is, the mechanical transportation of the virus, is perhaps possible in certain cases, notably for the ticks of the second and third groups, which transmit as nymphs, or as

adults, the germs taken in in the preceding stage, but it is not probable as regards the ticks of the first group. Lounsbury, indeed, has shown that adult ticks, transferred from a sick dog to a healthy one, never transmit the disease. On the other hand, we have seen that the inoculation of piroplasms by the progeny of an infected tick is possible only in adult age. It is true that this is not altogether general. Theiler, confirmed by Laveran and Vallée, showed that bovine piroplasmosis and spirochetosis are, in the Transvaal, inoculated by *Rhipicephalus decoloratus,* which are the progeny of infected mothers when they reach the larval stage. Further, the limitation of danger to the adult females may, as we have already shown, be explained by the fact that normally these females alone are parasites of domestic animals. Nevertheless, this peculiarity leads one to suppose that there is an evolution, and permits one to ask whether in the course of migration through the different evolutionary stages of the ticks (eggs, larva, nymph, and adult) the sporozoan does not itself undergo a series of transformations more or less comparable to those undergone by the paludic plasmodium in the body of the mosquito. Probably, then, this evolution can only reach the final stage (which is the formation of spores that are still hypothetical because they have not been seen) in the organism of the adult ticks. It could thus be explained why the larvæ and nymphs are incapable of inoculating the disease. They contain only the piroplasms at an intermediate stage, in which their inoculation into vertebrates would be sufficient to produce the affection.

Here, again, the hypothesis of a development is rendered more probable by comparison with the facts regarding the hæmogregarines of the tortoise shown by Siegel. As we have already said, the sporozoans perform a true evolution in the leeches with the formation of eggs and spores, and this scarcely leaves any further doubt regarding the reality of a similar evolution of the piroplasms in the body of the acarian.

To summarize, we ought, indeed, to recognize that it is still unknown how the young female ticks of infected mothers propagate the disease. It is probable that the spores exist in the salivary glands, but it has not been possible to establish this so far. As we said at the beginning of this chapter, the intimate mechanism of the ixodian transmission still remains mysterious in many respects.

Nevertheless, there is not a single reason to deny this transmission itself, which is demonstrated by so many facts, as some still do.—(Marotel, in Smithsonian Report.)

Medical News Items.

The Tangipahoa Parish Medical Society met at Amite City, Feb. 8. The meeting was attended by several visitors, among whom were Drs. S. Hyde and Porter, who added interest to the program. Election of officers resulted in Dr. H. G. Morris, of Kentwood, president; Dr. J. L. LeNoir, of Amite, vice-president, and Dr. W. T. Newman, of Independence, secretary-treasurer. Several new members were added. Dr. Morris, of Kentwood, was elected delegate to the State Medical Society.

The American Society of Tropical Medicine.—The eighth annual meeting of this society will be held in New Orleans, on Thursday and Friday, May 18 and 19. The secretary of the society, Dr. John M. Swan, of Watkins, N. Y., would be glad to receive, as soon as convenient, the titles of all papers to be read at this meeting. Those who are unable to attend the meeting may send papers to be read either by title or by proxy, and published exclusively under the imprimatur of the society.

The Thirty-fifth Annual Session of the Arkansas Medical Society will be held under the auspices of the Sebastian County Medical Society, at Ft. Smith, on the 2nd, 3rd, 4th and 5th of May, 1911.

Mandeville Town Board of Health Organizes.—The newly-elected Board of Health of Mandeville was qualified by Mayor Hartman on January 17. Dr. R. B. Paine was elected president; Geo. F. Bierhorst, vice-president, and Louis Menant, secretary. The Board will meet Monday before the first Wednesday of each month.

Pharmacy Examinations.—The Louisiana State Board of Pharmacy, which held examinations at Tulane University February 3 and 4, reports the following successful out of forty applicants: R. P. Becnel, F. B. Camors, T. J. Fatherree, J. J. Gerache, M. Graff, Camelia Hayes, A. K. Lindsay, L. A. Mathieu, L. J. Nicholls,

C. C. Walsdorf, J. Ritter, C. H. Kopfler, C. A. Allison, A. H. Bowman, F. J. Dixon, O. J. Herbert, L. E. Koffskey and William King.

Meeting of Attakapas Association.—The Attakapas Medical Association convened in Lafayette on January 25. Dr. Espy Williams, of Patterson, presided. A clinic was held at the office of Dr. R. D. Voorhies, and eight or ten rare cases examined and discussed. In the evening the Association met at the Elks' Home and papers on various professional subjects were read, after which a banquet was held at the Gordon Hotel.

New York Skin and Cancer Hospital Announces a Series of Lectures by Drs. L. Duncan Bulkley and C. W. Bainbridge, beginning March 1 and ending April 26, on Wednesday afternoons at 4:15 o'clock.

The American Society of Medical Sociology Has Been Organized for the purpose of considering the various vital questions related to the public health of this country. All interested in membership should address the secretary, Dr. A. C. Jacobson, at No. 12 Mt. Morris Park, W., New York.

The Anglo-American Society of Vienna.—Physicians who intend following the study of medicine in Vienna may avail themselves of the Bureau of Information of this Society, at No. 1 Johannesgasse 20, Vienna. They may become members upon the payment of nominal dues. The Society is intended to facilitate English-speaking students in obtaining board and lodging, and also for gathering information regarding clinics, and the like.

The International Dermatological Congress.—The Seventh International Dermatological Congress is to be held in Rome, September 29, 1911, under the presidency of Professor Tomasso de Amicis. The Congress promises to be especially interesting because of its convening at the time of the centenary of the Independence of Italy.

The National Confederation of State Medical Examining Boards will hold its twenty-first annual convention in Chicago on February 28.

The American Confederation of Medical Examining Boards.—This body will meet at the Auditorium Hotel in Chicago on March 3, 1911.

Louisiana State Medical Society.—The next meeting of the Louisiana State Medical Society will be held in Shreveport, May 30 to June 1.

The American Journal of Clinical Medicine has absorbed the *Chicago Medical Times,* beginning with the January issue.

Hodgson Infirmary, University of the South, was burned on February 10. Only one annex, containing the operating room, was saved. The loss is estimated at $25,000.

The University of Colorado and the Gross Medical School have been consolidated.

Physical Examination of Tulane University Students Inaugurated.—Physical Director Mason with Dr. Geo. S. Bel and his assistants, have begun the physical examination of the students in Tulane University. Each student in the academic colleges and of the first two medical classes will be subjected to this examination, any defects that may be discovered in his physical make-up noted, and a system of exercise for eradicating these defects prescribed. This will initiate the systematic training of students, to be expanded as soon as gymnasium facilities are afforded.

Anti-Meningitis Serum.—The Rockefeller Institute for Medical Research, in accordance with an announcement made last summer, now gives notice that it has discontinued the general distribution of anti-meningitis serum which it has undertaken without charge ever since the discovery of this remedy for cerebro-spinal meningitis. The effectiveness of this remedy in that form of meningitis which is caused by the Diplococcus intracellularis (Weichselbaum) having been generally accepted by medical authorities throughout the world, it has seemed appropriate that the Rockefeller Institute should devote to other lines of investigation the funds hitherto needed for the gratuitous distribution of the serum, handing over to the public health authorities of municipalities and States, and to commercial establishments, the routine preparation of the serum for general use. The anti-meningitis serum will thus take its place with vaccine and diphtheria anti-toxin as an approved agency for the protection of public health.

Corinna Borden Keene Research Fellowship of Jefferson Medical College.—The accumulated income of this fund now

amounts to $1,000, which will be awarded by the trustees upon recommendation of the faculty to a graduate of the Jefferson Medical College of not less than one nor more than ten years' standing, upon condition that he shall spend at least one year in Europe, America or elsewhere, wherever he can obtain the best facilities for research in the line of work which he shall select, after consultation with the faculty; and that he shall publish at least one paper embodying the results of his work as the "Corinna Borden Keen Research Fellow of the Jefferson Medical College." For further information address Dr. J. W. Holland, Dean.

Death Registration in Texas.—Although Texas, as a State, is not included in the death registration area of the United States formed for the compilation and study of mortality statistics by the Bureau of the Census, there are two cities, Galveston and San Antonio, which, because of effective local death registration ordinances, have been since 1906 comprised in the Bureau's report. Owing to the activity of Dr. William M. Brumby, the former State Health officer, in promoting the extension of the registration area, many requests from Texas cities which desire admission to the area have been received by the Census Bureau. These will be carefully considered, and Dr. Cressy L. Wilbur, chief statistician for vital statistics in the Bureau, states that it is probable that a considerable number of them, in which the ordinances are enforced, may be admitted for the current year 1911.

Personals.—Dr. K. W. Millican, who was associated at one time with the *Journal of the A. M. A.*, has gone to London and will be associated with the *London Lancet.*

South Carolina will erect a monument to J. Marion Sims.

The Louisiana Health Exhibition has been invited to go to Los Angeles for the meeting of the A. M. A. next June.

Dr. Thos. E. Wright, of Simsboro, and Dr. A. S. J. Hyde, of Baton Rouge, have been appointed sanitary inspectors on the State Hookworm Commission.

Removals.—Dr. John T. O'Ferrall, from New Orleans to Wisner, Miss.

Dr. A. S. Pollock, from Big Sandy to Sabine Pass, in charge of Quarantine Station.

Dr. A. J. Reynolds, from DeRidder to West Monroe, La.

Dr. C. H. Burton, from Hot Springs to Crystal Springs, Ark.

Married.—On February 21, 1911, Dr. Allen Jumel to Miss Dora Wright, of Bluefields, Nicaragua.

On January 30, 1911, Dr. William E. Denman, of Phillips, Miss., to Miss Grace D. Leighton, of Gulfport, Miss.

Died.—On Wednesday, February 1, 1911, Dr. Charles Albert Gaudet, aged 63 years. Dr. Gaudet was one of New Orleans' oldest and most prominent physicians, and his demise is much deplored by the local profession.

On February 18, 1911, Dr. King Holt, of Baton Rouge, La., aged 67 years.

On February 18, 1911, Dr. W. D. Egan, of Shreveport, La.

Obituary.

Dr. Emmett Lee Irwin.

The death of Dr. Emmett Lee Irwin, which occurred at his home in Clinton, La., on the evening of January 15, marks the passing of a man of inestimable worth as a citizen and practitioner and brings to a close a career—all too brief—of noble usefulness—a life devoted to the service of his State, his family, his friends and to humanity. His death was the result of an attack of acute gastritis.

Dr. Irwin was in his forty-seventh year, having been born in East Feliciana parish in June, 1864. He was a son of the late William Silliman and Letitia (Kelley) Irwin, natives of this parish, whose ancestors were pioneer residents here from Carolina. He was educated in the public schools and at Centenary College, Jackson, La., and in 1888 received the degree of M. D. from Tulane Medical College, New Orleans. The same year he married Miss Darling Kernan, a daughter of the late Judge Wm. F. Kernan, and entered upon a professional and business career which, from the beginning, was successful. He was a member of the American and Louisiana State Medical Associations and president of the East Feliciana Medical Society since its organization.

Fraternally, he was a member of the order of Free and Accepted Masons and the Kappa Sigma college fraternity. He was a liberal supporter of the Methodist Church, of which he was a consistent and useful member. He was essentially a man of affairs, owned considerable agricultural interests, was an officer in the Clinton

Oil Company and president of the Bank of Clinton. He always manifested a keen interest in matters political, and at the time of his death was State Senator, having previously represented his parish in the Legislature.

While preëminent as a man and a citizen, Dr. Irwin's most distinguishing and endearing characteristic was his broad humanity, so amply demonstrated during the score of years of his professional career. He was truly a friend of the poor, and, in the bestowal of his professional and other charities, knew no distinctions of class or condition, but consecrated his services to all. The palace of the prince and the hovel of the peasant were alike the scenes of his professional activities and the beneficiaries in the same unselfish measure of his skillful ministrations. Like the doctor spoken of by Ian McClaren, "No night was too dark, no sun too hot, no blast too chill, and no waters too deep for him to go on an errand of mercy to alleviate suffering humanity." This element of his nature found frequent expression in his professional life and endeared him to all, who esteemed and loved him as the embodiment of honor, integrity and unselfishness. Universal sorrow follows his untimely death. His country's tears embalm his memory—a memory fraught with the aroma of good deeds well done.

His private life was beautiful. To his family he was loving, kind, patient and indulgent. To his friends he stood true under all conditions. He was whole-souled and big-hearted, and had a pleasant smile for every one. He was charitable in the broadest sense, but never sounded his alms before men, obeying rather the Scriptural injunction not to let his left hand know what his right hand was doing. These acts were the elements of his creed, much of his daily life and his religion. The record of his life is pure and spotless, and such, without doubt, as will entitle him to the enjoyment of that uninterrupted and unceasing felicity that is alotted to the souls of just men made perfect.

He is survived by his wife, four sons and a daughter, two brothers, two sisters and a number of other relatives.

A Lay Friend.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

The Practice of Surgery, by JAS. G. MUMFORD, of Boston, with 682 illustrations. Published by W. B. Saunders & Co., Philadelphia and Boston.

A splendid work on the practice of modern surgery. The author deals in a simple and concise manner with all important surgical conditions, arranging them in the order of their importance. There is no attempt at the compilation of a lot of unnecessary operations and their technic, but a statement of facts and the description of such operations as have given best results in the hands of a thoroughly competent surgeon, and I take pleasure in recommending the book to the profession. MARTIN.

The Treatment of Disease. A Manual of Practical Medcine, by REYNOLD WEBB WILCOX, M. D. P. Blakiston's Son & Co., Philadelphia.

This third edition, thoroughly revised and enlarged, presents substantial additions, including the more recent methods of diagnosis, and, especially, the therapeutic resources at the command of the practitioner. *Forty-three sections,* devoted to *as many diseases,* have been added.

An up-to-date manual of practical medicine must necessarily include the latest reviews upon questions of diagnosis and methods of treatment, but it should not necessarily contain a catalog of all diseases, including the rare ones, which are just fit for monograph references, and many of which are yet under discussion. The space taken up by that kind of enlargement could be more substantially *filled,* to greater advantage, by going into the detail of practical bedside management, in all its aspects, of cases most commonly met in practice—*the real needs of the practitioner.* It should include, of the text-book, only that part of the pathology, etiology and pathogeny of the cases under consideration, which is directly connected with the management of such cases. In other words, as we see it, a manual of practical medicine with a marked leaning toward treatment must be similar neither to the text-book on medicine, nor to that on therapeutics, both being *schemes* and *systems* based on a general plan. Practice means a series of actual cases, with detailed suggestions in the management of each one, and the demonstration of results which cannot be yet explained by classical and scientific quibbling, but which are facts nevertheless. For, as the author of this book aptly says: "It is from a thorough and broad knowledge of therapeutics, in its largest sense, that the practitioner will achieve his greatest success and win most enduring reputation among his patients and the public at large." E. M. D.

International Clinics. Vol. IV, Twentieth Series. J. B. Lippincott Company, 1910.

This is a particularly good volume. We say this not to insinuate that the other volumes, predecessors of the present one, were at all inferior by comparison, for we have always supported, in all sincerity, the great quarterly now referred to. We frankly state that the article of HENRY

W. CATTELL alone on Diagnosis and Treatment is worth having the book. Indeed, these five pages of substantial text and three pictures about Ehrlich's new preparation, arsenobenzol "606," in the treatment of syphilis, are worth much. It may be that we are a trifle *"green"* about the matter, and that others have before this put out just as good an article, and perhaps a still better one. We simply say that we are not aware of it, and that we talk and write about things we know; that is all. E. M. D.

Progressive Medicine. Quarterly Digest of Medicine, etc. Vol. XII, Nos. 3 and 4, September and December, 1910. Lee & Febiger, Philadelphia and New York.

These two volumes conclude the year in review of important advances in the fields of medicine and surgery, and deal particularly with dermatology, obstetrics and the nervous system, in the September issue. The volume for December reviews diseases of the digestive tract and of the kidneys, with the major part of the book devoted to an excellent article on surgery of the extremities, which is not only well presented, but well illustrated. Miscellaneous articles conclude the volume. DYER.

The Diagnosis and Treatment of Diseases of Women, by HARRY STURGEON CROSSEN, M. D. Second edition, revised and enlarged. Published by C. V. Mosby Company, St. Louis, 1910.

The first edition of this work appeared in 1907, and was promptly accorded a place among the standard text-books. The author appreciated the value of well-selected illustrations, and endeavored to show the actual care and handling of patients, thus bringing to those who had not had the opportunity of gynecological hospital training facts that could not be presented in any other way.

Two hundred pages and fifty illustrations have been added to the present edition. The index has been amplified in order to include references and cross-references to every diagnostic and therapeutic suggestion.

In the new text special attention has been given to pelvic inflammation and tubal pregnancy—two live and important subjects, upon each of which an erroneous and chaotic mass of information has accumulated.

Disturbances of function has received careful and detailed consideration, both from the diagnostic and therapeutic standpoint.

Medico-legal complications have also been dealt with in a practical way.

The book is profusely illustrated and the text is conveniently arranged. MILLER.

Gray's Anatomy. Eighteenth Edition. Thoroughly revised and re-edited, with additions by EDWARD ANTHONY SPITZKA, M. D., with 1,208 engravings. Lea & Febiger, Philadelphia and New York.

This standard text on anatomy continues to hold its place among the preferred works for students of medicine, and the strong position it has held historically still places it among the best. No considerable change has been made in the new edition, with the exception of a revision of the plates, many of which have been added as well. To say that this edition of Gray satisfies the needs of the student and comes as an old friend in a new dress, is as much as any one may write of so encyclopedic a text.

DYER.

Never Told Tales, by WILLIAM J. ROBINSON, M. D. The Altrurians, New York.

A collection of stories—presented as true—dealing with the sociologic evils of unfit marriages, especially referring to the heinous marriage of

diseased men with pure women, and the consequences of such unions. Altogether a compilation of chronicles, the lessons of which should be learned by modern society for its own protection. DYER.

Notes sur la Medecine et la Botanique des Anciens Mexicains, par A. GERSTE, S. J. Imprimerie Polyglotte Vaticane. Rome, 1910.

It is interesting to note the gradual evolution of medicine in Mexico, starting with the incantations and crude symbolisms—up to herbaceous remedies and a final saner interpretation of disease. This contribution is of much value to the history of medicine in the Western Hemisphere. DYER.

Lectures on Cosmetic Treatment, by DR. EDMUND SAALFIELD. Translated by J. F. HALLS DALLY, M. A., M. D., B. C. (Cantab.), M. R. C. P. (London). With an introduction by P. S. ABRAHAM, M. A., M. D., B. Sc., F. R. C. P. I. Paul B. Hoeber, New York.

This contribution to the practical care and treatment of certain commoner dermatologic conditions is derived from a group of lectures by Saalfield and deemed of sufficient importance to have deserved a translation. The lectures are not particularly finished, but the series contains many practical suggestions for those interested in cosmetic dermatology. DYER.

Hand Book of Electro-Therapeutics, by WILLIAM JAMES DUGAN, M. D. F. A. Davis Company, Philadelphia.

A clear exposition of the practical method of electrotherapy, presented simply and with numerous illustrations. Altogether an addition to the texts available for the guidance of the student or physician who wishes to understand the simples of the subject. Not only fully instructive, but broad enough to carry the reader into the practical field of operative electro-therapeutics, including a full description of the sinusoidal current high frequency current and its application, galvanism, magnetism, etc. A commendable book. DYER.

Obstetrical Nursing for Nurses and Students, by HENRY ENOS FOLEY, A. B., M. D. John P. Morton Company, Louisville, Ky.

For the student, this little handbook provides a practical review of the preparation and study of the pregnant woman; while for student and nurse it adds the care of the lying-in patient before and after confinement, and, in addition, it affords an excellent common-sense chapter on infant feeding. Altogether a practical work of instruction, full of excellent ideas easily apprehended and put into practise. DYER.

Diagnosis of Syphilis, by GEORGE E. MALSBARY, M. D. The Harvey Publishing Company, Cincinnati.

An excellent compilation of the points, the differential diagnosis of syphilis from conditions resembling syphilis, set out in tableaux and in running text so as to make all points clear to the reader. Over one-third of the book is devoted to bibliographic references; a questionable feature if the book is intended for the general reader.

Modern laboratory methods are reviewed, and enough detail is presented for the elucidation of the subject. DYER.

A Laboratory Textbook of Embryology, by CHARLES SEDGWICK MINOT, LL. D. (Yale and Toronto), D. Sc. (Oxford). Second Edition. P. Blakiston's Son & Co., Philadelphia.

A comprehensive text on a subject of perpetual interest to the student

of medicine, in and out of school. Freely illustrated with original drawings, many derived from exclusive sources, altogether perfect in their exemplification and reference to the text.

Almost the whole book builds upon the human embryo, prefaced by a study of relative types and their development, and followed by ample and explicit advice as to methods of study of the subject covered.

Already an accepted authority, this book must continue standard for the subject of embryology. DYER.

Applied Anatomy. The Construction of the human body considered in Relation to Its Functions, Diseases and Injuries, by GWILYN G. DAVIS, M. D., with 630 illustrations, mostly from original dissections and many in color by ERWIN F. FABER. J. B. Lippincott Company, Philadelphia and London.

Arranged in topographic order, each regional division of the body, with its parts and contents, is extensively discussed in a comprehensive text, to which is added, on almost every page, most elaborate and beautiful illustrations. Not only are normal structures presented, but such abnormal conditions as may affect each anatomic structure, with graphic description and delineated drawing, showing the relations and possibilities in the surgical field.

No pains have been spared by either author or publisher to make a perfect book, and for the surgeon or for the student this must stand as a brilliant guide to the subject. DYER.

State Board Examination Questions and Answers, of Forty-one States and Two Canadian Provinces. Third Edition. Wm. Wood & Co., New York.

Over 800 pages are devoted to questions and answers in this book, constituting an excellent compend for the review of the subjects covered. The matter is well indexed and presented so that it is practical for the purpose for which it is intended. DYER.

Practical Medicine Series—Materia Medica and Therapeutics. Preventive Medicine. Climatology. Edited by GEO. F. BUTLER, Ph. G., M. D.; HENRY B. FAVILL, A. B., M. D., and NORMAN BRIDGE, A. M., M. D. Series 1910. Vol. VIII. The Year Book Publishers, Chicago.

Many old and some new remedies are discussed in the first division of this little book, with especially interesting articles on radium, tuberculin and vaccine therapy. The X-ray comes in for more than usual discussion and the suggestion for new uses of this measure. Preventitve medicine and climatology cover less space in the book, but each division presents interesting matter. DYER.

Manual of Nursing, by MARGARET FRANCES DONAHOE. D. Appleton & Co., New York and London.

A vast amount of information is contained between the covers of this book, much of it of doubtful service to the nurse, but if there is any error on the part of the author it is not an error of omission. Without any attempt to present anything more than the nurse's obligation to her profession, the writer of the book has, in careful detail, discussed everything a nurse must, may, or can do, and to this is added information on many topics on which the nurse may properly be informed. It is altogether the best discursive book on nursing we have yet read. DYER.

Medical Chaos and Crime, by NORMAN BARNESBY, M. D. Mitchell Kennerley, publisher, London and New York.

"As ye sow, so shall ye reap"! The story one reads betwen the lines of this chauvinistic essay on the practice of medicine may be told, with different coloring, of ministers, lawyers, bankers, merchants, or of any class—but it needs always some protagonist of peculiar sentimental spirit to shout out at the housetops the peccability of his own establishment.

That there are evil-doers in the medical guild is only too true, and that the medical profession suffers them is also only too true; but the public cannot see the shadows which cover the modest and true humanitarian workers in the field of medicine, when so strong a limelight is thrown on the unnamed brood described in this book.

Medical colleges have let loose on the public persons with medical diplomas who have been as unfitted to practitce our high calling as they have been to preach the Gospel—and we are only reaping what we have sown, and it is as much your fault, Mr. Author, as it is that of every man who practises decent medicine that such things have existed, just so long as you and the others have let such things go without proper notice and without adequate punishment at the hands of the profession, among which such men practise and by whom they are received. When we adopt the public as confessor let us be sure of some sort of absolution; otherwise it were best to wash our dirty linen at home. DYER.

The Diseases of China, Including Formosa and Korea, by W. HAMILTON JEFFERYS, A. M., M. D., and JAMES C. MAXWELL, M. D. P. Blakiston's Son & Co., Philadelphia.

A great contribution to contemporaneous literature in medicine. While no attempt is made to present any topic in a systematic way, every chapter teems with material of exotic interest, and the mass of subjects covered is in itself an evidence of the great opportunities afforded the writers of this work for the study of medicine and surgery in China.

Remarkable cases of all types of diseases are presented, and photographic illustrations are plentiful. The diseases due to parasites, inside and outside the body, together with the extraneous types of malignant and other diseases, in themselves make the book extraordinary. The work must be of intense interest to the student of tropical diseases and as well to the historian. DYER.

Publications Received.

FUNK & WAGNALLS COMPANY, New York and London, 1910.

The Care and Training of Children, by Le Grand Kerr, M. D.

WORLD BOOK COMPANY, New York, 1910.

Principles of Health, by Thomas D. Tuttle, B. S., M. D.

Primer of Hygiene, by John W. Ritchie and Joseph S. Caldwell. Illustrated by Carl Hassmann and Herman Heyer.

C. V. MOSBY COMPANY, St. Louis, 1910.

Bismuth Paste in Chronic Suppurations: Its Diagnostic Importance and Therapeutic Value, by Emil G. Beck, M. D.

PAUL B. HOEBER, New York, 1911.

Salvarsan, or "606": Its Chemistry, Pharmacy and Therapeutics, by W. Harrison Martindale, Ph. D., F. C. S., and Elwynn Westcott, M. B., D. P. H.

THE YEAR BOOK PUBLISHERS, Chicago, 1910.

Practical Medicine Series, under the general editorial charge of Gustavus P. Head, M. D., and Charles L. Mix, A. M., M. D. Volume X: *Nervous and Mental Diseases,* edited by Hugh T. Patrick, M. D., and Peter Bassoe, M. D.

REBMAN COMPANY, New York, 1910.

Makers of Man, by Charles J. Whitley, M. D.

Diseases of the Eye, by Curt Adam, M. D., with a preface by Prof. von Michel. Translated from the second German edition (1910) by William George Sym, M. D., F. R. C. S., and E. M. Lithgow, M. B., F. R. C. S.

Treatment of Syphilis by Salvarsan Ehrlich-Hata Remedy, by Johannes Bresler, M. D.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1911.

Differential Diagnosis, by Richard C. Cabot, M. D.

Collected Papers by the Staff of St. Mary's Hospital. Mayo Clinics, 1905-09.

W. M. LEONARD, Boston, 1911.

Case Histories in Pediatrics, by John Lovett Morse, A. M., M. D.

MISCELLANEOUS.

Proceedings of the Fourth Annual Meeting of the Association of Life Insurance Presidents. (Chicago, Dec. 9 and 10, 1910.)

A Careful Study and Presentation of Malaria and Its Manifestations, by J. H. McCurdy, M. D.

Studies Upon Leprosy, by Donald H. Currie. Public Health Bulletin No. 41. (Washington Government Printing Office, 1911.)

Disinfectants, Their Use and Application in the Prevention of Communicable Diseases, by Thomas B. McClintic. Public Health Bulletin No. 42. (Washington Government Printing Office, 1911.)

Some Known and Three New Endoparasitic Trematodes from American Fresh Water Fish; Some New Parasitic Trematode Worms of the Genus Telorchis, by Joseph Goldberger. *A New Species of Athesmia* (A. Foxi) *from a Monkey,* by Joseph Goldberger and Charles G. Crane. Bulletin No. 71. (Washington Government Printing Office, 1911.)

Three Contributions to the Sexual Theory, by Prof. Sigmund Frend, LL.D. Authorized translation by A. A. Brill, Ph.B., M. D., with introduction by James J. Putnam, M. D. (Journal of Nervous and Mental Diseases Publishing Company, New York, 1910.)

American Life-Waste, by E.E. Rittenhouse, President Providence Savings Life Assurance Society of New York.

The Determination of the Deterioration of Maize, With Incidental Reference to Pellagra, by O. F. Black and C. L. Alsberg, United State Department of Agriculture. Bulletin No. 199. (Washington, Government Printing Office, 1910.)

Thirteenth Census of the United States: 1910. Bureau of the Census. Bulletin No. 109. (Washington Government Printing Office, 1910.)

Report of the Chief of the Bureau of Animal Industry for 1910, by A. D. Melvin. (Washington Government Printing Office, 1910.)

Reprints.

The Effects of Haschisch Not Due to Cannabis Indica, by M. V. Ball, M. D.

The Field Investigation for Epidemic Poliomyelitis—What the Health Officer Can Do Toward Solving a National Problem, by W. H. Frost.

Preliminary Note and a Simple and Inexpensive Apparatus for Use in Safe Disposal of Night Soil, by L. L. Lumsden, Norman Roberts and Charles Wardell Stiles.

Medical Ethics, Publicity and Promotion, by G. Frank Lydston, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans

For January, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	4	2	6
Intermittent Fever (Malarial Cachexia)	.....	1	1
Smallpox	.....	1	1
Measles	1	.....	1
Scarlet Fever	.....	.....	.....
Whooping Cough	1	1	2
Diphtheria and Croup	2	1	3
Influenza	16	9	25
Cholera Nostras	.....	.....	.....
Pyemia and Septicemia	1	.....	1
Tuberculosis	37	33	70
Cancer	15	4	19
Rheumatism and Gout	1	.....	1
Diabetes	3	.....	3
Alcoholism	1	.....	1
Encephalitis and Meningitis	11	3	14
Locomotor Ataxia	2	.....	2
Congestion, Hemorrhage and Softening of Brain	17	3	20
Paralysis	6	1	7
Convulsions of Infants	1	4	5
Other Diseases of Infancy	13	4	17
Tetanus	1	4	5
Other Nervous Diseases	2	2	4
Heart Diseases	54	28	82
Bronchitis	4	2	6
Pneumonia and Broncho-Pneumonia	25	35	60
Other Respiratory Diseases	1	.....	1
Ulcer of Stomach	2	.....	2
Other Diseases of the Stomach	4	4	8
Diarrhea, Dysentery and Enteritis	12	7	19
Hernia, Intestinal Obstruction	2	2	4
Cirrhosis of Liver	6	1	7
Other Diseases of the Liver	4	.....	4
Simple Peritonitis	.....	.....	.....
Appendicitis	3	1	4
Bright's Disease	22	25	47
Other Genito-Urinary Diseases	1	7	8
Puerperal Diseases	4	6	10
Senile Debility	9	3	12
Suicide	5	.....	5
Injuries	8	14	22
All Other Causes	27	21	48
Total	328	229	557

Still-born Children—White, 25; colored, 22; total, 47.

Population of City (estimated)—White, 272,000; colored, 101,000; total. 373,000.

Death Rate per 1000 per annum for Month —White, 14.46; colored, 27.20; total, 17.91.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.24
Mean temperature 61.00
Total precipitation ..... 2.31 inches.
Prevailing direction of wind, east.

New Orleans Medical and Surgical Journal.

VOL. LXIII. APRIL, 1911. No. 10

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Obstinate Bone Cavities.*

By WILLIAM M. PERKINS, M. D.,
Professor of Clinical and Minor Surgery, New Orleans Polyclinic.
New Orleans, La.,

It is no doubt most satisfactory to have cases of brilliant surgery, with clean-cut cures after brief convalescence, but there will be always with us the cases that call for patient and persistent surgery, holding out only the hope that a fairly satisfactory result may reward long and unremitting after-treatment. Among the most trying patients are those with long-standing and almost never-healing bone cavities. The original troubles are usually osteomyelitis, necrosis or tuberculosis, and we will consider here as "obstinate" only those resulting bone cavities in which the healing process practically ceases. Adult patients, past the age of active bone-formation, are far more apt to have such conditions. In young children the more vascular and actively growing bone, if it be not hindered by infection, readily repairs its damages.

* Read before the Attakapas Clinical Society, Lafayette, La., Jan. 25, 1911.

Under favorable conditions the repair of bone cavities should proceed from both periosteum and marrow, first by the formation of fibrous tissue and later by deposits of lime-salts and formation of bone lamellæ in this tissue. Just as in soft-tissue wounds, the further the new cells are removed from normal tissue areas the feebler are their vitality and reproductive power. The thicker the lining of a cavity grows, the more difficult it becomes for the most recent layer of cells to acquire nourishment and to discharge waste products. This principle holds true for all areas of repair tissue. In superficial wounds it is a well-known fact that epidermis can only to a limited extent push out over granulations from the surrounding normal skin. Each new cell does not have the power to transmit the fully-matured characteristics of normal epidermis. In bone-cavities the lack of power to develop each successive layer of connective tissue lining quite as highly as those nearer normal blood vessels and lymphatics, results often in a condition of repair stasis. The cavity comes to grow smaller, and sometimes alternately sloughs out, and builds up with no material progress. The surgeon's fight is no longer against infection, but against cell apathy.

Such chronic cavities are a menace. The danger of some new and serious infection is always present. The kidneys are under a constant strain as long as there is any suppurating surface, and are liable to amyloid degeneration. Lack of fresh air, exercise and sunshine, together with mental depression from increasing hopelessness, lower the patient's vitality, and, in a vicious circle, reduce his chances for recovery. Any procedure which will shorten and make surer the convalescence is worth investigating.

Bone cavities may be divided into two classes—those that readily fill up with connective and osseous tissue, and those that become chronic.

We have neither time nor patience here for a detailed historical review of the suggestions for dealing with obstinate bone cavities. The object-lessons of dentistry lead to many attempts to fill bones as teeth are filled. There has been found this fundamental difference: bone is intolerant of permanent foreign bodies. The same process of sequestration by which dead bone is expelled is usually induced by any inorganic filling. An area of healthy bone immediately surrounding the foreign body is invaded by osteoclasts,

becomes rarified and absorbed, and the filling lies loose in the cavity.

Pedunculated muscular flaps have been turned into bone cavities, but the method has not grown into favor. Von Mangoldt, in the *Centralblatt fur Chirugie,* 1904, showed that live periosteum could fill bone cavities as well as promote union of old fractures. This method, like the preceding, can be used only in a limited class of cases. Schede's plan of treating aseptic cavities by sewing up the periosteum and soft tissues and allowing blood-clot to serve as a foundation for connective tissue infiltration is uncertain and dangerous. Infection of such clot offers such opportunities for bacterial development that the procedure has been abandoned. Senn's sterile and decalcified bone-clips dusted with iodoform have for similar reasons been abandoned. Fresh bones of young animals, suggested first by McEwen and Poucet, and the more recent successful experiments in autoplastic bone-transplantation, offer brilliant opportunities for further research, but are still far too much in the experimental stage for general utility. We need practical methods, available for any good surgeon.

Besides those procedures requiring unusual skill and experience, which are as yet scarcely advanced beyond the laboratory stage of utility, there are three methods of obliterating obstinate bone cavities which should be at the command of every general surgeon. They are the methods of Neuber, Mosetig-Moorhof and Beck.

Of these, Neuber's is so well known that to "neuberize" a cavity is understood to mean turning in and fastening skin-flaps so as to line it as far as possible. Its great advantages are that it can be done at the close of an osteotomy with such instruments as are already available, that it often succeeds, in spite of infection, and that the bone usually continues to grow thicker under the flaps. Its main disadvantages are that its application is limited principally to a few superficial bones, that it may bind down soft tissues if used where bone is deep, that the healing is slow, that the scar is large, unsightly and adherent to bone, and, above all, that healthy and useful bone must often be sacrificed to shape the cavity for the flaps.

About ten years ago Moorhof analyzed the failures of previous methods of dealing with obstinate bone cavities, and decided that a successful filling must perfectly obliterate the cavity, including all minute irregularities of its walls; must prevent bleeding and

exudation between wall and filling, and must be sufficiently antiseptic to take care of some unavoidable bacterial contamination. Moreover, it must be absorbable, so that in time it could be replaced by repair tissue growing slowly without exposure to air and irritating wound secretions. He finally suggested a mixture of spermaceti, sesame oil and iodoform, mixed so as to melt at between 113 and 118 degrees Fahrenheit. Many formulas have been given as his, but the most authentic seems to be spermaceti and sesame oil, each 30 parts; iodoform (finely powdered), 40 parts. The iodoform is added after boiling the other two, and kept from settling to the bottom by constant agitation while cooling. This antiseptic wax is melted just before being poured into the cavity, and allowed to cool into a solid mass, which remains hard at body temperatures. The cavity itself must be freshly chiseled or scraped out until its walls are sound and uninfected. The cavity should be dry. After the melted wax is poured in so as to fill the cavity completely it is allowed to harden before the periosteum and soft tissues are sutured. Sometimes the wax is slowly pushed out by the growing granulations, and escapes through existing fistulæ or between stitches. Under the best conditions it is completely sealed in by united soft tissues, and is gradually absorbed as connective tissue cells invade it from the cavity walls. Its gradual disappearance has been traced by X-ray examinations, and one case is reported in which a mass of the bone wax of the size of a hen's egg disappeared in one year, the patient being well enough to be at work, without dressings, after six weeks. Moore, of Minneapolis, has used a wax made of spermaceti, olive oil and iodin, and the writer has used refined cottonseed oil, under its own name, in a similar combination. Quite a long paper could be devoted to the preparation and use of Moorhof's bone-wax, and the technic of preparing and filling the cavity demands more time and space than is available here. An article by Moorhof himself, translated in *Surgery, Gynecology and Obstetrics,* October, 1906, gives many essential details, and no one should use the method without reading it. Many faults of technic and undeserved condemnation of new methods result from attempts to proceed with insufficient and second-hand information. What any man has to say about his own ideas is worth reading, if his ideas deserve any consideration whatsoever.

The main advantage of the Moorhof bone-wax are that the patient may be practically well in a short time, while the gradual rebuilding of bone goes on subcutaneously; that, once aseptic, the cavity should remain aseptic; that, even in partial failures, the results often justify the attempts; that scars are small; that the method is good for soft tissue cavities as well, and that the patient is not tied down to surgeon and sickroom for long periods.

Its main disadvantages are that the wax is not easy to buy or prepare; that oozing or infection may demand cleaning out the cavity anew; that the access to the cavity must be free enough for removal of all debris and for asepsis, which free access often demands sacrifice of sound bone; that some of the best surgeons in this country get a large percentage of failures; and that failure sometimes leaves the patient with an operative wound larger than the original one.

The fact that so many bone cavities cannot be rendered aseptic without extensive and destructive operations leaves a large number of cases unsuitable for the Moorhof bone-wax, even though the patient be in well-equipped sanitariums and in the hands of experienced surgeons. Moreover, many cases have to be cared for under conditions that demand methods fairly simple and easily applied by the average surgeon.

In 1906, Emil G. Beck, of Chicago, while injecting with bismuth and vaselin into fistulæ in order to make X-ray pictures showing their extent, discovered that the injections remarkably expedited healing. He had expected to utilize the bismuth to give a shadow on the X-ray plate, merely that the course and extent of operative measures might be foreseen. One extensive fistula leading to infected bone healed after injection and X-ray examination, and Beck thereupon investigated the curative value of the injections. Case reports have since been published by many observers, and the bibliography of this subject is already extensive.

Especially interesting are Beck's articles in the *J. A. M. A.*, March 14, 1908, and in the *Illinois Med. Jour.* for April and July, 1908. Although he has given a series of formulas, the two given in the *Journal A. M. A.* above mentioned and sufficient for most of the cases in which the paste is useful. The

formula given "for diagnosis and early treatment" is bismuth subnitrate 30 grams, vaselin 60 grams; mix while boiling. "For late treatment" the formula is bismuth subnitrate 30 grams, vaselin 60 grams, white wax and soft paraffin each 5 grams; mix while boiling. A later paper suggests that ½ per cent of formalin may be added (after the boiling) for cases with much infection. The soft paraffin must be used instead of the hard, as the latter is practically unabsorbable. The second formula is used after wound discharge has been stopped by the use of the first formula. The first remains quite soft at body temperatures.

When all wound secretion has stopped the second formula to make a solid plug which will hermetically seal the cavity against re-infection and be readily penetrated and absorbed by the advancing granulations, just as occurs with the Moorhof bone-wax. Both the Beck paste and the Moorhof wax can be used for soft tissue cavities, but the tremendous advantage of the bismuth vaselin is that preliminary asepsis of the cavity is not essential.

It is useless to try to heal bone-cavities by the injections unless all pieces of loose bone and similar foreign bodies have been removed. The cavity to be treated should be cleared of actual debris, but *need not be aseptic.* The paste is easily prepared, and may be bought ready-made. Any good glass syringe with a blunt tip will do. The vessel containing the paste should be partly immersed in hot water until it is just soft enough to run freely through the syringe. In hot weather heating is unnecessary. After injecting a sinus or cavity no attempt should be made to prevent the escape of the paste by tight packing, nor should the external wound be allowed to close until asepsis is certain. My worst failure with the paste was caused by allowing the skin to close over too soon after a large injection into an old empyema cavity. Some cases require injections every day or two for weeks. Some need only a few injections. My most satisfactory result was the cure by one injection of a cavity in the inferior maxilla persisting after operation for necrosis.

The paste is usually discharged mixed at first with wound-

secretion, but the discharge diminishes under repeated injections. Just how the treatment influences suppuration is uncertain. It was thought that the X-ray exposures following injections of the early cases had induced radio-activity of the bismuth and thus inhibited bacterial growth. So many surgeons report good results without X-rays that this explanation is unsatisfactory. Whether it be mechanical or chemical, whether vaselin alone would do as well, or whether the decomposition of the bismuth salt with formation of nitrates is the bactericidal factor, all are questions to be definitely determined. Certain it is that cures result from this simple and easy method, and that it cures a large number of cases of suppurating cavities, both of soft tissue and bone.

A word about its dangers. Gangrene, stomatitis, nephritis and even death have been reported following the uses of large doses of bismuth by mouth, by rectum, and by the Beck method. Some of these cases have been attributed to the arsenic which often contaminates inferior bismuth, some have been attributed to nitrate poisoning, and some to the bismuth itself. Whatever may be the explanation, serious results, including death, have followed bismuth injections. In the large majority of the class of cases under consideration in this paper the danger is very small, as absorption from old bone cavities is very slow. The only case of bismuth poisoning that has occurred to my knowledge in the New Orleans Charity Hospital, after these injections, occurred in the old empyema above mentioned. He received about ten or twelve fluid ounces of the paste, and his fistula closed in two days and remained closed a month. By that time he had a well-marked "blue line" on the upper gum, similar to the lead-poisoning line, and his fistula reopened with discharge of bismuth and pus. No other poisoning symptoms were noted.

The stress laid upon the injection method of Moorhof and Beck should not lead us to forget that these are but parts of the treatment of obstinate bone-cavities. Local and general nutrition must be watched. Bier's hyperæmia, vaccine therapy, exposure to air and direct sunlight, baths and massage to surrounding tissues, exercise when possible, fresh air and good food, all are important.

Judicious dressings and still more judicious rest from dressings often decide the result.

Far too little attention is paid to the necessity for repeated operations in many bona fide cases. In all obstinate wounds, the progress of the repair-processes should be carefully noted, and when repair ceases something must be done. There may be need only of improvement of general hygienic conditions, but often there is need of further drainage, elimination of tissue which cannot heal, or some such methods as those of Moorhof or Beck.

In closing, let me add just a little practical suggestion about watching wound-cavities, especially bone-cavities. There is often need of some fairly accurate method of deciding whether a cavity is growing smaller, or how rapidly it is filling. Often the cubic capacity can be determined quite closely by placing the patient in a position that brings the external wound uppermost, filling to a fixed point or to overflowing from a measured quantity of sterile water, and noting the water left in the vessel. If the same position and method be used at different times, variations in size of cavities can be recorded.

The Phenolphthalein Test for Occult Gastro Intestinal Hemorrhage.

By J. A. STORCK, M. D., New Orleans, La.

In the *Deutsche medizinische Wochenschrift* of January 12, Boas advocates the phenolphthalein test for the identification of occult blood in the feces. He claims for it more even results than that obtained from the benzidin or other tests. In the instance of the benzidin test, he rightly says that its very sensitiveness is misleading at times; while, on the other hand, the other tests are liable to cause error in the opposite direction—i. e., lack of proper sensitiveness in detecting significant amounts of blood. He thinks that the phenolphthalein test will prove the most certain of any of the present day tests in the hands of the general practitioner. From my limited experience with the phenolphthalein test, I am not prepared to speak with

positiveness as to its absolute reliability. So far as my experiments have gone, I feel hopeful that we have in the phenolphthalein test a valuable addition to our chemical tests for occult blood. The test is simple in application, the reagents inexpensive and stable. The apparatus required consists of a few two-ounce reagent glasses or beakers, a two-ounce glass mortar, a small graduate, and two pipettes, one for the phenolphthalein reagent, the other for the hydrogen dioxid.

The technic which I employ is as follows: If the stool is hard, a piece the size of a pea is rubbed up smooth with 2 c. c. of distilled water in a glass mortar; or, if the stool is already fluid, 2 c. c. of it are used, and in either instance 15 or 20 drops of glacial acetic acid are added. This is introduced into a reagent glass or beaker; about 15 c. c. of ether is then poured in and the contents are well mixed. When the ether separates, it is decanted into another reagent glass, or beaker, and 20 drops of the phenolphthalein reagent are added. The whole is shaken, and then 3 or 4 drops of hydrogen dioxid are added. In the presence of blood, the lower portion of the liquid turns pink; if considerable blood is present, the pink tint persists for some time; with very little blood, the pink tint soon fades. The color reaction is very pronounced. It is well to use the test on feces known to contain blood, until familiarity with the test is established.

The reaction is explained in this wise: In the presence of blood, phenolphthalin is oxidized into phenolphthalein; and, being in an alkaline medium, it turns pink.

The reagent is made by dissolving 1 gram of phenolphthalein and 25 grams of potassium hydroxid in 100 grams of distilled water, and reducing with 10 grams of pulverized zinc. The resulting red fluid is shaken over the flame of a spirit lamp until it is entirely decolored, which I found required from about eighteen to twenty minutes. Care must be exercised not to apply too great heat, as the reagent may be impaired. The recaction taking place in the preparation of the reagent consists in the phenolphthalein being reduced to phenolphthalin.

In applying this test, care should be exercised that no meat has been eaten for thirty-six hours previous to testing the

feces. As bleeding hemorrhoids and menstrual blood often contaminate the feces, this source of blood in the feces must not be overlooked. Plainly stated my results with the test are as follows:

1st. Whenever the phenolphthalein test gave a positive reaction, the benzidin test also proved positive.

2nd. The benzidin test several times showed a positive reaction when the phenolphthalein, guaiacum, and aloin tests were negative. In these experiments, 2 to 5 c. c. of blood had been given once daily for forty-eight hours previous to the application of the test.

3rd. It was found that, when more than 15 c. c. of blood was ingested in forty-eight hours, the phenolphthalein test always proved positive, but the guaiacum and aloin test often failed.

The Motais Operation as Performed at the Eye, Ear, Nose and Throat Hospital, New Orleans, La.

By T. J. DIMITRY, M. D., New Orleans, La.

It is my desire to describe as clearly as possible, mostly diagramatically, the technic of that ingenious operation of Motais for ptosis. This section of the country is deserving of much praise for the advancing of Motais' idea, through Dr. Henry Dickson Bruns, who has advocated the operation, and was probably the first to perform it in this country. The diagrams are to illustrate, as clearly as possible, the procedure Dr. Bruns has adopted. Some original ideas of my own in this operation will only be discussed but slightly, for the tendency to-day is great to modify and to steal from the originator the glory of his observing and constructive mind.

Ptosis is that condition of the upper eyelid in which, on account of paralysis of the muscle, levator palpebræ, there is no elevation of the lid, and hence the eye is kept covered, or partially so, at all times. The aim of an operation for ptosis is not only to have the eye opened, but cosmetically to be as near to nature as possible, and with this idea Motais substituted for the paralyzed muscle another muscle that could do

most readily the same function and restore this action more nearly than any that had been previously performed.

Some historical facts concerning the operation show the ancient method crude and incorrect. The Arabs designated the disease by the term *"scharnak,"* which was taken from the verb *"scharnaka,"* meaning to cut. The idea was that an excess of lid tissue existed and that the condition could be corrected by cutting out a section of this skin. Scarpa continued this practice, but suggested that, for greater success, the skin incision be made in such a way as to make use of the occipito-frontalis as a substitute for the elevator of the lid. Hunt followed the same idea. To-day we have four different procedures. They are:

1. Excision.
2. The advancement of the tendon of the muscle paralyzed onto the lid or a resection and then advancement.
3. The substitution of the action of the occipito-frontalis.
4. The substitution of the action of the superior rectus.

The excision operations are those of Von Graefe, Bowman, Nicati, Galezowski, Gilet de Grandmont and Boucheron.

The advancement of the paralyzed muscle are those of Everbusch, Schellen, Wolff and Lapersonne.

The substitution of the action of the superior rectus are those of Motais and Parinaud.

The original idea of the substitution of the superior rectus created a discussion before the French Ophthalmological Society and the consensus of opinion gave all praise to Motais.

Before describing the technic, the anatomy that concerns us in this operation should be considered, for without a thorough understanding none of the operations will be clear.

Figure 1 brings out clearly the muscle levator palpebræ, the superior rectus and the tarsus. The levator muscle is thin and triangular. Its origin is from the lesser wing of the sphenoid. It is narrow and tendonous, but soon becomes broad and fleshy and finally terminates in a broad aponeurosis into the anterior surface of the superior tarsal plate; also a few fibres interlacing with the orbicularis palpebrarum. The superior rectus, for it is a tongue of this muscle that Motais uses in his operation, is the thinnest and narrowest of the four recti. It arises

from the upper margin of the optic foramen and is inserted by a tendinous expansion into the sclerotic coat, about three or four lines from the margin of the cornea.

One may observe in Figures 1 and 2 the relationship of these muscles: the levator palpebræ above the superior rectus. I have dotted out on Figure 1 the superior rectus so as to show the tongue taken from that muscle and how the same is brought out over the tarsal cartilage and under the skin and tied on to a little bolster. One should take into consideration the Capsule of Tenon. It encircles the posterior two-thirds of the globe and also surrounds each muscle separately. There are muscular strands between the superior rectus and the levator. The eye, in looking up, also assists, to a certain extent, in elevating the lid.

All operations produce a certain amount of lagophthalmos, and Motais is not free from this point of disadvantage, but the great gain is that the lid can be elevated without occasioning grimace that is necessary when the operation of substituting the action of the occipito-frontalis is performed. When one has witnessed the appearance after both operations he can readily see the great difference cosmetically.

The method of operation that has been adopted by Dr. Bruns, in his department at the Eye, Ear, Nose and Throat Hospital of this city, is shown in Figures 3, 4, 5, 6, 7 and 8.

The eye is first carefully prepared by instilling a 15% solution of argyrol, so as to assist in removing any mucus that is contained in the conjunctival cul de sac, which seems to become thickened or ropy by its use, and easily washed out with a little normal salt solution. The operation is done under local anesthesia. That which has been adopted at the clinic for a number of years is the solution designated as 10-10-20, and first suggested for local anesthesia by Dr. E. A. Robin, the first assistant surgeon. It consists of 10 minims of a 4% solution of cocain, 10 minims of 1/1000 of adrenal in chlorid, and 20 minims of normal salt solution. Ten to 20 minims are injected under the conjunctiva, and also into the lid. After these minor preliminaries, the eye is strongly pulled down with forceps, and a vertical opening is made into the conjunctiva (as in Fig. 3), using for this purpose a pair of straight scissors. This incision would be a continuation of the meridian of 90 degrees.

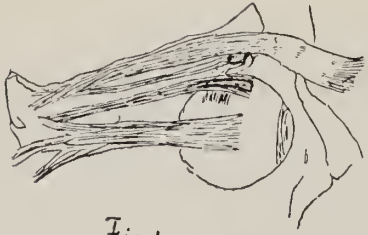


Fig 1.

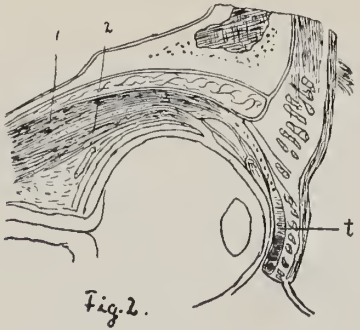


Fig. 2.

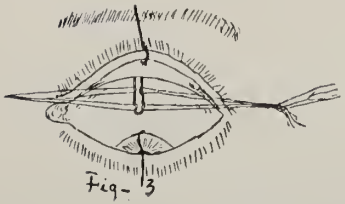


Fig. 3

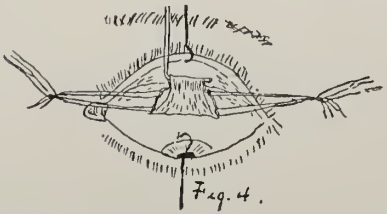


Fig. 4.

ILLUSTRATING DR. DIMITRY'S ARTICLE.

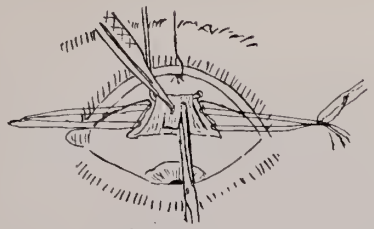


Fig. 5

Fig-6

Fig-9

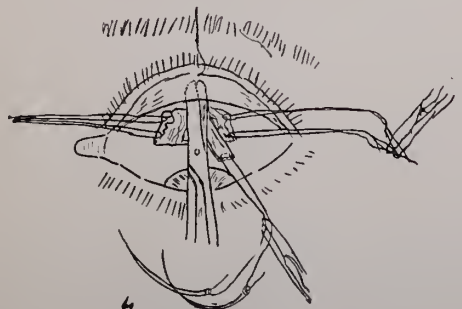


Fig-7

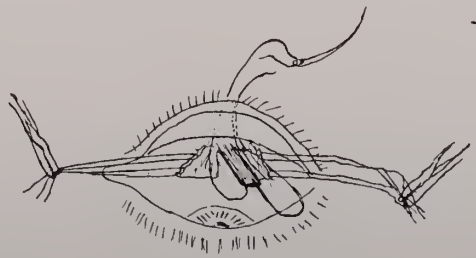


Fig-8

ILLUSTRATING DR. DIMITRY'S ARTICLE.

of the cornea. The starting point of the incision is from 5 to 6 m. m. from the cornea. After the incision is started Dr. Bruns has lately inserted a thread on each side to pull the cut edges apart, and at the end to close the wound in the conjunctiva, and again the incision is lengthened and traction threads introduced, till one reaches near to the beginning of the tarsus, when the upper lid is everted and so held while the cul de sac is cut through. The muscle then is carefully exposed and isolated, avoiding injury to the superior oblique, for it is just under the superior rectus muscle, and a few m. m. back from its insertion.

With the superior rectus well exposed, one introduces a tenotomy hook and prepares for the sectioning of the tongue (Figs. 4 and 5). This tongue consists of the middle third of the entire width of the tendon, as shown in Figs. 5 and 6. It is dissected back for a short distance, and one should be careful not to pull it off, for this could be very easily done in the hands of an inexperienced man, for the muscle is of very small size and does not permit of a second attempt. I am inclined to advise that a much longer tongue than we usually have be made, and to extend same back into the belly of the muscle, as if it were to form a separate muscle. Diagram No. 6 shows tongue free and stitches introduced. This diagram is faulty, in so far as a staunch knot around end of muscle is always adopted, and I have not been able to show it in the diagram. In Fig. No. 7 is shown the scissors introduced to open up the space between the tarsus and skin. After this is carefully opened one introduces the thread and needle that is attached to the tongue into this space, and bringing it out on skin of lid at a distance of about 1 m. m. margin of lid (Fig. 8). The second is introduced the same way, but a little to one side, so as to provide for a small bolster of gauze for threads to be tied upon. These threads are pulled tight. We have found that an over-effect is generally the best. The bulbar conjunctiva and the cul de sac are afterwards carefully sewed. On one occasion we have removed a small piece from the end of the tongue. The dressing usually adopted is that of a watch glass, so as to protect the cornea for a period of three or four days. The conjunctival stitches are removed and the other stitch that holds the tongue is allowed to remain, so long as it appears to be doing good, and that is usually six to seven days. That this operation does produce some lagophthalmus, and at times a hypertrophia, there is no doubt, but

the first passes off with time and the second can be corrected by a tuck of the inferior rectus muscle. It has there great advantages, that it is free from scars, visible or otherwise; free from any symblepharon, as the technic will readily show; that it is not necessary to draw one's face with a grimace to open lid, as is necessary in the other operations; and last, but yet most important, it approaches nearer to the natural.

I submit the picture of a young woman operated on by Dr. Bruns in his clinic some few months ago, and it would take an experienced man to detect any defect.

The Present Status of Bacterial Vaccins, and the Four Leading Serums.*

By FREDERICK O. NORTHEY, M. D., New Orleans.

Since the announcement of Sir A. E. Wright, of London, in 1907, that killed bacteria could be used as a therapeutic agent in combating bacterial diseases, numerous physicians throughout the world have employed this form of treatment in the hope of securing the same brilliant results as he did. The immortal Pasteur's prophetic belief that infectious diseases would be eradicated by vaccination may yet become a reality.

Clinical reports, in properly selected cases, indicate that an active immunity against certain diseases can be acquired by the progressive injection of killed bacteria of the disease. These bacterial injections, vaccinations, cause nature to go to work, and the body cell is made to produce its own protective substance, active immunity. This is in contradistinction to the production of passive immunity by the injection of serums where the protective substances are applied from without the human body.

The writer's experience with the bacterial vaccins has been with the products manufactured by the well-known firm of Parke, Davis & Co., which are prepared in strict accordance with Wright's method. The method consists of growing bacteria on inclined agar culture media for twenty-four hours, and washing the growths off in sterile salt solution, and thoroughly shaking the same to separate the germs one from another, and finally sterilizing by a

* Read before the Attakapas Clinical Society, Lafayette, La., Jan. 25, 1911.

ILLUSTRATING DR. DIMITRY'S ARTICLE.

heat at a temperature of about 60 degrees C. After the suspension is made sterile it is diluted to the proper strength by adding the necessary amount of sterile salt solution, containing 0.2% of trikresol, which acts as a preservative.

The product is now standardized by determining the total number of germs contained in each c. c. The best known and most widely used of the bacterial vaccines is that made from the staphylococcus, and when used in the treatment of boils, carbuncles, acne, staphylococcic septicemia, furunculosis, sycosis, and in any pure staphylococcic infection, also in cases in which the staphylococci are found as a secondary infection, the results have been remarkably good. In osteomyelitis, psoas abscess, various fistulæ, and chronic discharges, their cure is very often brought about by the employment of staphylococcus vaccin, thus reducing the effect of the secondary infection.

Streptococcus vaccin has been used with very encouraging results in cases of erysipelas, scarlet fever, tonsilitis, septic endocarditis, and in patients with pulmonary tuberculosis, complicated with a secondary infection with streptococci.

Gonococcus vaccin is not usually recommended in treating acute gonorrhea, although a number have reported good results from its use. It is particularly recommended in the treatment of gleet, epididymitis, gonorrheal prostatitis, gonorrheal urethritis, orchitis and gonorrheal infections of the eye.

Colon vaccin is especially recommended for the treatment of infections of the biliary and genito-urinary tracts.

Typhoid vaccins have been used with fairly good success as a prophylactic in typhoid fever, but have not proved to be of value in the treatment of the disease.

Pneumococcus vaccin has been used with some success in cases of pneumococcic infection of the middle ear, etc., but its employment in cases of acute lobar pneumonia has been very discouraging so far.

Regarding the dosage of the different vaccins, the amount of any vaccin required to produce artificial immunity varies greatly according to the age of the patient, the extent of the infection and other factors. This does also depend largely upon the virulence of the germs from which the vaccin is prepared. It should be remembered that there is no uniformity among such products; a vaccin

from one source of manufacture may differ in the intensity of its effect from that of another source. So far as the products we are discussing are concerned, it is agreed that in the cases of gonococcus vaccin, five million bacteria is an initial dose; of streptococcus vaccin, ten million; of staphylococcus vaccin, one hundred million, and of colon vaccin, fifty million.

The vaccin is to be injected subcutaneously by means of the ordinary hypodermic syringe in the usual manner. In the course of treatment the dosage must be gradually increased—as the resistance of the patient increases. The dose should be very small to begin with, and progressively increased until the quantity is found which, for that particular patient, produces a maximum of positive phase with a minimum of negative. In other words, the positive phase, representing as it does the period where improvement is taking place in the patient's condition, should be maintained, which it may be by repeated injections at proper intervals. It has been found that, in most instances, five to eight days is a suitable period between doses.

Before commencing treatment with bacterial vaccin the following points should be considered:

It is absolutely necessary that the physician knows just what germ is producing the trouble; a patient with a staphylococcic infection will not respond to treatment when a colon vaccin is given. In other words, the medical practitioner must become something of a bacteriologist before he can expect to get the desired results from the administration of bacterial vaccins. He should at least be able to distinguish the different micro-organisms.

Anti-Diphtheric Serum.—Diphtheria antitoxin is the straw-colored fluid or serum obtained from the blood of vigorous and healthy horses, which have been made immune to the toxic products produced from a pure culture of the Klebs-Loeffler bacillus, isolated from the throat of a patient suffering from a virulent type of diphtheria, and grown in an incubator in plain bouillon at a temperature of 37 degrees C. (or 98.6 degrees F.) for fourteen days.

By injecting subcutaneously repeated, gradually increasing doses of the toxic products, the resulting serum has the property, when given subcutaneously, of immunizing susceptible patients against diphtheria, and bringing about a cure after the disease is established.

The medical profession has come to realize that in cases treated with diphtheria antitoxin at the very commencement of the disease the mortality is about *nil.* Among those treated on the second day the mortality is about 4 to 5 per cent, while among those in which the serum treatment is delayed until the fourth day the percentage is very much larger, about 20 per cent.

The only satisfactory explanation of this increasing mortality is to assume that the administration of antitoxin is the controlling factor in saving lives. Experience proves that the serum treatment should be given as early in the course of the disease as possible; the more prompt, the more certain the cure.

In cases in which the disease is suspected, and while waiting for the results of the bacteriological examination, antitoxin should be given at once, as it does no harm and may prevent serious results.

When children or adults have been exposed to the disease they may be protected for about four weeks by the subcutaneous injection of 1,000 units. The dose in mild cases, when treated within twenty-four hours of the onset of the disease, is 3,000 to 5,000 units. In late and severe cases, 5,000 to 10,000 or more units may be given. In each and every case, no matter what dose is given, it should be repeated in six to twelve hours if there is no improvement shown.

We have learned that, inasmuch as the main problem presented in the treatment of a case of diphtheria is the neutralization of a specific toxin, the antitoxin cannot be administered too soon. Furthermore, antitoxin being a product of definite strength, too little of it may not bring about the desired results, when a little more would have succeeded, hence there is a tendency among the physicians of to-day to give larger doses. Since the antitoxin treatment of diphtheria has become so firmly established, it may seem a matter of supererogation to dwell upon this subject, but the physician should take it upon himself to protect his own interest by choosing the very best and most reliable serum to be had. While there may not be any danger resulting from the employment of any brand of serums supplied by a reputable house, the best results can only be hoped for from the use of the most reliable serums, whether it is given as a prophylactic or curative measure.

The medical profession, I believe, has come to realize that the preparation of antitoxin is not to be entrusted to the inexperienced

nor to those who have not the proper facilities for manufacturing the same. The patient's welfare demands a serum that is prepared where nothing is left undone to insure the purity and potency of same beyond doubt—not only at the time of manufacture, but when the serum is needed.

Antitetanic Serum.—This serum is obtained from the blood of horses that have been rendered immune to the filtered toxic products of a pure culture of the tetanus bacillus, grown in glucose bouillon for about four weeks at a temperature of 37 degrees C. (98.6 degrees F.).

Antitetanic serum has the same physical and chemical properties as anti-diphtheric serum.

Tests are made on the product for sterility, potency and safety, the same as required for anti-diphtheric serum. This serum is of unquestionable value as a prophylactic, and should be employed as soon as possible in cases in which there is a good reason to suspect infection with tetanus bacilli.

For suspicious wounds, the prophylactic administration of the serum is not only justified, but demanded, by reason of our present knowledge of prophylactic therapeutics. When employed as a prophylactic, not less than 1,500 units should be given. When used in the treatment of tetanus, it should be given in larger doses, 3,000 to 6,000 units or more, repeated every six or twelve hours and continued for some days, until the symptoms of the patient shows improvement. The results obtained depend largely upon the promptness in which the serum is injected, but often, when employed late in the disease, even after the symptoms of tetanus manifest themselves, such as the fixation of the jaws, etc., recovery has followed the administration of the serum.

Antistreptococcic Serum.—This serum is obtained from the blood of horses that have been immunized against gradually increasing doses of killed virulent cultures of the streptococcus pyogenes, the cultures having been isolated from the exudate or discharge of tonsilitis, scarlet fever, erysipelas, puerperal sepsis, tuberculosis (mixed infection), etc., occurring in human beings. Antistreptococcic serum has the same physical and chemical properties as diphtheria and tetanus antitoxins.

Thus far there has been no satisfactory method devised for standardizing the serum. It is tested for sterility and safety only.

Numerous reports have been published relative to the successful use of this serum in streptococcic infections. Good results have followed its use in scarlet fever, erysipelas, puerperal sepsis, septicemia, tonsilitis, broncho-pneumonia, pyemia, traumatisms and tuberculosis (mixed infections), etc.

It should be administered in large doses, 10 to 20 c. c., and repeated every six to twelve hours until the symptoms of the patient show improvement.

ANTIGONOCOCCIC SERUM.—This serum is made from the blood of strong and healthy rams, that have been treated with progressive doses of dead and live cultures of the most virulent strains of gonococci obtainable.

The serum has been prepared at the suggestion and according to the methods of Dr. John C. Torrey, of the Loomis Research Laboratory of New York.

The process of obtaining the serum from the blood is essentially the same as that employed in the production of other serums.

It is a comparatively recent product, and differs from antidiphtheric and antitetanic serums, for the reason that it possesses both antitoxic and antibacterial properties, and many evidences of its usefulness have already been reported. It is recommended for the treatment of chronic conditions brought about by gonococcic infections.

It has been employed with good results in joint involvements, arthritis, tendo-synovitis and in epididymitis, orchitis and gleet. The acute infectious process is not markedly benefited. The dose is 2 c. c., repeated every other day, the physician being guided by the general condition of the patient and the degree of the reaction of the serum.

Clinical Reports.

A Very Severe Case of Lobar Pneumonia, with Delayed Resolution, with Treatment Used.

By G. McG. STEWART, M. D., Laurel Hill, La.

H. M. S., white male, 38 years old, single; height, 6 feet; weight, 165 pounds; occupation, planter. Always used alcoholic stimulants in moderation. Used tobacco immoderately by chewing, and smoking cigarettes for the past twenty years. Has had a chronic bronchitis for years, due to the continuous inhalation of tobacco. Otherwise, general health good.

When attacked by pneumonia, the heart and kidneys were found free from organic lesions. Sonorous and sibilant rales were heard in both lungs.

This case of lobar pneumonia was a very unusual one, and was extremely severe. It was complicated primarily with chronic bronchitis, an extensive pleurisy, a very unusual amount of delirium, which lasted practically throughout the attack, and finally with malarial fever.

The lower and the middle lobes of the right lung were first involved. On the sixth day the left lung became involved, the condition in that lung being a pulmonary congestion, but not an acute pneumonic process. When this took place the pulse went to 180 to the minute, and a few hours later the respiration reached a frequency of 68 per minute. This condition in the left lung lasted for several days.

The primary attack ended by lysis, the temperature becoming normal on the fourteenth day, but after six days without fever the temperature rose, without apparent cause, and did not return to the normal again for six weeks, the attack lasting nine weeks in all. The condition was one of delayed resolution, and to this may be attributed the relapse.

After the relapse there was an extension of the pneumonic process in the right lung, and also an extension of the inflammation in the pleura until nearly the whole of its lateral and posterior aspects became involved. There was no evidence of any clearing up in the lung again for more than a month. The sputum was examined

for tubercle bacilli, but none were found. The patient finally recovered.

The temperature was controlled with ice throughout the attack. No other antipyretic was used and no cardiac depressant was given during the attack, except one dose of acetanilid a few hours after the onset and before any signs of pneumonia had developed.

After the heart reached a frequency of 120, digitalone was used, the patient having been *previously* placed upon strychnin sulphate, grs. 1/30, and whisky ℥ss, every four hours, alternating.

I believe that the use of this agent, together with an abundance of fresh air, saved the patient's life. On the sixth day, when the left lung also became involved, all the sash were removed from the windows of the room, and these remained out and the blinds remained continuously open for several days and nights.

This report is taken from the bedside notes of the case, which were kept by two trained nurses and myself.

October 18 (fourth day), 12 M.—Temperature, 101 4/5; pulse, 120; respiration, 40. Two ice bags of largest size in use. Digitalone added to the treatment. Gtts. xv of this were given every four hours, alternating with the strychnin, which was contained in doses of grs. 1/30 every four hours. The whiskey was also continued in doses of ℥ss. every four hours.

1:45 P. M.—In his delirium patient got up and sat upon the side of the bed.

4 P. M.—Temperature, 102 4/5; pulse, 124; respiration, 42.

8 P. M.—Temperature, 103; pulse, 134; respiration, 38. Three ice bags of largest size in use.

11:45 P. M.—Temperature, 102 1/5; pulse, 130; respiration, 42.

Oct. 19 (fifth day). 6 A. M.—Temperature, 102½; pulse, 130; respiration, 42.

8 A. M.—Temperature, 102; pulse, 122; respiration, 41.

10 A. M.—Temperature, 102; pulse, 120; respiration, 44.

2 P. M.—Temperature, 101; pulse, 120; respiration, 38.

10 P. M.—Temperature, 101; pulse, 122; respiration, 42.

Oct. 20 (sixth day). 4 A. M.—Temperature, 101; pulse, 122; respiration, 40.

6:00 A. M.—Temperature, 101 2/5; pulse, 126; respiration, 42.

7:35 A. M.—Pulse, 140; respiration, 40.

8:15 A. M.—Temperature, 101.3 in the axilla. Patient unconscious. Left lung has become involved. Slight dullness, numerous fine rales on inspiration only. Right lung was unstrapped.

9 A. M.—Pulse, 180.

A hypodermic of digitalone, minims xv, was given. The patient was on this preparation already, and the last dose by the mouth had been given at 8 a. m. Whisky, ℥ss. had also been given at 8:40 a. m.

Hypodermics of same preparation, minims xv, were now given every four hours, alternating with hypodermics of strychnin sulphate, grs. 1/20 every four hours.

9:50 A. M.—Temperature, 101 1/5 (axilla); pulse, 150; respiration, 54.

10:20 A. M.—Pulse, 180. Patient does not flinch from the hypodermics.

11 A. M.—Pulse, 158; respiration, 54. All the sash removed from the windows of the room.

12:00 M.—Temperature, 101.1 (axilla); pulse, 160; respiration, 54.

2:10 P. M.—Temperature, 97 4/5 (axilla); pulse, 140; respiration, 60. All ice bags removed.

4:20 P. M.—Temperature, 100 1/5 (axilla); pulse, 140; respiration, 60.

5:40 P. M.—Temperature, 100½ (axilla); pulse, 140; respiration, 68. Face ashy; nails blue.

8 P. M.—Temperature, 100 2/5 (axilla); pulse, 132; respiration, 64.

10 P. M.—Temperature, 99 2/5 (axilla); pulse, 130; respiration, 54.

11:55 P. M.—Temperature, 99 (axilla); pulse, 120; respiration, 52.

Oct. 21 (seventh day). 4 A. M.—Temperature, 99 1/5 (axilla); pulse, 118; respiration, 50.

8 A. M.—Temperature, 99.9 (axilla); pulse, 116; respiration, 54.

10 A. M.—Hypodermics of strychnin sulphate reduced to grs. 1/30.

12 M.—Temperature, 99 4/5 (axilla); pulse, 112; respiration, 52.

11:55 P. M.—Temperature, 99 3/5 (axilla); pulse, 116; respiration, 54.

Oct, 22 (eighth day). 9:15 A. M.—Pulse, 116; respiration, 48.

10:20 A. M.—Temperature, 99 3/5 (axilla); pulse, 116; respiration *60*. Note the difference in the *respiration* recorded at 9:15 a. m. and 10:20 a. m. The room temperature was 64° when the first was taken and 72° F. when the last was taken.

8:30 P. M.—Temperature, 99 1/5 (axilla); pulse, 112; respiration, 50.

Oct. 23 (ninth day). 12 M.—Pulse, 108; respiration, 40.

8:30 P. M.—Pulse, 110; respiration, 42.

Oct. 24 (tenth day). 8 A. M.—Pulse, 96; respiration, 36.

Hypodermics discontinued. The digitalis preparation was continued in doses of gts. xv every four hours, by the mouth, for four days, then the dose was gradually diminished and the drug was withdrawn. Strychnin sulphate in doses of grs. 1/30 every four hours by the mouth was continued to the end of the attack.

The Treatment of Pneumonia with Aconitin.*

By J. T. ABSHIRE, M. D., Leroy, La.

In the treatment of lobar pneumonia with aconitin (amorphous) it is not claimed that other remedies are not used in conjunction with it, nor that every case is aborted; but I *do* claim that the proper use of the drug will abort the majority of cases, or, if the disease lasts seven or nine days, as it generally does under the expectant plan of treatment and thus ends by crisis, under aconitin it will almost invariably end by the lysis, which, to me, is satisfactory as aborting it.

The following is the plan of treatment: The first thing I do when called to a case which I find to be lobar pneumonia is to stimulate the secretions with appropriate cathartics, keep the bowels open with daily doses of salines, together with some sort of intestinal antiseptics. Together with these I immediately start with the aconitin in 1/134-grain dosage, which I repenat as frequently as necessary, every fifteen minutes if required, depending upon the temperature. I usually combine with this aconitin strychnin arsenate 1/134 grain, and digitalin 1/134 grain, excepting and only when I have a plethoric case, when I substitute veratrin 1/134 grain, for the strychnin.

* Read before the Attakapas Clinical Society, Jan. 25, 1911.

The two following cases are about typical:

Case 1. Mrs. D., aged 40 years, mother of eight children, and then four months pregnant. She had the initial chill on Dec. 7, 1910, and I saw her forty-eight hours later, when the temperature was 104°, pulse 120 and respiration 44, with severe pain in right side of the chest, hacking cough, with bloody sputum. On examination the diagnosis was made clear. She had pneumonia involving lower lobe of right lung. This was a very delicate little woman, and I gave her the strychnin combination as outlined above, and on the sixth day she was free from fever and was on the road to complete recovery.

Case 2. Mrs. C., aged 23 years, mother of two children. She had the initial chill on Dec. 14, 1910, and I saw her six hours later. Temperature, 105°; pulse, 130; respiration, 40. Anxious expression, with slight delirium. This was a healthy young woman, and I gave her veratrin in place of strychnin in the treatment, and followed the plan of treatment as already outlined. The pain in this case was so severe that I had to give a hypodermic of morphin, and the pneumonia involved the middle lobe of the right lung. She expectorated blood on the second day of the disease, and she was out of danger on the fourth day. No more fever; normal pulse, and respiration 24.

These are only two cases out of over 300 so treated, and, although I have lost cases, my percentage has been less than 4%, when heretofore it was over 20% under the old method of treatment.

I know that I have converted some of my friends to adopt this treatment, and they are as satisfied with it as I am, and if this paper, which has, of course, no literary merits, but states only facts, should get only one man to adopt it also, and be as satisfied as I am, then my labor has not been in vain.

Tetanus Statistics.

By J. D. BLOOM, M. D., New Orleans, La.

The disappointment that followed the use of tetanus antitoxin in its early prophylactic administration, even when vigorously pushed, makes any fact pertinent that personal experience might contribute to our knowledge of method, doses, or reliability of manufacture.

There seems to be no doubt in the statistical showing of large numbers of cases that a decided lowering of the mortality can be recognized from the use of the serum. The central effect, both of the tetanin and antitetanin, that has prompted the intracerebral and spinal methods of using the curative serum under the belief that the subcutaneous introduction of the antidotal remedy conserves merely the prevention of a further general infection, is an idea to be measured by entrance, route and central effect, and though the central method of administration secures more immediate promise in offsetting the active disturbance of the centres, it should not be argued in setting aside the curative dosage possible in a subcutaneous or intravenous administration.

So thoroughly impressed have I been by my little experience during years of hospital work that the impression has forced me to compile the Charity Hospital statistics for the past twenty-five years to negative or affirm my impression.

Four years preceding 1896 the number of cases treated had exceeded any four successive years of the time of these observations, and the rate of mortality showed equally high.

Dr. O. L. Pothier, pathologist, on the eve of his departure to the European laboratories, was requested to make arrangements for the regular shipment, quarterly, of a stock of antidiphtheritic and antitetanic serums of the Pasteur Institute of Paris, regarding the reliability and scientific precision of which I was confidently assured. The shipments followed in regular order, and continued actively throughout the year that followed, when, besieged by American manufacturers with an offer of such attractive financial benefit to the hospital, I was persuaded to ask a release from the Pasteur contract.

My impression in the use of the Pasteur product during the time covered by its use was as happy as is the outcome of the early use

of the antidiphtheritic serum of to-day, and, in addition to the cases recorded, I can recall a number treated by a like product, with even more favorable results, by my professional friends in the city, with whom I was associated.

During the first twenty-five years covered in the statistics, of which I made special study, there were treated in the Hospital 295 cases of tetanus, of which 230 died—a mortality for all cases of a little less than 80%. Antedating the serum's full use, which was begun in 1896, the mortality by the prevailing method of treatment was 85½% plus, which included all cases and types. In the facts as presented, only the comparative results can be shown, as such data necessary to the effect of the remedy upon the type of infection, other than traumatic or idiopathic, cannot be definitely made.

It was about the middle of the year 1896 that the hospital began to use the Paris product, at first secured from agencies in the United States, and the impress of its use marks a contrast with the four preceding years.

The year 1891 shows an improvement, by comparison, in result, the outcome of the removal from the institution of three patients who passed out from under observation, the result remaining unknown.

In 1897, when the Pasteur serum was made particularly exclusive, coupled with the sedative effect of bromid and chloral, the death rate was but 33½%, the lowest in twenty-five years. I, too, can recall the small dose of bromid and chloral that was required after its use, and the decided impression one and two doses of serum produced upon the disease.

In the seventeen years preceding the use of antitetanin the hospital treated 169 cases, with 144 deaths—a mortality of 85% plus. Since the serum's introduction, though not continuous use, the mortality has been 67% plus. The lack of its continuous use was occasioned by the apparent harmful effect of the product that replaced that from the Paris Institute, exhibited by a high temperature following its administration in every instance, and this prompted the return of the remaining serum to the manufacturers for an examination and an explanation. Their reply was to the effect that it could only be explained by a change of temperature from the place of its manufacture to that of this city. At any

rate, this fear in its use was very guardedly overcome by gradual and tentative use of the replacing product. The showing of this is made in 1899, when again the mortality reached 100% but one time in eight years of the serum's use, whereas in the seventeen preceding years this death rate had occurred seven times. In this is there a very convincing evidence of its therapeutic value in a general way, and so markedly in the showing of the superiority of the Paris product, coupled as it is by the recollections of the marked amelioration and cure following one or two doses of 20 c. c. each, in cases that I recall, that I beg to submit the facts in the interest of the sufferer and in the hope of its confirmation and influence upon our home manufacturers.

The yearly statistics are here appended:

TETANUS.	Cured.	Improved.	Unimproved.	Died.	Total.	Death Rate.
1879.						
Tetanus				3	3	
Idiopathic				2	2	
Traumatic	2			4	6	
				9	11	81 9/11%
1880.						
Tetanus				8	8	100%
1881.						
Acute			1	4	5	
Chronic				1	1	
				5	6	83 1/3%
1882.						
Idiopathic				2	2	
Traumatic				6	6	
				8	8	100%
1883.						
Traumatic	2			6	8	75%
1884						
Idiopathic	1		1	3	5	
Traumatic	1			1	2	
				4	7	57 1/7%
1885.						
Idiopathic				1	1	
Traumatic	3			7	10	
				8	11	72 8/11%
1886.						
Idiopathic				3	3	
Traumatic				2	2	
				5	5	100%

TETANUS.	Cured.	Improved.	Unimproved.	Died.	Total.	Death Rate.
1887.						
Idiopathic				2	2	
Traumatic				10	10	
				12	12	100%
1888.						
Idiopathic				1	1	
Traumatic				6	6	
				7	7	100%
1889.						
Traumatic	2		1	4	7	57 1/7%
1890.						
Idiopathic	1				1	
Traumatic	1			8	9	
				8	10	80%
1891.						
Idiopathic	1				1	
Traumatic		2	1	5	8	
				5	9	55 5/9%
1892.						
Idiopathic		1		1	2	
Traumatic	1			6	7	
				7	9	77 7/9%
1893.						
Idiopathic	1			1	2	
Traumatic	2			7	9	
				8	11	72 8/11%
1894.						
Idiopathic				1	1	
Traumatic				15	15	
				16	16	100%
1895.						
Traumatic				24	24	100%
1896.						
Idiopathic	1			6	7	
Traumatic	5	1	1	8	15	
				14	22	63 7/11%
1897.						
Traumatic	10			5	15	33 1/3%
1898.						
Traumatic	2	1		13	16	81 1/4%
1899.						
Traumatic				14	14	100%
1900.						
Traumatic	2	1		10	13	76 12/13%

TETANUS.	Cured.	Improved.	Unimproved.	Died.	Total.	Death Rate.
1901.						
Acute	3			3	6	
Traumatic	2			2	4	
				5	10	50%
1902.						
Tetanus	2			6	8	75%
1903.						
Acute	6	1	2	15	24	62 1/2%
1904.						
Tetanus	5	1		12	18	
Tetanus Traumatic.				1	1	
				13	19	68 8/19%
1905.						
Tetanus	5	2		11	18	
Tetanus Traumatic.				1	1	
				12	19	63 3/19%
1906.						
Tetanus	4			11	15	73 1/3%
1907.						
Tetanus			1	2	3	66 2/3%
1008.						
Tetanus	5	2	1	14	22	63 1/11%
1909.						
Tetanus	4			16	20	80%
	74	12	9	298	298	74 174/199%

Though my official connection with the Charity Hospital ceased with the year 1903, these statistics, given in the order of their sequence, speak for an evolution toward a scientific method, modern in its appreciation of pathology and of a sustained benefit in point of treatment and cure.

The curative value, scientific precision and adverse conditions are to be reckoned from known facts toward which this is purposed, and only with which a definite quantity and manufacture can be adequately weighed as to the clinical requirements.

It may be fitting to add an observation relevant to the precision of manufacture that would further emphasize the need of a standard in the serum used by a case that I had under observation.

A miss, aged about 13, suffered an injury to dorsum on foot, for which a protective injection was given; a blood infection followed, with high temperature, ulcerative endocarditis, delirium

and a continuous illnes for six weeks, markedly relieved after injection of anti-streptococcus serum of a reliable manufacture.

Anærobic conditions necessary for the life of tetanus bacillus, the freedom of an aseptic wound from the possibility of infection, the likelihood, as has been found, of a blow or contusion that in degree caused great tissue impairment becoming infected, together with the frequency of the condition following thyroidectomy, are cogent facts of clinical importance and basic reasoning.

The saying that the subcutaneous injection of the serum wards off further infection and that existing symptoms speak for an overwhelming poison to the nerve centers has the advocacy of the serum's use in direct contact with these centers. Whilst a brilliant showing has been reported from this method, it would seem wise to restrict this treatment to the worst cases, not unmindful of the benefits by both subcutaneous and auxiliary mtehods.

That a disappointment exists in the use of tetanus antitoxin cannot be disputed. Every prophylactic treatment has failed, yet in the showing here presented and the individual impression that has been obtained, the mortality had a very assuring comfort, both as to pertinency of treatment by its effect and of the greater possibilities under a wise discernment in its use.

A statistical value is inferential; a consciousness of the facts presented is a matter of practical observation and must have weight.

Miscellaneous.

The Council on Medical Education of the A. M. A., and the American Medical College Association, Chicago Meeting.

SPECIAL REPORT FOR THE JOURNAL.

By Prof. Irving Hardesty,

Head of Department of Anatomy, Tulane University.

The series of meetings held in Chicago during the days of February 27 to March 3, inclusive, probably had a more prophetic bearing upon the future advanceemnt in the standards of training for and control of the practice of medicine than any similar meet-

ings ever held in this country. The first really honest and united movement toward the increase in efficiency and the standardization of medical education may be said to have started only seven years ago, and only now are the forces beginning to come together in a true realization of its defects in the United States, its present needs and what its standard must be in the near future. The meetings comprised those of the National Confederation of State Medical Examining and Licensing Boards, the convention of the American Medical College Association, and the seventh annual conference of the Council of Medical Education of the American Medical Association. The program of these bodies involved the presentation of about fifty formally prepared papers, and these and the discussions following them were contributed by members of a large number of State boards and by representatives of practically all the medical schools of any standing in the United States and Canada, the presidents of five universities, several counsels of note, one Judge and one State Governor.

While space cannot be asked here for even the briefest review of the various papers, the following, chief of the general heads under which the discussion could be arranged, may be of some interest:

The standardization and improvement in efficiency of the State Medical Examining and Licensing Boards.

Vital statistics' legislation and the needs of public health legislation in the United States.

Desirable medical practice acts and the administration and enforcement of those now in existence.

Interstate reciprocity, its administration, and vital relation to the upholding of educational standards.

State control and State support of medical education and medical colleges.

The necessity for high educational requirements for admission to all medical schools, and the accomplishment of their strict and uniform enforcement.

The need for the addition of a fifth year to the curriculum of the medical course in the United States.

The great importance and necessary content of the library of the medical school.

The subjects at present required in the medical school curriculum,

and the lack of, and necessity for, the truly scientific viewpoint and the application of modern pedagogics in teaching them.

The equipment required for the work of the different years of the medical school.

The educational functions of hospitals.

Research in medicine, and the desirability that all professors give their entire time to the teaching work.

As bearing upon some of the more flagrant evils and defects at present existing in the standards of medical training and the control of medical practice, the following statements may be culled from the papers presented:

From the very nature of their appointment, the State Boards of Examiners not only sadly lack uniformity of standard in requirements, but a large number of them practice methods both inefficient and unsafe. There exists the rationally unnecessary number of eighty-three licensing boards in the United States, including eighteen appointed separately for osteopaths. State boards should not only require one or more years of prescribed college work preliminary to the medical school, but they should all require an internship in a hospital. State board examinations should be only in part written. As is already practiced in several States, they should consist, in considerable part, of practical examinations. State boards, however appointed, cannot be depended upon to reorganize or crush out of existence the cheap schools of the State. Fully half of the schools of the country cannot grow from within and have no future whatever. State boards correctly and intelligently appointed, with sole reference to the one and only object of their existence, the protection of society against the incompetent practitioner, will never obtain universal uniformity of standard, because universal uniformity will never obtain in their personnel, never obtain in all medical colleges, and never obtain in the laws of the different States. In the natural development and evolution of affairs, just as, for example, in interstate commerce, railroads, purity of foods, etc., there will eventually come Federal control of medical training and medical practice.

As to those already licensed to practice, one great, lamentable condition stands out preëminently in America: the professions is over-crowded, not by the survival of the fit, but the survival of the unfit. With a population of about 90,000,000, we have at least

120,000 licensed to practice medicine, or about one doctor to every 800 inhabitants. In England the proportion is one to 1,250; in France, one to 2,175, and in other countries the proportion is still more favorable to the medical profession. We do not need more doctors in this country, but a better brand of doctors. This deplorable condition has been brought about by the numerous cheap and irresponsible medical colleges, the mutual admiration societies in this country, whose only personal qualification and whose only entrance requirement is that the student pay his tuition fees. The teaching and qualifiying of the student to practice medicine should be considered not only a public, but a sacred, trust. In the year 1904 there were 28,142 medical students enrolled in the United States—a large proportion of the world's supply. While the number has decreased somewhat since that year, it has not sufficiently decreased. Mr. Abraham Flexner stated that three-fourths of the medical schools in this country have no just and moral right to exist. Dr. Arthur Dean Bevan placed the number having a right to teach medicine at 60 out of 130 colleges. Dr. Wm. J. Means stated that 20 to 25 percent of medical students should be eliminated as unfit during the first two years of the medical curriculum. Dr. A. H. Ferguson, president of the Chicago Medical Society, advanced the idea of free medical education by the State and by the endowed institutions as the remedy for the present evils and, for the public, the really most economical solution.

The general consensus of opinion was that two years of college work should be required for entrance to the medical schools, and that such an entrance requirement will be general in the near future. In these preliminary years a year's course in inorganic chemistry, a year of physics, a year of biology and a half year of embryology, two years of German and one year of French should be prescribed. Eight State universities already require one or more years of prescribed college work for entrance to their medical schools, and thirty-four other medical schools have like requirements, many requiring two, and some of them requiring three, years of college work. The above subjects should be offered in the purely scientific or academic form. There is no time for them in the medical curriculum, and it is not the province of the medical schools to offer them.

The United States is the only country in the world of any size

and educational standing which attempts to give the degree of Doctor of Medicine in four years. Modern conditions have materially increased, even during the past ten years, the number of subjects taught, and has greatly elaborated the old subjects. The result is that in those schools which try to present the subjects required at all in accord with their present development, the curriculum is so crowded that the student has positively no time for recreation, and practically none for proper thought and assimilation. The addition of a fifth year was strongly urged. The Canadian institutions and several in the United States have already added a fifth year, and Tulane University is now earnestly considering it. Other countries are requiring more than five years.

The chief purpose of both associations is to elevate, standardize and systematize medical education, to lead the weaker schools to reorganization and to modern standards of efficiency, and to force out of existence those incapable of development, and therefore a menace to the public health. Since every human body presents the same anatomy and the same physiology, exists and is governed by identical vital laws; since, for example, there can be but one science of chemistry, so there will be and can be but one science of medicine. The various sects, fads and "pathies" that have exsited under the old training, in ignorance and empirical practice of medicine, will become impossible in the light of modern scientific medicine.

Dr. N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association, presented a paper on the past progress and present needs in medical education. He presented a series of charts calling attention to some changes for the better which have occurred since 1904, when the Council was organized. In this year there were in the United States 166 medical schools, practically one-half the world's supply, with 28,142 students enrolled. Since then the number of schools has decreased and the number requiring one or more years of college work for entrance has greatly increased. Below are some figures compiled from Dr. Colwell's charts, which tell the story of the decided trend toward better things of medical education in this country:

Years.	Total Med. Colleges in United States.	Colleges requiring for entrance one or more years of college work.	Total graduates of all Med. Colleges in United States.	Graduates of colleges requiring for entrance one or more years of college work.	Per cent of colleges in United States requiring for entrance one or more years of college work.	Per cent of total students enrolled in colleges requiring one or more years of college work.
1880	90	0	3,241	0	0	0
1890	116	0	4,454	0	0	0
1900	151	2	5,214	178	1.3	3.0
1901	159	3	5,444	170	1.9	2.6
1902	155	3	5,009	290	1.9	2.8
1903	154	3	5,698	189	1.9	2.6
1904	166	4	5,747	290	2.4	4.6
1905	160	5	5,600	251	3.1	4.8
1906	161	6	5,364	267	3.7	5.8
1907	161	9	4,980	253	5.6	7.0
1908	152	16	4,741	297	7.9	14.2
1909	144	24	4,515	618	13.9	19.7
1910	133	40	4,440	895	32.8	37.0
1911	128	42	?	?		*

* Estimated.

Communication.

Vienna Letter.

(Special Correspondence of the Journal.)

According to my promise in my last letter I will try to give you a few of the interesting facts concerning the hospitals and the courses to be had here.

After having secured suitable quarters, preferably in the neighborhood of the Allgemeines Krankenhaus, and become affiliated with the Viennese A. M. A. (from which one is surely to derive many benefits), the doctor is now ready to search for the work he desires. On the bulletin board of the A. M. A. he will find all of the courses that are regularly given placed under their respective headings. These courses are usually posted towards the end of the month, and begin, as a rule, about the first or fifth of the following month; consequently one reaching here between these periods will not experience any great difficulty in securing work.

Priority in registration (as a member of the A. M. A.) gives the signer of a course precedence, which is a very just rule. In signing a course, each one must place after his name the date of his

registration, and after the course is once assigned the signer is responsible to the class for his part of the fee, though he has the privilege of disposing of it to another person who may be looking for this particular work. Besides the courses regularly posted there are numerous others to be had. By reference to the blue-book one can find any number of most excellent men who are willing to start a course, provided the organizer of same will secure the desired number to form a class, and, again, those who desire individual instruction will not experience much difficulty in obtaining it, though it is a trifle extravagant, for the prices range from 20 to 30 kronen ($4 to $6) per hour.

The number in a course varies from two to five, and may go as high as twenty-five. Usually in gynecology, obstetrics, ear, nose and throat and dermatology, there are five, while in surgical and medical diagnosis it reaches ten, and in gross pathology the class may have as many as twenty-five men.

For laboratory or research work, one will find many opportunities here, with an abundance of material at his command, together with laboratories with the most modern equipment. With personal letters to some influential person or a professor, and with a fair knowledge of the language, one will, in all probability, be able to secure (as I have in the Wertheim Frauenklinik) the position as a volunteer assistant, in which one will be able to do the actual work, but under the guidance of one of the chiefs, who do only the major operations, and even these they often allow you to perform. You have also the opportunity of working in the pathological laboratory under the direction of a skilled and scientific man (Professor Schottländer being the pathologist in this clinic).

The majority of the courses that are given are conducted at the famous old Allgemeines Krankenhaus, where also the practical work and bedside instructions are given to the medical students of the University. The attending staff is made up chiefly of the professors of the various branches at the University. The University clinics are held daily (Sundays and holidays excepted) at eight in the morning, and to which the American colony is always welcome.

Professors Eiselsberg and Hochenegg have always an abundance of operative material, and usually two different operations in each department are going on at the same time. They begin at eight and continue till ten or eleven. The medical lectures are given by

Professors Neusser and Van Noorden. They, too, start at eight in the morning.

Among the most interesting, as well as instructive, things to be seen here are the *post-mortem* examinations, which are conducted every morning at the Pathological Institute, to which all medical men are welcome.

Each case has a tag tied to the great toe, giving the name of the subject, date of death, clinical diagnosis, and in each case a complete autopsy is performed.

For the study of pathology the student can hardly find as great opportunities nor as abundant material anywhere as in Vienna. The chair of pathology is held by Professor Weichselbaum, and courses are given by his able assitant, Professor Stoerck, whose course is one of the most popular.

For the study of anatomy in all its branches opportunities are offered by the Anatomical Institute, and occasionally Professor Tandler can be prevailed upon to give a course on pelvic and abdominal anatomy, with special relations to surgical application, on which he has done so much original work.

In the skin and genito-urinary work a rare clinic is afforded under the care of Professors Finger and Riehl.

The Allgemeines Krankenhaus was erected in 1772 by Emperor Josef II, and occupies more than two city squares of ground. It is built on somewhat of a pavilion plan. There are some thirty buildings, separated by large courts, making the wards light and cool. While the structures are quite old, they have been constantly improved and kept up-to-date as regards their equipment. In the building which Professor Van Noorden occupies, Van Swieten and Humboldt attended lectures as students.

The two Frauenkliniks, one under the direction of Professor Schauta, the other under Professor Wertheim, were completed and occupied the latter part of 1908, and contain each 300 beds, devoted exclusively to gynecology and obstetrics. They are modern and complete in every detail, and there are now in the course of construction three other beautiful new buildings, to be occupied by Professors Van Noorden, Chiari and the late Escherich's successor.

With the exception of the new buildings, the hospital has about 2,600 beds, the majority of which are devoted to clinical instruction, and, besides, the out-patient department, which is one of the

largest in the world, as they treat on an average 160,000 patients annually. This material is also at the disposal of the staff for teaching purposes. The obstetrical department is also one of the largest in existence, for they confine annually over 12,000 women. This material is exceedingly rich in all sorts of pathologic conditions, especially so in osteomalacia, contracted pelves and the like.

To give you a brief idea of the opportunities, I will enumerate some of the more important medical institutions, where work may be obtained by the student:

Rudolfsspital, with 1,000 beds; Franz Josefsspital, 680 beds; Wiednerspital, 600 beds. At this hospital is the famous surgeon, Professor Schnitzler, who enjoys the distinction of being an authority on appendicitis, of which he performs more operations than any other man in Vienna. We have the Elisabethspital, with 500 beds, and it is here that Professor Latzko did his original work on thrombosis of the pelvic veins and perfected and made popular the extra-peritoneal Cesarian section; Wilhelminenspital, 500 beds; Sophienspital, 250 beds; Rothschildspital, 300 beds; the Diaconissensipital, 50 and the Maria Theresiaspital, 30 beds, the latter two devoted exclusively to gynecology. The Rudolfinhaus, not to be mistaken with the above-mentioned Rudolfsspital, has 100 beds, and is under the charge of Professor Gersuny, who is noted for his plastic surgery. Though he is in his seventies he is still active and does surgical work in all its branches. The Policlinic has 200 beds and an out-patient clinic of over 70,000 annually.

Then there are the following hospitals devoted exclusively to children: Leopoldspital, 300 beds; Annaspital, 150 beds. It is here that Professor Escherich did most of his work, and where Professor Pirquet did his work on the tubercular reaction; St. Josefsspital, 200 beds; Karolinenspital, 50 beds and with out-patient department of over 20,000 annually; the Wiener Kaufmannspital, 130 beds; Stefaniespital, 108 beds.

One of the most important structures here is known as the Steinhof, which is situated in the suburbs and is devoted to mental diseases. It consists of sixty buildings, with accommodations for 4,000 patients, and contains a church, theatre and other things for the amusement of the patients.

Professor Fuchs' clinic for diseases of the eye, as well as Professor Politzer's for the ear, are too well known, and only require

the brief mention of the fact that the good work continues in these branches and their previous high standing is maintained.

Just a line as regards expenses. The cost of living in Vienna equals that of one of our larger American cities.

I trust my letters may give the readers of the JOURNAL an idea of what is to be found and that they may be of material aid to those who contemplate a visit to Vienna. Yours truly,

M. SHLENKER, M. D.

Miscellany.

THYROID EXTRACT IN CHOREA.—Percy A. Roden *(Lancet,* 1910, clxxix, 1276) reports a case of chorea in a girl, aged ten years, which is interesting from a therapeutic viewpoint. The condition was acute, and the arms and legs were especially affected. The heart was not involved. The child was treated over quite a long period of time on each of the following remedies: arsenic, potassium iodid with potassium bromide, salicylates and quinin. Absolutely no improvement resulted from the use of these drugs. Brine baths were then employed in a hospital, and the patient's condition was apparently relieved by them. In a month's time the chorea again appeared, with wasting. Cod-liver oil, with the bromides and iodide of potassium, having no effect, the brine baths were again tried, and again apparently relieved the condition. After several months the chorea reappeared. At this time it was noticed that the two sisters of the patient had goitre, but were in perfect health. On examination, the patient showed no trace of goitre. On this suspicion of thyroid insufficiency, teaspoonful doses of fluid extract of thyroid gland were administered twice a day, with surprisingly good results. The child was able to return to school in the second week. The thyroid was taken twice a day for the first month and once a day for the second month. After nine months had elapsed there had been no recurrence of the trouble. J. A. S.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

Public Education on Hookworm in Louisiana.

Almost the first publication of any moment relating to hookworm in the medical literature of the Southern States appeared in this Journal from the pens of Drs. Ashford and King, who had made a careful study of this disease in Porto Rico just after the Spanish-American War. Since then the active work of Dr. C. W. Stiles, of the Marine Hospital Service, and that of Dr. Claude Smith, of Atlanta, together with the meritorious work of our own Dr. C. C. Bass, have excited the systematic study of the disease at the hands of State health authorities, in conjunction with the coming organization under the auspices of the Rockefeller Fund.

While Louisiana has not been classed as one of the States in which the disease is notoriously prevalent, uncinariasis occurs sufficiently to have created the active effort on the part of the Louisiana State Board of Health to occasion its eradication. Dr. Sidney D. Porter has been actively at work during the past few weeks in organizing a systematic force for the investigation of the disease and for the education of the public.

One of the most striking initial movements on the part of the Louisiana State Board of Health has been the issuance of an extensive bulletin on the disease for general circulation among the people of Louisiana. This bulletin is as creditable as those which have preceded it, issuing from the office of the State Board. In this publication the hookworm is thoroughly described, with illustrations derived from various sources, indicating not only the character of the disease and the insect, but, as well, the sources of origin of the disease. Educational articles on the disposition of excrement and other sources of culture for the hookworm are related in detail, so that any intelligent reader may gather full information and education from these.

While there is no reason for the highly sensational alarm which has been created regarding the prevalence of hookworm and its effects on the Southern people, the evidence of the disease and its effects are sufficiently important to the civilization of the South to require the active coöperation of every intelligent person in every community in this State to further the work of the Board of Health.

The medical profession is already sufficiently educated in the treatment of hookworm to be able to take care of cases where found, but it must require the enforced sanitary provisions, particularly in small towns and in the country, to prevent the perpetuation of the infection by the neglect of rules.

The crusade, as proposed by the Louisiana State Board of Health, is aimed at determining the actual occurrence of hookworm cases, of instituting prompt treatment in those amenable to relief, and in educating the people in every section as to the method of erecting sanitary closets, through which the disease will be checked. If the result is at all commensurate with the initiatory propaganda, the success of the movement is already assured. It will require, however, the earnest coöperation of the medical profession throughout the State, and it is to that end that the JOURNAL writes so distinctly to encourage all of its readers to lend a helping hand.

Amendment to Owen Bill.

Senator Owen has anticipated some of the possible pitfalls laid for his Department of Public Health Bill by correcting some of the clauses which have obviously occasioned antagonism. In his own statement regarding this, he emphasizes the point that the bill is intended to bring together and into coördination the various health activities of the Federal Government, putting them under a responsible head, whose dignity justifies his being a Cabinet officer.

The particular amendment does away with chemical and biological standards, and now provides that the bill, if passed, shall not interfere with any of the prerogatives of the several States, and that no discrimination shall be made in the divisions of the department against applicants on account of any system or school of medicine to which they may belong. Here follows the amendment:

"Nothing contained in this bill shall be construed in any manner to authorize the Department of Health to exercise any of the functions exclusively belonging to any of the several States with regard to the health

service, unless expressly invited by the proper authorities of such State. No officer of the Department of Health shall be authorized by this act to enter the residence or abode of any person unless invited so to do by the inmates thereof.

"In making examinations for positions in the service of the Department of Health no discrimination whatever shall be made against any applicant on account of any system or school of medicine, but all applications shall be treated alike, without regard to the system or school of medicine to which such applicant may have attached himself."

Medieval Methods.

New York is having a legislative struggle on account of the fanatics who for some years have constituted a body engaged in antagonizing vivisection. A few inspired newpsapers and periodicals have been supporting the movement. The comic (?) weekly, the New York *Life,* has for a number of years set up to ridicule the entire medical profession because of its direct relation to vivisection in the study of the advancement of medical science. No systematic effort has been made heretofore to offset the work of this benighted people because the profession has hoped, by its actual performances in preventive medicine, to so educate the intelligent part of the people that these Quixotic individuals might of their own motion condemn themselves. It is evident, however, that there are enough persons in the world with maudlin sentiment to create a mob aimed at the destruction of the temple of science itself, and it must require some concerted effort on our part to correct and, if not, to quash this parasitic growth of misguided force.

It would have been impossible for the geniuses of bacteriological research to have achieved their splendid results if it had not been for animal experimentation, and if the early antagonism of those individuals who valued human life so much less than they did that of rodents, felines and canines had prevailed, the names of such men as Jenner, Pasteur, Virchow, Koch, Roux, Metchnikoff, Calmette, Behring, Klebs, Haffkine, and a host of others would never have been written. The array of diseases constituted by the group of diphtheria, typhoid, tuberculosis, smallpox, plague, cholera and, more recently, tetanus, rabies and infantile paralysis, would be militant and the death rate of our greater cities would still be one aimed at a constant decimation of the population.

Puck, in its issue of February 22, rather vigorously pleads for

intelligence in the reconsideration of the question of vivisection. The central cartoon arrays the crippled and the diseased against the self-constituted censors of laboratory methods—the former begging for health and life at the cost of a few animals, while the latter sanctimoniously are holding up warning fingers of "don't dare" to a group of physicians earnestly studying the action of some experiment upon a bridled rabbit. The picture is strong and the moral is plain. The voices of those who suffer human ills and who go on to die are never raised against the medical experiment leading to a result which may mean relief. On the other hand, the self-constituted guardians of human morals and customs assume that the medical profession is interested in animal experimentation because of its innate perversion to cruelty, and their very presumption that the results obtained do not justify the sacrifice of the animals used is egregious in the confession of ignorance and in its barrenness of humanity and its call.

If the world were not so full of maudlin sentimentalists ready to moralize on anything morbid, we might go on with our work and pay no attention to their outcry; but when the banding of such fools together creates a riotous mob, threatening our legislatures, it is time for intelligence to combine with morality and humanitarian citizenship to cry "halt." There is little use of trying to educate such perverted persons as those who would willingly watch, on the one hand, a baby dying in convulsion, rather than, on the other hand, to test the treatment on a few stray dogs; but the majority of the public should be educated, so that when these trouble-mongers pass by they may be shunned as homo-phobiacs and as mongrel-maniacs, for such they are finally.

Tropical Medicine in the South.

We are inspired to catch the echo of the editorial from the February issue of our esteemed contemporary, the *Southern Medical Journal,* referring to the work of the American Society of Tropical Medicine. It is appropriate that the journals of the Southern States should present to their readers and to the world the study of diseases of tropical and sub-tropical origin, many of which occur frequently among us. During recent years the attention of the

medical profession has been repeatedly attracted to the prolific field for the study of such diseases in the States along the Gulf, and we cannot call too much attention to the opportunities for their investigation. New Orleans has been recognized by many distinguished students of tropical medicine as the center in America at which the largest field may be found, and it is particularly gratifying to find our neighbor giving full recognition to this fact. The editorial notice recognizing the work possible in the future in our Southern medical schools, and particularly at Tulane, is deserving of an extended quotation, which we submit with our appreciation of the friendliness which dictated the editorial and the *con amore* spirit implied:

"'But such supplies are inadequate to meet the growing demand. Every school of medicine in a Southern State should have a chair of Tropical Medicine, in correlation with the work of a post-graduate school of tropical medicine at New Orleans, conducted by the Dean of the Tulane School of Medicine. The work thus unified and completed would warrant the establishment of a degree of Doctor of Tropical Medicine, T. M. D., to be eligible only to graduates in medicine who, in addition to the equipment demanded for the earning of the degree of M. D., should also possess the ability to read, write and speak with practical fluency the languages chiefly used among the tropical people living nearest us, namely, Spanish and French. New Orleans is peculiarly fitted for the location of such a post-graduate school of tropical medicine, for, in addition to the advantages common to other seaports, it has certain sections of the town wherein, if a student established his temporary residence, he would hear and speak only Spanish or French, according to his location.

"The JOURNAL would rejoice to see such a post-graduate school established at New Orleans, wherein the student who contemplated trying out his fortune in any of the Republics or dependencies south of us could be equipped with the knowledge he would need to use and the language with which to express it, and could prove his possession of the same by displaying some such abbreviations after his name as A. B. (Ala.), M. D. (Ala.) T. M. D. (Tulane)."

Formal Opening of New Domicile of the Orleans Parish Medical Society.

On the evening of Monday, March 13, the new domicile of the Orleans Parish Medical Society was ceremoniously opened by an unusual gathering of the medical profession in New Orleans and with an occasion distinguished by a number of addresses appropriate to the hour. Dr. B. A. Ledbetter, the President of the Society for the past and present terms, called the meeting to order with a few

NEW HOME OF ORLEANS PARISH MEDICAL SOCIETY.

remarks of welcome. He pointed with particular pride to the achievement of the incumbent officers, and stated that he would always hold it as a family heritage that the magnificent home of the Society had been incorporated during his term of office. He concluded with a welcome to all present, and presented the first speaker in the person of the Hon. Martin Behrman, Mayor of the City of New Orleans.

Mr. Behrman congratulated the Society on its splendid activity, expressed not only in this beautiful temple, in what one day would be the greatest city in our country, but also on what such an achievement commemorated. It was an expression of a satisfied ambition, comparable to the home which the wage-earner contemplates from his savings from his daily toil. The public spirit of the profession of New Orleans was proverbial, and he had never seen a physician among the list of those in New Orleans who had not been willing at all times to do his part in the service of humanity and citizenship. He paid a tribute to the architectural beauty of the building itself, and stated that it was a monument to all who were responsible for its completion. He expressed his appreciation at sharing in the occasion, and considered that it was not only a privilege, but a duty on his part to be present at the ceremonial as a climax to the many years of development in a glorious profession. The conclusion of this brief and simple address met with warm applause.

At this juncture the entire assemblage rose to greet the entrance of the venerable Nestor of the profession, Emeritus Dean and Professor Stanford Emerson Chaillé, who took his place on the rostrum amid thunderous applause. In an address which lasted nearly an hour Dr. Chaillé dwelt upon his trials and tribulations in his multifarious offices related to the development of the medical profession in New Orleans. He began with the statement that the usefulness of any organization depends upon a few shepherds who must care for a large number of sheep; that, during a large part of his medical career, he had been a hard-working shepherd, and that only during the latter part of his life had he fallen back among the sheep. His address was replete with references to the difficulties attending the organization of State and local societies. He referred to the early attempts at bringing the profession together as far back as 1849, and stated that the Civil War, with its consequences,

had been chiefly militant in preventing proper organization. It was not until 1877 that the plans crystallized, and in this year both a State organization and the Orleans Parish Medical Society were projected. He was chairman of both committees charged with the development of such plans; that he had been active until 1886 in bringing about the completion of the plans which had been conceived nine years before.

The meeting of the American Medical Association in New Orleans in 1878 offered a proper stimulus for the organization of local and State societies, both of which were accomplished sufficiently to permit the election of Dr. T. G. Richardson as President of the Association on the first ballot. In the following year (1879) the State Society was organically launched, and this date is fixed as the beginning of the present body. The original constitutions of both societies were arrived at from the study of similar organizations throughout the Union, and it is a noteworthy fact that in 1877, with the exception of Nevada, Louisiana was the only State without an organized medical society. The speaker attributed the reaction in medical interests to the shaking off of the vampires of Federal interference, carpet-baggers and free negro slaves, which was accomplished by the election, in 1877, of General Nichols as Governor of Louisiana. The Constitutional Convention of 1879 incorporated a number of the articles planned by the Orleans Parish Medical Society and approved by the State Medical Society, but eliminated a number of them, which have since been incorporated in the organic law of the State.

The influence of the original organizers of the Parish and State Societies, chief among which were Davidson, Turpin, Bemiss and Chaillé, practically prevailed until the reorganization of the relation of all medical associations to the national body in 1902-03.

The entire address was marked with a strong stress on State medicine. The speaker stated that State medicine usually was apprehended as limited to public hygiene, but that its scope was as broad as the relation of medicine to society itself, and he included medical education and all its appurtenances and, as well, every institution related to the sick and infirm. The speaker held that one of the chief functions of every organized body of medicine was the regulation of State medicine. So far as the Louisiana profession was concerned, the Constitutional Convention of 1879

incorporated a plank providing that the Legislature shall act in the interests of State medicine in all its departments, and he emphasized the point that this mandatory clause for all time made it compulsory upon the State Legislature to respond to the demands of progress as conceived by the medical profession in the interest of State medicine. The problems in State medicine have grown with added years, and the medical profession should study the history of State medicine in all countries, so as to arrive at a proper conception of its purposes. Germany, said the speaker, surpasses all nations in medical jurisprudence. To the end that the medical profession should be better educated, he recommended that the American Medical Association should, among its other many useful functions, authorize a sepcial body to collect and compile authorities and information on State medicine, which should be issued as a compend for the education of the medical profession in this country, and he urged that such a compilation should be made actively useful by a thorough revision every few years.

Dr. Chaillé concluded his address with a review of existing conditions in law and practice related to State medicine, many of which were reduced to their proper absurdity and many of which were declared as exemplary in their scope.

Repeated applause followed the lecturer's close as he was escorted, to the air of *"Old Lang Syne,"* down the aisle, and a sympathetic thrill of appreciation of the effort of this grand old man passed over the audience, composed of many generations of men who had felt the influence of his teaching and example in medical effort and education.

No less appreciated was the impromptu address presented by the next speaker, Professor Ernest S. Lewis, who, at the start, stated that he had no prepared speech to present, but only a few reminiscences indicating the evolution of gynecology in New Orleans. He related an early consultation, in which he was supplanted by an older physician skilled in gynecological methods, who treated a polypus by tying it off and allowing it to slough. He related that the first laparotomy done in the Charity Hospital was performed by him in 1875, in the little operation-room adjoining the colored female ward. At that time large incisions had been recommended, and he began his operation with a proper incision, beginning at the ensiform cartilage and extending to the pubic bone.

After the tumor had been removed he followed the customary practise by temporarily eviscerating the abdominal cavity, sponged the bowel, and, after replacing the contents, closed the abdomen. The patient recovered, to the astonishment of the operator and his audience. The crude methods of antiseptic surgery were reviewed, and the technic through which an anticipatory carbolic spray was used to prepare the hospital amphitheater, in which it was the custom to do both autopsy and operation without distinction.

It was the practise, in these ancient days, to remove fibroids by fixing the pedicle with clamps, which were readjusted from time to time; the effectiveness of the clamp probably was enhanced by the fact that they weighed four or five pounds. The gradual evolution of antiseptic and aseptic methods were reviewed, with the gradual evolution of the present hygiene of surgery. Many allusions were made to contemporary operators, and the speaker concluded with a modest reference to his well-known share in the development of gynecology in this country.

The last address was delivered by Professor Charles Chassaignac, who discussed the more modern history of the Orleans Parish Medical Society, first introducing his subject with a reference to the origin of the Orleans Parish Medical Society and of its amalgamation, in 1890, with the New Orleans Medical and Surgical Association. He summarized the work of each administration, relating the particular achievement accomplished in each successive year, dwelling upon the epochal periods in which advances in modern medicine had taken part and those periods in which the strenuous efforts of the Society had been exercised in fighting epidemic diseases. He summarized the twenty-five years from 1887 to 1911 in stating that, of the twenty presidents, eighteen were now living and engaged in promoting the progress of the Society; that two of those presidents, the much-beloved Dr. Davidson, who was the first president, and the lamented John Archinard had passed into the beyond. In these twenty-five years, membership had increased from 50 to 326; that, beginning with no library at all, the accretions from various sources had developed a present library of nearly 8,000 volumes, including the contributions from the New Orleans Polyclinic, made up, in most part, of the library of the late John Bemiss and his father, Dr. S. H. Bemiss, and of the

library of the Charity Hospital, which had been given into the keeping of the Parish Society.

The Society, from having no abiding place, had finally, through the interest and support of its patriotic members, come into the beautiful home which this night was being inaugurated so auspiciously. The speaker paid tribute to the efforts of the incumbent officers, who had chiefly engineered the completion of the building and its financing, but stated, in concluding, that, in the effort of the Society and its accomplishments during all these years, and in its last achievement, there was glory enough for all.

The epochal occasion, beginning with the inauguration of the new building of the Parish Medical Society, augurs its future prosperity and usefulness. It must be a matter of supreme pride and satisfaction to the older members of the Society to see their dreams and projects realized, at least in part. The review of Dr. Chaillé's effort for the development of medical organization must lay on each of the present generation a burden of obligation to fulfil the ideals for which his generation stood. Nearly twenty years ago Dr. DeRoaldes, retiring from the presidency of the Society, urged that its success depended upon its finding a domicile of its own, and it must be a matter of satisfaction indeed to those men of the Finance Committee who made possible the glorious meeting of the American Medical Association, in 1903, when they estimate that the small contribution of something over $1,200 from the balance of the funds of the American Medical Association meeting was the nucleus which made possible the financing of the first building owned by the Parish Society.

Altogether the Society to-day stands as a solidifying monument to the endeavor of successive generations, all men working for a common cause, and whatever of comfort and of ease in the declining years of those who may be classed as the older generation is found will only come to them as a reward for their work of foundation well done.

Miscellany.

A Review of Ehrlich's "606" in Syphilis.—Lesser states that this preparation exerts the same action as arsenic in other forms in other diseases as well as in syphilis, only in a much simpler, speedier and more energetic manner. The general condition improves, the patients regain appetite, and their pallor yields to the tint of comparative health. This organo-tropic effect, as he calls it, is also the main factor, in his opinion, in its efficacy in syphilis, as it reinforces the natural defensive processes. He doubts whether the direct destructive action of the new remedy on the spirochetes in the body is the principal factor in the cure of syphilis. The dosage should be selected with the aim to influence the natural defensive processes and increase the vitality of the cells without reference to any direct destructive action on the spirochetes. It has been his impression, from his observation, that the symptoms and the transformation of the Wassermann reaction are not influenced any more by large than by moderate doses. If the reaction is still positive, six or eight weeks after the first injection it might be advisable to repeat the dose. A negative reaction seems to indicate, he thinks, at least a temporary inactivity on the part of the spirochetes.—*Berliner Klinische Wochenschrift,* October, 24, xlvii, No. 43.

The Results Thus Far Obtained in the Treatment of Syphilis with the Preparation of Ehrlich-Hata.—Pick *(Wien. klin. Woch.,* 1910, xxiii, 1193) bases his conclusions upon 120 cases treated with "606." He says that this preparation develops a specific action such as has never been seen before in the treatment of syphilis, and is comparable to the action of quinin in malaria. He noticed a recurrence of the symptoms in only two cases. He says that recurrences and the incomplete cure of certain forms with the small doses at present used do not detract from its specific action. The principal indications for this remedy are malignant syphilis, obstinate syphilitic affections of the mucous membranes, and in early cases as a preventive measure. He found that the Wassermann reaction changed from positive to negative in most cases after four weeks. The shortest interval between the positive and negative was twelve days, and the longest yet observed was seven weeks. He has not observed any such bad after-effects as

those described by Bohas and Sobotka, which he thinks might possibly be explained by a direct injury to the sciatic plexus. The injections frequently caused a rise in temperature, but the temperature was high (103.5° F.) in only one case. He also observed that there frequently followed a diminution of the amount of the urine. The patients in which this occurred had profuse perspiration, lost their appetite, and complained of thirst. An erythematous eruption was also frequently observed at the site of the injection.

Experiences With Ehrlich's "606" in Syphilis.—Isaac (*Berl. klin. Woch.*, 1910, xlvii, 1528) reports 27 cases with details. The patients entirely recovered from severe manifestations of the disease in an average period of ten days. No serious symptoms were observed, but Isaac thinks that, under certain circumstances, the remedy is attended with certain dangers and should be used only when there is no serious internal disease associated with the syphilis. Pain after the injection seems to be often due to individual factors. Two of his patients had considerable pain, which was associated with fever and some infiltration in the gluteal region. This was severe enough to require the use of large doses of morphin for several days.

Theoretical and Practical Views in Regard to Ehrlich's "606."—Kromayer (*Berl. klin. Woch.*, 1910, xlvii, 1585) reports 27 cases. Five of these already show a recurrence, and in three other cases some of the symptoms persisted after the injection. He found that a positive Wassermann reaction became negative in only 25 per cent of the cases. His results as to the curative effects of the preparation agree, for the most part, with other published observations.

"606," Ehrlich's Newest Remedy for Syphilis.—Meltzer (*New York Med. Jour.*, 1910, xcii, 371) reviews briefly the early history of the preparation denoted "606" by Ehrlich and Hata, and recommended by them as a specific for syphilis. This remedy was first tested by Iverson in St. Petersburg, on cases of relapsing fever, with most gratifying results. After one injection all spirilli disappeared from the blood, and, under a critical profuse perspiration, the patient recovered. Since then the remedy has been widely used in all forms of syphilis by many different observers. Meltzer says that rarely, if ever, has there been such unanimity in medical statements as in the enthusiastic reports over the effects of the

Ehrlich-Hata preparation. The spirochetes disappeared, primary affections lost their induration, ulcers cleaned up and were rapidly covered by epidermis, headache, periosteal pains, paralysis, etc., disappeared. The patients felt well and gained in weight—all this after a single injection and in a comparatively short period of time. The question whether the cure will remain permanent can only be answered by the future. A large number of patients have remained cured for many months. In only a very small fraction of the cases have there been relapses; in these cases the injected dose was apparently too small. Over the fate of the Wassermann reaction the reports differ widely; some have seen it become negative in 100 per cent of the cases, others in only 40 per cent and less. In all the cases the change in the reaction recurred much later than the disappearance of the syphilitic manifestations. There was a close watch for any untoward effects upon the kidneys, eyes, etc., but no complications were observed. The report of two writers (who observed only fourteen cases) that in three of these there was paralysis of the bladder, reduction of the reflexes, etc., was apparently due to their faulty technic and to the use of too impure methyl alcohol. No other observers, who studied hundreds of cases, have ever observed such complications. One unpleasant complication with which many had to contend is the causation of pain, which sets in late and lasts for many days. This, however, seemed to have occurred only when the injection was given intramuscularly in the gluteal region. This applies also to the slight elevation of the temperature. Intravenous injections cause no pain. Meltzer says that the facts regarding the best methods of dissolving the substance, the mode of injection, the dose to be used, and other details, will be carefully established before the new preparation is handed over to the general practitioner.

Arsenobenzol in Syphilis.—Spiethoff (*Munch. med Woch.*, 1910, lvii, 1822) states that his experience with arsenobenzol in the treatment of fifty cases of syphilis shows that it has a curative action. He also narrates a number of untoward effects that, however, were transitory. In two cases he observed a sudden total blindness that, however, lasted only for a few minutes. In a few other cases scotomas were noted on the day of the injection. Tachycardia was also observed in a few cases, but subsided when the patients were in a recumbent position. In one case there occurred

convulsions that resembled an epileptic attack. These convulsions occurred four hours after the injection of 0.3 gram of the remedy. There were also two cases of skin eruptions that resembled the exudative form of erythema multiforme. One patient, a poorly nourished, anemic woman with tertiary lesions in the throat, was found dead in bed following an injection of 0.5 gram of arsenobenzol. Ehrlich attributes the death of this patient to shock from the local pain at the site of the injection. Spiethoff gave the remedy by intramuscular injections, and gives in his article the technic of the method of administration. He thinks that the contraindications for this remedy are rare. The chief one is a weakened and lowered vitality associated with serious non-specific organic changes, particularly of the circulatory organs.

Do Special Dangers Attend the Intravenous Injections of "606"?—Ehrlich (*Munch. med. Woch.*, 1910, lvii, 1826) does not believe that the intravenous injection of "606" presents special dangers. He thinks that patients with very far advanced degenerative processes of the central nervous system form a special group in which treatment by arsenobenzol is contraindicated. In the fatal case reported by Frankel and Growven, after intravenous injection there was extensive disease of the brain associated with marked myocardial disease, and therefore Ehrlich does not think that it was a suitable case for the treatment. In two similar cases death has resulted after subcutaneous and intramuscular injections of the remedy. He thinks that small doses, from 0.3 to 0.5 gram, may be injected into the veins with safety when there is no serious disease of the brain, arteriosclerosis, or functional disturbance of the heart, particularly angina pectoris. He adds that the preferable technic may possibly be first an intravenous, followed in forty-eight hours by an intramuscular injection, thus dividing the dose in two portions.

The Action of Ehrlich's Arsenobenzol in Syphilis.—Herxheimer and Schonnefield (*Med. Klinik.*, 1910, vi, 1400) report a number of cases of various forms of syphilis in which the results obtained by Ehrlich's "606" were brilliant. They discuss the advantages and disadvantages of the different methods of injection. Intramuscular injections are more painful, and frequently cause infiltrates in the muscles. Intramuscular injections are made in the left gluteal, in its upper and outer quadrant, to avoid the

neighborhood of the sciatic nerve. They advise making subcutaneous injections between the shoulderblades, and massage to hasten the absorption of the remedy. They found that neutral suspensions of the remedy caused less severe pains than acid solutions. They advise, before beginning treatment, a careful examination, to determine whether the heart and kidneys are normal. Heart or kidney disease, fetid bronchitis, and especially changes in the optic nerve, contraindicate this treatment. Herxheimer and Schonnefield have treated 200 cases with but one recurrence.

Untoward By-Effects After the Administration of Ehrlich's "606."—Bohac and Sobotka *(Wien. klin. Woch.,* 1910, xxiii, 1132) complete the histories of three patients who had serious bladder disturbances after the administration of "606." In one of these patients complete retention of urine persisted for ten days and rectal tenesmus for some time longer. The reflexes which at first were absent had returned, but were sluggish. They add four more patients in whom the improvement obtained by the injection of "606" was very temporary. They do not believe that these untoward symptoms are explained by the hypothesis of methyl alcohol intoxication that is advanced by Ehrlich as the cause of them.

The Use of Ehrlich's Arsenobenzol in the Treatment of Syphilis.—Neisser and Kuznitzky *(Berl. klin. Woch.,* 1910, xlvii, 1485) publish results that indicate the value of arsenobenzol in the treatment of syphilis. They discuss the introduction of the drug by intravenous, intramuscular or subcutaneous injections, and favor the intravenous method. They say that final results are, of course, unknown as yet, because the first patients were discharged only a short time ago. However, they believe that every syphilitic who does not present special contraindications should be advised to try this new remedy. Neisser and Kuznitzky think that it is especially indicated in all recent cases in the hope of a rapid and permanent cure; in every case that does not respond to mercury, and, finally, in cases overtreated with mercury. They believe that the effect of "606" on parasyphilitic affections is as yet unknown, but there seems to be no contraindication to its trial in paresis. However, the susceptibility of tabetic patients to optic atrophy may contraindicate the use of "606" with these patients.

The Treatment of Syphilis With "606."—Hoffman *(Med. Klinik.,* 1910, vi, 1291) reports six cases treated with "606," of

whom two were benefited, a third showed a recurrence, and in the remaining three severe complication occurred. Two of these patients had a quite severe disturbance of the action of the heart that, however, gradually subsided. The third patient developed an embolic central pneumonia following an intramuscular injection of the acid solution. In his experience with it by-effects were noticed only when the drug was in an acid solution, while they were absent when a neutral solution was used. He also refers to a case reported to have died suddenly as a result of a single injection of 0.3 gram of the remedy. Ehrlich *(Med. Klin.,* 1910, vi, 1322) answers this remark concerning this fatal case. He refers to his instructions that the treatment is contraindicated in those patients with marked changes in the central nervous system. The patient in question was a woman, who, in 1906, suffered from a luetic apoplexy, and had not yielded to several courses of mercurial treatment, and in the meantime had developed paresis of both legs, muscular atrophy, paralysis of eye muscles, tachycardia, etc. Ehrlich concludes, therefore, that this subject was not a suitable case for the treatment. He also excludes the metasyphilitic diseases from treatment with "606." He says that, given with proper technic and with proper indications, the remedy is free from danger.

The Treatment of Syphilis With Ehrlich's "606."—Wechselmann *(New York Med. Jour.,* 1910, xcii, 449) has treated over 600 cases with Ehrlich's arsenobenzol. He prefers the subcutaneous administration of a neutral suspension, and describes in detail the method followed by him. He says that such injections produce very little pain. On the third or fourth day there often appears a more or less marked swelling at the site of the injection. As a rule, a single injection of 0.3 gram was given. Although a repetition of the dose was necessary in a few cases that occurred, these recurrences were not widespread and severe, such as occur after mercurial treatment, but only a recurrence of a few isolated local lesions. Isolated cases have remained refractory and required a second injection. Wechselmann has observed no untoward effects, but he cautions that its use must be carefully guarded in patients with a weak heart. He also speaks of the possibility of damage to the optic nerve. He has not seen clear results in cases of progressive paralysis, although he thinks that a trial should be made in

the early cases. He has not noted rapid improvement in a number of cases of tabes.—*The American Jour. M. S.*

Further Reports on the Influence of "606" on Congenital Syphilis Through Mother's Milk.—J. Peiser *(Berl. Klin. Woch.,* 1911, xivlll, 13) refers to four recorded cases of remarkable disappearance of the lesions of congenital syphilis in infants when the nursing mothers were treated by "606" injection. Of these, Scholz was the only one who reported finding traces of arsenic in the mother's milk, the quantity being less than 1/10 mg. forty-eight hours after the injection. From these records it would seem not only right, but obligatory, to try "606" on nursing mothers with syphilitic children. But Peiser reports two cases treated by Dr. Ritter in Berlin which tend to modify the apparent obligation. One child, eight days old, showed lesions of congenital syphilis on its body and had visceral lues at birth. The mother showed no syphilic signs. Wassermann reaction was positive in both mother and child. The general condition of the child was poor and the prognosis bad. In the second case the infant developed a syphilic eruption shortly after birth, and had "snuffles," but its general condition and the prognosis was good. The Wassermann reaction was positive in mother and child. In both infants, after their mothers were injected with "606," the lesions and the syphilic conditions were somewhat improved, but shortly became worse, and both children died. The autopsies showed affections of the lungs, liver, kidneys and bones typical of congenital syphilis. The internal organs of the first child showed no spirochetes. Many spirochetes were found in the suprarenal glands of the second infant. No trace of arsenic could be found in the mother's milk in either case. These two cases show that this method of treatment in congenitally syphilitic infants cannot be relied upon absolutely. In this connection Rosenthal reports a case of congenital syphilis in an infant in which injection of "606" in the nursing mother was followed by an increase in the syphilitic condition of the child. Recourse was then had to mercurial treatment, which gave satisfactory results.

Report of 375 Cases Treated With "606."—Sieskind *(Munch. med. Woch.,* 1910, lvii, 2027) reports 375 cases of all stages of syphilis treated with Ehrlich's remedy. His article contains many valuable details, and should be consulted in the original. No deaths occurred in this series of cases. The following indications

are given for the use of "606": (1) Cases of malignant and early ulcerating syphilis, especially those refractory to mercurial treatment; (2) syphilis in any stage when mercury is not well borne; (3) cases of recurrence after repeated mercurial treatment; (4) cases of syphilis in the early incubation period. When possible, the chancre should be excised or destroyed by the Holander hot-air method. Injections of small quantities of the remedy into the local lesion also aid in the treatment. (5) Syphilis associated with tuberculosis, since mercurial treatment has often a bad effect upon tuberculosis; (6) cases of visceral syphilis; (7) decrepit patients, even though they have no organic disease; (8) cases of latent syphilis, when the Wassermann reaction persists; (9) parasyphilitic affections in various stages. Sieskind also gives the following contra-indications: (1) Grave non-syphilitic optic nerve diseases; (2) severe organic disease of heart or blood-vessels; (3) severe pulmonary disease, except tuberculosis; (4) severe kidney disease, not of syphilitic origin; (5) advanced degenerative disease of the central nervous system; (6) cases of angina or febrile disease. The injection is postponed until the fever disappears in such cases.

J. A. S.

Louisiana State Medical Society Notes.

In Charge of Dr. Joseph D. Martin, Secretary, New Orleans.

Two Open Letters to the Members of the Louisiana State Medical Society.

New Orleans, March 14, 1911.

Dear Doctor:

Your attention is called to the approaching meeting of the Louisiana State Medical Society, to be held at Shreveport, May 30 to June 1, 1911.

It is important that members intending to contribute scientific papers should send in their titles as soon as possible. Address the respective chairmen of the sections under which they contemplate reading, or to the Secretary of the State Society, Dr. Joseph D. Martin. Later, announcement of the same will be made.

Component societies are urged to see that the proper credentials are issued to their delegates, and that same be in the hands of the State Secretary as soon as possible.

Secretaries of component societies are requested to see that all information and settlement of dues of their members are promptly filed in due form with the State Secretary, so as to eliminate the usual trouble that occurs at our annual meetings. Please give this your individual attention, and request your members to help you. We want every component society to be in good standing, as this will be a record-breaking meeting. We can assure you that the chairman of the committee and the local profession of Shreveport will do their duty to make this meeting interesting and successful.

Every member owes it to the organization and to himself to be present.

We are all busy, but must have some recreation, and this will be your opportunity. We want to see you at Shreveport, and extend to you the glad hand of fellowship, which goes a long way in the profession.

Fraternally yours,

E. J. Graner, M. D., *President.*

Joseph D. Martin, M. D., *Secretary.*

Shreveport, La., March 18, 1911.

Editors New Orleans Medical and Surgical Journal:

Gentlemen—Please be kind enough to furnish the following information in "State Society News" in your April and May numbers:

The Shreveport Medical Society, as host, hopes to make the meeting which begins May 30 a "banner meeting" from every standpoint. Committees are already at work, and we expect to announce the entertainment features next month.

Hotel accommodations are ample, but those desiring reservations are requested to write to Dr. J. M. Bodenheimer, Chairman, Hotel Committee, so that they may get what they want.

Those desiring space for commercial exhibits should take up the matter with Dr. Thos. Ragan, Chairman.

Hoping to see you and as many of your readers as can get off, we are, Fraternally yours,

The Committee on Arrangements,
Per Arthur A. Herold, *Secretary.*

Medical News Items.

American Society of Tropical Medicine.—Provisional program for the meeting of the American Society of Tropical Medicine, to be held in New Orleans, May 18 and 19:

Morning Session—May 18, 10:00 A. M.

1. President's Address—W. S. Thayer, Baltimore.
2. Secretary's Report.
3. Treasurer's Report.

Papers on Malaria.

4. Studies on the Plasmodium Malariæ—M. Couret, New Orleans.
5. Histopathology of Malaria—M. Couret and W. H. Harris, New Orleans.
6. Experimental Syphilis and Yaws—Henry J. Nichols, United States Army Medical School.
7. Oriental Sore—S. T. Darling, Ancon.

Afternoon Session—2:30 P. M.

8. The Biochemistry of Bacillus Lepræ—F. B. Gurd and W. Dennis, New Orleans.
9. Resumé of Experimental Work in Leprosy—C. W. Duval, New Orleans.
10. The Nervous Symptoms of Leprosy—Roy M. Van Wart, New Orleans.

Morning Session—May 19, 10:00 A. M.

General Discussion—Amebiasis.

11. The Biological Characteristics of the Various Parasitic Amebæ.
12. The Symptoms of Amebiasis—W. E. Deeks, Ancon.
13. The General Treatment of Amebiasis—George Dock, St. Louis.
14. The Surgical Treatment of Amebiasis—Wm. Seaman, U. S. Navy.
15. The Complications and Sequelæ and Their Treatment.
16. The Public Health Problems Concerned in Amebiasis—J. H. White, U. S. Public Health and Marine Hospital Service.

Afternoon Session—2:30 P. M.

17. Election of officers and members.
18. Some Suggestions as to the Etiology of Pellagra—Chilton Thorrington, Montgomery, Ala.
19. Changes in the Poison Glands of Snakes as the Result of Functional Activity—Gustav Mann, New Orleans.

20. Certain Septicemias Resembling Yellow Fever; Their Bearing on Practical Quarantine—J. W. Amesse, Denver.

(Signed) Yours truly, JOHN M. SWAN, *Secretary.*

THE RAPIDES PARISH DENTAL SOCIETY held its annual meeting on March 7 and the following officers were elected for the ensuing year: Dr. W. B. Barry, president; Dr. T. M. Dupuy, vice-president; Dr. J. E. Dugger, secretary; Dr. J. M. McFarland, treasurer.

THE SEVENTH CONGRESSIONAL DISTRICT DENTAL SOCIETY met in Alexandria on March 1 and held their annual meeting. Important subjects were discussed, officers were elected, and interesting papers read, after which a delightful banquet was enjoyed at Hotel Bentley. Alexandria was chosen as the permanent meeting-place of the Society.

MEETING OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.—At the meeting of Association of American Medical Colleges in Chicago, February 27 and 28, a number of amendments to the constitution were adopted, the principal one being in regard to the new curriculum for medical colleges and the raising of the entrance requirements to an unconditioned high-school certificate. Another amendment was the placing of the administration of the entrance requirements into the hands of proper educational authorities. The following officers were elected: President, Dr. William P. Harlow, University of Colorado, Boulder; vice-presidents, Drs. Henry A. Christian, Harvard Medical School, Boston, and Charles M. Hazen, Medical College of Virginia, Richmond; secretary-treasurer, Dr. Fred C. Zapffe, Chicago (reëlected), and judiciary council, Drs. William J. Means, Columbus, O.; Randolph Winslow, Baltimore; Clarence M. Jackson, Columbia, Mo.; Charles R. Bardeen, Madison, Wis.; Egbert LeFevre, New York City; James R. Guthrie, Dubuque, Ia., and John A. Witherspoon, Nashville, Tenn. The next annual meeting will be held in Chicago.

NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS.—NEW OFFICERS ELECTED.—At the Chicago meeting of this Society, held on February 28, the following officers were elected: President, Dr. Charles A. Tuttle, New Haven, Conn.; first vice-president, Dr. James A. Egan, Springfield, Ill.;

second vice-president, Dr. A. B. Brown, New Orleans, La.; secretary-treasurer, Dr. George H. Matson, Columbus, Ohio; Executive Council, Drs. N. R. Coleman (chairman), Columbus, Ohio; Charles H. Cook, Natick, Mass.; Joseph C. Guernsey, Philadelphia; W. Scott Nay, Underhill, Vt., and James A. Duncan, Toledo, Ohio. The meeting for 1912 will be held in Chicago.

The American Gastro-Enterological Association will hold its fourteenth annual meeting in Philadelphia, April 19-20, under the presidency of Dr. Walter B. Cannon, of Boston. The session will be held at the Bellevue-Stratford.

Hotel Hospital.—The new McAlpine Hotel in New York projects a miniature hospital on the twenty-third floor, with all modern equipment.

The Alabama State Medical Association meets in Montgomery, April 18-21.

The Mississippi State Medical Association meets in Jackson, April 11-13.

The Texas State Medical Society meets in Amarillo, May 9-11.

The Florida Medical Association will meet at Tallahassee, April 6-8.

The Georgia Medical Association will meet at Rome, April 19-21.

The Louisiana State Medical Society meets in Shreveport, May 30 to June 1.

The Texas State Board of Medical Examiners will meet in Austin, June 27-29.

The Association of Medical Life Insurance Examiners met in New Orleans, February 24, and held a very interesting three days' session. Dr. Luther Sexton, of New Orleans, read a paper on "Four Prominent Causes of Mortality." The convention endorsed the Owen Bill, and adjourned to meet again in Pittsburg next September.

Colleges to Consolidate.—A bill is to be introduced into the Tennessee Legislature authorizing the consolidation of the University of Nashville and the University of Tennessee.

The Prevention of Insanity.—Four hundred thousand copies

of a pamphlet entitled "Why Should Any One Go Insane?" have been issued by the Committee on Mental Hygiene of the New York State Charities Aid Association. This pamphlet, which was prepared by Mr. Homer Folks, secretary of the State Charities Aid Association, and Mr. Everett S. Elwood, assistant secretary of the Committee on Mental Hygiene, has been endorsed by eight eminent specialists in nervous and mental diseases in New York. It deals with the extent, cost, cause, curability and prevention of insanity. It has been printed in several languages, and is being distributed broadcast by physicians, health officers, ministers, labor unions, and, in fact, every individual or organization interested in the educational movement against the causes of insanity.

To Prevent Spread of Tuberculosis and Similar Diseases.—(Laws of the State of Mississippi.)

Section 1. Be it enacted by the Legislature of the State of Mississippi, That it shall be the duty of all practicing physicians in this State to report to the Secretary of the State Board of Health any and all cases of tuberculosis, consumption, or other pulmonary diseases which they shall be called upon to treat or examine, within ten days after receiving knowledge of such cases, and the Secretary of the State Board of Health shall at once send to the patient thus reported printed information on the subject of proper care and treatment of the disease, and the prevention of its spread, and such other information as may be prescribed by the Board.

Sec. 2. That each and every attending physician shall also report to the Secretary of the State Board of Health, on blanks furnished by the Board, the death or recovery of all patients treated by him for tuberculosis diseases.

Sec. 3. That any practicing physician who shall fail to make the reports provided for in Section 1 of this Act shall be guilty of a misdemeanor, and, upon conviction, shall be fined not less than ten dollars nor more than fifty dollars.

Sec. 4. That this Act take effect and be in force from and after its passage.

Some opposition has been aroused since the Legislature has adjourned, and the subject will come before the next State meeting of the Society.

Epileptic Colony Needed in Louisiana.—Owing to the overcrowded condition of the insane asylums at Jackson and Pineville, La., an epileptic colony is badly needed for this State.

Some Louisiana Penitentiary Statistics.—There are 1,663 negroes in the Louisiana Penitentiary, and the death rate last year was 21 per 1,000. There are 384 whites, with a death rate of 7.

Personals.—Dr. R. Martin Bruns, of Baltimore, brother of Dr.

H. Dickson Bruns, of New Orleans, returned to his old home for a brief pleasure trip during the last month. While in the city Dr. Bruns delivered a lecture, under the auspices of the Tulane Medical Department, at Hutchinson Memorial, on "The Etiology of Criminal Insanity," which was followed by a very large and interested audience. In his lecture Dr. Bruns blamed the immigrants and negroes for the increase in lunacy, and attributed a number of the criminally crazy to the drug habit. Dr. Bruns is a mental specialist and a member of the Insanity Commission of Baltimore.

Dr. H. Sartor, of Rayville, La., was elected coroner of Richland Parish.

Mr. W. R. McKowen, of Clinton, La., gave the Presbyterian Hospital $20,000.

Dr. Sidney D. Porter attended the conference of the State Directors of Sanitation at Atlanta, Ga.

Dr. I. E. Siess has been appointed Mayor of Winfield, La.

Dr. Allan C. Eustis has gone to Europe for six months' post-graduate work.

Dr. Alfred Stengel will succeed Dr. David L. Edsall as Professor of Medicine at the University of Pennsylvania.

Dr. Howard D. King has returned to New Orleans.

Removals.—Dr. S. G. Wilson, from Bogalusa, La., to New Orleans.

Dr. J. W. Gregory, from Big Sandy, Texas, to Altura.

Dr. R. M. Griffin, from Adona, Ark., to Oppelo.

Dr. E. S. Scharff, from Plaquemine, La., to New Orleans.

Dr. P. C. Tircuit, from Oubre, La., to Abbeville.

Dr. L. D. Wadler, from Biglow, Ark., to Little Rock.

Dr. H. V. Kitzmiller, from De Begue, Colo., to Wray.

Dr. W. E. Tatum, from Converse, La., to Beaumont, Texas.

Dr. Sam Allen, from Melvin, Ala., to Samuel.

Dr. M. O. Shivers, from Greenville, Miss., to Colorado Springs.

Married.—On February 22, 1911, Dr. C. G. Ducoté to Miss Estelle Norman.

On March 16, Dr. Joseph O. Segura and Miss Mabel Weston.

Died.—On March 13, 1911, Dr. S. A. Ayo, of Thibodeaux, La. Dr. Ayo was a member of the State Medical Society.

On March 10, 1911, Dr. J. B. Hargrove, of Coldwater, La., aged 46 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

Obstetrics. Edited by JOSEPH B. DELEE. Practical Medicine Series. The Year Book Publishers, Chicago, 1910.

This is Volume V of the Practical Medicine Series, and comprises an excellent review of obstetrical literature for the current year. Dr. DeLee has arranged his material most admirably under four divisions, viz: Pregnancy, Labor, Puerperium, and the New-Born. The reader will find not only the views of the contributors, but various comments by the editor—a feature which adds considerably to the value of the book.

MILLER.

Gynecological Diagnosis, by WALTER L. BURRAGE, A. M., M. D. D. Appleton & Co., New York and London, 1910.

Dr. Burrage states, in the preface of this excellent book, that at the present time the medical profession is devoting an ever-increasing time to diagnosis, and it seems fitting to describe at length this somewhat blind subject, gynecology, for the benefit of those who have not had an opportunity to study it in the special hospitals and clinics.

A practical textbook, embodying simplicity of technic and concise statement of essentials, has been the aim. The methods of procedure of the pathological and bacteriological laboratories have been omitted because of the assumption that the physician has always at his command the services of a trained pathologist and bacteriologist, or can consult text-books devoted exclusively to these subjects. The attempt has been made to keep in the background the rare diseases and give prominence to the common affections usually met with by the general practitioner. While the book is written entirely from the clinical point of view, the salient points of anatomy and the latest views of pathology have been summarized at the beginning of each chapter.

Particular attention has been paid to the diagnosis of the diseases of the bladder and rectum, diseases of the breast, and uterine diseases in early life.

An original feature of the book is an alphabetical index of illustrations, which makes it possible to find any desired figure without going through the entire text. Each chapter is headed by a resumé of its contents, with page references. The book contains 207 well-selected illustrations.

The author has prepared an excellent book, and it will promptly find its place among the best upon the subject. MILLER.

Surgery, Its Principles and Practices, by Various Authors. Edited by W. W. KEEN and JOHN C. DACOSTA. Vol. V. W. B. Saunders Company, Philadelphia, and London, publishers.

The fifth and last volume of this magnificent work fully maintains the standard of the preceding volumes, and without it the work would be incomplete. Every chapter is of special interest, and the subjects are treated

in a most practical way by men whose reputations have already been established by their long and personal experiences in the several branches of surgery upon which they have written.

The opening chapter of this volume, on surgery of the vascular system, is a magnificent work in itself, and it is especially pleasing to the reviewer that it is the work of Rudolph Matas, who has been one of the greatest contributors to this field of surgery. The author is too well known in medical literature to need any introduction, yet it is gratifying to our local profession to know that his work has been done in our midst, and that his untiring efforts in his adopted field of medicine have been crowned by signal success. Though it is a distinguished privilege to have been selected as a contributor to one of the best works of surgery yet published, it is doubtful if a better choice could have been made. One has only to look through the article to reach this conclusion, which we feel is in itself a sufficient apology for what might seem a prejudice in favor of home talent. The want of space will not allow us to review the article in detail, The numerous surgical affections of these organs is shown to be most readable, with special references throughout. The illustrations are numerous and clear, and it is, in our opinion, the best work on vascular surgery yet published.

Surgery of the female genito-urinary organs is most interesting and valuable to the general practitioner, from the fact that the author is painstaking in directions for examination, suggesting the method of taking histories and the points of interest bearing especially upon the condition. The numerous surgical affections of these organs are shown to be of greater importance than is usually believed.

Surgical technic, though short, is one of the most interesting chapters in the book, giving many valuable hints to those whose lack of hospital experience has prevented from becoming familiar with the details of this work. We are glad to note the author's caution in the method of applying, tying, and removing sutures. In our opinion, there is no part of an operation which more thoroughly tests a surgeon's skill; few to-day seem to consider the purpose and functions of a suture, and invariably apply the same methods and force in approximating tissues as in ligating a vessel, resulting in great pain and discomfort to the patient, as well as infection from necrosis of the strangulated tissues. No stitch, unless put in under especial conditions to relieve tension, should ever cause pain, whether in the perineum or skin.

The chapter on ligation of arteries is thorough in detail, but contains nothing new.

Operations on bones and joints, like the subject, is full of interest. It is regrettable that some notice is not made of Murphy's methods in arthroplasty, as we believe this work was sufficiently well known at the time the article was written to deserve some mention. It is also a little surprising that cuneiform osteotomy for deformity of the long bones should be still practiced and recommended in all operations. It requires more extensive dissections and much time, when simply fracturing the bone on the concave side by cutting through two-thirds of its diameter with a chisel and fracturing by slight force accomplishes the same end in half the time, and the periosteum is left intact on the convex side.

The chapters following on Amputations, Plastic and Reconstructive Surgery, and Accidents are quite complete.

Surgery of the parathyroid bodies, by such an authority as Charles Mayo, is of the greatest importance to surgeons on account of the importance of this gland and its liability to injury in goitre operations. Though this chapter contains all that is known of this small body, the conclusions are that we are yet much in the dark as to its functions.

Intra-cranial surgery, Anesthetics and Anesthesia, Local and Sub-

arachnoid Anesthesia, X-Ray and Radium in Surgery, are interesting chapters.

Legal Relations of the Surgeon is a chapter every surgeon should read most carefully. There are few men, as a class, in any profession, who make poorer witnesses; many doctors go to pieces on cross-examination, simply because they are not prepared to testify, either from a lack of knowledge of the facts or a familiarity with the subject, as well as of their own legal requirements.

A short chapter on the Laboratory as an Aid to Surgical Technic and Surgical Diagnosis contains valuable information.

Surgical Organization of a Hospital, we take pleasure in recommending to all who are interested in a hospital, or expect to be. It is full of good reading and valuable suggestions from a man whose long experience and practical sense must carry weight. MARTIN.

Plastic and Cosmetic Surgery, by FREDERICK STRANGE KOLLE, M. D. D. Appleton & Co., New York.

The author deserves great credit for getting together and systematically arranging the subjects in a book which will prove most valuable to surgeons of experience, but, like so many of the books published to-day, it is written by and for the experienced surgeon, who gives little thought to the details in technic, forgetting that the student and inexperienced practitioner has not reached that standard of perfection which has been attained by the originator only after repeated failures. The student is told in a vague way to do certain things; for example, the chapters on plastic surgery of the face is exhaustive; every conceivable operation under every conceivable condition is described, but nothing is said about preparing the case beforehand, about the necessity of having the tissues in the best possible condition, and the bad effects of attaching flaps to extensive scar tissue. This also applies to grafting of ulcers. The success of this operation depends almost entirely upon having the ulcer in perfect condition, the importance of removing varicosed veins, and looking to the constitutional condition of the patient. The author may claim that this is not the purpose of the work; perhaps not, but an experience of twenty years in this special work has taught us that superstructures soon crumble without suitable foundations.

In making these criticisms we do not wish to detract from the work. It is the result of enormous labor, perfect in detail, comprehensively illustrated, and is a valuable aid to any surgeon. MARTIN.

Collected Papers, by THE STAFF OF ST. MARY'S HOSPITAL, MAYO CLINIC. W. B. Saunders Company, Philadelphia and London.

This, to the casual observer, might seem a very modest heading, but if one will only think for one minute and realize that it is a summary of the work done by the Mayos and their staff from 1905 to 1909, covering every subject of importance in abdominal surgery upon which they are recognized authorities to-day, as well as nearly every other branch which can be classed as surgical, with their unequalled facilities for observation, their great clinics, and their truthfulness to detail, we doubt that a more valuable book has been published. Every surgeon who is familiar with most of the articles it contains will want the book for reference, and any surgeon who is not familiar will gladly welcome the opportunity of becoming so. The Mayos have done well in publishing this book, and we trust it is only one of others to follow. MARTIN.

Manual of Cystoscopy, by J. Bentley Squier, M. D., and Henry G. Bugbee, M. D. Paul B. Hoeber, New York, 1911.

A short practical work on cystoscopy. The main points of a working knowledge of the principal types of instruments are clearly, though concisely, explained, more stress being laid on the technic approved by the authors.

Twenty-six plates, most of them colored, assist materially in elucidating the text, and include pictures of the normal as well as the pathologic bladder.

The binding is of stout, flexible leather, the appearance is neat, and, all told. the little book is useful and recommendable. C. C.

The Prevention of Sexual Diseases, by Victor G. Vecki, M. D. The Critic and Guide Company, New York, 1910.

After depicting the reality of the venereal peril, the author describes briefly the venereal diseases, discusses prostitution, arguing in favor of a certain degree of supervision, with power to hospitalize, then the Government's duty towards prevention. Next the physician's duty is presented and individual prophylaxis is studied, as well as the physician's personal prophylaxis. Finally, the conclusion is reached that the question has not yet received proper attention, and the teaching of the naked truth is urged. C. C.

Treatment of Syphilis by Salvarsan, by Dr. Johannes Bresler, translated by Dr. M. D. Eder. Rebman Company, New York and London.

This is a collection of observations on the Ehrlich-Hata remedy for syphilis, although the author's views are briefly set forth.

It seems a little premature to publish a book on something about which it will take many, many moons before we begin to know much, yet to a good number who have not had access to current literature it will furnish a convenient resumé of what was published on the subject, in Germany especially, up to last fall. C. C.

Malaria and Its Manifestations, by J. H. McCurry, M. D. S. C.Toof & Co., Memphis, Tenn.

The title *in extenso* of this little book is: "A Careful Study and Presentation of Malaria and Its Manifestations, with the Most Thorough and Exhaustive Methods of Treatment of Any Work of Its Kind on the Subject." The author means well; but his monograph reminds us of some papers read before medical societies where nothing original is found except a more or less adroit abbreviated compilation of statements and quotations. It is a cursory review of the subject, and no better than the articles found in our best text-books. He is fond of giving names to the various treatments. He overlooked Baccelli's name for the intravenous injection of quinin, though he gives Bacelli's formula, *à peu prés.* He ought to strike out the word hypodermics of quinin. The injections are intramuscular. He says, page 112, in chapter on Hemoglobinuria: "It is probable that neither the mode of administration nor the preparation used, if absorbed, gives any difference in results." Now, it is pretty clearly stated by a number of reliable workers in tropical countries that the results do depend on the method of administration and the choice of the preparation. Thus, quinin given by the mouth, in small doses, and chiefly the sulphate, will cause hemoglobinuria, the hydrochlorid given intramuscularly and in 2-gram dose will not.

Again, he could have dispensed with a number of citations, *in extenso*. The eclectic treatment of periodicity and of cachexia is "funny." The old veteran, Manson, has told us how we can obtain "a certain cure" in intermittent fever. We doubt that aconite, belladonna, chionanthus, iris, leptandra, podophyllum, hydrastis and boldo are worth much in cachexia.

E. M. D.

Differential Diagnosis, presented through an analysis of 383 cases, by Richard C. Cabot, M. D., Boston. W. B. Saunders Company, 1911.

A great work by a great teacher! If publishers would bring forth only books of this kind we would be in the paradise of medical literature. It was a pleasure for us to praise here, years ago, the book of Cabot on "Case-Teaching in Medicine." We cannot surely say less about the book now before us; we would like to be able to say more. The difficult task which Cabot undertakes shows his strength. As the French say: *"C'est prendre le táureau par les cornes."* But the struggle is one we like to see, and finding ourselves in this predicament so often, in practice, we are glad to learn how to meet the difficulty, and down it. The book is, in all respects, neat, strong and rich.

E. M. D.

Dislocations and Joint Fractures, by Frederick J. Cotton, A. M., M. D. W. B. Saunders Company, Philadelphia and London.

Cotton gives us a masterful presentation of those difficult, and oftimes perplexing, conditions. Our knowledge of the pathology and treatment of dislocations and fractures has greatly changed within the past few years, an exposé of which is to be found in this work. We were much impressed with the articles on delayed union, massage, operative treatment and the almost indispensable X-Ray.

The book contains 1,200 illustrations, mostly from drawings by the author.

Larue.

Practice of Surgery, by James G. Mumford, M. D. W. B. Saunders Company, Philadelphia and London.

A Clinical Surgery would be a more fitting title, as the author admits, and justly, for this work of Mumford is essentially bedside and amphitheatre surgery.

To the list of good books on surgery, Mumford has added this solid and practical work—one which does not contain any superfluous amount of matter, to be found in special monographs.

It is the author's personal clinical experience, and a good one to consult. Six hundred and eighty-two fine illustrations enhance the value of the work.

Two points of historical value to American surgery appear—one, on the frontispiece, being two photographs representing the old-time and the modern operating-rooms of the Massachusetts General Hospital; the other, a comment on the death of the Father of Our Country, brought about, it appears by the non-intervention of the attending surgeon, who might have saved the life of our preëminent citizen by performing trachcotomy. We cannot incriminate the physician who attended Washington, for that operation was hardly in vogue, at least in Virginia, during the latter's illness.

Larue.

Bismuth Paste in Chronic Suppurations, by Emil G. Beck, M. D. C. V. Mosby Company, publishers, St. Louis.

This timely publication, with eighty-one engravings, nine diagrammatic illustrations and one color-plate, should be welcomed by all who do any

surgical work, for it is generally admitted that Beck's bismuth paste method, although it has its limitations, has its place in aiding to diagnose in conjunction with the X-ray and as a quasi surgical therapeutic measure. Like most methods, it has its drawbacks, and, we may add, its dangers. Beck rightfully alludes to the fact that the X-rays, vaccinations, antitoxins and anesthetics, have also had their pitfalls. He openly confesses to its possible dangers, stating, nevertheless, that neither his brothers nor himself have, in their experience of several hundred cases, encountered any such misfortune.

Reports of cases, some fatal, are cited, with a free and unbiased comment. LARUE.

Fractures of the Elbow, by A. P. C. ASHHURST, A. B., M. D. Lea & Febiger, publishers, New York and Philadelphia, 1910.

This beautifully illustrated and printed work of Dr. Ashhurst, presented in a neat and durable binding, was awarded the Samuel D. Gross Prize Essay of the Philadelphia Academy of Surgery in 1910.

One has but to read the first pages of this highly instructive work to see what led the author to choose such an apparently superfluous theme.

"Even those surgeons," says Ashhurst, "who have given particular attention to the subject of elbow fractures do not claim to achieve very good results."

The above suffices to entitle this book to its merited claim. LARUE.

Nervous and Mental Diseases, by HUGH T. PATRICK, M. D., and PETER BASSOE, M. D. Volume X. The Practical Medicine Series. Series 1910. The Year Book Publishers, Chicago.

The rapid advances made in neurology and psychiatry render it difficult for the average practitioner to have at his disposal the literature which would keep him abreast of the writings of even the better known workers in this field. The present volume contains a selection of abstracts of the more important articles which have appeared during 1910. These cannot fail to be interesting to all who desire to keep in touch with the studies in nervous and mental diseases. VAN WART.

The Blues (Splanchnic Neurasthenia), by ALBERT ABRAMS, A. M., M. D. Fourth Edition, Revised and Enlarged. Illustrated. E. B. Treat & Co., New York.

The views of this writer concerning splanchnic neurasthenia are well known, and, while they are not generally accepted, the book presents many points of interest and cannot fail to be profitable to any one reading it from a critical standpoint. VAN WART.

Three Contributions to the Sexual Theory, by PROF. SIGMUND FREUD, LL.D. Translated by A. A. BRILL, Ph. B., M. D. The Journal of Nervous and Mental Disease Publishing Company, New York, 1910.

This is No. 7 of the Nervous and Mental Disease Monograph Series issued from time to time under the editorship of Smith Ely Jelliffe and Wm. A. White.

It includes, first, the sexual aberrations; second, the infantile sexuality; and, third, the transformation of puberty. The main idea sought to be conveyed is that psychoneurotic illness never occurs with a perfectly normal sexual life.

It will repay careful reading by the student in this line. C. C.

Publications Received.

D. APPLETON & CO., New York and London, 1911.
Plastic and Cosmetic Surgery, by Frederick Strange Kolle, M. D.

C. V. MOSBY COMPANY, St. Louis, 1911.
Golden Rules of Diagnosis and Treatment of Diseases, by Henry A. Cables, B. S., M. D.

E. B. TREAT & CO., New York, 1911.
The Blues: Causes and Cure, by Albert Abrams, A. M., M. D. Fourth Edition.

LEA & FEBIGER, Philadelphia and London, 1911.
Modern Treatment, edited by Hobart Amory Hare, M. D., assisted by H. R. M. Landis, M. D.

HARVEY PUBLISHING COMPANY, Cincinnati, 1911.
Inebriety, by T. D. Crothers, M. D.

PAUL B. HOEBER, New York, 1911.
Manual of Cystoscopy, by J. Bentley Squier, M. D., and Henry G. Bugbee, M. D.

Miscellaneous.

Transactions of the Fourth International Conference of the American Republics. Held at San Jose Costa Rica, Dec. 25, 1909, to Jan. 3, 1910. (Published and distributed under the auspices of the Pan-American Union.)

The Johns Hopkins Hospital Reports: Volume XVI. (Johns Hopkins Press, Baltimore, 1911.)

Proceedings of the Canal Zone Medical Association for the Year 1909. (C. C. Press, Mount Hope, C. Z.)

Report of the Department of Sanitation of the Isthmian Canal Commission for the Year 1910. (Washington Government Printing office, 1911.)

Bulletin No. 124, Agricultural Experiment Station of the Louisiana State University and A. and M. College, Baton Rouge, La. Part I. *Breeds of Hogs*, by W. H. Dalrymple; Part II. *The Best Crops to Grow for Hogs, and other Data*, by W. R. Dodson and S. E. McClendon, (Ramires & Jones, Baton Rouge, La.)

Hygienic Laboratory—Bulletin No. 74. *Digitalis Standardization and the Variability of Crude and of Medical Preparations*, by Worth Hale. (Washington Government Printing Office, 1911.)

Public Health Bulletin No. 44. *Acute Anterior Poliomyelitis*, by Wade H. Frost. (Washington Government Printing Office, 1911.)

Transactions of the American Surgical Association: Volume XXVIII. Edited by Archibald McLarren, M. D. (Wm. J. Dornan, publisher, Philadelphia, 1910.)

Reprints.

A Brief Review of the Applications of Roentgen Rays in Diagnosis, by E. W. Caldwell, M. D.

The Abdominal Position for Drainage in Suprapubic Prostatectomy, by Henry J. Scherck, M. D.

La Décompression Cérébrale par L'ouverture du Crane et ses Indications, par le docteur Just Lucas-Championniere.

Some Phenolic Derivatives of b-Phenylethylamine, by George Barger, M. A., D. Sc., and Arthur James Erwin, B. Sc.

The Action of Tetrohydropapaveroline Hydrochloride, by B. B. Laidlaw, M. A., B. C.

The Fate of Parahydroxyphenylethylamine in the Organism, by A. J. Ewins, B. Sc., and P. P. Laidlaw, M. A. B. C.

A Reverse Action of the Vagus on the Mammalian Heart, by H. H. Dale, M. A., M. D.; P. P. Laidlaw, M. A., B. C., and C. T. Symons, B. A.

Chemical Structure and Sympathomimetic Action of Amines, by George Barger, M. A., D. Sc., and H. H. Dale, M. A., M. D.

Chart Presentation of Recent Work on Indicators, by George Stanley Walpole, B. Sc., A. I. C.

The Author's Universal X-Ray Frame, by Amédée Granger, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Compiled from the Monthly Report of the Board of Health of the City of New Orleans

FOR FEBRUARY, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	1	2	3
Intermittent Fever (Malarial Cachexia)	1	1	2
Smallpox			
Measles	5	1	6
Scarlet Fever			
Whooping Cough	5	2	7
Diphtheria and Croup	1		1
Influenza	10	5	15
Cholera Nostras			
Pyemia and Septicemia	3	2	5
Tuberculosis	39	37	76
Cancer	12	4	16
Rheumatism and Gout	1		1
Diabetes	6	1	7
Alcoholism			
Encephalitis and Meningitis	2	3	5
Locomotor Ataxia	1		1
Congestion, Hemorrhage and Softening of Brain	17	7	24
Paralysis	1	4	5
Convulsions of Infants			
Other Diseases of Infancy	8	4	12
Tetanus	1	2	3
Other Nervous Diseases	4	1	5
Heart Diseases	44	31	75
Bronchitis	6	5	11
Pneumonia and Broncho-Pneumonia	24	24	48
Other Respiratory Diseases	4	4	8
Ulcer of Stomach	1		1
Other Diseases of the Stomach	2	5	7
Diarrhea, Dysentery and Enteritis	24	14	38
Hernia, Intestinal Obstruction	4	1	5
Cirrhosis of Liver	9	4	13
Other Diseases of the Liver	2		2
Simple Peritonitis			
Appendicitis	5	1	6
Bright's Disease	23	22	45
Other Genito-Urinary Diseases	5	4	9
Puerperal Diseases	3	3	6
Senile Debility	5	4	9
Suicide	6		6
Injuries	14	9	23
All Other Causes	19	17	36
TOTAL	318	224	542

Still-born Children—White, 15; colored, 21; total, 36.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 14.03; colored, 26.61; total, 17.43.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.15

Mean temperature 64.00

Total precipitation ..... 1.35 inches.

Prevailing direction of wind, southeast.

New Orleans Medical and Surgical Journal.

VOL. LXIII. MAY, 1911. No. 11

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Upon Malignancy in Tumors.*

By Fraser B. GURD, B. A., M. D.,

From the Pathological Laboratory, Tulane University of Louisiana.

The malignant property of certain new growths is naturally recognized by all, to such an extent, perhaps, that an apology is necessary for attempting to interest the society in any new method of studying this vicious attribute of one of the most common causes of death at the present time. The author considers, however, that a more thorough appreciation of the essential factors of malignancy and a more thoughtful consideration of the factors, in so far as they are known at present, underlying the development of such properties would by aiding early recognition and by stimulating more thorough operation in certain cases and conservative treatment in others assist in the development of more permanent and useful results in the care of patients suffering from new growths.

* Read before Orleans Parish Medical Society, January 23, 1911.

It will be my aim in this short paper to attract attention to the important feature of relative malignancy in tumors, and especially to consider the changes which take place in certain new growths of apparently benign type, but in which malignant characteristics develop; such conditions are usually loosely and falsely grouped under the heading of malignant degenerations.

In order that there may be no confusion of ideas resulting from the use of terms let me first briefly define a tumor, as such, and explain the author's conception of malignancy.

By a tumor is meant a mass of new tissue the result of the continued development of certain cells or tissues in a more or less typical arrangement and form, the nourishment for such growth being developed at the expense of the organism and the growth itself serving no useful function. Malignant new growths are so called on account of their tendency to invade and destroy surrounding tissues and to spread to distant parts of the body by means of the blood or lymphatic vessels and by transplantation as the result of trauma, operation, etc. The characteristic of malignant tumors so frequently referred to, namely recurrence, is more apparent than real. It may be said that no tumor can recur if entirely removed. It is as a result of the infiltrative tendency of malignant tumors that operation is so frequently unsuccessful in extirpating all tumor cells. The cells not removed continue to grow and the so-called recurrence is in reality merely a continuation of growth on the part of the cells not excised.

Attention is frequently called to the presence of a capsule about benign tumors; undoubtedly such tumors are usually encapsulated, on the other hand the same may be said of practically all malignant tumors, namely, that they are likewise encapsulated. Usually in sarcomata the capsule is apparent, though frequently thin, whereas in carcinomata, owing to the tendency of the cells to grow in narrow radiating lines taking advantage of interspaces between the surrounding tissue cells which results in the development of an extremely irregular outline, the connective tissue surrounding the individual masses of cells loses apparently its characteristics as a capsule. If, however, the edge of such a tumor be cut horizontally with the growing protuberances of the tumor cells the capsular nature of the connective tissue element or stroma, as it is called, becomes evident. It may be said that the encapsulation of tumors

is analogous to that of the walling off of foreign irritating substances anywhere in the body. That the chorion epithelioma is not walled off in such a manner must be explained by the cytolytic action of the cells themselves. In general, the rate of growth of the confining capsule is inverse to that of the tumor.

It must be borne in mind by the student or observer that up to the present, at least, no proof has been brought forward of any inherent malignancy or destructive property of the individual cells forming any tumor, except those of the chorion epithelioma. Experimental work has taught us that if there is any essential quality of tumor cells, it is the ability of such cells to remain viable for long periods, and also to obtain for themselves nutriment under conditions of unusual or unsatisfactory environment. All evidences of vicious action on the part of the malignant tumors can be explained either physically or chemically by the study of the gross and microscopic appearances of the tumor. Physically the destruction of normal useful tissue by the invasion of tumor cells, this destruction being due apparently to pressure and lack of nourishment, results in a loss of functioning ability on the part of the organ involved. Again, pressure upon important or even vital organs by new growths, such as endotheliomata of the dura, pressing upon the brain, may produce extremely dangerous sequelæ. Chemically the toxic bodies set free as a result of the retrogressive and degenerative changes which take place in many tumors, notably in carcinomata as a result of the cutting off of the blood supply of many of the cells by the peripheral growth of the tumor itself are sufficient to induce the cachexia characteristic of the presence of these classes of tumors. On the other hand, in the case of large, rapidly growing tumors, such as the round celled sarcoma of bone, a tremendous drain is made upon the nutrition of the individual to provide material for the new growth, thus resulting in the development of secondary anemias of the most severe type as well as other disturbances of metabolism.

It will be noted that no mention is made in the definition of malignancy of the microscopic morphology of tumors; the differentiation of neoplasms into benign and malignant groups was first made by the clinician. Such being the case it may be asked why it has been reserved more and more to the microscopist to decide upon the nature of individual tumors. In the majority of

instances it is impossible by means of histologic examination to note either infiltration or metastasis on the part of any given tumor. Why, then, the value of such examinations and why should the laboratory worker become the adjudicator upon the nature of any tumor? The answer appears to the author to be as follows: Of necessity, if the differentiation of harmful and harmless tumors as defined above be accepted, and results must be waited for, the effect will be that, before proof of malignancy according to these criteria is obtained, in most instances the knowledge will be valueless, it being too late for interference, hence the importance of some earlier method of diagnosis. But, it may be argued, the statement has already been made that in most instances the histologist can see neither infiltration nor metastasis in sections examined, how then can he give more information than the clinician? Briefly, the reply must be that it has been noted as the result of repeated and recorded observations that certain tissue or cell appearances are presented by tumors which clinically have been found to possess certain characteristics. The microscopist diagnostician must possess, therefore, not only the ability to recognize tissues or cells in sections, but also the knowledge, accumulated by others and himself, of the probable course of neoplasms composed of certain cells or tissues.

Not only, however, does the histologist draw upon the clinician's records in order to prognosticate the future growth of individual tumors, but he has been able to explain in most instances the habit of growth, as we may call it, of such neoplasms. In part the benign or malignant course of a neoplasm can be explained entirely morphologically; in part theoretical help must be asked for in order to understand the manner or rate of growth. For instance, it is known that cells of more embryonic type grow more rapidly, are more liable to infiltrate and to metastasize than cells of other types. Occasionally the shape and size of such cells explain fully the probability to metastasis; often, however, some special, though unknown, property of the cell, whereby it can gain nourishment when transplanted, must be assumed. Thus the cells of the melanoma are no smaller, as a rule, than those of the endothelioma of the dura and are equally elongated. Notwithstanding the similarity in cell, and a similar relationship in the blood vessels, it is known that the latter tumor, except in so far as its local growth

is dangerous, is benign whereas the former is extremely malignant.

As an aid to the study of tumors from this point of view of relative malignancy the author has elaborated a method of classification which, though possessing its limitations, appears valuable.

If tumors be divided into two large groups according as their essential constituent consists of tissues or cells they may be classified as follows: Tissue tumors are benign whereas cell tumors are at least potentially malignant. In order to accept such a classification it is necessary, perhaps, to employ the term tissue in a rather broader sense than is customary. It would include as tissues not only glands, nerves, blood vessels, etc., but also fibrous tissue, considering it to be composed, as it is, of fibrous tissue cell and fibres, also cartilage as being composed of cells and matrix and thus forming true tissue. Thus fibrous tissue tumors, known as fibromata, are benign, while connective tissue cells either of cartilagenous, bony or fibrous tissue origin form by continued growth malignant tumors. Fat tissue and muscle tissue is composed normally of fat or muscle cells. Thus, to embrace tumors of such cells in the classification given, all tumor collections of cells which normally, *per se,* form tissues must, if sufficiently developed to stimulate the normal tissue, be classified as tissue tumors, hence benign. Should such cells have lost their distinctive properties they form malignant tumors.

If breast tumors be studied they will be found to fall for the most part into one of two groups—either they will consist of breast or glandular tissue or they will be composed of epithelial cells. At first sight this differentiation may not appear plain. We are so accustomed to consider glandular tissue as epithelium, which forms to parenchyma, and to neglect the membrana or tunica propria whose growth and control appears to determine the formation of glands. By some the term fibro-epithelial is applied to tumors of this class. A similar differentiation of other epithelial organs can also be made and will be found to justify the classification into benign and malignant, with but few exceptions.

Enough has been said to show that the so-called benign epithelial tumors are in reality not merely epithelial overgrowths, but consist of continuous and unnecessary growths of certain tissues into whose composition epithelial cells form the parenchyma. The author believes that a clearer conception can be gained of the es-

sential characteristics of carcinoma if this term be reserved to designate only those tumors in which the proliferation of cellular elements is confined to the epithelia themselves. By carcinomata, then, we shall understand tumors consisting of epithelial cells, the collections of cells being surrounded by a greater or smaller amount of fibrous tissue; the amount of stroma varying inversely with the rapidity of growth of the epithelial cells.

It may, perhaps, be urged by some that a knowledge on the part of the practicing surgeon of the histologic morphology of tumors is not necessary. It is the author's belief, however, that it is only by a proper appreciation of the cellular elements, their size, arrangement and habit of growth that it is possible to properly understand the gross appearance of new growths and to prognosticate the probable course of their development and extension. To many practitioners the designation applied to a tumor by the pathologist signifies little more than a name, it being impossible for him to picture either mentally or otherwise the appearance of the microscopic arrangement. To him terms such as benign tumor, or sarcoma and carcinoma alone are suggestive of properties which may influence the course of the disease in the individual case. The finer differentiation cytologically and the varying grades of malignancy, are, as a rule not understood; thus a myxo-sarcoma and a lympho-sarcoma appeal to him merely as sarcomata; tumors understood to be very malignant, and as a result the worst possible prognosis is given, whereas as a matter of fact the former tumor may be classified, as regards its manner of growth, as being practically benign while the latter are probably the most malignant tumors which can be met with. The same lack of differentiation exists with reference to the so-called myelomata and melanomata both of which are usually referred to as sarcomata, between which again the greatest possible difference in the probable course of the disease is noted. In a similar manner, among epithelial new growths a wide variance in malignancy is evidenced by tumors commonly called carcinomata. Thus Krompecher's carcinoma basocellular is to all intents and purposes a benign tumor, while on the other hand as is well known epidermoid carcinomata are definitely malignant. Again, by many observers, the epidermoid carcinoma usually called by English authors an epithelioma is a much less malignant tumor than the chorion epithelioma. It is only by a

proper recognition of the shape, size and arrangement of the cells and an appreciation of their origin that the varying types of malignancy of such tumors can be properly understood. Only by a thorough knowledge of the microscopic morphology of tumors can the significance of common signs, such as retraction of the nipple in the breast cancers, presence of so-called cancer juice in carcinomata, and the tendency of sarcomata to metastasize by the blood stream, whereas carcinomata rarely do so, be understood. It is only, too, by a proper study of the habits of individual tumors and exact diagnosis that the best treatment can be employed.

The result of this lack of knowledge on the part of the surgeon and lack of sympathy as regards terminology between surgeon and pathologist have resulted in much harm to both surgery and to microscopic diagnosis and above all to the patients themselves. Whereas it is the intention of the representatives of both these branches representing what might be termed the art and science of medicine to benefit the individual for whom they both labor to bring relief.

By no means does every malignant tumor present all evidences of malignancy, many are especially injurious as a result of their local destructive properties, others almost entirely on account of their early metastasis to vital organs; whereas still others are more subject to transplantation than liable to infiltrate or prone to metastasize. Many, or perhaps, most show a tendency to both infiltrate and metastasize, some present all three criteria of malignancy. The simple local infiltrative properties possessed by many tumors is an evidence of malignancy in most instances, only in so far as this property makes their complete extirpation difficult or impossible.

It is thus seen that the mere statement of malignancy or the use of some term such as "sarcoma" does not of necessity give any adequate idea of the probable importance of the neoplasm. Adjectives either in Latin or English must be employed which will describe more fully the characteristics of the individual tumor. As a result, however, of the manifold meanings expressed by the use of the same term, it is usually necessary to explain more or less, *in extenso,* what type of tumor is being dealt with in the individual case.

If surgeons, in general, would familiarize themselves with the

morphology of certain cell-types and a method of classification and nomenclature were adopted whereby tissue tumors were so called and cell tumors were designated by their type cell in only occasional cases would description or didactic diagnosis be necessary.

The term malignant degeneration so frequently employed has been used by many to dispose of all difficulties in understanding certain apparent changes in the character of tumors. That such an expression is insufficient is evident; that it is misleading, though perhaps not so apparent, is equally true. Cellular or tissue degeneration in other uses of the term never conveys an idea such as the development on the part of cells of increased potency for growth; on the contrary degeneration, *per se,* results in either the total or the comparative death of the cell. Usually, when employing the expression "malignant degeneration," the clinician refers to the evidencing on the part of a tumor, previously supposed to be running a benign course, of properties only found in malignant tumors, namely, infiltration, metastasis, or spread by transplantation.

The author wishes to oppose the general use of such terms as "malignant degeneration" and "becoming malignant" as employed so frequently by clinical observers. It is yet to be proven that tumors are capable of becoming malignant excepting in so far as the malignant property of a new growth may increase. That this latter change may occasionally occur is undoubtedly correct, thus it is sometimes noted that, with the continued growth of a fibrosarcoma, a tumor which originally contained but few cells and whose growth was extremely slow may with repeated recurrence following operation develop a more cellular habit of growth, that is, the individual cells will each produce a smaller number of connective tissue fibrils and as a result will grow more rapidly and will be enabled to infiltrate, and become more liable to metastasis. In general, however, the proper expression in most cases would appear to the author to be the development on the part of a tumor of potentially malignant qualities, in others, the development of a malignant tumor within a previously benign neoplasm. There is no essential difference between the origin of a carcinoma within an adenoma of the breast, for instance, and that arising from normal breast tissue. It is probable that the mere presence of an unusual mass renders the tissue more susceptible to the factors

which ordinarily cause carcinoma. In many instances I believe, moreover, that the original tumors in such instances are in reality inflammatory masses and hence liable to lead to malignant development.

The most important feature is, however, in my opinion that of potential malignancy and it is by a study of tumors of this nature that surgeons will be led to understand many tumors and apply proper treatment. This point of view is useful in considering amongst other tumors whose origin may be accepted as being from congenital cell nests. For instance, not very long ago I had the opportunity of observing a patient from Dr. Matas' service suffering from a tumor situated below and posterior to the angle of the jaw upon the right side. Upon removal of the mass it was found to arise, apparently, from the region about the tip of the styloid process invading the neighboring tissues and having metastasized to several lymph nodes in the vicinity. Histologically the tumor proved to be a carcinoma simplex. Death ensued a few days after operation as a result of paralysis following ligation of the carotid which vessel had been involved in the tumor mass. At autopsy a small tumor, 1.5 c.m. in diameter, was found at the tip of the styloid process upon the opposite side. This latter tumor was encapsulated and, to all intents and purposes, so far as its action and gross relationships were concerned, was benign. Microscopically, however, an appearance exactly similar to that seen in the larger mass was present. These tumors must have resulted from enclosures of epithelial cells from the bronchial cleft during embryonic life; they had apparently remained dormant for thirty years, when one of them, as the result of some factor which at present we cannot determine, was enabled to continue its growth, which resulted in the development of an infiltrating noplasm; this alteration in habit was not, however, accompanied by any change in histological structure. A similar explanation, in the author's opinion, can be given for the development of a certain number of mesoblastic tumors as well as many of epithelial origin.

Another important class of tumors, more especially papillomata, such as those found in ovarian cysts, appear to be benign, so long as they are confined within the cyst wall, whence they spring, that is to say, they show no tendency toward infiltration backwards toward their base, but upon rupture of the cyst-wall and the

freeing of the masses of the papillomatous tissue, the cells are capable of transplantation over the peritoneum. It is tumors of this nature in the breast which have led to the recording of such appalling figures with reference to the so-called malignant degeneration of adenomata. All tumors of glandular origin composed in whole or a part of cysts should be considered serious in that it is known that the epithelial cells covering the papillæ so often present in such cysts are capable in many instances of continued growth if transplanted.

In conclusion allow me to repeat my plea for a more scientific study on the part of the practitioner of the comparative grades and diverse types of malignancy presented by different classes of tumors.

Talma's Operation for Cirrhosis of the Liver. Report of Cases Operated on by Narath's Procedure.*

By E. DENEGRE MARTIN, M. D., New Orleans.

Although operations for cirrhosis of the liver have yielded but few cures, yet these cures are sufficiently encouraging, in view of the temporary relief afforded, to warrant the procedure in all suitable cases. Though Rutherford Morrison placed it upon a successful plane, to Talma, who in 1889 first suggested the operation, is the credit primarily due. He noticed in autopsies that those cases of liver cirrhosis which showed the least ascites were those in which abundant anastomoses existed through adhesions between the vessels of the portal system and those of the systemic circulation. By multiplying the adhesions he hoped to multiply the anastomoses and relieve the portal congestion. The consensus of opinion to-day seems to be that this operation will give relief only in hypertrophic cirrhosis of the liver, or at least in selected cases in the earlier stages, and whereas it may relieve the portal circulation and cure the ascites it does not cure the pathological changes which have actually occurred in the liver.

Talma's operation, known as "omentopexy," is performed in the following manner and may be carried out under local anesthesia: The abdomen is opened at a point between the umbilicus and ensiform cartilage, such fluid as does not escape is sponged out with gauze until the entire abdominal cavity is thoroughly dried. The

* Read before Orleans Parish Medical Society, January 23, 1911.

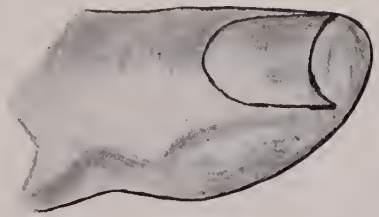
surface of the liver is briskly rubbed with gauze, also the parietal peritoneum and the omentum. Schiassi has suggested treating the spleen in the same manner, as this is usually congested. The omentum is next sutured to the parietal peritoneum of the anterior abdominal wall. The new adhesions give relief, either by diminishing the flow of blood through the liver and allowing it to deal more satisfactorily with the toxemic condition of the blood or by furnishing a freer supply of arterial blood to the liver through the new adhesions, thus improving the nutrition of the liver cells which are better prepared to undergo compensation by hyperplasia. Further study of the collateral circulation (so well described by Dr. Ralph Floyd in the *Medical Review* of July 4, 1903, and quoted in the excellent paper of Dr. Carson, of Savannah, in the *Annals of Surgery* in December, 1907), seemed to clearly indicate that anatomoses of the visceral with the superficial abdominal veins give greater relief, and upon this theory the operations of Schiassi and Narath are based. Their method is to draw the omentum through the abdominal wound and suture it between the muscles and skin. In the early stages of this operation a drainage tube was inserted above the pubis to drain off the fluid. This idea has since been abandoned, it being thought best to tap the patient if the fluid reaccumulated before the collateral circulation was established. I have adopted Narath's technic in two cases.

The first is a case referred to me by Dr. T. S. Dabney with the following history: Mr. H. A., aged 27, a warehouseman by occupation; habits regular, but drank to some extent, took from four to five drinks a day, never under influence of liquor. Never sick until 1895, when he had an attack of bowel trouble, probably dysentery, extending over a period of six months. Last summer, in June, began to feel pain and discomfort in epigastrium; was treated by a doctor, name not given. Latter part of July called in Dr. Dabney, who diagnosed the case as one of cirrhosis of the liver associated with nephritis. Was referred to me on August 3, 1910. Examination showed a man of small stature, face thin, slightly jaundiced, pulse small and beating at the rate of 90. Liver large, extending three inches below the costal arch. Kidneys showing albumen, hyalin and granular casts; waist measure, 34 inches. Dyspnea from pressure was so great that he could not lie down with comfort. Although this case presented the most unfavorable symptoms, I ad-

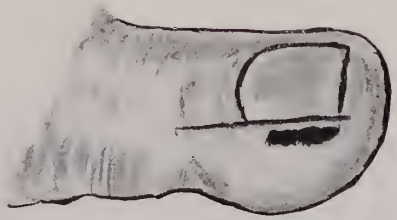
vised operation. In this Dr. Dabney concurred and on August 3 I operated upon him at the New Orleans Sanitarium. Ether anesthesia was given.

The abdomen was opened at a point above and a little to the right of the median line, cutting through the muscle, as I believed this incision would be less likely to result in hernia. About six quarts of fluid escaped and the balance was mopped out. The omentum was brought through the incision and spread out and sutured under the skin. Convalescence uneventful. His relief was instant; the fluid has never reaccumulated. To-day, nearly six months after operation, though he shows evidence of chronic Bright's, with urine analysis practically unchanged, he is well nourished, the liver has contracted, there is no fluid in the abdominal cavity that I can make out, and his waist measurement is 27 inches. This man is not cured, but for five months and seventeen days he has been made comfortable, and has unquestionably been much benefited by the operation.

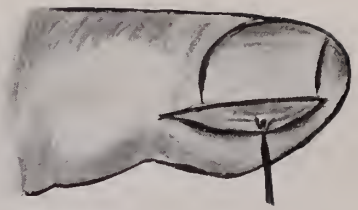
Case number two is a young colored woman, 20 years old, giving the following history, which we all know from experience with this class of patients is usually unreliable: Was sickly as a child, had trouble with her back. Nine months ago stopped menstruating, felt pain in side, and began to swell. Examination revealed dorsal kyphosis, patient fairly well nourished, abdomen distended with fluid. Ovarian cyst suspected. Incision in median line below umbilicus proved case to be one of ascites. About two gallons of dark fluid escaped. Intestines were small and omentum so contracted that it was some time before a portion sufficiently large to be brought up and sutured could be found. Once secured it was sutured in the wound as suggested by Narath. The patient is convalescing, but nothing can be told, as to result, at this early date.



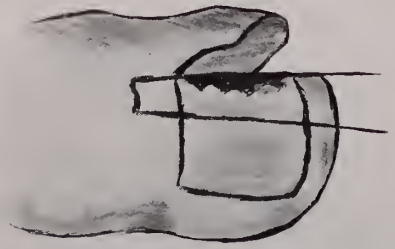
I. Ideal trimming



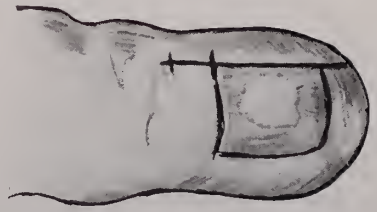
II Von Bergmann (a)



II Von Bergmann (b)



III Anger (a)



III Anger (b)

ILLUSTRATING DR. GESSNER'S ARTICLE.

Ingrown or Overgrown Toe-Nail.*

By HERMANN B. GESSNER, M. D., New Orleans.

William Shakespeare said: "He jests at scars that never felt a wound."

Let him scoff at ingrown toe-nail that never has limped about with one. For my part personal experience and observation of other sufferers combine to make the subject one of considerable interest.

The etiology is evidently compression of the foot by shoes too narrow or too short. The nail of the great toe does not grow in; it is the soft parts that are forced against and over it, becoming ulcerated and exquisitely tender from the long standing pressure.

The treatment of this condition is preventive, palliative and curative. The preventive consists chiefly in the wearing of shoes that afford sufficient room for the extremity of the foot. Under this head I wish to mention proper trimming of the nail, which belongs also under the palliative and curative heads. This trimming leaves the end of the nail concave, with a distinct angle projecting on either side; the lateral boundaries are left untouched. This is illustrated by Fig. 1.

Of the palliative methods the best known is that of filing and scraping the nail down the middle so as to make a sort of hinge with the addition of a notch at the free end. These procedures allow the edges of the nail to be pried up with cotton or gauze so as to override the soft tissues.

Another method is the application of powdered alum or of a mixture of alum and tannin to the soft tissues, for the purpose of hardening or tanning them so that they will stand the pressure against the nail edge.

Still another makes use of a metal (usually silver) band of semicircular shape, one end passing under the toe, the other dipping under the edge of the nail, which is lifted by the spring of the band.

The curative method formerly in vogue was the removal of the nail *in toto,* with or without attempted removal of the matrix. This has, I believe, been discarded as unsatisfactory; my own experience has led me to seek a better method.

* Read before Orleans Parish Medical Society, February 13, 1911.

The radical methods at present in use may be classified as those which deal with the matrix in some manner and those which confine themselves to the soft parts adjacent to nail and matrix.

Von Bergmann incises the soft parts at the side of the nail, turns back a flap, excises a strip of nail and matrix, say ⅛″ to 3/16″ wide, then lets the flap fall in place and sutures or plasters it in place. (Fig. II.)

Anger, more radical, excises a section of toe-nail, matrix and underlying tissues, the entire thickness of the toe, then opposes the flap on the inner side with sutures or adhesive. (Fig. III.)

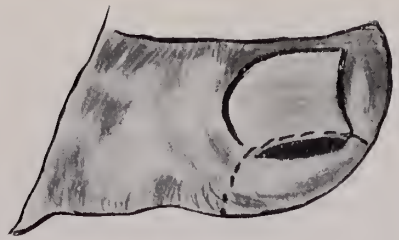
We come finally to the methods dealing with the adjacent tissues alone. One of these methods removes a wedge whose base is at the extremity of the toe, below the nail, its sides corresponding to those of the toe, its apex lying centrally. Suture of the wound edges pulls the soft parts down from the nail, which is supposed to project free above them. (Fig. IV.)

A more attractive operation is that of Cotting, who simply slices off the offending soft parts on the side of the matrix and nail, leaving a large granulating surface. (Fig. V.)

This gives relief but requires an excessive length of time for complete healing, besides leaving the lateral aspect of the phalanx without its normal skin-pad until the cicatrix has fully contracted.

The operation suggested by Van Meter is clearly a logical one. He removes a lozenge shaped piece of skin and fascia on the side of the toe and unites the skin edges across the gap with sutures, thus pulling the skin along the nail away from it, and eliminating the hurtful overriding. (Fig. VI.) An advantage of this and of a modification which has occurred to me is the fact that they can be done under the simple infiltration method of local anesthesia, normal tissue alone being involved, while the others, involving the ulcerated skin or matrix, require the more etxensive paraneural use of local anesthetics. The slow convalescence of the Cotting operation is done away with, the sutures introduced allowing prompt healing to take place. The only criticism that I have to make is that uneven tension is made on the overriding skin by the sutures across the lozenge; insufficient tension may be made at the distal end, where it is of particular importance to uncover the inner angle of the nail. I have therefore introduced a modification which, I believe, meets the indications a little better. This consists of the

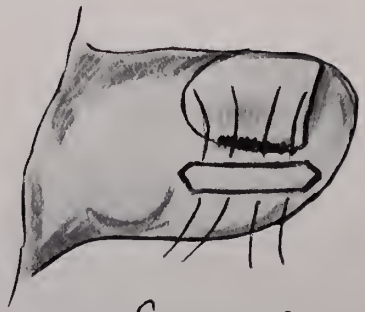
IV. Wedge method.



V. Cotting (a)

V. Cotting (b)

VI. Van Meter



VII. Gessner

ILLUSTRATING DR. GESSNER'S ARTICLE.

substitution of a hexagon, (Fig. VII.) for the diamond of Van Meter.

The edge of the nail is paralleled by a cut running its full length, about ¼″ from it. A ¼″ to ½″ further (from the nail) another cut is made, parallel with the first, and equally long. A V-shaped incision joins the first two cuts at each end and completes the hexagon. The removal of the skin and fascia between these lines of incision leaves a gap, suture of whose edges pulls the skin away from the nail edge evenly throughout its entire extent. My own experience with this method has been very limited. However, it seems so well suited to the permanent relief of a troublesome condition that I trust it will be utilized in practice and given a fair test.

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Tumors of the Lung, With Report of a Case.*

By W. H. HARRIS, M. D., New Orleans.

Medical and pathological archives furnish rather brief literature concerning tumors of the lung as compared with those of most other organs.

Of the tumors derived from the connective tissue the following are to be considered:

Fibromata which spring from the pre-existing interlobular fibrous tissue; these occur only rarely.

Enchondromata, having their origin in the cartilage of the bronchi or from "embryonic rests," have been reported.

Osteomata are exceedingly rare. Virchow has reported a true bone tumor of the lung; several other pseudo osteomata have been found to owe their origin to inflammation and are examples of metaplasic ossification; such conditions have been described by Adami & Ribbert; other pseudo osteomata are calcific foci in old tuberculosis.

Lipomata have been found between the lobes as small collections of fatty cells.

Sarcoma is a more common connective tissue tumor of the lung and is more often secondary or metastatic in this organ.

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* Read before Orleans Parish Medical Society, February 13, 1911.

Endotheliomata are of occasional occurence and whilst they may spring primarily from the endothelium of the vessels they usually infiltrate the lung from the pleura as their source.

Metastatic tumors to the lung with their primary focus in the suprarenal gland are sometimes found. Whether this tumor should be considered a connective tissue or an epithelial cell tumor is still in controversy and as the present case may be one of this type we shall discuss this tumor later in its study.

The pulmonary tumors of epithelial origin are the carcinomata and the adenomata. The metastatic carcinoma is the most frequent tumor of the lung. The primary growth being commonly located in the stomach or mammæ. These tumors usually involve both lungs and are characterized by discrete nodules varying in size from a walnut to a pea or the growth may ramify throughout the lungs often coursing along the bronchi or larger vessels.

Primary carcinomata are decidedly rarer. They are usually unilateral and originate more often from the epithelium of the bronchi and their glands, although such men as Boix, Aufrecht, Perl and Melassez have held that the alveolar epithelium may at times form their source.

They usually form a large infiltrating mass which may involve almost an entire lung. Necrosis may occur in such masses and the formation of cavities result. Such a picture would simulate chronic tuberculosis. Again, although less often this tumor may assume a miliary arrangement giving a picture strikingly like that of acute miliary tuberculosis. Hydrothorax or hemothorax may complicate this tumor.

It is interesting to note that workmen in cobalt mines, notably those of the district of Schneeberg, are often victims of primary pulmonary carcinomas and sarcomas, an observation first made by Ancke in 1884. Primary carcinomata of the lungs are much more frequent in man than woman (73%, Passler), whilst secondary are more common in women.

Hodgkins' disease and true leukemias often give extensive so-called lymphomata of the lung. Dermoids and melanomas have been reported.

Malignancy in Pulmonary Tumors—As to this point there exists to a certain extent an analogy to tumors of the brain i. e. that

tumors otherwise benign are malignant because of their vital location and again their, at present, almost inoperable site.

REPORT OF A CASE.

The patient came into the service of Dr. Bel and myself at the Charity Hospital. He was in a moribund condition at the time of admission and died the following day. His history consequently was obtained with difficulty and is incomplete.

Morris Hopkins, colored male, about 48 years of age, a laborer by occupation, was admitted to the hospital on June 22, 1910.

There is nothing of interest in his family history. Patient has used alcohol and tobacco to a great extent. He has had the diseases common to childhood and has had rheumatism and malaria. About five weeks previous to his entrance he noticed a swelling in the right side of thorax. He had a cough and fever and suffered from shortness of breath. He came to the hospital because of the extreme pain in both sides of chest, difficulty in breathing and diarrhea.

No more history than the above could be obtained.

Physical examination shows the following:

Patient is an emaciated negro male, restless, anxious and dyspneic. Thoracic examination showed on inspection rapid and shallow respirations, chiefly abdominal in type. The right side, whilst more prominent, is almost stationary during in and expiration. The supra-clavicular regions and Mohrenheim's fossæ are abnormally sunken. The right side from the third rib down anteriorly and laterally and posteriorly below the scapula shows a marked distension with bulging of the intercostal spaces. Palpation shows absence of fremitus over entire right lung and but slight increase over left side. There is a localized edema of the right chest wall. Abdominal palpation shows the lower edge of the liver to be pushed down as far as the umbilicus.

Percussion: Flatness over entire right chest. Left side is practically normal.

On auscultating right lung, voice and respiratory sounds are only barely audible. Over left lung scattered rales of the coarse and fine moist varieties are heard throughout.

Aspiration of the right pleural cavity showed the fluid present to be blood.

The patient's condition somewhat hampered the examination and nothing else of interest was gained.

Upon entering the ward the following morning we found him in a state of collapse, his pulse was very rapid and barely perceptible and he was bathed in a cold perspiration. He died a short while afterwards.

The clinical diagnosis was a bilateral pulmonary tuberculosis with hemothorax of right side.

Post-Mortem—Autopsy held one hour after death.

Body of a colored male, emaciated, sclera yellow and pupils dilated and equal. Chest and chest-wall are full and tissues over chest are edematous. There are no enlarged peripheral lymph nodes. On the right side along the axilla down to the ileum the skin is blistered.

Thyroid Gland—Apparently normal.

Thoracic Cavity—Found to be filled with a dark brown fluid which protruded and is probably blood. At the lower portion of the cavity clots are found. The lungs are totally adherent laterally to the costal pleura at a point corresponding between the 3rd and 6th ribs, and following those ribs posteriorly as far back as the spinal column. At a point corresponding to the arch of the aorta is a small opening without adhesions which communicates with a pocket which is bound by the adhesions of the lung below and extending up to the apex of the cavity. This opening communicates also with another cavity which is bound along the opening by the lung substance anteriorly and laterally by the adhesions below the diaphragm, and posteriorly by the ribs and spinal column. The right pleura is found studded with small nodular areas which gives the appearance of dark skin, probably tuberculous in character. There are a number of tags on the parietal pleura corresponding to a point where the lung was found adherent. The left pleural cavity is dry.

The left lung is slightly adherent to the costal pleura, it is of a gray color and is studded on the surface with small grayish nodules; it crepitates fairly well on palpation and is very nodular. On section the organ is of a red color and presents throughout small yelowish-white nodules—some of them grayish white and larger areas which are caseous in character.

Heart—On opening the parietal pericardium it is found to be

adherent on the surface of the heart by recent adhesions which are easily broken up. Surface of the pericardium internally and the surface of the visceral pericardium are studded with small grayish nodules which are rough and nodular on palpation. Heart is otherwise negative.

Spleen—Totally adherent to the liver and adjoining organs. Of a slate color, capsule very much thickened and slightly lobulated. It measures 12x6 c.m. and is firm. On section it is of a red color; trabeculæ are well marked.

Liver—Is found pushed down as far as the umbilicus from fluid in right chest. On the surface are seen milky lines corresponding with the blood vessels. Gall bladder is one-fourth full of a yellow fluid; it is patulous and free from calculi and measures 8.5x3 c.m. Liver on section is of a yellowish brown color, lobulations are not marked; nothing else of note.

Pancreas—Presents nothing of note.

Mesenteric Glands—Are slightly enlarged and calcareous.

Kidneys and Adrenals—Adrenal on left side measures 6x3 c.m. An oblong body more or less caseous is found which is probably tubercle. Kidney measures 10x60 c.m. The surface of the organ is studded with small yellowish areas or bodies especially at the upper pole near the pelvis. The capsule is slightly adherent, surface of the organ is granular and of a red color. On section organ is also of a red color. Cortical substance measures 8 m.m. There is no marked differentiation between the cortex and pyramids. The right adrenal measures 4.5x3 c.m. It presents on section a yellowish mass which fills up the whole section of the organ and measures 1 c.m. in diameter. The right kidney measures 11x6.5 c.m. On section it is of a red color. Cortical substance measures 1 c.m. and presents same general appearance as the left kidney.

Gastro Intestinal Tract—Nothing of note.

Pelvic Organs—Normal.

Anatomical Diagnosis—

Right pleura hemorrhage.
Tuberculous pleuritis.
Pulmonary tuberculosis.
Tuberculosis of adrenals.
Tabes mesenterica.
Tuberculous nephritis.

Gross specimens of the lungs and adrenals and sections of the heart, kidneys, liver and spleen were retained for study.

A more careful examination of the lung upon section showed a large number of the nodules to be at the same level with the surface or even umbilicated. This point together with their irregularity in size suggested a metastatic neoplasm with a primary focus in the right lung as this lung was almost entirely solidified and showed areas of necrosis.

Microscopical specimens of the lungs showed distinct tumor areas throughout.

The cells are very irregular in size ranging from about 12 u. to 25 u. Their shape is pleomorphic, some are round, other cuboidal and others polyhedral. Their protoplasm is smooth and stains a light purple by eosin-hematoxylin. The nuclei stain a very deep blue and have a coarse chromatin network. Some of the large cells are multinucleated, others show a very large coarse and irregular nucleus which seems to project from the cell. A broad connective tissue stroma is present through which the vessels course. This forms irregular arboriform papillae and in some places arranges the cells in irregular alveoli, some containing masses of cells, others a single or double layer causing an adenomatoid arrangement. This picture resembles somewhat an endothelioma which forms one of the probable diagnosis of the tumor.

The growth in the adrenal is almost identical in its microscopical picture. The cell masses are seen springing from the cortical portion particularly the zona fasciculata and reticulata.

Cells having part resemblance to the normal zone cells and part to the tumor cells are seen and form a transitional cell which would indicate that this gland forms the tumor's primary origin. Some few tumor cells are seen infiltrating the medullary portion.

There are also numerous large multinucleated cells present here.

Should this tumor spring from the adrenal the nomenclature of it will depend entirely upon our view of the embryonal origin of the suprarenal. The extensive work of Minot, Aichel and others indictates that its origin is from the Wollfian body which is of mesothelial derivation and would place this tumor in that category.

The origin of this gland from an epithelial source has its adherents by whom the tumor would be classed as a carcinoma.

The resemblance of the cells to the polymorpho-celled sarcomata

and the multinucleation of many cells lead me to believe it is of mesothelial origin and is hence a mesothelioma of the adrenal with metastasis to the lungs. (Stains.)

Woolley has described a tumor in the Transactions of the Association of American Physicians, 1902, which he terms a primary carcinomatoid tumor of the adrenals with sarcomatous metastasis.

His description applies quite closely to this tumor. To enter into the discussion of the potentiality of the present tumor to arise from this source would bring up the scientific controversy of Grawitz, Stoerk, Adami, Jelle and the very recent work of Wilson upon hypernephromata, questions such as presence of fat adrenalin, chlorophyl, etc., which I will pursue in a later paper.

Microscopical examination of the heart showed a definite tuberculosis of the pericardium.

The other organs were practically negative.

In conclusion I wish to state that it is my opinon that metastatic tumors of the lung simulating so strikingly tuberculosis of that organ are diagnosed physically as such and even at autopsy are apt to be so mistaken until the tissue is carried to the microscope.

The resumé of the present case forms a striking example of the necessity of the microscopical study of autopsy findings.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

The Copper Salts and Ipecacuanha in the Treatment of Amebic Colitis. A Comparative Study.*

By J. A. STORCK, M. Ph., M. D., New Orleans.

Every one familiar with the therapeutics of amebic colitis is aware of the numerous remedies suggested from time to time. Of those used internally, ipecacuanha, calomel and magnesium sulphate are the best and most favorably known. The first, ipecacuanha, has much merit and many strong advocates, notably among them Manson and Woodhull. In English practice, ipecacuanha is generally

* Read before the Louisiana State Medical Society Meeting, 1910.

the first to be tried. Calomel also has its champions, for Scheube says: "According to my experience when it (calomel) proved useless, ipecacuanha was given also without results." As to magnesium sulphate, it forms part of the treatment in almost every instance when ipecacuanha is administered.

As to the method of treatment by means of irrigation and instillation, the medicaments suggested are legion: quinin sulphate, silver nitrate, argyrol, salicylic acid, tannic acid and copper sulphate being among those most generally used. The irrigation and instillation method of treating amebic colitis appears to be the most rational and has the sanction of men high as clinicians. Osler, Jackson, Futcher, Moulden and Thornbrurgh are among its advocates. For my own part, I have found a combination of the internal administration of ipecacuanha and copper arsenit, along with hot instillations of copper sulphate, to give the best results.

While it is true that the treatment of amebic colitis with ipecacuanha, as in the use of pills coated with shellac, keratin and latterly with salol, is not as objectionable as the ipecacuanha treatment after the Brazilian plan, nevertheless, I have seen disagreeable symptoms follow as a result of its administration in pills coated as above mentioned; in three cases, I found it necessary to abandon its use.

These cases, afterwards put upon copper arsenit by mouth and hot instillations of coper sulphate, made good recoveries. Recognizing the worth of ipecacuanha in the treatment of amebic colitis, but not feeling satisfied with the results obtained, I determined upon using the copper salts alone and in conjunction with ipecacuanha. Moulden's splendid results with hot instillations of copper sulphate appealed to me, and my own previous experience with copper arsenit in other intestinal disturbances gave me my cue.

The forty-five cases of which I here report results are taken from hospital and private practice, and were treated as follows:

Series I—Twenty-four with ipecacuanha.

Series II—Nine with ipecacuanha and copper arsenit internally, and hot instillations of copper sulphate by bowel.

Series III—Twelve with copper arsenit internally, and hot instillations of copper sulphate by bowel.

All the cases of the three series were given at 5 o'clock every morning from five to ten days, 30 c.c. of a saturated solution of

magnesium sulphate, with the object of washing from the mucous membrane by exosmosis as many of the entameba h. as possible, and by clearing out all digestive residue, thus securing a clean track for the day's work.

In *Series I,* twenty-four cases were treated. The initial dose of ipecacuanha given at 8 p. m. ranged from forty to eighty grains, always in salol coated pills. The total quantity given to the different cases ranged from 200 grains as the minimum, to 630 grains as the maximum in a given case. The dose and total quantity given being regulated according to toleration and results produced, it so happened that the smaller gave as good results as the larger amounts; that is, apparently caused a disappearance of the entameba h. It might also be remarked that the cases taking the smaller amounts did not show a greater number of relapses (i. e., reappearance of the entameba h.) than those taking the larger amounts. All things being considered, I invariably gave preference to larger initial dose, as also the greater total quantity. The dose was reduced five grains nightly until on examination the stools showed freedom from the entameba h. and this dose was then continued for several days thereafter. Six of the cases of this series relapsed; i. e., the stools showed a reappearance of entameba h. after an apparent absence of from two to six weeks. In twelve of the cases, no entameba h. could be found during the above period, but in three of these there were occasional mucoid stools. In one of the cases the stools continued to show marked traces of blood. I lost trace of the other six cases and, therefore, am unable to say what was the outcome of them; but, if we assume that all of these six cases did not have a recurrence, and if we eliminate the three cases in which mucoid stools recurred, we still have a large proportion of true relapses; i. e., 25%.

Four of the six cases in which the entameba h. reappeared and two of the other cases, those with mucoid passages, were prevailed upon to submit to the copper treatment, and with one exception, there was complete cessation of all bowel symptoms after the expiration of twelve days. The other case, one with mucoid stools, did not respond in this time, became discouraged, and did not report further. These cases have remained free of entameba h. up to the present writing, four months having elapsed since their disappearance. The above four cases which were treated with copper

for the recurrence of the entameba h. are included in *Series III.* So as to avoid confusion, the other cases, those spoken of as having mucoid stools only, are not included further in any of the series.

As to relapses after the ipecacuanha treatment, I quote the following from an article by Captain R. M. Thornbrurgh in charge of the Division Hospital, Manilla (during part 1905-6): "The cases treated solely by ipecac, or by ipecac combined with quinin enemata, nearly always relapsed when the treatment was discontinued. To this hospital were sent the worse cases that did not yield to treatment at their stations, and many were sent with a view of being sent to the United States for further treatment. No internal treatment used by itself was successful in the hands of the writer in any of these sub-acute or chronic cases." Ipecacuanha seems to have its greatest efficiency in the acute cases.

One point which I wish to emphasize in particular regarding the ipecacuanha treatment is that, under its administration, the number of stools are lessened and become formed, but it does not eradicate the entameba h. at all times, even though it be given in large doses* and be long continued.

It is possible that the entameba may at times become very resistent, or being embedded in the mucosa, be difficult of dislodgment. In this manner we may account for the reappearance of entameba h. Ipecacuanha is of considerable value in the treatment of hepatitis of amebic origin, and I have seen the liver condition grow steadily better under its use, even when there appeared to be an incipint liver abscess.

Series II—This series, comprising nine cases, was given ipecacuanha as in *Series I.* In addition, during the day time, copper arsenit, grain 1-100 in tablet, was given every hour, until six or eight doses were administered, and thereafter, every four or five hours, so long as the ipecacuanha was being administered.

Morning and evening, every twelve hours during the above period, high instillations of hot (106 to 110° F) solution of copper sulphate were administered. Entameba h., also mucus and blood, disappeared from the stools in all of these cases in from six to twenty days. Although these cases were under observation for more than

* Since reading this paper I have given one hundred grains as initial dose in three chronic cases, and a total quantity of one thousand grains. Two of these cases relapsed and were afterwards cured with copper arsenit internally and hot instillations of copper sulphate.

two months, there was no recurrence of entameba h. and only one relapse of mucoid stools—a percentage of 11 1-9.

Series III—In this series, thirteen cases were treated, among which are included the three cases in which there was untoward effect from the first dose of ipecacuanha; four which relapsed after full treatment with ipecacuanha; and six which had undergone treatment of some sort without cure previous to coming under my charge. These different cases were each given magnesium sulphate as in the other two series. Copper arsenit internally, and hot instillations of copper sulphate were given, as in *Series II*. The time required to eradicate the entameba h. and to free the stools of mucus varied from five to twenty-five days, being slightly longer than in *Series II*. During this time, the patients were kept under as close surveillance as possible. Thereafter, the stools were examined off and on for periods varying from six to ten weeks. Eleven of the cases remained faithful during this period, and of this number, no case had relapsed in the periods stated. The other two, both hospital patients, disappeared before I was enabled to satisfy myself as to whether or not they relapsed. For the sake of argument, we will say they relapsed—a percentage of 15 5-13.

All patients of the three series were put to bed on beginning treatment, and when possible induced to remain there until disappearance of the entameba h.

Summary of Results: *Series I.*—Ipecacuanha, twenty-four cases: Six true relapses—25%.

Series II.—Copper arsenit and ipecacuanha internally, and hot instillations of copper sulphate. Nine cases, one questionable relapse—11 1-9%.

Series III.—Hot instillations of copper sulphate and copper arsenit internally. Thirteen cases, two questionable relapses—15 5-13%.

Before closing I wish to say a few words regarding the use of copper sulphate in the treatment of amebic colitis. In so far as my knowledge goes, its use in the form of hot instillations was first practiced by Moulden, who conceived the idea of its use in amebic colitis after reading the work done by George T. Moore and Karl F. Kellerman, of United States Department of Agriculture. After making some preliminary tests, Moulden treated more than two

hundred cases successfully by the copper sulphate instillation method.

The method of applying the hot instillations of copper sulphate, as suggested by Moulden and as used by me, is as follows: The patient is placed upon an inclined plane that raises the buttocks twenty-five centimeters above the level of the shoulders, thus allowing for the complete distension of the entire colon, especially at the cecum where the entamebas are usually present in large numbers. By taking advantage of the fact that, as the majority of the weight of the solution is thus kept internal to the sigmoid flexure, a maximum distension of the entire colon is produced, while a minimum amount of pressure is brought to bear upon the rectum and its sensitive nervous mechanism, the colon is thoroughly irrigated through a double-flow colon tube, with sterile water until the return is perfectly clean. After draining off all the surplus water, the bowel is slowly filled with the hot copper solution by starting the reservoir on a level with the anus, and slowly elevating it as the gut accommodates itself to the pressure, thus distending it to its fullest capacity without contraction of the muscular walls. The temperature at which the instillations prove the most efficacious is from 106° F to 110° F, the higher temperature being used as a rule in the worst cases. This temperature seldom causes annoyance, but on the contrary, acts as a sedative to the mucous membrane, improves the penetrative power of the copper, and brings about reaction. The patient usually retains the solution for twenty or thirty minutes. This procedure is repeated every twelve hours, and has been found to work well in practice, as it does not needlessly exhaust the patient.

Under the copper treatment, patients gain rapidly in weight, possibly due to some tonic action resulting from the absorption of the copper. Profuse perspiration frequently occurs, but no unfavorable results follow.

The strength of the solution used by me on the cases here reported was from 1-10,000 to 1-6,000.

Moulden claims to have proven experimentally that copper sulphate solutions of the above strength and temperature will destroy the entameba.

Lately, I have used hot solutions of copper sulphate of strength 1-2,000, first beginning with 1-10,000 and gradually increasing to

the stronger solution. This was only done when the entameba h. and mucoid stools failed to disappear as rapidly as I thought they should. No ill effects were observed from the use of solutions of this strength.

Orleans Parish Medical Society Proceedings.

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141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. C. P. HOLDERITH, Chairman.
DR. HOMER DUPUY and DR. H. D. KING.

MEETING OF MARCH 13—INAUGURATION OF NEW DOMICILE.

Origin of the Orleans Parish and the State Medical Societies and the Two Chief Purposes of their Founders.*

By STANFORD E. CHAILLÉ, M. D., New Orleans.

Mr. President and Fellow-Members of the Orleans Parish Medical Society:

The warmth of your vivacious welcome is very gratefully appreciated, and, as an indication of your esteem and friendship, is cordially reciprocated as to every one of you.

My subjects are the origin of this and our State Society and the two chief purposes of their founders, prefacing these two subjects by allusions to my early devotion to and my long neglect of both societies. Please note that, for brevity's sake, I shall, whenever I may say *our* societies, mean this and our State Society, and when I say *my* committee I shall mean one of which I was the chairman, thus avoiding frequent repetition of long official titles.

Still a member of many societies, my experience is that their usefulness depends on a few hard-working shepherds caring for a discouragingly large flock of inactive sheep, useless except to pay fees. During the ten years, 1877-1886, I was one of the hard-working shepherds of our societies; for I am the only one living of their

*Read before the Orleans Parish Medical Society, March 13, 1911, on the occasion of the opening of the Society's new domicile.

three primal founders. I was chairman of the committees of both societies for their permanent organization, preparing their regulations—*i. e.,* their constitutions and by-laws. I was chosen in 1878 their first annual orator, devoting my address, in 1879, to stimulating all reputable physicians to unite in promoting the execution of the first two articles in the original regulations of both societies as to their purposes, viz: first, to union into affiliated or component societies for our State Society, and this to support our National Society; second, to the promotion of State medicine; and finally I was chairman for nine years of the two committees on State medicine—one committee for each of our societies. These four duties required, I think, more time and labor, especially the last, than was given by any other member of our societies. In 1886 I insisted on being relieved of the chairmanship of both committees on State medicine, and then I ceased to be a hard-working shepherd, and have ever since been one of your inactive sheep.

Having taken part in the generation, the parturition, the delivery and the devoted parental nursing during ten years of the feeble childhood of both societies; and, having ever taken such deep interest in their growth, that among other evidences I annually urged for many years on all graduates the important duty of joining their parish or county and state societies; I believe it a duty to all friends, in order to avoid their misjudgment, to explain why I have neglected for so many years not only our societies, but also lengthy meetings of all kinds. All causes will not be stated and I hesitate to state even the four chief ones, because I shall thereby fail to *practice* what I have often *preached.* However, if any person *always* practices what he or she preaches, I have never known *him, much less her.* I have often unsympathetically preached two suggestive lines from a negro melody:

"Oh! don't tell *me your* troubles,
For, I'se got troubles of *my* own."

To my very laborious duties as a professor from 1868 to 1909, there was added from 1885 to 1909 the heavy burden of the deanship of the Tulane Medical Department with such trying tasks as the management of its finances and the persuading of from three to six hundred teachers and students to work in harmony. Lucky the dean of our medical department who has not daily a lot of

new troubles to tax his capacity to sleep and maintain health, to conciliate the many chronic grumblers, and to well discharge other than his official duties!

Further, in spite of the fact that when I meet one of you, you tell me how fine I look, I have long had three incurable maladies. Two of these are very harrassing, inflicting, at unexpected intervals, specially when making unusual exertion or confined over an hour; and these two, with advancing age, force me to very cautious and regular habits and to such early night hours that I am very rarely out of my home after half past eight. Of all preachers and teachers of right conduct, nature, if well understood, is the most efficient, sooner or later wielding with relentless hand the scourge of pain on her defiers.

Still farther, old age has, as usual, aggravated old maladies and added others to them. At last I have become a member of a small, unenviable and degenerating class of the population, the octogenarians, who, as many think, ought to have been earlier transferred to another world. Either to where the wicked cease from troubling and the weary be at rest, in which I often concur; or to where they would have "a hot time in the old" place not only to-night but every night and every day to eternity, in which I have never concurred. And this reminds me that, at a notable banquet, a well-known bishop, interlarded an eloquent after-dinner speech with this story: A preacher warned his congregation that God would surely condemn the wicked to hell-fire forever, eternally and everlastingly; after the sermon a politician inquired: "Mr. Preacher, did you say that the All-Merciful Father would damn many of His own children forever?" "Yes, sir!" "And eternally?" "Yes, sir!" "And everlastingly?" "Yes, sir!" "Well, I tell you, Mr. Preacher, the *American* people will *never* stand it!"

More than enough has been said to explain why, hearing a rumor, days before my official notification, that I would be solicited to address you to-night, I said I earnestly hoped not, for, I would not consent. Accidentally meeting afterward my valued friend, your president, he asked whether your committee had yet invited me to address you and I said no, and that I could not consent; then Dr. Ledbetter, in his usual persuasive way, pleaded that, on this notable occasion you could not possibly get along without me and that

I must not forget that I was the professional daddy of most of you. Your committee concurred in this insidious appeal, both to my vanity and my affection for you and here I am—thus reminding myself of a famous poet's sweetheart, who, swearing she would ne'er consent, consented.

This overlong preface brings me to the first of my two subjects, the origin of our societies. I regret that, to explain this and why our parish never had an efficient medical society until May 6, 1878, and our state until April 9, 1879, both to support the American Medical Association, it will be necessary to state six sets of historical facts.

Louisiana did have a so-called State Medical Society for the six years, 1849 to 1856, when it died, because unattended by any except the physicians of this parish. This was such a serious lesson that the primal founders of our present State Society determined that they would set the example and use their influence with others to give the presidency and all other possible favors to members from the country parishes; in this these founders succeeded during many of the earliest years.

Of the thirty-eight states of the United States in 1877 there were only two, the new and insignificant state of Nevada, and Louisiana that had no State Society. Our state had no such society earlier, chiefly because of our civil war, 1861-65, and of the atrocious period of reconstruction, that endured the twelve disastrous years, 1865-1877, during which Federal soldiers maintained white alien carpetbaggers and native scallawags, with our freed negro slaves to vote for them, in power over the grossly misgoverned free-born white citizens of our state. During these twelve years all efforts for progress were paralyzed, except the effort of every white patriot to drive from power the vampires that were sucking the life-blood of our city and state.

In 1876, Tilden, the Democrat, was elected president, but by the political trickery of Republican politicians, long entrenched in power, the electoral votes of Louisiana and Florida were manipulated in such wise by corrupt Republican returning boards, that finally the votes of these States were so falsified that Hayes, the Republican, was squeezed into the presidency by one majority in a total electoral vote of 369, by *only one* majority in spite of the fact that

Tilden was defrauded of the electoral votes of Louisiana and Florida.

The indignant democracy of the nation had to be appeased and there resulted a political understanding that, while Hayes' presidency would be submitted to, though gained by dishonest count, yet, that the Federal soldiers should be withheld from interference in Louisiana, thereby insuring that the honest vote of this State for its Governor would prevail. The result was that while Hayes, the Republican, became president, March 4th, 1877, aided by Louisiana's falsified vote, yet that our patriotic Confederate, General Nicholls, the Democrat, became Governor of Louisiana, April 26th, 1877, by our State's honest vote. Then, for the first time in twelve years, all patriots realized that we free-born white citizens had regained our liberty and that justice and progress depended at last on *ourselves* and no longer on aliens, traitors and freed slaves, backed by the Federal army.

One result of freedom regained and hope revived, was the belief of Dr. Bemiss and myself that favorable opportunity had at last arrived to organize State and parish medical societies to cooperate with the American Medical Association, and that this end would be greatly stimulated by securing for a physician of our State the presidency of our national association. We had good reason to believe that our friend, Dr. T. G. Richardson, would be the most acceptable candidate that Louisiana and the South could nominate. He had rendered very notable and highly valued services to the A. M. A. in 1869, when its session was held in New Orleans; his devoted and most serviceable friend, from his youth, was the noble man, devoted patriot, and most famous surgeon, Dr. S. D. Gross, who, for many years, was the most influential member of the association, and Dr. Richardson had the esteem and friendship of many other influential members. Dr. Bemiss and I, in 1869 and subsequently, had also gained the friendship of these leaders; hence, we were in favorable condition to urge our claim for Louisiana and Dr. Richardson. By numerous interviews with and letters to the leaders of our National Association, we succeeded in having Dr. Richardson, ex-Confederate surgeon and Democrat, elected president June, 1877, on the very first ballot, although three influential Northern leaders were candidates and although the election was

held in Chicago. All three of us, greatly pleased by this success, at once decided that we would strive to organize, before Dr. Richardson would preside in June, 1878, a State and as many parish societies as might be practicable, all of them to strengthen our national association.

We three promptly conferred with many of the most influential M. Ds. in this city and State to unite with us in organizing a State society in January, 1878. This first meeting was in truth merely *a convention* to pave the way for the permament organization of both State and parish societies; and was attended by forty-six physicians from Orleans Parish and by thirty-four physicians from fourteen other parishes, and these eighty members may, with good reason, be deemed founders of our State society; and most, if not all, of the forty-six members from Orleans Parish became founders of the Orleans Parish Medical Society.

At the first meeting I was chosen annual orator for 1879 and also chairman of a committee for the permanent organization of both State and parish societies. The chief labor of preparing constitutions for these societies was, as usual, thrown upon the chairman and proved to be very great, for I had never studied and knew very little about such constitutions. Hence, to guide me, I secured and studied the regulations of over twenty State and of every notable county or city society in the United States. From the best of these numerous constitutions were selected those regulations that seemed the very best, adding others deemed very desirable. The result was unanimous approval, first, by my committee, then by this society May 6th, 1878, and then by our State society, April 9th, 1879; and these were the dates of the permanent organization of our societies. Their regulations endured until about 1903, when both societies were chartered and new regulations were adopted, which, however, contain important relics of the regulations originally submitted by me.

The so-called permanent organization of this society antedated that of our State society, hence *your* society was the first one ever organized to support our State society, with knowledge that your State society would be organized to support the A. M. A. And your society was organized to be what it has ever since proved to be the mainstay of our State society. Therefore, much very valuable ac-

tion taken by this society in its earliest years, having been carried to and adopted by our State society is published only in the annual transactions of the Louisiana State Medical Society. Copies of these can be found in the libraries both of this society and of the Tulane Medical Department.

My chief purpose in submitting most of the historical facts now stated has been to impress on every one of you these three noteworthy facts: Dr. Bemiss was as much a primal founder and active supporter of your society as were my other two dear friends, Richardson and Chaille; that your society was the first one permanently organized in our State to support our State and national societies, and that both this and our State Society were the offspring of the hard won liberty regained, in 1877, by the patriots of Louisiana.

Only now have I come to the subject that most tempted me to address you, viz.: State medicine, the subject that the founders deemed the most important, after your permanent organization, to promote, as indicated by your regulations from 1878 to 1902; and its importance is still insisted upon in your present by-laws.

In 1869 was published the first of many publications of mine on public hygiene and in 1875 I became deeply interested also in medical jurisprudence, and, at the same time, in State medicine. Diligent search into then existing literature proved that the words State medicine were usually limited to public hygiene and failing to find anywhere a definition of State medicine, I originated for the benefit, first and especially of this society, the following: "State medicine embraces *all* subjects for the comprehension of which medical knowledge, and for the execution of which State or legislative authority are indispensable, viz: medical education, public hygiene, medical jurisprudence, and public institutions for the sick and infirm." And, as far as I know, I was the first to urge: that, after the efficient organization of component medical societies, State medicine should be to them the most important of all subjects; that responsibility for the education of both the medical and legal professions and of the public and their legislators depended primarily on such societies and that if these neglected this responsibility, this would never be adequately discharged by any other organizations; that the greatest duty of such societies was to promote the public

welfare; that this could not be accomplished as efficiently as by the dissemination of a knowledge and the advocacy of State medicine, and that in no other wise could such societies confer as great benefits on the people and thereby gain as much influence and power.

I strenuously advocated these views first before the committees on the organization of our societies, then before both societies and they were unanimously adopted as proved by the original regulations of both societies. The first annual oration ever delivered for our State and this society was devoted to the supreme importance first to union of our profession into affiliated medical societies, and second, to the promotion of State medicine; an address that I still think good, which is not my opinion of all of the over 160 of my published literary contributions, as listed by my devoted friends, members of this society, Drs. Matas and Smyth.

In 1879 I also delivered an address on State medicine twice for the A. M. A. once before one of its sections and was then paid the exceptionally high compliment of being requested to redeliver it before the whole association. I also addressed on the same subject the Texas State Medical Association, a Kentucky and also a Massachusetts Medical Society. In every one of these instances my views met with warm approval and very flattering applause. Farther, I could weary you with quotations from several ex-presidents of the A. M. A. and of other leaders of our profession advocating the same views.

Now, what was *accomplished* from 1877 to 1887 by this society and by those of its members who were members of the committees on State medicine of both of our societies? The annual transactions of our State society publish what was done and I know that most all and believe that all that was done was originated and approved by this society and by it carried to our State Society, where all first done also met unanimous approval.

First, a State convention to adopt a new constitution for our State was to be held in New Orleans, July, 1879. Preparatory to this, an article on State medicine was prepared by your committee for introduction into the State constitution of 1879. This proposed article was then submitted by me to my friend, Chief Justice Manning, of our Supreme Court, for his criticisms, and he, warmly ap-

proving, made only one criticism, that it was at least fifty years ahead of our civilization; which is proved by the fact that thirty-three years have already elapsed without its efficient execution. This article was then unanimously approved first by your society and then by the State society. Four eminent lawyers, members of the convention, approving your proposed article, volunteered to urge its adoption by the convention.

The result of these strenuous efforts was that instead of adopting your article, which subdivided State medicine into its four departments and specified eleven subjects thereof for adoption, the convention did adopt Article 178 of the Constitution of 1879, which is to this effect: "The General Assembly *shall* provide for the interests of State medicine in *all* its departments, and added thereto only three of the eleven specifications proposed by you. Louisiana's present constitution of 1898, in its Articles 296, 297, re-enacts Article 178 of 1879, adding thereto *two more* of your eleven specifications.

The word "shall," instead of the frequent words "is authorized to," in the constitutions of 1879 and 1898, is well worth your notice for our supreme law has been since 1878, "The General Assembly *shall* provide for the interests of State medicine in *all* its departments"; hence, if you or any one can convince our legislators that any proposed law is in the interests of State medicine, these legislators are bound by their official oath to enact it. Every law that, since 1878, has been or may hereafter be enacted in the interests of State medicine has found or will find the strongest support in our State constitution, as first originated by this society; and, as far as I know this introduction into our State constitution of a mandatory provision for State medicine was unprecedented in 1879 and of such great importance that this service of our society should not pass into oblivion.

Second, after this success, your committee devoted its attention to the education in State medicine of the medical profession and of our legislators, to persuading and aiding the latter to enact laws which the constitution commands "shall be provided for," and to publishing all done from 1878 to 1887 in the annual transactions of our State Medical Society.

The annual reports of the two committees of our societies con-

tain over 113 pages devoted to State medicine during the first ten years. It would require hours to review these reports and as I have spoken twice as long as I had first intended I shall briefly allude only to the subjects of chief importance; but first let me plead that, if I impose on your time, you should blame your representatives, who assured me *you* would welcome an address by *me* of even more than an hour, which I shall not take.

The longest of your committee's annual reports was of twenty-seven pages in 1881 and was republished, largely at the expense of members of this society, in numerous pamphlets entitled a "Petition to the General Assembly of Louisiana in the interests of State Medicine." This petition (i. e. the annual report of 1881) urged our legislators to enact laws, defective or non-existent on fourteen specified subjects. The petition had been unanimously approved *first* by this, then by our State society, and a copy of it was mailed to every physician and every legislator of our State and to many lawyers. The chairman of your committee testified that its *very great* value was in large part due to the laborious and zealous co-operation of Drs. Davidson, Herrick, Bickham, Parham and McCutchon (all members of this society and of my committee) and to the invaluable aid of Judge Semmes and Judge Howe and of his young partner, Mr. Prentiss. The reputation of the eight men named, as my co-workers, ought to be a guarantee that the annual report of 1881 of your committee still deserves to be read by whoever takes interest in the defective laws of Louisiana. Subsequent reports of your committee persevered in behalf of the enactment of efficient laws on the fourteen subjects specified in 1881, and to recording what was accomplished and show that seven laws, most of them defective, in the interests of State medicine were enacted to 1886. Some of the laws you petitioned for have never yet been enacted, but it is my conviction that the efforts of this society, 1878 to 1887, planted some of the seed from which grew all the laws enacted then and since and that Louisiana may ever enact in the interests of State medicine.

Hoping to stimulate you to greater efforts in behalf of State medicine, I shall now summarize my experience of the chief requisites to success in having laws enacted:

1. The chairman of your committee should be an enthusiast,

zealous for the welfare of the people as well as of his profession; he should have power to nominate his fellow-members, who should be at least four other enthusiasts, *one* for every one of the four departments of State medicine; and he should not be a member overburdened with practice or official duties.

2. The laws of our State and ordinances of our city should be well searched, especially for their defects; and, in order to appreciate these, the laws and ordinances of the best-governed States and cities, not only in our own but also in other nations, must be studied. It will probably still be found, as I did over thirty years ago, that many laws of Massachusetts, New York and a few other States are much superior to our own and that Germany surpasses all nations in medical jurisprudence.

3. At least one influential member of our legislature and another in our city council must be found to advocate the enactment of such laws, as you may propose, and be endorsed, if possible, not only by such medical officers as may be interested in any special law proposed, e. g., members of our medical examining boards, boards of health, hospitals, asylums, coroners; but also be endorsed by any societies specially interested in a law proposed by you.

4. Your committee must find, among its friends, patriotic lawyers to give freely indispensable information and advice.

5. Strenuous efforts must be made to educate in State medicine not only the members of your own society and profession, but also the people and their legislative representatives. How lacking in active interest, the members of our own societies were, and may still be, is shown by my discouraging experience in 1881, when your petition to our General Assembly was submitted to over 100 of the members of our State Society for approval, and when I urged that, in order to secure success, it was indispensable that, not only should every member use his influence with his own representative, then about to be elected, but also should report to me the result of his efforts. I received unusual applause and many *promises* to report, and yet of about 100 promises, three members and only three did report. How easy for the people, even for such important unit of the people as every doctor should be, to growl at evils and to clap hands and shout when these evils are justly denounced, and yet to *do* nothing to correct them!

My conviction is that State medicine would be greatly promoted by the American Medical Association, if it would add to its many very valuable publications a compend on the subject, detailing the best laws in existence in every one of the four departments, and the defective and non-existent laws in every one of our States, and this compend to be followed every few years by an appendix recording all improved laws since enacted.

Finally, as to State medicine, I hope to farther stimulate your interest in the subject by asking every one of you a few pertinent questions, first presuming that you know the following facts: You do know that our government is of the people, by the people, for the people; that every one of you is an important unit of the people; and that not only in State medicine, in whose interests you should be the paramount units, but also in many other particulars, our laws and their execution are so defective that many patriots still doubt whether the people are fit to govern themselves.

You do know that, by constantly improving ways and means for research, the accumulation of new knowledge is so vast that we live in an unprecedented age of specialists and that civilization now has, as never before, many skilled experts, especially in numerous branches both of medicine and of law. Hence the frequent assumption of judges, lawyers, juries, that the testimony of one M. D. is as good as another's is often false.

You do know that our laws still permit many medical officers, who should be specialists, to owe their offices not to their superior expert knowledge, but to the favor of political bosses and as rewards for services in supporting the temporarily right side in politics; and that when, in time, this right has become the wrong side, these officers having in the meantime gained some valuable expert knowledge are supplanted by the new bosses of the people with successors just as ignorant as their predecessors were when first appointed. And you do know that you ought not to approve these gross abuses, due in part to greed, but in greater part to the ignorance of the people, which I believe it your special duty to strive to overcome.

You are now prepared for five pertinent questions, out of many like ones, that could be asked. Do you know that your annual report of 1881 or petition to our General Assembly in the interests

of State medicine was hatched by your society and was designed to be your platform of reform for all the time that might be required for its execution; and have you ever read this platform of twenty-seven pages, gaining thereby valuable knowledge of the many defects in the laws of your own State?

Do you know and approve of our laws as to the selection of medical experts in trials for the determination of insanity and of other medical specialties—laws that have often defeated justice and brought, as they frequently will bring, on your own profession public discredit and scandal?

Do you know and approve of our laws as to coroners whose existence of a medieval relic peculiar to Anglo-Saxon legislation, laws requiring a coroner to discharge both *medical* and *legal duties,* laws originating when there were neither skilled medical nor legal experts, and do you know how superior are the laws of other nations, specially of Germany, and that Massachusetts in 1877 enacted a law, abolishing the office of coroner, and, in accord with ordinary common sense, substituted the office of medical examiner (of sudden, violent and suspicious deaths) to discharge solely a coroner's medical duties and transferred his legal duties to legal officials, and that this Massachusetts law has ever since proved more satisfactory both to the public and to our profession? Our constitution requires coroners and that they shall be physicians (the sole official crumb given our profession); however, eminent lawyers have assured me that, while the title of coroner cannot be changed, our General Assembly could, without violating the constitution, limit his duties solely to those of a medical examiner.

Ought not our medical examining board be required to add to their written examination, the only one now prescribed by the law, more practical tests of capacity to practice; if so, ought not the examiners to be paid more for the greater time and labor necessary and their Board be authorized to employ and pay for *such* aids as might be needed, *such* as laboratory experts?

Would you approve of a law, like Indiana's, that would deprive some hopeless degenerates, by means of vasectomy, of capacity to reproduce their kind to the grave detriment of the human race?

If you favor the correction of any of the defects in our laws,

that I have now suffciently exemplified, then this last question, who of the people can, as well as you appreciate these defects, and, if so, on whose shoulders, if not yours, rests the chief responsibility of striving to correct them, however many and great the discouragements and however long the time required?

We teach our children to sing that *our* country is "the land of the *free* and the home of the *brave,*" and when these soul stirring words are thus heard, we, swelling with pompous vanity, uproariously applaud. Are you sufficiently *free* of indolence, ignorance, prejudice and are you *brave* enough to strive to establish such good laws in every department of State medicine as would very greatly benefit the common welfare?

Too much of that which I have thus far said offends even me by the use of so many big I's and references to myself; and this abuse reminds me of a criticism of the German Emperor, of whom it was said that his *every* speech was *limited* to his *"me, myself* and God." Should any of you criticise the present speaker by declaring that, worse than the Emperor, I made no appeal to God, but limited myself to *me, myself,* I would merely remind you that most people, besides the Kaiser and myself, find *their* "me, myself" the most fascinating of all topics to *themselves,* though usually, alas! the most wearisome to everyone else.

This apology enables me at last to discharge my pleasantest duty, for I can now tender you my heartfelt congratulations. I congratulate you on such able support given by you to this society that now, in its thirty-fourth year, its feeble childhood has matured into a lusty manhood. I congratulate you on the great progress you have made in strengthening your influence over the most reputable members of our city's medical profession, binding them into one strong union, for this society now is composed of at least 300 physicians out of the 446 named in this year's city directory, and, of the 146 non-members there are many you would not admit on any terms. I congratulate you on the staunch support given to our State and national societies, on your valuable contributions to medical science and on your successful efforts for the enactment of some greatly needed laws, whose importance I fully appreciate, spite of my plea for still greater efforts in behalf of State medicine. Finally, on this special occasion, I frevently congratulate you on your

new library room with its improved size and conveniences and its collection of nearly 9,000 books; and most fervently of all I congratulate you on the inauguration to-night of this attractive and commodious new domicile, thereby insuring the still greater power and progress that a well-appointed home gives to a profession united in a harmonious family.

Long may every one of you, my friends, live to serve this society, still longer may it endure to serve the people, thereby ceaselessly augmenting that public esteem on which depends the influence, power and repute of our own beloved profession!

History of the Orleans Parish Medical Society.*

By CHARLES CHASSAIGNAC, M. D., New Orleans.

In acquiescing with the request of the president and of the chairman of the Committee on Scientific Essays of the society to say something to you on this auspicious occasion concerning the past of the organization, I have concluded that a brief resumé of its history would be sufficient. More would be tiresome reiteration as already in the first volume issued of its proceedings, in 1893, there appeared a sketch of the society prepared by me and covering its history up to that time, gathered with difficulty and labor as no official records were available for earlier than 1887. On the other hand, since that date our transactions have been published regularly, thus furnishing, with the sketch just mentioned, a complete account of the society from its organization to the present time.

The Orleans Parish Medical Society is thirty-three years old, having been founded on April 22, 1878. The committee named to affect a permanent organization was composed of Drs. Chaillé, Turpin and Herrick, of whom our esteemed honorary member, Dr. Chaillé, is the only survivor. Two weeks later the organization was completed by the election of Dr. Charles Turpin as president, Drs. S. S. Herrick, E. S. Lewis and J. P. Davidson, vice presidents; A. B. Miles, recording secretary, D. Jamison, corresponding secretary, of all of whom again there is but one survivor, our distinguished member, E. S. Lewis.

The chief purpose of the new society was affiliation with the state and national bodies, as there already existed an active but independent medical association in this city.

* Read before the Orleans Parish Medical Society, March 13, 1911, on the occasion of the opening of the Society's new domicile.

At that time the meeting place of the society was in a room tendered by the faculty of the Medical Department in the old college building situated on Common street, between Baronne and University place. The average attendance at meetings in those days was sixteen.

In the early eighties there was already a diminished interest in the society and by 1885 and 1886 its existence was only precarious. Up to this date no records are available.

New life was instilled into the organization in 1887 by the election to the presidency of the much beloved J. P. Davidson, the Nestor of the profession of Orleans, who was nevertheless young in activity and in ideas and whose closest associates and most earnest supporters were the younger medical men of the city. At the same time the writer was elected secretary and the movement was inaugurated which was to terminate in the amalgamation of the various medical bodies of New Orleans. Since that date, complete and authentic records of the society have been kept and I am able, therefore, to give you a list of the principal officers and of the most important events in the order of their election and occurrence respectively. The names of the other officers are on record and I am afraid it would tire you out if I attempted to enumerate them all.

After using the same room as a meeting place for ten years, the society was compelled to vacate it in 1888 as it was needed by the Medical Department. A room on the ground floor of the old and historic Mechanics' Institute was tendered by the Board of Tulane University, and was used for some time. It was located where the new Grunewald Hotel now stands. On April 2, of this year, the society celebrated its tenth anniversary by giving its first banquet which was quite a success and was attended by thirty-six members and guests.

Drs. Davidson and Chassaignac were re-elected president and secretary, respectively, in 1888; also in 1889.

In 1890 Dr. Davidson died at just about the completion of his third term, deeply regretted and sincerely mourned. Dr. Charles Chassaignac was elected president and Dr. M. J. Magruder, secretary. This year was notable for the culmination of the efforts towards the unification of the medical organization of the city. The New Orleans Medical and Surgical Association disbanded and

donated the balance of its funds, about $60, to the Medical Library Association. Shortly after, the latter became amalgamated with this society, which thus became the only medical society here and included all the local men who showed an active interest in medical matters and organization. At the same time the foundation was laid for our splendid library; thus 1890 is to be counted as one of the epoch-making years in the annals of the society.

Drs. Chassaignac and Magruder were re-elected president and secretary respectively in 1891 and again in 1892.

In 1893 Dr. A. W. DeRoaldes became president and Dr. A. McShane was elected secretary. The first volume of transactions was issued during their term. By this time the membership had reached 112 and the library included 278 bound volumes.

Dr. E. M. Dupaquier was elected president and Dr. McShane was re-elected secretary in 1894, and at the end of this year the membership had increased to 146. A noteworthy detail of the year's work was an exhaustive discussion on the serum therapy of diphtheria, then in its infancy.

The year 1895 was another notable one in the history of this society. Dr. F. W. Parham was elected president and Dr. McShane was re-elected secretary. The domicile was changed to 163 University Place and for the first time the society had a home of its own, although it was only a rented one, for the sum of $20 a month. At the housewarming, which took place on May 18, forty-six members were present. An arrangement was made with the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL whereby this publication was given office room and it donated to the society the medical journals it received in exchange, over one hundred American and many foreign ones, thus eliminating one of the chief expenses of the society. This donation of journals by the local publication continues to this day although quarters are no longer furnished to the JOURNAL.

It was at this time that meetings were made semi-monthly instead of monthly as heretofore. By the end of the year the membership consisted of 157 and the number of volumes in the library had increased to 1,786, mainly through donations by members.

For 1896 Dr. Edmond Souchon was president, with Dr. H. B. Gessner as secretary. The society, through a commission, made a careful study of antiphthisin in the treatment of tuberculosis.

Dr. John Callan was elected president in 1897 and re-elected in 1898, and Dr. C. J. Miller, secretary. By the end of the latter year the roll showed 150 active members and the library had been increased to 2,075 bound volumes.

The president elected in 1899 was Dr. Isadore Dyer and the secretary Dr. H. P. Jones, and by the end of their administration the membership of the society had increased to 171 and the volumes in the library to 3,001.

In 1900 Dr. T. S. Dabney was made president and Dr. E. H. Walet secretary. During their tenure of office the membership increased to 191.

The year 1901, under the presidency of Dr. E. D. Martin and the secretaryship of Dr. W. M. Perkins, was noteworthy especially for the labors of the mosquito commission and of the committee on hospital abuse. The former presented a report covering the various phases of the mosquito question in a comprehensive manner, covering eighty printed pages and embellished by twenty plates, most of them original. The question of hospital abuse was exhaustively studied, several conferences were held with representatives of the various charitable medical institutions and a plan tending to lessen the abuse was agreed upon by all institutions except the Charity Hospital.

In 1902 Dr. H. B. Gessner became president and Dr. I. I. Lemann secretary, and by the close of their term the membership had reached 190 and the library boasted of 3,600 volumes.

Dr. E. J. Graner was president for 1903, with Dr. S. M. D. Clark as secretary, and at the end of year there were 210 members on the rolls and 3,842 volumes in the library.

1904 was marked by another milestone in the progress of the society as it was during this year that the society was able to own its home for the first time. Dr. M. J. Magruder was president and Dr. S. M. D. Clark secretary. The move into the new quarters was made in November. The ground bought was that on which our new quarters now stand and it was occupied by an old residence building with which you are all familiar and which was altered and renovated for our purpose. The purchase was made possible by the sale to members of mortgage bonds bearing only 4 per cent interest, which were redeemed at the time the bond issue covering

our new building was floated. The library at this time consisted of 4,200 volumes.

In 1905, under the presidency of Dr. L. G. LeBeuf and the secretaryship of Dr. Allan Eustis, the membership had reached 226 and the number of volumes in the library was markedly increased by the donation to the society by the New Orleans Polyclinic of its library of over 1,200 volumes, many of them valuable and rare works of reference which had been obtained from Professor S. M. Bemiss and his son, Professor John H. Bemiss. This year was a memorable one in the history of New Orleans as that which saw what will probably go on record as its last yellow fever epidemic. It was in consequence a notable one in the annals of the society owing to the prominence it attained through the formation of an advisory committee which took an important part in the brilliant campaign against the fever and its propagators, ending in the extinguishment of the former through the destruction of the latter.

The society elected Dr. C. J. Miller and Dr. Amédée Granger, respectively, as president and secretary for 1906. During this year the society became the custodian of the Charity Hospital library, thus swelling the number of volumes on hand to 6,648, with a membership of 237. Through a special committee the society made a careful investigation of the milk supply of the city and framed practical suggestions for its improvement.

In 1907 Dr. John J. Archinard was elected president and Dr. A. Granger was re-elected secretary, and during that year the number of active members was 249.

The next year, 1908, Dr. Granger was made president and Dr. E. M. Hummel secretary. During that term there was a handsome increase in membership, the number reaching 292. A symposium on criminal abortion excited the interest of the society, a minister of the gospel and a lawyer taking part as well as members of the society.

During 1909, Dr. W. H. Seemann was the executive officer and Dr. C. P. Holderith secretary. The membership was again increased to a gratifying extent, numbering 323, and the volumes in the library were calculated at 7,385.

In 1910 Dr. B. A. Ledbetter succeeded to the presidency and Dr. Holderith continued as secretary, the former being re-elected for

1911, and Dr. L. R. Debuys being elected secretary. The membership stood at 326 at the end of 1910 and the bound volumes in our library exceeded 7,500.

During this administration the plans were matured for the putting up of a new building and the undertaking was financed by the issuance of new mortgage bonds and the redemption of the old issue. The funds for the new equipment were raised by means of an assessment on the members.

All of this is of too recent occurrence to require relating in detail here and is the subject matter of adequate reports on the question. During the erection of the new building the society was the guest of the New Orleans Polyclinic.

Our attractive and commodious as well as convenient new home speaks for itself and to the credit of those who are chiefly responsible for its completion and of all of us. There is glory enough in the achievement to give all a share.

On one hand it would seem invidious to single out a few for complimentary mention, but on the other hand it would be ungrateful not to acknowledge our debt to the energetic president and the building committee whose persistent labor typifies the spirt of the society as well as their own interest in its welfare.

This plain recital of unvarnished facts is dry business, hence I have purposely made it as concise as circumstances allowed.

From 1887 up to date, the twenty years for which we have complete records, the Orleans Parish Medical Society has had twenty presidents. Only two of these have died, one during his term, Dr. J. P. Davidson, the other after completing his term, Dr. John J. Archinard. The other eighteen are all living and are working in the ranks for the upbuilding of this organization. During that quarter of a century just completed the society has grown from a membership of barely fifty to that of 326; from no library to one of nearly eight thousand volumes; from a mere abiding place at the courtesy of the university to our own new, modern and handsome home.

This is not all. The scientific work has improved and increased *pari passu* with the physical growth of our organization and its importance and influence in the community have been rising in proportion.

Truly, as I said a moment ago, there is glory enough for all.

INSTALLATION MEETING—MARCH 27, 1911.

DR. B. A. LEDBETTER read the following

Annual Address of President.

To the Officers and Members of the Orleans Parish Medical Society:

I little thought one year ago, when I was inaugurated president of this society, that I would again stand before this body to express my appreciation of having conferred on me one of the most distinguished honors in the power of the society to bestow, a second term. I accept that position at your hands with a deep sense of the honor that goes with it, and likewise with a very deep sense of the responsibility attached to it. And during my term of office I will again, as in the past, work with heart and soul, nerve and brain, to prove myself not unworthy of the confidence reposed in me by this most distinguished body.

I am aware that you did not intend it as a recognition for any great service previously rendered, but to the fact that the work undertaken had not yet been completed. I interpret it as a reward to one who has always prized his membership in the society, who has never failed in his loyalty and faith in its future, and has contributed his mite in its upbuilding.

It is most gratifying to report that during this year a large amount of scientific work has been done. For this splendid showing of the scientific work done by this society all credit is due to the painstaking chairman and members of the Committee on Scientific Essays. Now that we are in our new home and comfortably situated, we hope to make this the banner year of the society.

It has been my aim to serve the society faithfully and keep up the high standard attained by my predecessors. In keeping with the promises of my inaugural address I have striven faithfully to always bear in mind the many needs of the society. One was absolutely essential to ultimate success, viz., a new domicile. For a period of twenty years the subject of acquirement of a new domicile has been agitated by every administration, has been brought to a final conclusion, and to-night it is with a feeling of pardonable pride that your officers and Board of Directors turn over to you this beautiful new home.

Twenty thousand dollars worth of bonds were issued bearing 5% interest and secured by first mortgage on the property; $5,425 was used in retiring old bonds, leaving us a balance of $14,575 for the new building; about $1,320 has been collected by special assessment to furnish our new domicile.

Due to economical management of your officers and Board of Directors, the treasurer was able to show a balance of $606.67 on Dec. 31, 1910, after paying interest on bonds and all outstanding indebtedness.

Though I have worked earnestly and zealously for the erection of this building, I could have accomplished little indeed but for the loyal co-operation of the Board of Directors, every member of which showed willingness to sacrifice time and money for the welfare of the organization.

Your Domicile Committee, composed of Drs. William H. Seemann, W. H. Block, Homer Dupuy and H. D. King, have willingly and enthusiastically shouldered a great burden of furnishing the society with a new domicile. Without throwing bouquets, they have worked like Trojans whenever called upon; but without detracting from the good work performed by each individual member of the committee, especial mention must be made of the chairman, Dr. William H. Seemann, who, in his usual energetic and conscientious manner, fulfilled the duties of his very important office.

To Drs. Chassaignac, Martin, Parham, Danna, Weis and Callan, we are indebted for valuable aid in connection with the construction of our building.

To Attorney Fred Zengel we are indebted for valuable service and advice in connection with the bond issue for which he has made no charge.

I wish to especially commend the good work of our Assistant Secretary, Mr. George Augustin, who has rendered this society very valuable services.

The Bank of Orleans has extended courtesies and aided your officers in many ways, for which we are thankful.

To Dr. P. E. Archinard we are indebted for the donation of two old bonds, amounting to $50.

To Dr. Joseph T. DeGrange we are indebted for the donation of one bond amounting to $25.

To Messrs. Paul Gelpi & Sons we are indebted for the donation of two cases of champagne.

To Smith Bros. we are indebted for the donation of one case of champagne.

To Mrs. Carrie Rehm, the florist, we are indebted for decorations.

Through the courtesy of the Board of Assessors and the Tax Collector, we have succeeded in getting our property exempt from taxation.

To the New Orleans Polyclinic we are indebted for the use of their building during the construction of our new domicile.

Established custom makes it incumbent on me to call your attention to-night to some of the matters which I consider of most importance.

To further increase the usefulness of our library and stimulate research work, I would recommend, if possible, that our library be kept open until 10 p. m.

I would recommend that a membership committee be instituted for the specific object of seeking eligible members of the profession, who are not yet in our ranks, or, who have left it for some inexplicable reason, and to stimulate interest in those members who fail to attend our meetings and reap the benefits thereof.

There are many who do not seem to realize the immense value of our library, the numerous and expensive reference books, official documents and hundreds of current journals that are added monthly to our collection.

There are yet about thirty members of our profession in New Orleans eligible to our membership. I would earnestly request that strong measures be instituted to get them to join our ranks.

SCIENTIFIC PROCEEDINGS.

MEETING OF JANUARY 23, 1911.

DISCUSSION OF DR. GURD'S PAPER.

DR. BRUNS: The contention that the return of a malignant tumor is always due to a failure on the part of the surgeon to remove it completely; that such return is always a recrudescence, not simply a recurrence—seems to me extremely difficult of proof. It would require an almost infinite number of experiences and of ex-

aminations of a kind, in the nature of things, most difficult to be had. In the present state of our knowledge we must think that there is something different in one who gets a malignant tumor from the majority who do not. How then are we to assert positively that the appearance, in the same individual, of a new malignant growth at the point whence the original malignant tumor was removed, is always a recrudescence and not merely a recurrence in one disposed to malignity and at a point already disturbed?

Meeting of February 13, 1911.

Discussion of Dr. Gessner's Paper.

Dr. Martin believed Dr. Gessner's paper of greater importance than was generally supposed and one in which we were all vitally interested. Not so much, however, in the cure of the disease as its preventive. He was a crank on the subject of shoes, as many of the shoe dealers knew. That any shoe which had a tendency to cramp the toes would produce ingrowing nails, corns and bunions if only worn long enough. He had done the several operations suggested according to the conditions existing, the simplest giving the quickest relief, with the least inconvenience to the patient, was the operation of choice. Removal of the nail was unnecessary if it added to the patient's discomfort and seldom accomplished the desired result. The proper fitting shoe was the only permanent cure.

Dr. Roussel: I agree with Dr. Martin that a properly constructed shoe is at all times necessary. I do not agree with Dr. Gessner that an operation, such as he describes, is necessary, except, possibly, in extreme cases.

The scheme, which I have pursued in the treatment of these conditions, has been to remove the offending edge of the nail and apply the acid nitrate of mercury, which served the double purpose of cutting down the exuberant granulations and destroying a small portion of the matrix thus preventing a recurrence of the trouble. This proceedure has been generally very satisfactory.

Dr. Gessner, in closing: I am interested in the information given by Dr. Roussel concerning the acid nitrate of mercury. However, I doubt that any chemical means will prove efficient in all cases. Probably the worst cases seek the surgeon rather than the dermatologist.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

Progress of Simplified Spelling.

The simplified spelling board and its advisory council contain in their joint membership 259 leading scholars, teachers, men of letters and men of affairs. Within the past few years this movement has gained considerable ground and in the daily and periodical press distinct innovations have come in the spelling of English words.

Much yet has to be done to satisfy the needs in pruning and clipping English orthografy so as to make the spelling like the spoken words.

The written language for several hundred years has been consulted with the object of arriving at a common basis for a simplified spelling and already it would seem that the board had accomplished considerable success.

Etymologic considerations have not been ignored in the revision of the English language so far attempted, but an effort at uniformity in the spelling of words of like construction has been undertaken and it looks like a successful one. At first the movement for simplifying English spelling met with considerable ridicule, but to-day so many scholars have championed the cause that the looker-on has paused, and perhaps a few more years may see some practical result among the masses of the people. Custom and usage in language has varied since the origin of our language and spite of schools and training the trend among those slow to learn has always been towards the simpler phonetic forms. Even among persons held as fairly educated this is true. Foreigners in attempting the orthografy of the English language are always inclined to a phonetic practise and the educated foreigner makes the constant charge that this more than anything else makes the English language difficult.

A simplification which would spell all words alike which sound alike would popularize our language and would go far towards making it more assimilable.

The gradual introduction of revised forms into literary productions, into the periodicals and into the columns of the secular press would make usage and custom would follow. Many institutions with pedagogic possibilities have already adopted some of the simpler rules of the Simplified Spelling, and if the spelling books also indicate such changes another generation may see the practical results.

In no field would such a revision be more welcome than among medical students who, even now, anticipate such a step by their unconscious tendency to spell hard words by phonetic methods. Indeed such a practise would not be entirely new, for already for some years the Spanish language has abandoned diphthongs and compound consonants and the Iberian peninsula presents a practical language, spelled as it is spoken.

The gradual acceptance of the rules of simplified spelling is already showing and it must need only the co-operation of educators and writers in scientific and other fields to make a simplified language a thing decided.

The Louisiana State Medical Society.

North Louisiana has again offered her hospitality to the physicians of the State, and it is to be hoped that the same success in even greater degree will be assured the Shreveport meeting of the State Society of the end of May.

The official notices of the meetings have been less frequent than common, and the JOURNAL regrets that no earlier program has been furnished the columns for announcement in advance of the meeting.

The various sections and committees, however, have been appointed and are presumably at work for a great meeting.

The members of the State Society must remember that the meeting at Shreveport is for the whole State and that the hospitality of that city has already been tried and has not been found wanting. We trust that every one will make an effort to attend and to enjoy

the recreation of the few days meeting and at the same time to share in the always interesting discussions of the scientific program. The meeting will fill the three days of May 30, 31 and June 1, and our Shreveport brothers have assured us of a cordial welcome and a pleasant visit.

The American Society of Tropical Medicine.

With each annual gathering of the American Society of Tropical Medicine the importance of this organization increases. The New Orleans meeting on May 18 and 19 should attract an attendance from all over the South and especially from the cities along the Gulf.

Not only is an excellent program promised, but the meeting will be honored by some of our distinguished neighbors from the Isthmus of Panama and they will bring with them much of interest. New Orleans affords a peculiar opportunity for such a gathering in that our hospitals and clinics may be sure to give a varied clinic in tropical diseases. The local committees of the Orleans Parish Medical Society and of the Tulane Medical Department propose arranging ample material for demonstrations and study and among other interesting features is a projected visit to the Louisiana Leper Home, which is unique in the Western Hemisphere and probably unsurpassed in its work and provisions for the care of these cases. Pellagra, hookworm, amebic diseases, malaria in all its forms, are frequent in hospital practice, and cases of these are easy of demonstration in Charity Hospital.

The local profession is anxious to demonstrate the logical situation of New Orleans for the study of tropical disease and we are in hopes that many of our neighbors will take advantage of the opportunity to attend what promises to be a most interesting meeting.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of Dr. P. Michinard and Dr. C. J. Miller, New Orleans.

Uterine Bleeding of Ovarian Origin.—Kaji (*Monatschr. f. Yeb. u. Gyn.*, Nov., 1910), says that in many cases of uterine bleeding an excellent reason is found in growths, whether benign or malignant, pregnancy or abortion, or inflammatory diseases of the endometrium. But there are some cases, either at the menopause or at the time of puberty, that seem to have no evident cause: formerly these cases were referred to supposed pathological conditions of the endometrium, which have now been shown to be normal to the climacteric. Benecke was the first to advance the opinion that this bleeding depended on a functional derangement of the ovarian function. Under it the uterus underwent swelling and increase in the glandular substance, and bleeding resulted. Other authors, by their observations, corroborated his views. Franz thought that there were changes in the nutrition of the ovaries, and degeneration of the Graafian follicles. Winternitz described thickening of the tunica albuginea, increase of connective tissue, destruction of the primary follicles and degeneration of the blood vessels of the ovary. Pankow maintained from observation of forty-four cases that the majority of the ovaries showed no typical changes, and that the condition was functional ovarian derangement. The author made a systematic examination of ovaries in the Halle Frauenklinik in seven cases of which he gives the histories. Six of them were at the climacteric, one at puberty. No cause of the bleeding could be found in the uterus. In case of the six older women the uterus was removed with good results. In the seventh the enlarged right ovary was removed. The extirpated uteri showed no typical lesion, although not entirely normal. In the ovaries were several varieties of change, cysts thickening of the tunica albuginea, etc. The bleeding resulted neither from lesions of the endometrium nor of the myometrium, but from derangement of the physiological function of the ovary. *Amer. Jour. Obst.*

Miller.

Delivery of the First Arm in Podalic Version, or Breech Presentations. D. C. Guffy (*Surgery, Gyn. & Obst.*, 1911), proposes the following procedure in these cases:

The method consists in delivering the arm at the same time the body is delivered. When the feet, or the foot if desired, have been delivered at the vulva, one hand of the operator holds them while the other is introduced in the uterine cavity and an arm seized, preferably the right, since the bringing of the arm into the left sacro-iliac fossa will cause the head to engage in the more desirable right oblique with the occiput anterior. The hand of the child is then brought into the vagina and traction is made upon it at the same time as upon the feet or body. The hand of the operator is not removed from the vagina until the breech is at the vulva, or is actually born. As the body is grasped by the outspread hands, the arm is included.

The advantages of the method are: much valuable time saved, since it usually takes as much time to deliver the arm from a nuchal hitch, or extended position, as it does to deliver the head. The child's life is therefore less endangered than by the usual method. Lacerations of importance are less likely to occur, since the usual violence or haste are unnecessary. Moreover, perineal relaxation may be secured by the hand and breech at the time of the birth of the latter. Fractures of the humerus or clavicle will be less likely to occur, since the uterus affords an abundance of room for manipulating the arm; a nuchal hitch can be easily corrected by the hand in the uterus, while it is corrected with difficulty in the usual method of delivery. If cervical dilatation is not complete, it may be completed manually when the hand is passed in for the arm. This is of special importance in breech presentations. Miller.

Department of Internal Medicine.

In Charge of Dr. E. M. Dupaquier, New Orleans.

Medical Clinic. (New Orleans Polyclinic, Tulane University.) Here is a case of phlebitis complicating typhoid fever. This patient standing before you with marked edema, as you see, has had an eventful typhoid fever. Of the several complications presented phlebitis was one, and the phlebitis is now forty and some odd days

old. The case is interesting and somewhat uncommon in this among other details that it presents on the right side a femoral thrombosis, phlegmasia alba dolens of the whole inferior limb, and, on the left side a thrombosis of the veins of the calf of the leg. The clinical picture is a good one, and the history the usual one. I shall not waste time in telling you what you can read with the greatest pleasure in such classics as Hare's medical complications and sequelæ of typhoid fever, Osler's Modern Medicine, Vol. IV., and, for those who read French, Dieulafoy's Pathologie Interne, Vol. I. What concerns us most, here, is how to manage such cases as this, in the light of modern medical treatment. Is it all that I need tell you, simply this, put your patient completely at rest. Indeed not. Important changes in the treatment of medical phlebitis (I refer you to *"La Pratique Therapeutique,* by Comtois Suffit et Tréniolières") have been adopted, and are now current, and, of course, this modern treatment demands minute precision in application, in other words, there is a technic.

First of all, you must understand that there are three periods which can be pretty safely defined, one of incipiency or preobliteration, one of obliteration and one of convalescence. During the first period, first twenty days, immobilization if the whole limb, stretching it, foot placed at right angle on the leg, and raised from the bed resting on a cushion. Instead of applying to relieve pain, such local applications as belladonna ointment, compresses of ammonium chlorid solution 1-100, or solution of subacetate of lead, we (personal cases) much prefer the collargol ointment 15-100, 3 grams for adults, 1 gram for child, gently rubbed in, at short intervals; and, instead of giving by mouth hammamelis and hydrastis, we (personal cases) much prefer collargol in solution or pills 0.03 to 0.12, at a dose. But, here (second period) is a more important point of practice than this quibbling about drugs: How soon can you start the massage and movement of the swollen limb? We can safely start mobilization on the twentieth day from incipiency, knowing that the clot is fixed from the sixth day. Formerly, mobilization would be dreaded, and was not allowed until forty days had passed. Now, I am going to tell you other things that should be done in phlebitis, but that have not been done here, to the letter; and, yet, my case is feeling well, and with his swollen limb he tells

you that walking does him good. I am glad to show you this case and make this statement, it might help to shorten yet the duration of immobilization in such cases.

Sure enough, says the technic, before starting the slightest stroke of massage and movement, you must know for a fact: First, that the veins have ceased to pain on slightest pressure; second, that edema is decreasing by degrees and that it has already markedly diminished; third, that there was no rise of temperature during the previous twenty days. The last requisite is very important. That is why in all cases temperature charts must be carefully kept and the slightest fraction of a degree counts in a case like this.

If all these three conditions are assured, the treatment by means of massage and movement can be started. It covers three weeks.

First week: Mobilization of the toe joints, foot and instep. Slow passive movements during half the week. Patient then should, *himself,* exercise the muscles of leg, during the other half of the week. In the meantime, simple "effleurage" of the foot, leg and external side of thigh.

Second week: Movements of knee. Effleurage again, manipulating mass of flesh of limb, but no kneading, strictly speaking in terms of massage.

Third week: Movements of hip joint, but avoid flexion of thigh on abdomen. This is very dangerous.

After twenty days, or thereabouts, of this treatment, that is about forty days after incipiency, patient can sit up, and even walk a few steps.

Convalescence, third period. Three times a week, warm baths of 20 to 40 minutes' duration. After each bath, rest flat on back for half hour, limb stretched, heel raised on cushion. Baths are taken at longer intervals if edema decreases; at shorter intervals if edema reappears or persists. And, for the persistent edema, patient must wear a soft crape bandage from the toes up to the groin. I do not mean to reverse the details of this technic, but I wish to state that while most of it was followed, chiefly as regards the second and third periods, and convalescence treatment, the patient had long moved his swollen limb and been caught sitting up, or his thigh flexed, heel resting flat on bed, long before the twenty days of the first period had elapsed, and no evil resulted, and if his statement is correct he felt, thus, more comfortable (Sic.) E. M. D.

Department of Therapeutics and Pharmacology.

In Charge of Dr. J. A. Storck and Dr. J. T. Halsey, New Orleans.

"Menzer's Streptococcus Serum."—*Articular Rheumatism.*—Menzer, who introduced the use of this serum into therapeutics, was able to prove the correctness of the assumption that this disease was due to a streptococcic infection. The treatment of articular rheumatism with streptococcus serum is based on scientific grounds, and is justified. The action of the serum must be regarded as bacteriotropic (opsonic)—that is to say, the bacteria which cause the disease are so affected by the serum that they are taken up and digested by the leucocytes.

In acute articular rheumatism 10 c. c. are injected subcutaneously into the thigh every day; in the presence of high temperature it is often advisable to omit the injection for a day. In chronic cases, as a rule, the same dose is used, but later in the course of the treatment an interval of a few days is allowed as required. On an average, for acute cases, the total quantity required is 50 c. c.; for chronic cases, at least 100 c. c. of serum.

In Menzer's experience, acute or chronic inflammation of the valves of the heart offer no contra-indication to the use of serum. In hyperpyrexia, however, and in the presence of a larg pleuritic or pericardial effusions, the author deems it advisable to proceed with caution and to use smaller doses to begin with (5 c. c.).

Menzer summarizes his own experience with the serum as follows: The streptococcic treatment of articular rheumatism is superior to the methods of treatment previously in use, for the following reasons: 1. Because it is able to effect a cure or improvement even in cases which have become chronic. 2. Because, as a whole, it improves the condition in acute articular rheumatism, favoring a cure, and especially materially improving the chances of curing endocarditis. 3. Because it appears to prevent the occurrence of relapses more effectually than any other method of treatment, and even in old standing cases has been able to effect a cure, or, at any rate, improvement of some considerable duration.

E. Bibergeil considers that the last statement of Menzer's should be limited, for, in his opinion, a chance of improvement is only to be looked for in chronic cases when the objective examination of the affected joints fails to demonstrate the presence of formation of

new tissue. The true field for serum treatment is stated by Bibergeil to include sub-acute and chronic cases of articular rheumatism without the stationary formation of new tissue. In these cases the author has obtained undoubted improvement and cures with serum. Even in one case of chronic spondylitis with ankylosis, where every method of treatment had failed, the improvement was so striking that he recommends further trials of the method.

Schafer injected 1/5 c. c. of serum in articular rheumatism, and found the injection to be free from danger in every case, while the result was very apparent, as the attacks of rheumatism were materially shortened in every case, while the injections produced a subjective condition of well-being such as was never obtained by the other methods of treatment in vogue. Special prominence should be given to the fact that the serum method of treatment of articular rheumatism is not accompanied by the harmful secondary effects of the salicylic preparations. Thus the stomach is completely unaffected, so that a good appetite is often preserved, even during the febrile stage. Further, the attacks of sweating which occur spontaneously during medicinal treatment, do not take place.

Special attention should be given to a case of chronic articular rheumatism, mentioned by Menzer, in which the complete helplessness of the patient left little hope of successful treatment. All the same, the success following a three months' course of treatment was brilliant. At the beginning of the treatment the entire musculature of the patient was extremely atrophied and most of the joints were painful, so that neither active nor passive movements could be carried out. After a course of eighteen injections, involving the use of 159 c. c. of serum in all, the patient was already able to go short distances with the aid of crutches. This result is all the more striking, as all other methods of treatemnt had been tried for years and had failed.

The twenty-one cases of acute and subacute articular rheumatism described by B. Kanel ended in a complete cure in fourteen cases, and in an improvement in one. In six patients the result was negative. In Kanel's experience the serum was absolutely harmless. In many cases it gives good results, even when salicylic treatment has failed. Endocarditis occurring as a complication is no contra-indication.—*Merck's Annual Report.* J. A. S.

Skin Tests With Corn Extracts in Pellagra.—In these observations cutaneous tests were made with substantially the same technic as that employed by v. Pirquet in tuberculosis, except that corn extracts were substituted for tuberculin in making the test. The procedure was as follows: 20 gm. of corn was extracted with 50 c. c. of ether, alcohol, 10 per cent sodium chlorid, or 0.2 per cent sodium hydroxid. The extract was filtered and 1/10 vol. 5 per cent phenol added to the clear filtrate so as to give it a content of 0.5 per cent phenol. The ethereal extracts were allowed to evaporate at 46 degrees, until the odor of ether had disappeared. The site chosen for the test was on the patient's wrist, in an area which was subject to pellagrous pigmentation, thickening or desquamation, and, in most cases, was bare, so as to be exposed to the action of light. A drop of the extract to be tested was placed on the skin, and a pin-head area of epidermis beneath the drop was excoriated by the tortion of a v. Pirquet stylet. Into this excoriated area the extract was rubbed with a glass rod. A series of epidermal punctures were made in this way in a line across the wrist, with another line of duplicate punctures above them. In each series there was a pair of controls in which only the pure sodium hydroxid solution or alcohol was placed on the skin. Within half an hour after the puncture a small red, or, sometimes, blanched areola, and occasionally a small papule formed about the site of inoculation, but in only one case did this exceed 5 m. m. in size, and no difference could be noted between the areas about the punctures with corn extracts and the controls. The reactions in sites which were nearest the midline of the forearm were often slightly more marked (areolæ about 1 m. m. larger than the rest), but these reactions were always quite as marked with the control fluids as with the extracts, and hence were of little significance. The reactions, which were regarded as negative in all cases, consisted of simple traumatic reactions, were watched for about half an hour and the sites of inoculation were again inspected three hours, twenty-four hours and forty-eight hours later, as well as at frequent intervals between and after the expiration of these periods. Extracts were made from samples of good corn, spoiled corn taken from the Arkansas Insane Asylum at the time of a pellagra outbreak, and a sample of the spoiled corn containing Aspergillus fumigatus. These reactions are all negative. The results of these

tests, therefore, render it improbable that pellagra is due to or accompanied by a condition of hypersensitiveness of the individual to products derived from good or from spoiled corn.—*Archives of Internal Medicine.* J. A. S.

Treatment of Typhoid Fever With Vaccins.—Hollis (*Med. Record,* 1910, lxxviii, 622) compares the vaccin treatment of typhoid fever with the older method of treatment by hydrotherapy. Eleven cases were treated by vaccination, and the results compared with twenty-one cases treated under similar conditions with hydrotherapy. The diet in both methods of treatment was of the high caloric variety. No drugs were employed, but strychnin and whisky were used as stimulants in the severe cases. The bowels were used with enemata. Those treated by vaccination received no baths other than a daily warm soap and water sponge. No fever reaction was obtained. No case ended by crisis. Occasionally a slight local erythema or itching was noticed at the point of injection, which cleared up without treatment. The agglutinins were markedly stimulated by the vaccins. Complete agglunation was observed in dilutions as high as 1 to 1,000, while cases without vaccines showed incomplete agglutination in 1 to 80 dilutions. No effect was noted upon the temperature or length of the disease. Hemorrhage was seen with equal frequency in both classes of cases, though not so severe in those vaccinated. Relapses were noted with more frequency in the vaccinated cases—30 per cent, as compared to 10 per cent. No death occurred in the vaccinated cases, although there were four in the other series—one from hemorrhage, one from perforation, one from toxemia, and one from pulmonary thrombosis, with necrosis of the whole left upper lobe of the lung. Headache, gastro-intestinal symptoms and toxemia were far less frequent in the cases treated by vaccination than in those treated by hydrotherapy, and convalesence also seemed to be more rapid. Hollis usually gave from 10,000,000 to 50,000,000 dead bacilli by subcutaneous injection. The injections were given in the region of the buttocks, every second or third day. He says that the number of cases is too small to draw any definite conclusions, although the results obtained in individual cases were often so striking that they seemed to indicate almost a specific action. J. A. S.

The Use of Typhoid Vaccines in Typhoid Fever.—Anders (*Jour. Amer. Med. Assoc.,* 1910, lv, 2023) discusses the results

obtained by different clinical observers with the use of vaccins in the treatment of typhoid fever. These results are extremely variable, some writers reporting favorably and others finding either no especially striking effects or entirely negative ones. Anders reports eight cases treated with vaccins, with no striking results. Small doses of vaccine were employed, namely, initial doses of 25,000,000 and subsequent ones of 50,000,000 each. These injections were repeated at intervals of seventy-two hours. The author believes that phagocytosis probably plays an important rôle in the cure of typhoid fever, and therefore a vaccin should stimulate an increased leukocyte count. Anders found that the doses of vaccin he employed did not appreciably increase the leukocyte count. He warns against the use of the vaccin method in severe cases, when the system is already overwhelmed with the typhoid bacillus and its toxins. He also states that an anti-endotoxin would constitute the ideal method of treating typhoid fever. Anders concludes by saying that vaccin therapy in the treatment of typhoid fever should receive a more extended trial than hitherto, more particularly in the earlier stages of mild types of the disease, before being rejected. Finally, in the present state of our knowledge, the value of vaccins for the following purposes must be conceded: (1) As a means of prophylaxis; (2) in suitable cases, when continued during convalescence, to prevent relapse; (3) to combat local infections with the typhoid bacillus, as, for example, bone suppurations which arise in the period of convalescence; and (4) for the removal of the typhoid bacilli from the feces and urine in the case of typhoid-carriers. J. A. S.

Department of Ear, Nose and Throat.

In Charge of Drs. A. W. deRoaldes and Clyde Lynch, New Orleans.

Anesthesia in the Modern Treatment of Laryngeal Tuberculosis by M. Boulay.—*(La Presse Médicale,* January 28, 1911.)—The author lays special stress on the fact that the relief of pain in cases of tubercular laryngitis is followed by a diminution or subsidence in the inflammatory state, and a more hasty return to the healthy condition.

After discussing what has been up to recently the routine treat-

ment of the pain of laryngeal tuberculosis (such as sprays, swabbing, instillations of analgesic mixtures, cauterizations with chemical caustics, or the Galvano cautery, curettages or amputation of the epiglottis, etc.) the writer considers the establishment of *deep* and *prolonged* anesthesia of the larynx, the greatest advancement of recent times. This anesthesia can be secured by the following methods:

First: The submucous injection of novocain. (Speiss.)

Second: Passive hyperemia of the larynx. (Bier.)

Third: The injection of the superior laryngeal nerve (internal branch) with alcohol. (Hoffmann.)

The submucous injection of a solution of novocain is not new, for other anesthetics have been used in this manner, but novocain is less toxic and can be used in stronger solutions and can be repeated more frequently. The injection can be made under guide of the mirror, with a special syringe. Two to five per cent of novocain in normal salt solution may be used, and the value of this can be enhanced by adding five drops of adrenalin—1-1,000. From fifteen to thirty drops are injected according to the depth and extent of the lesion. It may be repeated two or three times, and will produce an anesthesia that will last from seven to fifteen days.

2. Passive hyperemia (Bier) has been tried by Polyak, who used an elastic band placed about the neck, sufficiently tight to give the face and eyes a reddish blue tint. Applications are made for six hours the first day, twelve to fifteen the second, eighteen the third, twenty to twenty-two the fourth and successive days. In favorable cases the odynphagia and dysphagia are relieved at the second application, when the patient can then take liquid and semi-solid food; on the fifth day solid food. After using the band continuously from six to nine weeks, the pain has entirely disappeared, with a notable decrease in the inflamatory condition. Polyak has relieved 80% of his cases by this method.

3. The use of alcohol injections into the superior laryngeal nerve, according to the method now in vogue against the refractory neuralgias, has been applied to the larynx by Hoffmann, and more recently by Levenstein. (*Arch. f. Larynx,* 1910). The technique is as follows: Patient either sitting or lying horizontally, the side of the neck is prepared. The operator forces the larynx to the side

to be injected by the thumb of the left hand, the index finger exploring the thyro hyoid membrane, near the great cornu of the thyroid cartilage until a painful spot is encountered. Marking this with an imprint of the finger nail, the injection is made at this point. The needle is inserted perpendicularly to the skin surface to a depth of 1 1-2 centimeters, at this depth the patient will feel a severe pain in the ear, and this is characteristic of the nerve. One c.c. of 85% alcohol heated to 45° C is injected slowly. The needle puncture is covered with collodion. The injection can be repeated one, two or three times before the required analgesia is acquired. This will last from a few hours to forty-five days and even longer at the end of which time it can again be repeated. The method has these advantages: It is perfectly simple and can be employed by the general practitioner, can be repeated on one or both sides with impunity, and can be employed no matter what the state or stage of the laryngeal lesion.

Analgesia of the Larynx by Alcohol Injection of the Internal Branch of the Superior Laryngeal Nerve. (Alfred Leroy, *Laryngoscope,* January, 1911.) The author reports two cases as follows:

One, age 35, had pulmonary and spinal tuberculosis, with extensive involvement of the larynx; had suffered pain for seven months, which lately has become unbearable. 12 minims of a 1% cocaine in 75% alcohol were injected. There was immediate relief of the pain lasting twenty-five days.

The other, aged 45, pulmonary tuberculosis, advanced with extensive infiltration of the larynx; pain so intense as to prohibit swallowing. 25 minims of 75% alcohol injected on left side, within a few minutes patient drank alcoholic solution with no discomfort and three days later reports no return of the pain.

Wolf Freudenthal, M. D., writing on Laryngitis Dolorosa, in the *Annals of Otology, Rhinology and Laryngology* (September, 1910), reports three cases. The first one of secondary laryngeal tuberculosis; intense pain and dysphagia. Alcohol injection; complete relief for seven days. A return of pain at this time required a second injection, with relief again lasting one week. A third injection gave relief for a period longer than two months.

Case 2. Advanced tuberculosis (pulmonary) with extensive ul-

ceration of larynx. 2 c.c. of 85% alcohol, with complete relief to injected side. Injection repeated on opposite side with some relief, but only lasting a short time; patient dying within a month of the injection from general tuberculosis.

Case 3. One of perichondritis of the arytenoid cartilage, with abscess formation. Alcohol injection relieved the pain, but seemed to increase the rapidity of the inflamatory process and patient refused further injection. The author mentions some ten cases treated by this method with good results when the fluid reached the nerve. LYNCH.

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

Next Meeting, Shreveport, La., May 30 to June 1, 1911.

Officers, Committees and Chairmen of Sections, 1910-1911.

OFFICERS.

President—Dr. E. J. Graner, 1633 First Street, New Orleans.

First Vice President—Dr. Allan C. Eustis, Abbeville.

Second Vice President—Dr. Homer Dupuy, Medical Building, New Orleans.

Third Vice President—Dr. Louis Abramson, Shreveport.

Secretary—Dr. Joseph D. Martin, 141 Elk Place, New Orleans.

Treasurer—Dr. C. C. Bass, 141 Elk Place, New Orleans.

Assistant Secretary—Mr. George Augustin, 141 Elk Place, New Orleans.

COUNCILORS.

Chairman of Council—Dr. R. O. Simmons, 7th Cong. Dist., Alexandria.

Secretary of Council—Dr. B. A. Ledbetter, 2nd Cong. Dist., Maison Blanche Building, New Orleans.

1st Cong. Dist.—Dr. P. E. Archinard, Tulane-Newcomb Building, New Orleans.

3rd Cong. Dist.—Dr. S. A. Ayo, Thibodaux.

4th Cong. Dist.—Dr. J. C. Willis, Shreveport.

5th Cong. Dist.—Dr. I. J. Newton, Monroe.

6th Cong. Dist.—Dr. E. K. Sims, Donaldsonville.

COMMITTEES.

Committee on Publication—Dr. Joseph D. Martin, ex-officio, Chairman, New Orleans; Drs. A. B. Brown and E. M. Hummel, New Orleans.

Committee on Scientific Work—Dr. Joseph D. Martin, ex-officio, Chairman, New Orleans; Drs. L. R. DeBuys and H. B. Gessner, New Orleans.

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Committee on Medical Education—Dr. L. G. LeBeuf, Chairman, New Orleans; Drs. I. I. Lemann and J. P. O'Kelley.

Committee on Conference with the Press—Dr. William M. Perkins, Chairman, New Orleans; Drs. W. H. Knolle and Isadore Dyer.

Committee to Confer with Louisiana Bar Association—Dr. F. W. Parham, Chairman, New Orleans; Drs. Randell Hunt, Shreveport, and Henry Dickson Bruns, New Orleans.

Committee to Confer with the Board of Health—Dr. A. F. Barrow, St. Francisville, Chairman; Drs. H. E. Atkins, McDade; Charles McVea, Baton Rouge; John F. Oechsner and Gustav Keitz, New Orleans.

FRATERNAL DELEGATES.

To Arkansas—Dr. J. T. Halsey, 724 Baronne Street, New Orleans; Alternate, Dr. J. B. Elliott, Jr., New Orleans.

To Texas—Dr. J. A. Storck, Medical Building, New Orleans; Alternate, Dr. S. K. Simon, New Orleans.

To Mississippi—Dr. S. M. D. Clark, Cusach's Building, New Orleans; Alternate, Dr. C. N. Chavigny, New Orleans.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Dr. Charles Chassaignac, New Orleans; Alternate, Dr. Oscar Dowling, Shreveport.

The Shreveport Medical Society is stirring itself with Trojan-like valor to make the 1911 Meeting the most successful and interesting in the history of the Society. Dr. Oscar Dowling, Chairman of the Committee on Arrangement, ably assisted by the chairmen of the various sub-committees, is rapidly getting things in readiness for the greatest outpouring of Louisiana doctors ever witnessed, and every member of the Society who can do so should make it a point

to be at Shreveport to answer roll call, even at the sacrifice of time allotted to a strenuous practice.

The personnel of the Committee on Arrangement is as follows:

Committee on Arrangement, General—Dr. Oscar Dowling, Chairman; Dr. J. A. Hendrick, Treasurer; Dr. A. A. Herold, Secretary; Drs. M. F. Smith, J. C. Willis.

Committee on Finance—Dr. J. A. Blanchard, Chairman; Drs. S. Y. Alexander, Randell Hunt, J. E. Knighton, T. P. Lloyd, A. A. Herold.

Committee on Transportation—Dr. R. M. Penick, Chairman; Drs. L. Abramson, J. L. Scales.

Committee on Hotels—Dr. J. M. Bodenheimer, Chairman; Drs. E. B. Hands, O. B. Hicks, W. B. Hunter, S. L. Williams.

Committee on Halls and Meeting Places—Dr. W. W. Smith, Chairman; Drs. M. R. Purnell, A. P. Crain, D. A. Mohler, W. L. Dickson.

Committee on Commercial Exhibits—Dr. Thomas Ragan, Chairman; Drs. G. C. Chandler, R. H. Gray, W. B. Lawton, J. G. Yearwood.

Committee on Printing—Dr. A. A. Herold, Chairman; Drs. S. C. Barrow, T. F. Long, J. E. Knighton, J. D. Woolworth.

Committee on Program—Dr. S. C. Barrow, Chairman; Drs. H. L. Alison, G. B. Lawrason, I. B. Rougon, T. B. Tooke.

Committee on Badges—Dr. J. E. Knighton, Chairman; Drs. W. E. Hawkins, F. J. Frater, A. B. Bugg, F. S. Furnam.

Committee on Publicity and Press—Dr. C. P. Munday, Chairman; Drs. J. M. Bodenheimer, J. L. Kimbell.

Committee on Registration—Dr. J. A. Hendrick, Chairman; Drs. T. G. Ford, J. J. Frater, M. M. Collins, E. R. Watters.

Committee on Bureau of Information—Dr. A. S. Reisor, Jr., Chairman; Drs. W. M. Ledbetter, M. H. Foster, L. H. Pirkle, J. K. Sheppard.

Committee on Postoffice and Telephones—Dr. T. P. Lloyd, Chairman; Drs. R. A. Fray, J. F. O'Leary, A. S. Reisor, Sr., A. P. Oden.

Committee on Refreshments—Dr. I. M. Callaway, Chairman; Drs. W. K. Sutherlin, G. W. Robinson, J. L. Kimbell, C. E. Rew, E. A. Welsh.

Committee on Ladies' Entertainment—Mrs. Randell Hunt, Chairman; Mesdames Abramson, Alexander, Alison, Barrow, Blanchard, Bugg, Callaway, Chandler, Dickson, Frater, Furnam, Fuller, Gray, Hands, Hawkins, Huckaby, Kimbell, Knighton, Lawrason, Ledbetter, Long, Munday, McGlathery, O'Leary, Pirkle, Purnell, Penick, Rew. Robinson, Smith, Scales, Sims, Sheppard, Tooke, Watters, Williams, Willis, Welsh and Ama Ford-Vance.

Railroad Arrangements: The Committee on Transportation is actively at work in arranging rates with the railroads and announces that every road will give the same rate and will sell tickets on the same plan. The rate will be one and one-third fare, plus twenty-five cents. When purchasing his ticket, a member will pay full first-class fare and insist on the ticket agent giving him a certificate that he has purchased such a ticket. This certificate must be presented to the Secretary of the Louisiana State Medical Society at Shreveport for endorsement. When leaving Shreveport, this certificate, properly endorsed, will entitle the holder to purchase a return ticket for one-third the regular fare. A fee

of twenty-five cents will be collected by the railroad agent at Shreveport for stamping these certificates.

Members can purchase tickets for their wives, children or guests on the same conditions.

MEETINGS: All meetings will be held in the City Hall, which is three blocks from the Union Station and near the business district of the city. Members attending the meeting and not knowing in advance where they will stop, may have mail addressed "Care L. S. M. S. Meeting, City Hall, Shreveport."

The general sessions will be held in the Auditorium, the House of Delegates will meet in the Council Chamber, and the City Physician's Office will be used for committee meetings.

HOTEL ACCOMMODATION: While the hotel accommodations are ample, those desiring reservations of rooms at hotels or boarding houses should write, as soon as possible, to Dr. J. M. Bodenheimer, Chairman Committee on Hotels, 240 First National Bank Building, Shreveport, so as to avoid the rush. While the committee does not anticipate any trouble in taking care of the crowd, the hotels are always more or less filled at this time of the year and it is advisable to make advance reservations.

EXHIBITS: The commercial exhibits will be in charge of a committee, of which Dr. Thomas Ragan, 240 First National Bank Building, Shreveport, is Chairman. Exhibitors who have not done so, should write at once regarding space.

ENTERTAINMENT: The following is a tentative program of the social features so far arranged:

Monday, May 29, 6 p. m. Auto ride over the city for delegates and other members present.

Tuesday, May 30, 5:30 p. m. Lawn fete and *'Al Fresco"* entertainment, under auspices of Ladies' Entertainment Committee, at residence of Dr. M. F. Smith, President Shreveport Medical Society. Tuesday, 8 p. m. Public Meeting at City Hall. President's Address and Annual Oration.

Wednesday, May 31, 12:30 p. m. Reception and luncheon at North Louisiana Sanitarium. Wednesday, 8:30 p. m. Smoker.

Thursday, June 1, 12:30 p. m. Reception and luncheon at Schumpert Memorial Sanitarium. (Cars will be waiting to transport members.)

CADDO OIL FIELDS: Members who wish to visit the great Caddo

oil and gas fields are specially invited by the Committee on Arangement to stay over an extra day, so that they may make the journey on Friday. There are three trains, each way, daily.

Dues: Many members have responded to the various notices from the State and Parish Secretaries and most of the Parish Secretaries have settled with the State Secretary, but there are still some who are backward and they are urged to remit at once. The By-Laws of the State Society require that all dues be paid in thirty days in advance of each annual meeting. Members who have not already done so, are therefore requested to remit at once for 1911, or they will be placed on the delinquent list and debarred from the privileges of membership.

Delinquents: There are still a few delinquents for 1910. The New Orleans Medical and Surgical Journal is still being sent to them, because the Society believes that every one of them will "make good" before the Shreveport meeting and once more become active and useful members.

Members in Unorganized Parishes.—Members in unorganized parishes are requested to remit dues direct to the Treasurer of the Louisiana State Medical Society, Dr. C. C. Bass, 141 Elk Place. The annual dues are $3.00, payable in advance. Do not wait until the last moment, but do it now.

Important Notice to Parish Societies: The term of office of many delegates expired at the beginning of the present year. Parish Presidents and Secretaries are urged to call meetings at once and elect their delegates. Up to the time of going to press, only about fifteen parishes have sent in the names of their delegates. The time is short and immediate action is imperative.

Preliminary Program: Below is given the scientific program, so far as the Committee on Scientific Work has been able to arrange it. Chairmen of Sections who have not yet reported are requested to do so at once, as the Official Program will go to the printer on May 4., after which date no changes or additions can be made.

Section on Bacteriology—Chairman: Dr. C. C. Bass, New Orleans. Subject: "Anti-Typhoid Vaccination."

"The Role of the Sexual Malarial Plasmodia in Relapses of Malarial Fever," by Dr. William Krauss, Memphis, Tenn.

Section on Diseases of Children—Chairman: Dr. L. R. De Buys, New Orleans. Subject: "The Effect of Salvarsan on Congenital Lues."

"Toxic Cerebro-Spinal Meningitis in a Child, Treated by Murphy Drip; Recovery," by Dr. L. G. LeBeuf, New Orleans.

"The Significance of Persistent Vomiting in Early Infancy," by Dr. W. W. Butterworth, New Orleans.

"A Plea for the Proper Feeding of Children," by Dr. C. H. Rice, New Orleans.

Section on Cutaneous Medicine and Surgery—Chairman: Dr. J. F. Buquoi, Covington. Subject to be announced.

Section on Genito-Urinary and Rectal Diseases—Chairman, Dr. Charles Chassaignac, New Orleans. Subject: The Office Treatment of Rectal Diseases."

"Senile Hypertrophy of the Prostate," Dr. A. Nelken, New Orleans.

"The Abortive Treatment of Acute Gonorrhea in the Male," by Dr. J. M. Bodenheimer, Shreveport.

Section on Hygiene and Sanitary Science—Chairman: Dr. R. M. Littell, Opelousas. Subject to be announced.

"The Status of Certain Preventable Diseases in Louisiana and Elsewhere," by Dr. Hamilton P. Jones, New Orleans.

Section on Laryngology, Otology and Rhinology—Chairman: Dr. Homer Dupuy, New Orleans. Subject: "The Acute and Sub-Acute Inflammations of the Middle Ear."

"Incision of the Drum Membrane; Its Indications and Its Technique," by Dr. Homer Dupuy, New Orleans.

"Acute Otitis Media in Influenza, Measles and Scarlet Fever, by Dr. Arthur I. Weil, New Orleans.

"Anesthesia, (a) Local, (b) General, in Tympanotomy," by Dr. Llevin De Poorter, New Orleans.

Section on Materia Medica and Therapeutics—Chairman: Dr. J. Birney Guthrie, New Orleans. Subject: Dietetics of Typhoid Fever."

"The New Prescription," by Dr. Oscar Dowling, Shreveport .

Section on Medical Jurisprudence—Chairman Dr. J. M. Barrier, Delhi. Subject to be announced.

Section on Practice of Medicine—Chairman: Dr. Charles McVea, Baton Rouge. Subject to be announced.

"Salvarsan," by Dr. George S. Bel, New Orleans.

"The Hookworm," by Dr. O. O. Hamner, Bienville.

"Results of My Investigations Concerning the Extent of Hookworm Infection in Louisiana," by Dr. S. D. Porter, New Orleans.

The Relation of Gall Bladdder Diseases to Digestive Disturbances," by Dr. J. E. Knighton, Shreveport.

Diagnosis of Abnormal Stomach Motricity," by Dr. F. E. Lamothe New Orleans.

"Dyspepsia in Phthisis," by Dr. J. A. Storck, New Orleans.

A paper by Dr. Isaac Ivan Lemann, New Orleans. (Title to be given later.)

"The Influence of Louisiana Climate on Pulmonary Tuberculosis," by Dr. E. L. McGehee, Sr., New Orleans.

"Some of the Causes of Digestive Disturbances in the Negro Race," by Dr. Howard D. King, New Orleans.

Section on Nervous and Mental Diseases—Chairman: Dr. Clarence Pierson, Jackson. Subject to be announced later.

Section on Obstetrics and Gynecology—Chairman: Dr. G. B. Lawrason, Shreveport. Subject: "The Pathology of Pregnancy."

"The Use and Abuses of Forceps," by Dr. E. Stanley Mathews, Bunkie.

"Eclampsia," by Dr. J. M. Moseley, Arcadia.

Papers by Drs. R. G. Ducoté, Bordelonville, and D. O. Willis, Leesville, on some subject in pathology of labor. (Titles to be given later.)

A paper by Dr. E. S. Lewis, New Orleans. (Title to be given later.)

"Extra-Uterine Abdominal Pregnancy," by Dr. I. M. Callaway, Shreveport.

"Injuries to the Parturient Canal During Labor," by Dr. C. N. Chavigny, New Orleans.

"Watkins' Operation for Prolapse of the Uterus," by Dr. Espy M. Williams, Patterson. (Dr. Williams will also exhibit a specimen of hydatiform mole.)

"Recurrent Extra-Uterine Pregnancy," by Dr. C. Jeff Miller, New Orleans.

"Uses and Abuses of Forceps," By Dr. E. S. Mathews, Bunkie.

"Obstinate Vomiting in Pregnancy," by C. N. Menville, Houma.

"Toxemia of Pregnancy," by Drs. O. W. Cosby and R. H. Blackman, Monroe.

"The Various Anesthetics as Applied to Obstetrical Work," by Dr. A. C. King, New Orleans.

"Antepartem Diagnosis in Obstetrics," by Dr. E. D. Gardner, Clarks.

Section on Ophthalmology—Chairman: Dr. M. Feingold, New Orleans. Subject to be announced.

"Report of Cases of Dislocation of the Lens," by Dr. Ernest A. Robin, New Orleans.

Section on Pathology and Physiology—Chairman Dr. C. W. Duval, New Orleans. Subject to be announced.

Section on Surgery and Anatomy—Chairman: Dr. Marion Souchon, New Orleans. Subject to be announced.

"Bevan's Operation for Cryptorchidism; Report of Two Cases," by Dr. H. B. Gessner, New Orleans.

"Conservative Surgery of the Shoulder Joint," by Dr. William M. Perkins, New Orleans.

Epithelioma of the Lip," by Dr. J. C. Willis, Shreveport.

"The Treatment of Tetanus," by Dr. Joseph D. Martin, New Orleans.

Section on X-Ray and Electro-Therapeutics—Chairman: Dr. Amédée Granger, New Orleans. Subject: "The Value of Roentgen Ray Explorations."

Parish Society Meetings.

The East Feliciana Parish Medical Society met in Clinton at the office of the secretary-treasurer, Dr. R. P. Jones, Wednesday, April 5. Drs. Pierson, Lea, Singleton, Young, Toler, Norwood, Thompson, Wall, Hagaman and Jones were present. Also Dr. Henry N. Blum, of New Orleans, who was the special guest of the society for this meeting. His paper on "Some of the Common Diseases of the Eye," was one of the best, and was generally discussed. Dr. George Bel, of New Orleans, was to have been present, but was unable at the last moment to leave. He has been invited to be present at the next meeting in June, at which time the Society will meet with Dr. Pierson at the Asylum for the Insane in Jackson.

Dr. Pierson's paper, read at this meeting, was of special interest. He advocated the establishment of sanitariums in every village and hamlet regardless of how small, with a full corps of trained nurses,

competent surgeons, laboratories, etc., showing the advantages such institutions, however small, would be to the community in general.

Dr. Singleton's paper on "Eclampsia," provoked much discussion and was enjoyed.

The old officers were re-elected to serve another year: Dr. Lea, of Jackson, president; Dr. R. P. Jones, secretary-treasurer; Dr. Hagaman, of Norwood, vice president. Dr. Jones was elected delegate to the State meeting in Shreveport, with Dr. Pierson alternate.

Before adjourning for the usual good dinner at the Rist Hotel, the following resolution on the death of Dr. E. L. Irwin was read and adopted:

WHEREAS, It hath pleased the All-Wise and Beneficent Author of the Universe, in His infinite mercy, to remove from the scene of life's activities our beloved president, co-worker and friend, Dr. E. L. Irwin; and,

WHEREAS, It is our desire, and but mete and proper, that we give expression to the sorrow we all experience over his untimely taking off, and to place on record our appreciation of the character and worth of our late brother; therefore, be it

Resolved, That in the death of Dr. Irwin our Society has lost one of its most honored, beloved and valued members, the community and State are deprived of the services of a most prominent, useful and influential citizen, his family is bereft of a husband and father who was a model of tenderness and devotion, and society divested of one of its rarest and choicest ornaments. We who knew him in the relationship of professional intimacy are especially cognizant of the great loss his death entails, for not only had he visited professionally the family of several members of this Society, but had aided them as consulting physician in many, many cases. His relations with his brother-physicians were characterized by that spirit of absolute fairness, honesty and liberality which were among the distinguishing elements of his life's creed. The first president of our Society, he brought to the discharge of the duties of that position the same generous, fair and indulgent spirit, while his zeal for the organization is attested by the fact that he never missed a meeting.

He was whole-souled and big-hearted, and in the truest sense charitable. To the poor and needy who came to his notice he gave not only of his time and professional skill, but also of his means. He passed none without an attempt to make life more easy and happy. He had a kind word and a pleasant smile for everyone, and many there are who will call his memory blessed.

To term him a good citizen seems too commonplace an expression, for he was more than a good citizen; he was one of the best. As a man, as a friend, as a citizen attentive to his civic duties, as a distinguished member of an honorable profession, he was ever and in every relation of life the honest, upright, sincere gentleman that God made him, and he leaves an example which is an inspiration for all time—a memory embalmed in the grateful hearts of his countrymen.

Resolved, further, That a special page in our minute-book be set apart for the reception of these resolutions; that they be published in the *Southern Watchman* and the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, and a copy furnished the family of our deceased brother.

(Signed) W. F. HAGAMAN, M. D.
F. M. THOMPSON, M. D.
R. P. JONES, M. D.

Dr. Lea also offered the following memorial to the Police Jury of the parish:

WHEREAS, The present method of collecting the data of vital statistics for the Parish of East Feliciana is defective, in that it does not give the names of births and deaths, but merely gives them numerically; therefore, be it

Resolved, That we memorialize the Police Jury of East Feliciana to the end that they cause to be established, and kept by the proper officer, a book of births and deaths occurring in the Parish of East Feliciana; said method of collecting vital statistics, so far as practicable, to be modeled after the method in vogue of collecting vital statistics for the Parish of Orleans, Louisiana.

At a regular meeting of the BI-PARISH MEDICAL SOCIETY, held at Coushatta, La., on Wednesday, April 5, 1911, the following answered to roll call: Drs. W. T. Sibley, J. B. Pratt, E. W. Breazeale, W. L. Davis, C. E. Edgerton, W. A. Boylston and J. T. Keator. Meeting called to order by the president. On motion the minutes of last meeting were read and adopted.

Dr. W. F. Sibley read a paper on the "Prevention of Typhoid Fever," which was discussed by Drs. Edgerton, Breazeale, Pratt, Keator and Davis.

In the absence of a paper, Dr. C. E. Edgerton gave a talk on "Infantile Paralysis," detailing two cases. Both cases were interesting in connection with reported epidemics, but in neither case was the disease considered infectious by the doctor.

Dr. Breazeale presented an interesting case of fibroid tumor of the gum, involving the alveolar process of two upper molars. The growth was the size of a walnut and extended nearly to the median line. Case being that of a negro girl about the age of puberty. The growth was successfully removed.

On motion, Drs. Sibley, Pratt and Edgerton were named as a committee to draw up resolutions on the death of our fellow-member, Dr. J. B. Hargrove.

Drs. W. L. Davis and A. C. McLamore were admitted to membership. The following were elected as officers for the ensuing year: President, W. L. Davis; first vice president, C. E. Edgerton; second vice president, W. F. Sibley; secretary and treasurer, E. W. Breazeale.

On motion the secretary-treasurer was authorized to pay $31.50 out of the general fund to defray the expenses of banquet held at Natchitoches in December.

The following were appointed to prepare papers for next meeting: Gynecology, papers by Drs. Gallion and Boylston; Surgery, papers by Drs. Keator and Sibley; Practice, papers by Drs. Pratt and Edgerton; Medical Ethics, or Courtesy due our Brother Physician, E. L. Sanderson.

The president appointed Dr. W. F. Sibley a delegate to the Louisiana State Medical Society and A. C. McLamore as alternate.

A sumptuous banquet was tendered the members, to which a number of prominent townspeople were invited. There being no further business the society adjourned to meet at Natchitoches on Wednesday, December 6, 1911.

E. W. Breazeale, M. D.,
Secretary and Treasurer.

Resolutions of Respect on the Death of Dr. J. B. Hargrove.

Our Divine Ruler, who doeth all things well, has seen fit to remove from among us our beloved friend and brother, Dr. James B. Hargrove, to his home above; therefore we, in behalf of the Bi-Parish Medical Society, extend our love and sympathy to his wife and children and other relatives. May they realize, though they are lonely and heart-broken for the loving companion and father, that God doeth all things for the best; while his earthly presence is not visible, be assured he is with them in spirit. The members of this Society extend sincere sympathy to the bereaved wife and children, and will always feel a loving interest in their welfare.

Be it Resolved, That whereas the public has lost a true friend, the medical profession an ardent co-worker and counselor, whose vacancy this Society will ever deplore, we must humbly submit to the will of our Father, and live in the hopes of heavenly meeting when life's labors are done, that we extend our tender sympathy to the bereaved ones, and commend them to the care of Him who "tempers the wind to the shorn lamb. Be it

Further resolved, That a copy of these resolutions be spread on the minutes of this Society and a copy be sent to Mrs. Hargrove and published in the New Orleans Medical and Surgical Journal, the *Natchitoches Times* and *Coushatta Citizen.*

(Signed) J. B. Pratt, M. D.,
W. F. Sibley, M. D.,
C. E. Edgerton, M. D.,
Committee.

The American Society of Tropical Medicine.

EIGHTH ANNUAL MEETING, NEW ORLEANS, LA.

THURSDAY AND FRIDAY, MAY 18 AND 19, 1911.

The Committee of Arrangements for the American Society of Tropical Medicine announce the program of the meeting and at the same time extend a general invitation to the profession to attend the sessions.

The meeting will be distinguished by a number of notable scientists from this country, and it is anticipated that a representative contingent will be on hand from the Isthmus of Panama.

The place and the occasion of the meeting afford an excellent educational opportunity, of which the committee hopes many will take advantage.

PROGRAM.

MAY 18.

Morning Session—10:30 A. M.

AT THE ORLEANS PARISH MEDICAL SOCIETY.

1. *President's Address*—W. S. Thayer, Baltimore.
2. *Secretary's Report*—John M. Swan, Watkins, N. Y.
3. *Treasurer's Report*—C. Lincoln Furbush, Philadelphia.

Papers on Malaria:

4. Histopathology of Malaria—M. Couret and W. H. Harris, New Orleans.
5. The Etiology of the Erythrolytic Hemoglobinuric Type of Blackwater Fever—Walter Brem, Cristobal, C. Z.
6. Experimental Syphilis and Yaws—Henry N. Nichols, U. S. Army Medical School.
7. Oriental Sore—S. T. Darling, Ancon.

Afternoon Session—2:30 P. M.

AT RICHARDSON MEMORIAL, TULANE CAMPUS.

8. The Biochemistry of Bacillus Lepræ—F. B. Gurd and W. Dennis, New Orleans.
9. Resumé of Experimental Work in Leprosy, with Demonstrations of Culture Methods—C. W. Duval, New Orleans.
10. The Nervous Symptoms of Leprosy—R. M. Van Wart, New Orleans.
11. Report of a Probable Case of Sprue—Sidney K. Simon, New Orleans.

MAY 19.

9:00 A. M.—Clinic on Pellagra at Charity Hospital.

Morning Session—10 A. M.

AT HUTCHINSON MEMORIAL, TULANE MEDICAL DEPARTMENT.

GENERAL DISCUSSION.

Amebiasis:

12. The Biological Characteristics of the Various Parasitic Amebæ—M. Couret, New Orleans.

13. Observations on the Effect of Ipecac, Phenol and Salicylic Acid on Amebæ in Vitro—Randolph Lyons, New Orleans.
14. The Symptoms of Amebiasis—W. E. Weeks, Ancon.
15. The Medical Treatment of Amebiasis—Walter Brem, Cristobal.
16. The Surgical Treatment of Amebiasis—Wm. Seeman, U. S. Navy.
17. The Complications and Sequelæ and Their Treatment—Rudolph Matas, New Orleans.
18. The Public Health Problems Concerned in Amebiasis—J. H. White, Public Health and Marine Hospital Service.

The discussion will be opened by Sidney K. Simon, New Orleans.

Afternoon Session—2:30 P. M.

At Hutchinson Memorial.

19. Election of Officers and Members.
20. Some Suggestions as to the Etiology of Pellagra—Chilton Thorrington, Montgomery, Ala.
21. Treatment of Pellagra—C. C. Bass, New Orleans
22. Clinical Notes on Yellow Fever: "Results of Titrations of Gastric Contents—J. Birney Guthrie, New Orleans.
23. Certain Septicemias Resembling Yellow Fever: Their Bearing on Practical Quarantine—J. W. Amesee, Denver.
24. Changes in the Poison Glands of Snakes as the Result of Functional Activity—Gustav Mann, New Orleans.
25. Report of Blood and Stool Examinations in a Company of Philippine Scouts—Elmer S. Tenney, Reina Regenti, Mindanao.

N. B—An excursion to the Louisiana Leper Home will be arranged for Saturday, May 20, for those in attendance who wish to go. This will take all day, leaving about 7 a. m. and returning to New Orleans about 7 p. m.

Medical News Items.

The XVIIth International Congress of Medicine.—The XVIIth International Congress of Medicine will meet in London in the summer of 1913. The exact date is to be fixed by the International Permanent Committee, which will assemble for the first time in London, April 21 and 22 next, under presidentship of Dr. F. W. Pavy.

At the same meeting the list of Sections of the Congress will be constituted. Any wishes or propositions concerning the arrangement of this list may be sent, up to the first of April, to the Hon. General Secretary of the Permanent Committee, Prof. H. Burger, Vondelstraat 1, Amsterdam, or to the Bureau of the Committee, Hugo de Grootstraat 10, The Hague.

The committee will be glad to receive, before the same date and

at the same addresses, possible informations and propositions concerning the organization of the Congress.

New Ordinances Promulgated by the New Orleans Board of Health.—Two new ordinances have been passed by the City Council and have been duly promulgated. The ordinance covering the reporting of contagious diseases now embraces the following list: Asiatic Cholera, Leprosy, Yellow Fever, Typhus or Ship Fever, Diphtheria, Scarlatina or Scarlet Fever, Small Pox, Varioloid, Trichiniasis, Typhoid Fever, Tuberculosis, Measles, Poliomyelitis, or any other case that may at any time be specified by the Board of Health.

The other ordinance is new and is important in establishing a better status of record of births. We quote the ordinance as passed:

An Ordinance for collection of vital statistics by reporting and registration of births, providing manner in which same shall be done, and providing penalties for the violations thereof.

Section 1. Be it ordained by the Council of the City of New Orleans, That from and after the passage of this ordinance it shall be the duty of the attending physician or midwife, at the birth of any child in the Parish of Orleans, to report the same in writing to the office of the Board of Health of the City of New Orleans within seventy-two hours of the same.

Sec. 2. Be it further ordained, etc., That it shall be the duty of the father or mother, or, in their default, of any person present at the birth of any child, to report same within thirty days from the date of said birth at the office of the Board of Health of the City of New Orleans, which report shall be recorded in the presence of two witnesses, and shall as nearly as possible show the date, street and number thereof at which such birth occurred, the color and sex of the child, the name of the father and mother, their nationality, age, occupation and residence.

Sec. 3. Be it further ordained, etc., That all institutions, public and private, shall report all births occurring within said institution to the Board of Health of the City of New Orleans within seventy-two hours of the same, giving the name of the child, date of birth, the color and sex, the name of both parents, if known, or at least that of the mother.

Sec. 4. Be it further ordained, etc., That there shall be collected by the Board of Health, for the recording under this ordinance of any birth, the sum of fifty cents, and a like fee for any certificate of such record.

Sec. 5. Be it further ordained, etc., That any person who shall violate any of the provisions of this ordinance shall be punished by a fine of not more than twenty-five dollars ($25.00) nor less than five dollars ($5.00), or imprisonment for not more than thirty days (30) nor less than ten days (10), or both, at the discretion of the Court having jurisdiction.

Adopted by the Council of the City of New Orleans, March 15, 1911.

American Medical Editors Association.—The 42nd annual meeting of this association will be held at the Alexandria Hotel, Los Angeles, Cal., June 26 and 27, under the presidency of Dr. J. MacDonald, Jr.

Unusual efforts are being made for this annual convention, and members are urgently solicited to be present. Plans already matured enables the executive committee to assure those who will attend a most interesting session both from a literary as well as a social viewpoint.

The American Association of Pathologists and Bacteriologists met in Chicago April 14 and 15, with an interesting program. Papers were contributed by Drs. Duval, Mann, Gurd and Couret from New Orleans.

The American Proctologic Society announces its 13th annual meeting at the Hotel Alexandria, Los Angeles, on June 26 and 27. The general profession is invited to all sessions.

Medical Interne, Government Hospital for the Insane.—The United States Civil Service Commission announces an examination on June 7, 1911, at New Orleans, Shreveport, Baton Rouge, Alexandria, Monroe and Lake Charles, in Louisiana, to secure eligibles from which to make certification to fill a vacancy in the position of medical interne, Government Hospital for the Insane, Washington, D. C., and vacancies requiring similar qualifications as they may occur in that hospital.

The positions are tenable for one year, and pay $50 a month and maintenance. At the end of six months, however, during which time a post-graduate course in mental and neurological diagnostic methods, etc., is given, an examination is held, and promotions to the next grade, assistant physician, at $75 a month and maintenance, are made. Beyond this there is regular advancement for men whose services are satisfactory. The Government Hospital for the Insane has over 2,900 patients and about 750 employees to care for. In addition to the general medical practice offered, the scientific opportunities are excellent and the clinical opportunities in neurology and psychiatry are unsurpassed.

As considerable difficulty has been experienced in filling vacancies in the position of medical interne in the Hospital Service during the past several years owing to the limited number of eligibles available, qualified persons are urged to enter this examination.

The Northwestern University celebrated the 25th anniversary of its School of Pharmacy by a banquet and other exercises at the Hotel Sherman, Chicago, on April 12.

Report of the Committee of the American Neurological Association Appointed to Inquire Into the Occurrence of Mental Disease Among Persons Employed by Transportation Companies.—An elaborate report has been made by this committee with the following conclusions:

A considerable number of cases of general paresis and others forms of mental disease are to be found among railway employes.

I. Out of 5,832 commitments, 60 were of railway employes (over 1 per cent).

II. Out of 1,905 male paretics seen in city clinics, 40 were railway employes (nearly 4 per cent).

III. Out of 2,803 paretics at present in hospitals for the insane, 102 were railway employes (nearly 5 per cent).

IV. The examining physician for two railway companies has noted in four years, among the employees of these companies, 26 cases of mental disease, 15 of which were cases of paresis.

We have been unable to discover any fatal accidents due to the mental incompetence of such employes, but we have learned of several accidents, unattended with loss of life, due to this cause, and several cases in which accidents have been narrowly averted. It is obvious that it is a source of danger to the community to keep persons suffering from paresis and other mental diseases in responsible positions in the railway or marine service. Such danger can be averted, or at least diminished, by the examination, at repeated and regular intervals, of all employes holding responsible positions.

International Commission on Control of Bovine Tuberculosis.—A meeting of this commission was held in Buffalo on Feb. 27. It was decided that the first task would be the preparation of material for a small pamphlet on the subject of bovine tuberculosis. This pamphlet is to be very simply and plainly worded, for the general public, especially stock owners. It is to embody a full statement of available inforamtion on the subject—so far as it concerns the stock owner in a practical way, and so far as such information is accepted by the commission.

This primer will probably be published in very large editions in the United States and Canada, and be given very wide distribution by the Canadian and United States Governments and by our several States in this country.

The committee entrusted with the responsibility of preparing this pamphlet is Dr. V. A. Metre, Cornell University; Dr. J. R. Mohler, Federal Bureau of Animal Industry; Mr. J. J. Ferguson, representing American Packers; Dr. Reynolds, Minnesota, representing American Veterinarians in State work; Dr. F. Torrance, Manitoba, representing Canadian Veterinarians.

The next meeting of this commission will be held at Toronto late in August.—M. H. Reynolds, Secretary.

The Louisiana Section of the American Chemical Society held an interesting meeting on March 17. President Philip Asher and Secretary George B. Taylor presided. A Dutch supper was enjoyed at the close of the meeting.

The Clarksdale and Six-County Medical Society met in Clarksdale, Miss., March 22, President R. L. Mercer presiding. The following officers were elected: President, A. G. Everett; vice president for Bolivar County, F. H. Duley; Coahoma, W. W. Stuart; Tunica, Dr. D. W. Coker; Tippah, S. C. Cowan; Tallahatchie, S. W. Robinson; Sunflower, W. B. Harrison, secretary and treasurer.

The Tennessee State Medical Association will meet at Nashville June 11-13.

The Mississippi Medical Association met in Jackson April 11-13 and had a very successful meeting. Dr. D. J. Williams, of Ellisville, was elected president; Dr. E. F. Howard, Vicksburg, secretary; Dr. L. B. Sparkman, Cleveland, treasurer. The following were recommended to the Governor for appointment as members of the State Board of Health next year: Drs. John Darrington, Yazoo City; G. S. Bryan, Amory; E. A. Cheek, Arcola; T. E. Ross, Hattiesburg; I. W. Cooper, Newton.

Meeting of the State Board Medical Examiners.—The next meeting of the State Board of Medical Examiners will be held in this city May 18, 19, 20. All doctors intending to take the Board are requested to register at the office of the secretary, Dr. A. B. Brown, Cusach's Building, before the meeting.

The American Society of Tropical Medicine.—The eighth annual meeting of this society will be held in New Orleans, on Thursday and Friday, May 18 and 19.

Bogalusa Hospital Operated by Lumber Company.—The Bogalusa Hospital will be operated in future by the Great Southern Lumber Company. Dr. Herbert C. Cole will be chief surgeon in place of Dr. Solon G. Wilson, who resigned.

One Thousand Dollars for Gulfport King's Daughters Hospital.—At the regular meeting of the City Council, held April 5, the annual allowance of $1,000 for the King's Daughters Hospital was granted.

Under the Name of *Ophthalmic Literature* there has been established in Denver a monthly journal giving a classified list of contemporary ophthalmic publications, together with a few short articles on ophthalmological topics.

The Texas State Journal of Medicine for April contains the program for the coming meeting at Amarillo, May 9-11, with pictures of public buildings where different sections will be held. The *Journal* presents a fine appearance and its editors are to be congratulated.

Eye, Ear, Nose and Throat Hospital Holds Annual Meeting.—The Board of Trustees of the Senses Hospital met April 19 and re-elected all of the incumbent officers. Standing committees were appointed with slight change in the personnel. Acknowledgment of various benefactions was made and a testimonial of thanks spread on the records.

Nearly 8,000 new patients were treated during 1910, over 400 more than in 1909. Of this number 2,153 patients were from the State at large.

The report of the secretary showed that 120,066 patients had been enrolled since the hospital began, with over 800,000 consultations and over 21,000 operations performed. Attention was called to the special bequests of Mrs. Ida Richardson and Mr. S. O. Thomas and of the gift of Mrs. Milliken.

A memorial record was made of the death of Dr. Gordon King, late surgeon in charge of the Nose and Throat Department, and the committee in charge reported that arrangements had been made for placing a proper tablet, duly inscribed, in the hospital.

The Louisiana State Board of Health met in Franklin, April 18, and considerable ground was covered in the plan for the promulgation of a Sanitary Code. The members of the Board present were: Drs. Oscar Dowling, president; Beverly W. Smith, vice-president; T. T. Tarlton, Herman Oechsner, P. T. Talbot, register of

vital statistics; E. S. Kelley, secretary; George B. Taylor, analyst; Benjamin T. Waldo, attorney.

Association of Medical Officers of the Army and Navy of the Confederacy.—The twenty-first annual reunion of the United Confederate Veterans will be held at Little Rock, Ark., May 16, 17 and 18, 1911, in the chapel of the First Presbyterian Church. At the same time and place will also convene the fourteenth annual meeting of the Association of Medical Officers of the Army and Navy of the Confederacy. Dr. Edwin D. Newton, of Atlanta, Ga., will preside. Dr. Newton enjoys the unique distinction of being the only surviving officer attached to the medical staff of General R. E. Lee's headquarters. The Pulaski County Medical Society and others of the medical corps of Little Rock are evincing an encouraging interest in the coming convention, and promise a most cordial welcome.

Personals.—Dr. Geo. H. Upton is resident physician at the Covington Sanatorium.

Dr. J. A. Dorsett has been elected mayor of Lucedale, Miss.

Dr. R. O. Hollister has been elected president of the Hammond Board of Health.

Removals.—Dr. S. M. Blackshear, from St. Francisville, La., to New Orleans.

Dr. A. J. Williams, from Wetumka, Okla., to Dale.

Dr. D. A. Mopler, from Shreveport, La., to Oil City.

Dr. S. A. Poole, from Ruston, La., to Mansfield.

Dr. T. H. Maddcn, from Fisher, La., to Mitchell.

Dr. C. E. Terry, from Jennings, La., to Lake Charles.

Dr. C. J. McGrave, from 237 Canal St., New Orleans, to 432 Galvez St.

Married.—Dr. Phillip W. Bohne and Miss Alma Elise Heim, on April 12, at New Orleans.

Died.—At Buffalo, N. Y., on Tuesday, March 14, 1911, Dr. William Warren Potter, aged 72 years. Dr. Potter was editor of the *Buffalo Medical Journal* for 23 years.

At Jackson, Miss., on April 6, 1911, Dr. F. L. Fulgham, aged 70 years.

On March 31, 1911, Leon F. Beridon, of Mansura, La., aged 22 years. Mr. Beridon was a senior student at Tulane Medical Col-

lege and a resident interne at the Charity Hospital. He contracted typhoid fever at the hospital in the course of duty.

Tulane Notes.—The session of 1910-11 will close June, 1911. Commencement will take place on May 17 at the French Opera House.

The session of 1910-11 will close June, 1911. Commencement will take place on May 17 at the French Opera House.

The Senior Class exercises will be held on Saturday, May 13, at 11 a. m. The ceremony of planting the ivy will be held at the Richardson Memorial Building on Tulane Campus and the class exercises at the Hutchinson Memorial at 8 p. m.

The Summer School will begin a few courses on May 23, but most of the courses will not start until June 5.

The faculty has decided to arrange a preparatory year in sciences and medical branches for unprepared high school graduates. Courses in biology, chemistry, physics, embryology, osteology and histology will be offered. It is hoped that this will lead ultimately to a five-years' course as now entertained by the American Medical College Association, of which Tulane is a member.

The following were the successful members of the Senior Class receiving appointments to interne positions in the New Orleans Charity Hospital and Touro Infirmary: Charity Hospital Internes—Messrs. W. S. Berry, R. E. Bodet, D. J. Bordenave, J. G. Gardner, J. DeW. Garrett, J. S. Gatlin, D. F. Gray, C. J. Hauer, J. G. Hirsch, A. M. Kahn, G. Neves, T. H. Patton, J. C. Roberts, D. H. Sparks, R. C. Webb, Jr. Touro Infirmary Internes—C. V. Akin, Jr., R. M. Blakely, C. B. Cooper, S. Geismar, J. B. LeGwin. Alternates—C. S. Brooks, S. J. Rosenthal.

There will be about one hundred graduates from the Medical Department in the class of 1911.

Professor Duval and Drs. Couret and Gurd attended the Chicago meeting of the American Association of Pathologists and Bacteriologists on April 14 and 15.

Professors Mann, Bass and Dyer attended the Jackson meeting of the Mississippi Medical Association in April.

Professor John B. Elliott was the guest of Texas Fifth District Medical Society at the April meeting.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

A Handbook of Practical Treatment, by many writers, edited by JOHN M. MUSSER, M. D., LL.D., and A. O. KELLY, A. M., M. D. Volume I. W. B. Saunders & Co., Philadelphia.

Works on treatment are always of interest to physicians, and such a one as this is certain of a hearty welcome by the profession. Judging by the first volume, the editors have been most fortunate in their choice of collaborators, and these latter have been diligent and faithful in their collaboration. In a work of such even excellence as the one under review, it is hard to select any chapters for special mention. The reader will be most impressed in the chapters which treat of those subjects which deal with subjects in his especial field of interest.

Anything which Brunton writes is always well worth reading, and his chapter on the General Principles of Drug Treatment is no exception to this rule. Edsall treats of the general principles of Dietetics in a sane, complete and eminently helpful way. The chapter on Organotherapy, by Coleman, puts before the reader a very complete and concise resumé of our present knowledge of this subject, and the reviewer notes with satisfaction the healthy skepticism with which many claims are viewed by the writer. In a well-illustrated and clearly-written section on Exercise, Massage and Mechanotherapy, McKenzie deals with this very important branch in a way which is bound to be helpful. The chapter on Climatotherapy and Health Resorts contains much valuable material, but, in the reviewer's opinion, much space is devoted to places in foreign lands which might better have been used in mention and description of resorts nearer at hand. In this chapter the section devoted to the effects of high altitudes on blood pressure is especially timely. Dock contributes a carefully-written chapter on the treatment of the diseases of the ductless glands, while this volume is brought to a close by one of the best chapters in the book—Bloodgood's article on that very live topic, the surgical treatment of the Thyroid and Parathyroid Glands. J. T. H.

Induced Cell-Reproduction and Cancer, by HUGH CAMPBELL ROSS, M. R. C. S. (Eng.), L. R. C. P. (Lond.). P. Blakiston's Son & Co., Philadelphia.

Ross' book is a complete and careful record of a series of interesting and instructive experiments primarily accidentally begun and afterwards deductively elaborated upon. Ross found that agar in a 1 per cent solution made an excellent film for "in vitro" examinations of living cells. He later, by the addition of some Unna's polychrome methylene blue to the agar, was able to gradually stain the leucocytes and finally kill them. He observed that alkalinity and heat were conducive to a more rapid diffusion of the stain, while salts, such as sodium chlorid, acted in an opposite direction. He then began to experiment as to the effect that the addition of alkaloids to the agar jelly film would have on the leucocytes. He found that they produced marked excitation, especially in the case of atropin; least so in the case of morphin.

At this stage of the work attention was turned to cancer research, as it was suggested, by a collaborator, that, on occasions, persons dying from cancer presented symptoms somewhat similar to those dying from alkaloidal poisons.

It was found that, by the addition of certain dyes and alkaloids, especially the latter, cellular mitotic diversions could be induced. This phenomenon was observed likewise in the case of the blood platelets, which also were observed in actual ameboid movements, settling an important question as to their nature by proving that they are not detritus, but real living, active cells.

Cancer serum was found to have a marked "auxetic" effect on mitosis. This led to experimentation with animal alkaloids. After a series of investigations, "globin," a histone derived from hemoglobin, was found to be "an important source of the causes of the cell proliferation of healing." This action was increased by putrefaction and found to be due to the presence of the animal alkaloids, cholin, cadaverin, neurin, putrescin, etc. "In vitro" division in epithelial cells was successfully induced by a jelly consisting of azur stain, putrid suprarenal gland and atropin. "In vivo," also, "epithelial cells undoubtedly proliferate in response to globin and kreatin."

Not the least interesting part of the book is an account of the discovery that normal serum has an inhibitory action on the "Auxetics," and the restraining body is not thermostable.

An account of the improvement produced in several inoperable cases of carcinoma by the rectal administration of defibinated sheep's blood is given in the closing chapters. The serum was administered on the presumption that the restraining body of the serum, the "Auxetic" in the globin and in the remains in the white cells, and lastly the products of the decomposition, would be gradually absorbed, and that they might raise the content of the restraining body in the patients. In other words, they might acts as a sort of vaccin.

Finally, Ross has apparently, in a case of inoperable scirrhus of the breast, been able to produce a marked improvement in mascroscopical and microscopical appearance by the local application of globin and kreatin, and later, conversely, to produce a marked conical excrescence of malignant cells by the application of a solution of five parts of globin and one of cholin.

The book contains so litttle superfluous reading matter and so much that is novel and interesting that it is really difficult to make a resumé of it. Over one hundred and twenty beautiful reproductions of microphotographs illustrate the text.

The type and paper used are of excellent quality, and, altogether, the work is one which will prove of undoubted interest, and possibly of great value. SEEMANN.

Principles of Therapeutics, by A. MANQUAT. Translated by M. SIMBAD GABRIEL, M. D. D. Appleton & Co., New York and London.

"The science of the utilizable modifiers of the organism of morbid causes and of diseases, and the art of applying their properties to the profitable correction of disturbances of health." Thus the author defines Therapeutics. Again, "Therapeutics is an art, but a scientific art, or an applied science." These two definitions indicate the author's attitude toward his subject, and in a measure enable one to forecast in general the general trend of this work. Ready-made prescriptions and made-to-order schemes of treatment are not to be found in these pages, but there is adequate discussion of the principles which should underlie all treatment. The thinking physician will get new food for thought from this author, although much of what the author says has been said before. J. T. H.

The Care and Training of Children, by LE GRAND KERR, M. D. Funk & Wagnalls Company, New York and London.

More books like this should be written and placed in the hands of parents. The thorough appreciation of the obligation to the child is shown here, and the best means of arriving at an understanding of his needs in care and training. Common practices of parents are discussed and condemned, and the proper substitute is suggested. Altogether a book which many parents should read—and follow. DYER.

New World Science Series: Primer of Hygiene, By JOHN W. RITCHIE and JOSEPH S. CALDWELL. World Book Company, Yonkers, N. Y.

Here is another of the health books which is practical for school use and yet so written as to serve for general education on the topics discussed. Each phase of domestic and municipal hygiene is presented simply and clearly, and in such a manner that a child may learn the precepts submitted. Not a book for students of hygiene, but yet full enough to do much good in its own field among the young. DYER.

Principles of Public Health, by THOS. D. TUTTLE, B. S., M. D. World Book Company, Yonkers, N. Y.

Clothing, food, habits, ventilation, rest and the care of the various organs of the body—each finds place in this little book. Practical measures for the prevention of the common diseases of the public are presented, and many hints are given for the better sanitary conditions in the home. Just such a book as the general public needs. DYER.

"Salvarsan," or "606." Its Chemistry, Pharmacy and Therapeutics, by W. HARRISON MARTINDALE, Ph. D., F. C. S., and W. WYNN WESTCOTT, M. B., D. P. H. Paule B. Hoeber, New York.

A timely exposé of this much-advertised preparation of arsenic, giving a clear description of its qualities and uses. A good digest of various observations is submitted, together with the various methods employed in the administration of the drug. Altogether a conservative presentation of the subject, with a proper avoidance of any opinionative discussion. DYER.

Osteology and Syndesmology, by HOWARD A. SUTTON, A. B., M. D., and CECIL K. DRINKER, B. S. P. Blakiston's Son & Co., Philadelphia.

An excellent text, arranged with logical clearness and much simplicity, and presenting the subject in logical form for the student. The typographic arrangement adds much to the value of the book and to its purposes as a text. DYER.

Practical Bacteriology, Blood Work and Animal Parasitology, etc., by E. R. STETT, A. B., Ph. G., M. D. Second Edition, Revised and Enlarged. P. Blakiston's Son & Co., Philadelphia.

The demand for a new edition of this work evidences its popularity. Many changes have been made in the revision and the subject-matter has been brought up to date. The illustrations are numerous and the subject-matter arranged for a comprehensive interpretation of the different topics presented. An excellent laboratory guide and reference work in daily technical work in the laboratory. DYER.

Publications Received.

LEA & FEBIGER, Philadelphia and London, 1911.

Progressive Medicine, edited by H. A. Hare, M. D., assisted by Leighton P. Appleman, M. D. Volume XIII.

Diseases of the Nose, Throat and Ear, by William Lincoln Ballenger, M. D. Third edition, revised and enlarged.

P. BLAKISTON'S SON & CO., Philadelphia, 1911.

Hughes' Practice of Medicine, by R. J. E. Scott, M. A., B. C. L., M. D. Tenth edition, revised and enlarged.

Enlargement of the Prostate, by C. Mansell Moulin, M. D., F. R. C. S. Fourth edition.

J. B. LIPPINCOTT & CO., Philadelphia and London, 1911.

International Clinics, by leading members of the medical profession throughout the world. Volume I, twenty-second series, 1911.

D. APPLETON & CO., New York and London, 1911.

Prevention of Infectious Diseases, by Alvah H. Doty, M. D.

REBMAN COMPANY, New York, 1911.

What Shall I Eat? by F. Gouraud, M. D., with a preface by Prof. Armand Gautier. Only authorized translation in the English language, by Francis J. Rebman.

Miscellaneous.

Seventy-second Annual Report of the Registrar-General of Births, Deaths and Marriages in England and Wales (1909). Darling & Son, London, 1911.)

Annual Report of the Bureau of Health for the Philippine Islands (1909-10). (Manila Bureau of Printing, 1910.)

Diuretin-Knoll. (Knoll & Co., New York and London, 1911.)

Poor Richard's Lactopeptine Almanack for Ye Doctor. (The New York Pharmacal Association, 1911.)

The Typhoid Bacillus Carrier: A Review, by R. M. Grumm, M. D. (Washington Government Printing Office, 1911.)

Smallpox and Vaccination in the Philippine Islands, by Victor G. Heiser, M. D., and Robert Oleson. (Washington Government Printing Office, 1911.)

Annual Report of the Surgeon-General of the Public Health and Marine Hospital Service of the United States. (Washington Government

Reprints.

Prevention of Hemorrhage in Pulmonary Tuberculosis by the Administration of Autogenous Vaccines, by Roswell T. Pettit, B. S.

Some Phases of Asthenopia, by Dwight W. Hunter, M. D.

The Personal or Business Side of a Doctor's Life, by J. Macdonald, Jr., M. D.

Hyoscine Hydrobromide as an Adjunct to Cocain Anesthesia and as a Preventive to Cocain Poisoning; Submucous Resection for the Correction of Septum Deflections, with a Description of the Author's Special Instruments, by Myron Metzenbaum, B. S., M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans

FOR MARCH, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	9	2	11
Intermittent Fever (Malarial Cachexia)	.....	2	2
Smallpox	.....	.....	.....
Measles	7	.....	7
Scarlet Fever	.....	.....	.....
Whooping Cough	12	1	13
Diphtheria and Croup	2	3	5
Influenza	7	7	14
Cholera Nostras	.....	.....	.....
Pyemia and Septicemia	2	.....	2
Tuberculosis	46	44	90
Cancer	21	11	32
Rheumatism and Gout	.....	.....	.....
Diabetes	1	.....	1
Alcoholism	2	1	3
Encephalitis and Meningitis	4	2	6
Locomotor Ataxia	2	.....	2
Congestion, Hemorrhage and Softening of Brain	20	6	26
Paralysis	1	2	3
Convulsions of Infants	3	1	4
Other Diseases of Infancy	9	9	18
Tetanus	2	5	7
Other Nervous Diseases	3	1	4
Heart Diseases	45	35	80
Bronchitis	8	4	12
Pneumonia and Broncho-Pneumonia	37	24	61
Other Respiratory Diseases	2	2	4
Ulcer of Stomach	1	.....	1
Other Diseases of the Stomach	6	4	10
Diarrhea, Dysentery and Enteritis	39	21	60
Hernia, Intestinal Obstruction	4	1	5
Cirrhosis of Liver	10	4	14
Other Diseases of the Liver	2	.....	2
Simple Peritonitis	.....	.....	.....
Appendicitis	3	.....	3
Bright's Disease	30	26	56
Other Genito-Urinary Diseases	8	4	12
Puerperal Diseases	3	4	7
Senile Debility	6	3	9
Suicide	4	.....	4
Injuries	21	21	42
All Other Causes	26	12	38
TOTAL	408	262	670

Still-born Children—White, 23; colored, 25; total, 48.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 17.99; colored, 31.12; total, 21.55.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.09
Mean temperature 67.00
Total precipitation ..... 5.82 inches.
Prevailing direction of wind, southeast.

New Orleans Medical and Surgical Journal.

VOL. LXIII. JUNE, 1911. No. 12

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Diagnosis and Treatment of the Diseases of the Mitral Valve.

By F. M. THORNHILL, M. D., Arcadia, La.

This subject, assigned me by the committee on program, is one that cannot be discussed in all its bearings in the short space of a society paper, and I shall confine myself to a consideration of a few of the elementary principles involved, in order that we may be able to properly analyze and interpret the morbid manifestations usually presented in lesions of this valve. The mitral valve is the shutter, so to speak, situated at the left auriculo-ventricular doorway, or the opening between the left auricle and the left ventricle. In order to be able to understand and diagnose the disease of this valve, as well as of the other cardiac valves, a knowledge of the location of the heart, its boundaries and relations to the thoracic contents, is necessary. A proper understanding

*Read before the Bienville Parish Medical Society, April 4, 1911.

of the diseases of any of the cardiac valves also requires an accurate knowledge of their anatomical position and of the different heart sounds. The mitral, the tricuspid, the aortic and the pulmonary valves, the four sets of the valves of the heart, are crowded into an incredibly small space, each having its own area and point at which each particular heart sound is heard the most distinctly, and which do not correspond to the exact anatomical position of the valves themselves. The intelligent study of valvular diseases carries with it a knowledge of physics, particularly that part relating to the laws of acoustics, which is a part and parcel of physical diagnosis, one of the really scientific branches of medicine. In studying these lesions it is also important to have a clear conception of the factors concerned in the production of the first and second sounds of the heart and to be able to distinguish and separate the sounds. The cause of the first sound of the heart has been the subject of much speculation and controversy among physiologists, but it is believed to be composite in character, having at least, it is contended, a valvular and a muscular element—the valvular element, it is claimed, being due to the sudden and simultaneous closure of the mitral and tricuspid valves, while the muscular element is due to the contraction of the ventricles. The cause of the second sound has been pretty generally accepted as altogether valvular in character, and as being produced by the closure of the aortic and pulmonary valves.

According to most clinicians and pathologists, the mitral valve is more frequently the seat of diseased conditions than any of the valves belonging to the heart. There are two types of lesions common to this valve, as well as to each of the others, namely, regurgitation or insufficiency, and obstruction or stenosis. Of these lesions, mitral regurgitation is said to be the most frequent, and fortunately the least dangerous; but mitral obstruction, while not so frequent, is, next to the aortic regurgitation, considered the most dangerous, and an interesting fact connected with it, according to observers of large experience, is the strong predilection for the female sex, and its frequent association with tuberculosis, and, as a clinical fact, I believe they are more frequently associated than is commonly recognized. The natural effect of extensive and persistent obstruction is to weaken the heart muscle by the extra labor imposed in the effort to overcome the obstruc-

tion, which eventually results in dilatation and backward leakage. Mitral obstruction is always organic and progressive, and is never accidental or temporary, as regurgitation may be, and, as a matter of fact, often is. Valvular lesions may be congenital or pathologic, but it is not the province of this paper to consider congenital defects, or such as occur during intra-uterine life, further than to call attention to their possible existence in order that we may not be ignorant of them when confronted with them. Practically the same symptoms, diagnostic signs and principles of treatment guide us as in the pathologic type, but less is to be expected from therapeutic efforts than in the latter form.

Before entering upon the discussion of the symptoms and clinical manifestation of mitral diseases, a few words with reference to their etiology will probably prepare us for a better understanding of the morbid syndrome accompanying such lesions. Endocarditis of rheumatic origin is conceded to be the most common cause of valvular disease, and the frequent association of different bacteria with these lesions has tended to strengthen the theory of the bacterial origin of rheumatism. Streptococci, staphylococci, the bacillus of typhoid fever, of diphtheria, of influenza, of pneumonia and of tuberculosis are frequently associated with valvular lesions, and while no specific organism of scarlet fever has ever been demonstrated to the satisfaction of the entire profession, yet it is known that the virus of this malady is a frequent cause of valvular disease. One of the most typical cases of mitral disease I have ever seen was in a child four or five years old, and was directly traceable to this cause. Chorea, which is by many considered but another manifestation of rheumatism, is also often associated with endocarditis and valvular disease. The valves are simply folds or reduplications of the endocardium, or the lining membrane of the heart, situated at and guarding the different endocardial openings so that morbid processes involving the endocardium naturally involve the valve. Inflammation of the valves produces structural changes which prevent their opening and closing perfectly, resulting in stenosis or obstruction to the outward flow of the blood in the one case and in regurgitation or backward leakage in the other. The liability of valvular involvement should be borne in mind during and for some time after each attack of rheumatism and of the diseases before mentioned, as well as of each of the specific

infectious fevers, and a history of such attacks will be of valuable aid in diagnosis. As a general proposition, it may be stated that valvular lesions are seldom, or never, primary, but are secondary to morbid processes that have gone before. The frequency of mitral disease is a sufficient reason for the selection of that subject by the committee on program for discussion to-day. Regurgitation and obstruction are the two types of lesions usually involving the mitral valve, which are determined by certain symptoms and physical signs peculiar to each. The ear, the eye and the hand are the means by which these symptoms and signs are detected. By the ear we detect murmurs and other adventitious sounds; by the eye we ascertain whether or not the apex beat is in or out of place, and other abnormalities, and by the hand we detect thrills, the position of the apex beat, the force and character of the cardiac impulse, etc., all of which are helpful aids to diagnosis.

Prof. Gerhardt, of Berlin, a distinguished physical diagnostician now deceased, it is said, used to say the first thing he wanted to know in studying diseases of the heart was whether or not the apex beat was in place, and if it was found in normal position he felt reasonably sure that there was no serious organic lesion of the organ. With the average physician, the first thing to apprise him of the existence of a heart lesion is the discovery of a murmur. When a murmur is detected, the essential thing to know is at which one of the endocardial openings it occurs and the relation it bears to the different acts of the heart cycle, for without this knowledge we are unprepared to make a correct diagnosis. Mitral murmurs are always heard within the mitral area, and with the greatest intensity in the immediate neighborhood of the apex beat, usually in the fifth intercostal space below, and a little to the right of the left vertical nipple line, and are direct or indirect, according as the lesion is obstructive or regurgitant. I like the terms direct and indirect, and shall employ them during the remainder of this paper synonymously with those of obstructive and regurgitant to express the character of murmurs. Insufficiency, incompetency and stenosis are terms used to designate the pathologic conditions by which indirect or regurgitant murmurs and direct or obstructive murmurs are produced.

Mitral regurgitation, as before stated, the commonest of all heart lesions, is at the same time the easiest of diagnosis. A

murmur occurring with the first sound of the heart and heard loudest at the apex, transmitted to the back and to the inner side of the left scapula, and to the left axilla, is almost surely a mitral regurgitant murmur. The murmur may be so loud as to obscure the first sound of the heart altogether, and on the other hand may be so feeble as to be scarcely audible, and of such duration as to extend into the beginning of the pause between the first and second sounds. Murmurs presenting these features, it is claimed. cannot occur without backward leakage at the mitral valve. Mitral indirect murmurs may occur from other causes than deformity of the valve itself, as, for instance, from weakening of the heart muscle, from typhoid fever, or the physical strain incident to hotly-contested boat races, football games or prize fights. Under these circumstances the heart muscle is so weakened as to admit of the strechíng of the mitral sphincter, and the ring into which the valve is inserted, to such an extent as to render it incapable of closing the orifice. Under these conditions the murmur is temporary, and disappears with the recovery of the patient and the restoration of the heart to its normal condition. The intensity or feebleness of a murmur is no guide to the extent or gravity of the lesion, as a very serious lesion may give rise to a very feeble murmur, while a slight lesion may be accompanied by a murmur of the greatest intensity. Loud murmurs, therefore, are only helpful as aids to diagnosis. However, for practical and scientific reasons, the elements of intensity, pitch, quality and duration of sound should be considered. Mitral regurgitant murmurs are always transmitted backward, or in a direction opposite to that of the normal blood current.

Murmurs are classified as organic and functional, and we should always be prepared to differentiate between them. Functional murmurs are most invariably systolic in time—that is, they occur with the first sound of the heart, are soft and blowing in character, and are usually heard loudest over the pulmonic area, from which point they are transmitted in all directions, but not widely. This is the murmur so often found in anemic girls, and subjects suffering from hookworm disease and other debilitating causes. I saw a very pretty example of this class of murmurs a short time ago in a lad suffering from hookworm, and it was interesting to note the disappearance of the murmur as the boy improved and his

blood was restored to its normal condition, after having been relieved of the parasites. To meet the extra demands made upon the heart by organic mitral lesions, anatomical changes occur in the organ, beginning with enlargement of the left auricle, then of the right ventricle, and, last of all, hypertrophy of the left ventricle; when the circle is complete, and as long as compensation is maintained there is nothing save the evidences, elicited by auscultation and percussion, to indicate the presence of a heart lesion. But sooner or later, in the majority of cases, compensation fails, which is signalized by sundry circulatory disturbances, the pulse becomes weak, rapid and irregular; some of the heart-beats fail to reach the wrist, constituting the intermittent pulse. At this time general venous congestion begins to appear, evidenced by edema of the lungs, congestion and enlargement of the liver, dropsy of the lower extremities, gradually extending upward into the large serous cavities, and to these is superadded cough, dyspnea, cyanosis, rales, etc. I recall at least three cases in my own experience in which the liver became enormously enlarged as the result of mitral regurgitation. With the failure of compensation, the murmur, before audible, now disappears, and if the patient is now seen for the first time a diagnosis can only be made by a history of the case and the presence of complications just described. In this condition the prognosis is extremely grave, and it has been said that the very worst valvular lesion is one without any murmur at all.

I remember several cases of mitral disease, which were under my observation for a long time, in which the murmur disappeared temporarily at different times, and permanently for quite a long while, prior to dissolution. Mitral obstruction, or stenosis, is characterized by the presence of a presystolic murmur—that is, a murmur occurring just before ventricular systole, running up to the first sound of the heart and ending abruptly. This is in reality a diastolic murmur, inasmuch as it occurs at the end of diastole and immediately preceding ventricular contraction. It requires an accurate knowledge of the mechanism of the heart, and of the acts comprised in a heart cycle, to be able to distinguish this murmur from the one previously described. A mitral obstructive murmur is the typical direct murmur being produced, as it is, by the forcing of the blood through the narrowed mitral orifice. This

murmur is heard loudest at the apex, is transmitted toward the apex, and in the direction of the normal blood stream, but is heard over a comparatively limited area. The distinctive feature of a mitral direct murmur is the thrill that accompanies it, which often can be felt when no murmur is heard, and which serves at once to distinguish it from the mitral regurgitant murmur. The thrill denotes stenosis, or narrowing at the mitral orifice, and is produced by the blood being thrown into vibration as it is forced through the narrowed mitral opening, from the left auricle into the left ventricle. The apex beat in this lesion sometimes assumes the character of a short, sudden thud, with perceptible diminution in the duration of the first sound of the heart, and relative prolongation of the second sound. The secondary effects of mitral stenosis are those of regurgitation in an intensified degree, but as long as compensation is maintained there may be no symptoms to direct attention to the heart. The murmur of mitral obstruction, contrary to what might be expected, considering the character of the lesion, is the most fleeting and inconstant of all murmurs, and, like that of mitral regurgitation, disappears permanently when the final breakdown in compensation occurs, and if the patient should first come under observation at this time we may be unable to determine which of the two is the primary lesion.

The other murmurs which may be mistaken for that of mitral stenosis are the Flint murmur, the murmur of tricuspid stenosis, and the rumbling murmur sometimes heard in children after an attack of pericarditis. The Flint murmur, named for its author, Austin Flint, occurs in connection with aortic regurgitation, but is transmitted to the mitral area, and in this instance we have the presence of the aortic lesion to guide us to a correct diagnosis. Various theories have been advanced to explain the cause of this murmur, but apparently the most reasonable one is that which ascribes it to the meeting of the opposing blood currents, from the left ventricle and the aorta. Some good clinicians contend that disease of the right side of the heart is so infrequent, as compared with the left, that it is not worth taking into the count, but I should regard this as a dangerous rule to follow. In the event of a lesion of the tricuspid valve, we would have the occurrence of a murmur in that area to guide us. The rumbling murmur referred to as sometimes occurring in children after pericarditis is, in point of

fact, exocardial, being produced by pericardial adhesions, and in this instance we would probably have the history of the attack to aid us in a diagnosis. In the diagnosis of endocardial murmurs there are eight to be considered, and if the Flint murmur is taken into the count as separate and distinct there are nine. Or, to be more accurate, there may be two murmurs at the mitral valve, two at the tricuspid valve, two at the aortic valve, and two at the pulmonary valve, and in order to be able to differentiate between them we must be familiar with the different valve areas, the laws governing the conduction of sound, and the factors concerned in the production of murmurs.

The therapeutics of valvular disease, if viewed from the standpoint of drugs alone, is very limited, but if considered from that of hygiene, habits, manner of life, etc., it becomes very extensive, particularly if we go into detail. The profession and the laity should be educated out of the idea that there is practically no help for those suffering from organic cardiac lesions. Such doctrine is unkind and inhumane, and the consequences growing out of the neglect and indifference thus begotten are painful and disastrous in the extreme. Unfortunately for myself, I began the practice of medicine thoroughly imbued with the belief, owing to the attitude of the profession on the subject at the time, that there was little or nothing that could be done to relieve the suffering or to prolong the lives of this unfortunate class of victims. The practice of medicine then consisted altogether in the administration of drugs, and the value of hygiene, of rest and of diet in these conditions had not penetrated the brain of the average medical man. Sufferers from heart disease were then considered doomed to a painful existence and an early death, and were perhaps given a dose of morphin and told to take care of themselves as best they could. I am glad that I have lived to see such doctrine and practice give way to more rational, scientific and humane views. By the intelligent observance of the laws of hygiene, with correct and temperate living, many persons suffering from valvular disease can be made comfortable and their lives prolonged beyond measure. It is a matter of astonishment how long some of these patients will hold out, even under a flagrant disregard for the laws of health; particularly is this true of mitral regurgitation. In fact, of late years, I have heard it said, ironically, that persons with this lesion, like

the proverbial white mule, never die. I recall at least four persons now living with this lesion, one of whom has been under my care continuously for twenty-five years, and when first discovered I predicted an early dissolution, but she is still alive, and for the past ten or fifteen years has filled a responsible Government position. This case has afforded me abundant opportunity for studying the features of the disease; the murmur is most typical, is transmitted to left axilla, and behind to the inner side of left scapula, at which point it is heard equally as distinct as at the apex. The pulse in this case is very slow, weak, irregular, and staggering, and sometimes appears as if every beat will be the last.

Another case came under my observation fifteen or twenty years ago, who is still living, and for a number of years has been an active member of a leading wholesale firm in the metropolis of North Louisiana. Two other cases, first seen more than a year ago, are able to pursue their usual avocation, but both have had temporary breakdowns in compensation, with accompanying dropsy of lower extremities and ascites, but, with rest and the aid of some drugs, they were relieved, and compensation restored.

I have related these cases to give practical value to my paper by showing how the lives of these patients can be preserved, and what may be accomplished by treatment. A great deal can be done to relieve the suffering and to prolong the lives of most persons afflicted with crippled hearts. The sum of this treatment can be stated in the words rest, temperance, hygiene, diet, and I name these measures in the order of what I consider their value. To go into detail in the application of these measures would require more time than we have at our disposal to-day. The fundamental principle of treatment of every valvular lesion is rest, and the other measures are helpful adjuncts in the order named. A heart with an organic mitral lesion is badly crippled, and needs rest as much so as a broken arm or leg or an inflamed kidney, and to the laboring man particularly rest is an important part of the management. Therefore, every case manifesting symptoms of secondary effects and failing compensation should be sent to bed, and the matter of rest and the adjustment of diet as rigidly enforced as if the patient had pneumonia or typhoid fever, until he is relieved and compensation restored. The term rest is used here in a relative sense, since there can be no such thing as absolute rest for the heart during

life, but with the proper adjustment of exercise, diet and habits it can be saved a great deal of harmful labor. As long as compensation is maintained, and the patient suffers none of the inconveniences of the secondary effects, no drugs should be given. But with failing compensation, however, some one of the different heart tonics may be brought into use with benefit. The selection of this remedy should be governed by the specific indications to be met. If the case is one of mitral regurgitation, with a frequent, weak, irregular pulse, lacking in volume and resistance, digitalis should be given the preference. The result obtained from this drug will depend upon the amount of obstruction to be overcome and the size of the dose. If the lesion is slight and the myocardium not too much exhausted, comparatively small doses will often steady the pulse and be sufficient to restore the heart to its normal action, but the dose should be commensurate with the effect desired, be it large or small. Digitalis, while overcoming the obstruction to the circulation, is at the same time the most reliable for relieving the dropsy and other secondary effects resulting from it. Mitral regurgitation is sometiems accompanied with bradycardia or a slow pulse, in which digitalis is better replaced with strophanthus or strychnin. In the case which has been under my care for twenty-five years bradycardia has been a prominent feature, and strophanthus and strychnin have been employed instead of digitalis. If mitral leakage is due to weakness of the heart muscle more than to lesion of the valve, strophanthus or strychnin will give better results than digitalis. Spartein, another heart tonic, is growing in popularity, and in certain conditions is considered by some as superior to either of the other drugs mentioned. By some, caffein is regarded as a most reliable heart tonic, but owing to the unpleasant mental symptoms and the insomnia resulting from large doses its protracted use has never come into general use in the treatment of heart diseases.

The same principles of treatment apply in mitral obstruction as in regurgitation, but for obvious reasons greater caution should be exercised in the employment of the remedies. In cases of extreme narrowing of the mitral orifice, associated with hypertrophy of the right ventricle, and resultant pulmonary congestion, there is a point beyond which it is dangerous to push heart stimulants, since such treatment can but add to the overflow of the lungs and to the

danger of overpowering the heart's action. In such conditions, sedatives may be substituted for those of heart stimulants with benefit, such as aconite, veratrum, or, in extreme cases, blood-letting, if for no other purpose than to give temporary relief to the overwhelmed heart and lungs.

The dropsy resulting from mitral disease frequently calls for special attention. Here it is, it may be, that large doses of digitalis will again serve us well as a heart tonic, but better as a diuretic. In extreme cases a tablespoonful of the infusion may be given every two or three hours. Purgatives that produce watery stools, such as sulphate of magnesia, elaterium, compound jalap powder, etc., assist in draining the tissues of excessive fluid and prepare the way for the action of diuretics. All the avenues of elimination should be kept open, and nutrition maintained by the administration of concentrated and easily digested foods.

Intermittent Claudication (Painful Spasmodic Limp)*

By E. M. HUMMEL, M. D., New Orleans.

Claudication, or painful intermittent limping, was first observed in horses, but Charcot later recognized the same condition in man. In the quadruped, either one of the four extremities might be involved, most frequently the posterior. It is an incident of pronounced disease and age in overworked animals. Likewise, in man, either upper or lower extremities may be involved, though, of course, most frequently the legs.

The pains of claudication are among those vague complaints the cause of which is not to be seen in the part affected, or easily recognized elsewhere, as for that, and the physician is apt to be provoked into believing that the complainer is hysterical or playing off. Its frequency, especially in people of advanced age, makes it an important condition to know about.

Since its recognition the disease has received several names—*e. g.*, intermittent arterio-sclerotic dysbasie (Erb.), angina cruris (Walton), etc.

The symptoms are usually as follows: The patient, while walking, begins to experience pain, great fatigue or numbness in one

*Read before the Orleans Parish Medical Society, April 10, 1911.

or both legs, sometimes the whole extremity; most often a certain segment—as the calf—is involved. At first the discomfort passes after a few moments' rest, when walking may be resumed until another attack. Later the pain and distress is so readily provoked as to entirely preclude walking, and may even continue in the recumbent posture. If the subject is observed in an attack, the skin of the soles, ankles, etc., may be observed to be cyanosed or of waxy whiteness, and if the finger is pressed against the surface the spot of ischemia thereby produced is seen to be very slowly refilled by the sluggish vascular reaction.

Claudication should not be confused with achillodynia, which is characterized by severe pain at the insertion of the tendo-achilles, associated with swelling or signs of inflammation at the painful point, and which is due to strain or bursitis, or to gout and similar constitutional states; nor with painful consequences of flat-foot and other troubles with the bones and joints of the foot. It is quite easily distinguished from sciatica, if anyone be at all mindful of the symptoms of the latter disease.

Rather is the condition under consideration a muscular pain resulting from arterial degenerative changes. Marinesco reported degenerative muscle changes directly associated with the obliterating arteritis, and it is the opinion of every one who has studied the disease that faulty nutrition of the muscles, usually from calcification of the arterial walls, is the real explanation of the neuromuscular symptoms.

As might be expected, the disease is seen nearly always in elderly persons, especially excessive smokers and users of alcohol—chiefly, therefore, men. Erb is of the opinion that the Kneip water cure and certain strenuous gymnastic methods of treatment sometimes cause claudification. Oppenheim regards neuropathic predisposition as important. Such was the case in two patients seen by me in private practice.

Fuchs, Holzknecht and Hunt have demonstrated by refined radiographic methods that the calcified large arteries can be easily seen and traced in the affected limb. In one case seen by me no pulse could be felt anywhere at or below the knee. Often pulsation of the smaller arteries is abolished, and greatly diminished in the larger. The fact that gangrene not infrequently supervenes is a further criterion of the vascular etiology of claudication.

Not only are local vascular changes recognized, but such factors operating in the cerebrum, and obviously disturbing certain afferent fiber tracts, may be responsible. This was the only explanation I could find for a painful condition in the arm of a lady recently seen by me. She was 53 years old and was suffering from other signs of obliterating vascular disease in the cerebrum, having had the opposite arm weakened by a stroke due to cerebral softening. Claudication of cerebral origin, and occurring in the arm as well as legs, is well recognized.

Congenital narrowing of the arteries and the angio-spastic neuroses also result in pain characteristic of claudication, especially after prolonged fatigue. Indeed, arterial spasm and muscular ischemia are the causative factors in all painful muscular cramps, but should not be confused with the condition in question.

The indications for treatment are rather obvious. Rest in the horizontal position, massage, to the limb, especially over the trunk of the large vessels. Iodid preparations are helpful, as are cardiac stimulants, such as strophanthus, which drive the blood through the impaired vessels with increased impetus. The galvanic footbath is probably the most useful local measure. This is administered by placing either foot in a vessel of warm water, dropping the electrodes, one in each receptacle, and turning on about fifteen milliamperes of current for a half or three-quarters of an hour.

Extradural Injections by Sacral Puncture in Genito-Urinary Neuroses.

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It is unnecessary here for me to mention that to Leonard Corning belongs the credit for having first suggested the idea of utilizing the spinal canal as a new channel for the introduction into the organism of therapeutic agents. In his book on Pain, published at Philadelphia in 1894, one can find the idea developed into a method, and its application more than suggested. To Beer, however, we are indebted for the application of Corning's idea for operative analgesia, and in 1899, after having even dared to

*Read before Orleans Parish Medical Society, April 24, 1911.

experiment on himself, he reported his first series of cases of subarachnoid injections. This method was further popularized by Tuffier, who, in 1901, published his valuable monograph on surgical analgesia. In this monograph, and in explanation of the mechanism of the analgesic action of the cocain solution injected subdurally, the authors stated that the analgesic agent exerted its effect nearly exclusively on the nerve roots and sparingly on the cord itself.

Bearing this statement in mind, Dr. Cathelin, of Paris, and an assistant to Guyon, experimented on animals to find a method that would reach the nerve roots without acting on the cord proper, and as a result of his work devised the method which deservedly bears his name and which is the subject of this paper.

Cathelin's animal experimentation enabled him to formulate the following facts:

I. That it is possible to obtain by this method on the dog a superficial and deep contact and temperature anesthesia of the lower half of the body.

II. That relatively large doses of cocain do not produce total anesthesia of the entire body of the dog when in the horizontal position.

III. That the same dose will bring on total anesthesia of the whole body if the dog is held with the head down.

IV. That the absorption of the cocain takes place through the rich venous plexus of the extradural space.

V. That it is a new method of experimental anesthesia, easy and of common application, requiring no special instrumentation, permitting conscious animal experimentation without pain.

VI. That the nerve roots cannot be directly affected by the cocain on account of their dural covering.

VII. That this method offers, over the subarachnoid, the following advantages:

1. Security, so far as the cord is concerned, this structure being avoided.

2. Avoidance of direct penetration of cocain in the subarachnoid space.

3. Tolerance of the extradural space for liquids, large injections being harmless and painless.

Applied to man, and compared with the subarachnoid route, this new method of spinal injection possesses many advantages from

the medical point of view, and up to the present time it has been spoken of favorably by many eminent physicians.

It is not meant for spinal cocainization only, but is advocated as a superior method of administering the majority of soluble medicines now administered by the mouth, rectum, or injected under the skin, or into a vein. The drug, in a weak solution, is introduced into the sacral canal, and is thus brought at once into contact with the extensive plexus of veins which lines almost the entire bony structure. The absorption of the drug, therefore, proceeds simultaneously over a large surface, and its effect is felt to the remotest ramifications of the vascular system.

This method has already scored a number of brilliant successes in the palliative treatment of neuralgias in the legs, sciatica, lumbago, the fulgurant pains and gastric crisis of tabes, intercostal neuralgia, and also in tetanus, with injections of the antitetanic serum. Prolonged and pronounced relief has been obtained in cases of inoperable malignant disease of the rectum, cystitis, anal fissure, in painful accouchements, and affections of the joints without effusion.

In the domain of operative surgery its value in man is limited, being very inferior to the subarachnoid method, yet on dogs Cathelin reports excellent results.

But it is in urinary surgery that extradural injection meets its highest application, especially in the functional incontinences of urine and certain urinary neuroses. Cathelin reports having used his method in over 2,000 cases with a percentage of 75 of cures in cases of enuresis of children and adults, and he claims for his method that it is the one of choice in such cases.

To clearly understand Cathelin's method, one must bear in mind the anatomy of the sacral canal, and recall that the blind sac of the dura matter extends to the second sacral vertebræ only, and that the sacral nerve roots can be easily reached in the sacral canal by a puncture of its postero-inferior opening.

The technic of the extrdural injection in the sacral canal is as follows:

The field of operation having been previously prepared for the operation, the patient is placed in Sims' or lateral position, with the legs and thighs well flexed, so as to fully stretch the obturating membrane of the postero-inferior sacral opening, and on the side

affected, so as to reach the roots of the affected nerves. Chipault has the patient assume the Trendelenburg position to facilitate the dissemination of the fluid, but Sicard and many others prefer the lateral decubitus as advised by Cathelin.

The three small bony prominences outlining the inferior opening of the sacral canal are made out easily in the lean patients, less so in stout ones, by sliding the index finger along the spinous processes of the sacral crest until it falls into a triangular depression over the fifth sacral vertebra. The three tubercles where the spinal canal is left exposed near the end of the sacrum, owing to the non-development of the laminæ and spinous processes of the fifth sacral vertebra, is the point for the puncture. The membrane closing the opening thus defined is made taut by flexion of the thighs on the trunk of the body and punctured a little above the line uniting the two lower tubercles. The sacral canal at this point has a transverse diameter of a little over half an inch; the antero-posterior diameter is about one-third of an inch. The tip of the cone formed by the dura is three inches above—out of reach of possible injury.

It is not necessary to use a needle of special make; a lumbar puncture needle, or one for serum injection, will answer. The syringe should be one of about 5 c. c. capacity, to avoid frequent refilling. The needle is now depresed, describing an angle of about twenty degrees, and pushed two to three inches within the sacral canal, in the direction of the buttock's groove. It hits against the coccyx if introduced too low, and against the roof of the sacral canal if too high, but in either case no damage is done. If these precautions are carefully observed there will not be even a slight oozing of blood from the puncture.

The tolerance of the spinal canal and outside the dura for non-toxic fluids is remarkably great, and experiments with stains injected in the cadaver showed that the fluid rapidly spreads through the entire extradural space in the dorsal, and even cervical, region. Normal salt solution, or one containing cocain 1 per cent, or other analgesic agent, is commonly employed. For cocainization Cathelin injects on an average 2 to 3 c. c. of a 1 per cent solution. Injections of 5 to 30 c. c. of the physiological solution are usually made, and it is with this solution that Cathelin has obtained his success. His idea is that the solution acts mechanically, and its pressure on the

nerve roots exerts a nerve block action on the corresponding medullary centres (ano-spinal, vesico-spinal, genito-spinal.)

The syringe is applied and the injection made slowly, and the puncture hole closed with a little collodion or Z. O. plaster. Assurance that the injection has been correctly done is given by the fixity of the needle, the absence of a subcutaneous edematous swelling at the time of injection, and the recoil of the needle on its withdrawal.

Nausea, fever and headache never accompany the method of injection. The only symptoms observed were a sensation of heaviness in the limbs, and very rarely formication, extending to the toes. Four or five hours after the injection a sensation of a bruise is experienced in the lumbar region, gradually subsiding during the night. The relief of pain is immediate; it vanishes in two to five minutes after the introduction of the fluid. The analgesia obtained lasts for two or three days, but in the experiences to date each recurrence is less violent, and progressive improvement can thus be obtained, amounting to actual cure.

With children the same technic is followed, and the puncture generally easier to perform, since the sacral opening is proportionately larger than in the adult and situated higher up. Besides, a three to four centimeter needle introduction will be sufficient to avoid injuring the dural sac, and even were this to happen no inconvenience would follow. This puncture is not accompanied by any pain, and, even in most indocile children, is performed without trouble.

The mode of action of the extradural injections, according to Cathelin, rests entirely on their effect on the medullary centres of the cord, and owing to this particular nerve block action he maintains that his method is a most valuable one in checking nerve reflex irritation by changing the molecular equilibrium in these very centres.

Jaboulay's suggestion to inject the solution in the cellular tissues behind the rectum has not proven generally helpful.

In a comparatively recent paper, H. Albrecht,* of Germany, reports favorably on extradural injections for sacral pains. He has applied Cathelin's technic in fifty-three cases of severe pains in the sacral region without appreciable disease in the genital organs.

Zentralblatt fur Gynakologie, Leipsic, January 14, 1911.

The result was the complete cure of the pain in 72 per cent, while the benefit was brief, or no benefit was observed, in 28 per cent. His experience shows that the procedure is particularly useful in treatment of functional bladder disturbances, in idiopathic pruritus vulvæ and for coccygodynia. He injected from 30 to 40 c. c. of physiologic salt solution, with or without local anesthesia. In two out of three cases of enuresis a cure was obtained by a single injection, as also in nine out of sixteen cases of severe functional neuroses, without pathologic findings in the abdominal organs or genitalia. Most of these patients had long been under treatment in the hospital, without appreciable benefit. In a case of exophthalmic goiter, with pain in the lumbar and sciatic regions, the pain subsided for three days and then returned, but disappeared permanently after a second injection, with no recurrence during the five months to date. In another case a complete cure was realized by this means after failure of systematic and repeated courses of other measures for relief of intense sacral pain and idiopathic pruritus in a woman with premature menopause. Equally favorable results were obtained in eleven out of thirteen cases of severe sacral pain, persisting after apparent cure of old chronic inflammation of the uterine appendages. He thinks it possible that the sacral pain in these cases was a morbid pain-habit, and that this habit was broken up by the single injection. Some of these patients had been in the hospital for from six to fifteen weeks under a course of treatment to promote absorption of the products of inflammation.

My personal experience is limited to the following cases:

Case I. Male, 64 years of age, suffered from diurnal and nocturnal enuresis of six months' duration. One extradural injection of 60 minims of 1 per cent cocain hydrochlorate solution made January 15, 1910. Two weeks later patient left hospital, having good control of urine.

Case II. Male, aged 54 years, married. This patient had a history of partial vesical paralysis of ten years' duration. An extradural injection of 70 minims of a half of 1 per cent cocain solution was made to satisfy the patient, but with little hope of success. No benefit followed.

Case III. Male, married, 46 years of age; had retention of urine. One injection of 75 minims of a 1 per cent cocain solution relieved him immediately.

Case IV. Female, midwife, married, aged 30 years, with a sciatica lasting over five months, was relieved by one injection of 130 minims of a 1 per cent cocain solution.

Case V. Male, single, 34 years. No history of injury; genitalia normal; for six months has suffered with diurnal and nocturnal incontinence of urine, necessitating use of urinal day and night; a case of

severe functional neurosis, without pathologic findings in the genitalia. After one injection of 12z minims of a half of one tropacocain solution urination became normal, and has remained so since.

CASE VI. Male, aged 58 years, married, without appreciable disease in the genital organs, with sexual appetite very strong and active; had been much annoyed by frequency of urination four or five times nightly and twelve to fifteen times daily. After examination nothing was found to explain condition except nerve reflex irritation. On December 31, 1910 one injection of 130 minims of a half of 1 per cent tropacocain solution was given with excellent result. No recurrence to present date.

CASE VII. Male, married, aged 26 years. Otherwise in perfect health, with nothing abnormal to explain a continuous pain in body of penis, middle portion. The result was the complete cure of the pain after one injection of a half of 1 per cent tropacocain solution administered February 5, 1911.

Objections may be raised against this report, as it offers a study of only seven cases; but the results in these, however, are so encouraging that it seems well to lay them before the profession, in the hope that others may take up the matter and test it. Again, this preliminary report contains no records of children affected with abnormalities in urination, as I have thus far failed to elicit the interest of my pedriatic friends.

Though the cases here reported are few, still when the claims for this method, made by a few American physicians, such as F. C. Valentine, of New York, and Dudley Tait, of San Francisco, besides the many European reporters, are considered, the following deductions seem warranted:

1. That extradural injections with normal salt solution, or any mild analgesic solution, offer the most promising results in abnormalities of urination due to faulty vesical innervation.

2. That incontinence of urine, enuresis, excessive frequency of urination (unless due to other pathologic conditions), can at least be ameliorated, if not cured, by extradural injections.

3. That the immediate effects of extradural injections are very rarely even disagreeable, and, when cautiously performed, the injections are in no wise dangerous to the patient, and no more painful than any other hypodermatic injection with a mild solution.

Before closing I wish to add another word, and that is to advocate the extradural route, according to Cathelin's technic, as a new mode of injection of Salvarsan solution for syphilis.

Note on a Case of Tuberculous Meningitis with a Remarkable Ante-Mortem Rise of Temperature.*

By HOWARD D. KING, M. D., New Orleans, La.

Tuberculous meningitis in adults presents so many difficulties of diagnosis and otherwise which are apt to lead one into error that I am prompted to recite my experience in a case recently coming under my observation.

This type of meningitis in adults is likely to baffle the keenest clinical worker by reason of the variance of the symptoms present in the patient from those described in the standard texts. In no other condition are the chances for erroneous diagnosis greater than in tuberculous meningitis, the reasons for which are many and varied. Tubercular meningitis in adults is usually the finality of some tubercular process—in the majority of cases pulmonary tuberculosis. Debove[1] classifies the meningeal affections connected with phthisis as *(a)* meningeal tuberculosis; *(b)* granular tuberculous meningitis with inflammatory exudation; *(c)* tuberculous meningitis without the finding of the tubercle bacillus. If the lungs should prove the non-causative factor, a continuance of the search will probably bring to light eventually some hidden tubercular focus. This focus may be located anywhere—lymphatics, mesentery, bones, etc.

The patient whose illness forms the basis of this paper was that of M. G., a female 30 years old. Family history has but little bearing on the case, though I have reason to believe a brother died of phthisis, though denied by the family. Personal history of the patient is not of much value, as the family for reasons known only to themselves, to a great extent concealed or distorted facts. The family, once in affluent circumstances, did not, I believe, resort to the concealment of the patient's antecedent troubles in order to hamper me in my work, but merely to shield the family name from adverse comment as to the presence of "insanity in the family."

However, by dint of questioning and scattering bits of information, I was able to learn, on the whole, that the patient had been in poor health for three or four years preceding. Patient at no time was a robust child. Menstrual irregularities served to make

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her life distressing at these periods. She was of a high-strung, nervous temperament, and held aloof from all but immediate members of her family. On account of her shyness and marked aversion to coming into contact with strangers she resigned her position in a dressmaking establishment, and for the last two or three years remained at home, going out but little. Patient suffered from a most severe form of acne, which was a source of great anguish and mortification to her, because of the facial disfigurement. For the acne, which, not unnaturally in her sex, she regarded as the source of her unhappiness, recourse was had to innumerable remedies, even vaccin therapy, but to no avail. She was ultra-sensitive regarding her affliction, and, on being warned as to the dangers that might ensue from "picking the pimples," would go off into a corner and cry.

About two years ago patient suffered from a spell of hysteria lasting from six to eight weeks. Recovery was slow, and since that date patient has been in rather feeble health. This state of affairs continued for about two years, and, whilst the condition was never entirely satisfactory, it was not such as to occasion any alarm in the minds of the family. She received no medical attention whatever during these two years.

The illness covered by this paper began on January 1, 1911. Upon a visit from the family physician it was declared to be a recurrence of the hysteria, and similar to the attack of two years previous. Bromid therapy to the point of saturation, and general treatment by "long distance," was the extent of the therapeutic endeavors in behalf of the sufferer. The long-distance treatment was accomplished in this wise: Once or twice a week a sister of the patient would go to the physician with a recital of the doings of the week as it concerned the patient, and a prescription or two would be written covering the case until the next visit of the sister. After three or four weeks of this long-distance treatment the physician became ill, and scant attention was given to the patient until the date of my first visit, March 6, at 11 P. M.

When I first saw patient she was in a deep coma and could not be roused. After making a cursory general examination and obtaining the meagre history recited above, I came to the conclusion that I had a cerebral condition to deal with. I was unable to make a positive diagnosis, however, and, in fact, was on the

brink of diagnostic uncertainty as to whether it was a case of typhoid or a cerebral condition due to absorption of intestinal toxins. Pupils were unequal; some rigidity of the neck and spine, and a not too well marked hemiplegic condition on the left side. The next two days brought but little change, though the comatose condition did not appear as deep, but the patient was still decidedly drowsy, stupid and apathetic. Temperature during the three days did not go over 101.8° Fahrenheit. At the end of this period it was evident that there was some meningeal trouble, and on the fourth day I gleaned from the family that the patient had lost considerable weight and was a sufferer from a most persistent cough, and also had had influenza the previous December. These facts, coupled with the clinical phenomena, strengthened my diagnostic clue, and I was convinced that the condition was none other than tuberculous meningitis. To avoid any doubt and not be misled further, I enlisted the aid of a neurologist, and, after a thorough examination, including all the reflexes, we arrived at a tentative diagnosis of tuberculous meningitis. Babinski's sign negative; Kernig's sign present to a slight degree.

Lumbar puncture brought out the following facts: Twenty cubic centimeters of cerebro-spinal fluid were removed at very high pressure, the examination disclosing a marked lymphocytosis. There was a fibrin clot well formed, though made up of delicate coagulum; no tubercle bacilli demonstrable. Noguchi's[2] globulin test was positive. Strouse[22], who has obtained positive results in eighteen tests of the cerebro-spinal fluids in cases of tuberculous meningitis, says the reaction has been more constant than lymphocytosis, and further adds that it is always present in tuberculous meningitis, and its presence is aid in the diagnosis. The absence of reaction in suspected cases of tuberculous meningitis is of great value in excluding meningitis. Fluid, on removal, was remarkably clear, but later became slightly turbid.

The condition of the patient gradually grew worse, and on the thirteenth day of her illness patient was removed to the Presbyterian Hospital, as the resources of the family had become nearly exhausted. One might say that the diagnosis in this case was erroneous, but I will give you in detail the obstacles which prevented at the outset a positive diagnosis. The meagre history obtainable as to the antecedent troubles may be excluded, as the

physician is presumed to make a diagnosis based upon his own observations. At first sight the patient presented a typical "third-week typhoid" appearance, but this idea was speedily routed by the fact that the day of my first visit was the first time temperature had manifested itself. Widal agglutination test the next day proved negative. Throughout the entire illness patient was weak and drowsy. Pressure over the lower limbs seemed to cause pain. The patient was obviously very ill, the tongue was thickly furred, cracked and dry, the breath was fetid and the sordes disgusting.

In the foregoing case the examination of the cerebro-spinal fluid obtained by lumbar puncture according to Quincke[3] did not show the presence of the tubercle bacilli. The ophthalmoscopical findings also proved negative. Therefore, the question of diagnosis rested entirely on the clinical symptoms and the cytological evidence as found in the cerebro-spinal fluid. The fact that a marked lymphocytosis coincident with the clinical picture as herein presented was observed should be sufficient grounds for the making of a diagnosis of tuberculous meningitis. Notwithstanding this, we are forced to consider in the differential diagnosis of tuberculous meningitis a number of diseases presenting clinical pictures similar to that of tuberculous meningitis. These conditions are principally delirium tremens, hysteria, uremia, septicopyemia, typhoid fever, and head symptoms in certain dyscrasic states.

Ten days after withdrawal of spinal fluid a differential white count was made, and the following results obtained:

Small leucocytes	9
Large leucocytes	2
Polymorphonuclear neutrophiles	88
Transitional	1
	100

Total white blood count, 12,222.

In tubercular meningitis an increase in the number of leucocytes, as a rule, is rare, but there are cases in the literature where counts ranging from 14,000 to 34,000 have been recorded. The hyperleucocytosis in this case was due to a complicating terminal pneumonia. Thus it can be readily seen that the later findings cannot invalidate the diagnostic import of the primary lymphocytosis. Wilson and Chowning[4] state that a hyperleucocytosis is usual in cases of so-called "spotted fever" of the Rocky Mountains, which is nothing more or less than cerebro-spinal fever. As a rule,

lymphocytes abound if the inflammatory process is tubercular, while the polymorphonuclear type reigns in non-tubercular cases. Marcou-Mutzner[5] records a case in which the predominant cell was a polymorphonuclear leucocyte, despite the fact that necropsy showed a typical pulmonary and meningeal tuberculosis. The blood count in tuberculous meningitis has been found to differ in a marked degree from that obtained in other tubercular processes. The usual blood count in a slowly progressing tuberculous condition is shown, as a rule, a leukopenia, whilst in tuberculous meningitis there is generally a demonstrable increase.

Oppenheim,[6] in discussing the clinical picture of tubercular meningitis as it occurs in adults, says: "The early delirium and mental confusion which soon occur point out that grown-up patients may go about in this stage and appear mentally affected; sometimes they are in a dreamy state, sometimes excited and agitated, often to such a degree as to closely resemble persons under the influence of alcohol." Brown[7] is led to remark: "In certain instances there has been great difficulty in making the diagnosis from hysteria, early mental diseases or delirium tremens." Warrington[8] records a series of seven cases, and makes the following observations: "When previous tubercular disease is not known, and evidence of disease elsewhere cannot be found, the opening symptoms are very difficult to interpret." According to Bonney,[9] pulmonary disease apparently making satisfactory progress is often the forerunner of tuberculous meningitis.

The diagnosis of meningitis, as well as the special type of the infection, has recently acquired greater certainty by resorting to lumbar puncture. That this method of establishing a positive diagnosis is, in the great majority of cases, reliable and satisfactory, is evident from the following table:

Name of observer.	Number of Cases.	Tubercle bacilli Found in C. S. Fluid.
Hemenway[10]	137	135
Bernstein[11]	102	100
Park & Krumweide[12]	83	69
Dunn[13]	60	15
Norris[14]	50	47
Furbringer[15]	37	27
Schwarz[16]	22	16
Slawyk & Manicatide[17]	19	19
Warrington[18]	7	4
	517	432

Morse[17] says: "It is true, of course, that the cerebro-spinal fluid in tuberculous meningitis contains tubercle bacilli. They are missed in about 90 per cent of the cases, however, if the examination is the usual routine one." Osler[18] states: "A sterile fluid which is sometimes present also favors the diagnosis of tuberculous meningitis." In the differentiation of the type of meningeal inflammation the clearness of the fluid is regarded as a valuable means of distinguishing the tuberculous from the other forms. The demonstration of tubercle bacilli in the cerebro-spinal fluid cannot always be done—and their absence therein should not be regarded as sufficient evidence for a negative diagnosis. Dunn[13] says, in speaking of the cytodiagnosis of tuberculous meningitis: "The main reliance is placed on the predominance of the mononuclear lymphocytes as shown by a different count of the cells in stained cover glass preparations. In the writer's analysis of sixty cases this predominance of lymphocytes was present in every one, and its absence should be regarded as precluding a diagnosis of tuberculous meningitis." Lucas,[19] who has given a great deal of study to the cell findings in the spinal fluid, states that there are many conditions that give rise to the same cytologic findings in the spinal fluid: *(a)* encephalitis, *(b)* epidemic myelo-encephalitis, *(c)* meningismus, *(d)* tuberculous meningitis, *(e)* and syphilis; secondly; that the presence of the mononuclear lymphocytes in the spinal fluid cannot be the basis for a diagnosis of tuberculous meningitis; third, that the recovery from animal inoculation, or the finding of the tubercle bacillus microscopically, are the only positive means of making the diagnosis of tuberculous meningitis; fourth, that the study of the spinal fluid, although very important, must go hand in hand with more accurate clinical studies of such borderlying cases as are frequently confused with tuberculous meningitis. Thus, from the foregoing observations, one can see that the only reliable method of establishing a diagnosis, the finding of the tubercle bacillus, is a much-mooted question. Notwithstanding the researches of Lucas,[19] a great many leading authorities attach much diagnostic significance to the occurrence of lymphocytosis.

Aside from the difficulty encountered in making a diagnosis, the most interesting feature of the case was the accompanying temperature. The caprices exhibited by the temperature were puzzling and inexplicable. At times there would be distinct remissions, only to

be followed by a spurt upward, and then a sudden downward plunge.

Often the temperature oscillations were as much as two degrees within as many hours; one morning the temperature would be very high, and the evening temperature low. The next day conditions would be entirely reversed.

The day following the withdrawal of the spinal fluid the temperature dropped nearly to normal, only to rise very high the next day. The pulse was not always commensurate with the febrile reaction.

On the fourteenth day of illness—the date of patient's removal from home to the hospital—the temperature began to maintain a more definite course—the ascensions and declinations were not as freaky.

The temperature on the fifteenth day of illness reached 105.2° Fahrenheit, with a pulse of 110 and respiration 46. Within the next two hours there was a decline of two degrees, though the pulse rate was increased to 128 and respiration had dropped to 36. For five hours temperature (103° Fahrenheit), pulse (128) and respiration (36) remained unchanged, and then within the short interval of three hours the temperature leaped to 106.5° Fahrenheit, pulse 140, respiration 48. This sudden change was noted at 6 A. M., and three hours later temperature was 107° Fahrenheit, pulse 145, respiration 60.

From this hour the temperature kept mounting higher. To avoid the chances of error in observation, several thermometers were used, all with the same result. At 1 P. M. the temperature was 107.8° Fahrenheit, pulse 170, respiration 76, and at 5 P. M. the temperature had reached 110.8° Fahrenheit. Forty minutes after this recordation patient expired. A complicating terminal pneumonia hastened the end.

As a rule, in tuberculous meningitis, just before dissolution, the temperature sinks to 94° or 95° Fahrenheit, though there may be a hyperpyrexia. Osler[18] calls attention to a case of Baumler's where the temperature rose just before death to 110.7 Fahrenheit.

It is the expressed opinion—though the comment is a rather grim one—that the infallibility of the diagnosis is best established by the death of the patient. That there are exceptions, however rare, to this dictum, is acknowledged by a few leading authorities. Some observers doubt the invariable fatality ascribed to the disease,

and cite certain well-authenticated recoveries. Goliski, in his clinic in Vienna, was in the habit of displaying the brain of a child in which tuberculous meningitis had been the diagnosis. The old scars (healed) at the base of the brain were demonstrable. This case is of interest, as the child succumbed to an entirely different disease some time after. Martin[20] says recoveries are possibly more frequent than has been believed, and states that since 1894 there have been no fewer than twenty full recoveries. There are some cases that seemingly recover completely, only to be taken again ill in a short time. Allaria[21] classifies the foregoing type as an intermittent form in which the tuberculous process develops at intervals. During the abatement of the condition the patient is, to all appearances, well. In these cases resistance is so much above par that the infection is checked in its incipiency or the bacillary virulence is decreased to such an extent that the meningeal lesion becomes localized and subsequently undergoes fibrous metamorphosis. These supposedly latent lesions at a later date form the focus of a fresh infection, which always terminates fatally. It is in these cases that the prognosis must be carefully weighed.

Summary and Conclusions.

To recapitulate, the diagnosis of meningitis was based on the following facts:

1. The previous personal history of poor health and enfeebled constitution.
2. The illness, influenza preceding the general collapse, which rendered patient a fertile soil for tubercular infection.
3. The evidence of pulmonary involvement—persistent cough, great loss of weight, and other physical signs.
4. The meningeal manifestations—cervical rigidity, Kernig's sign, and clinical phenomena peculiar to meningitis.
5. The cyto-diagnostic evidence as revealed by examination of the cerebro-spinal fluid—the amount of the fluid—the clearness of the fluid—the high pressure at which it was obtained—the delicate, though firmly coagulated fibrin clot—the marked lymphocytosis, and Noguchi's globulin test positive.
6. The death of the patient.

Much to my distress, permission for an autopsy was refused. After carefully weighing all the facts in the case, I believe a "Scotch

verdict" would not be inappropriate, and that, whilst it was not proven absolutely to be a case of tuberculous meningitis, it was not proven otherwise.

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Thoracoplasty by Schede's Method. Exhibition of Patient.*

By WM. M. PERKINS, M. D., New Orleans.
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This patient's account of his case from onset to admission to Ward 68 of Charity Hospital is rather vague and the subsequent bedside notes are incomplete, but sufficient data have been gathered for the following epitome.

January 1, 1910, hard chill, followed by fever for three days. January 23, a physician found heart beating to right of sternum and aspirated three pints of thin, milky fluid. In February a negro quack began blistering abdomen and chest (see photos) and steaming the legs "to draw the swelling from the chest to the legs."

About March 1 the pus made its way into the bronchial tubes, and from then until the day of first operation there was profuse and constant expectoration of pus.

August 8, 1910, was admitted to Hospital. Weight, 95 pounds.

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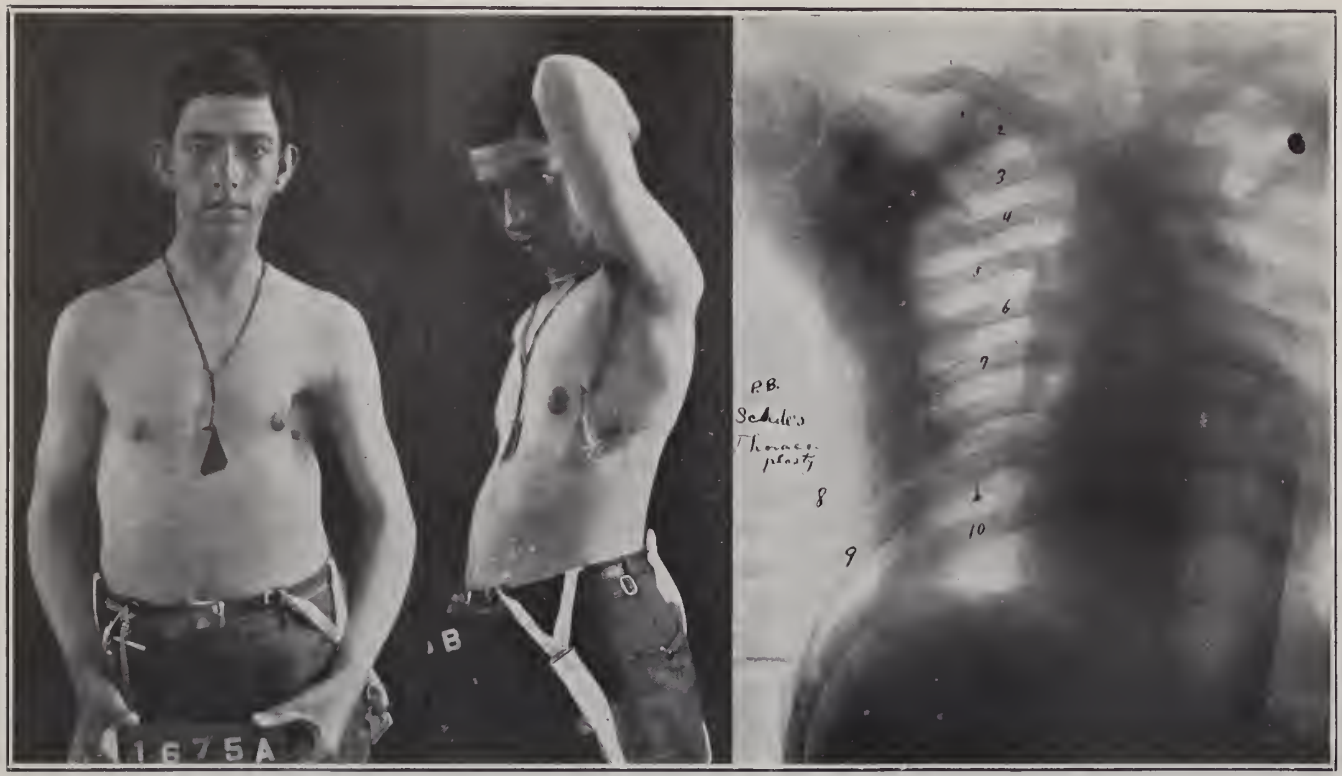

ILLUSTRATING ARTICLE OF DR. PERKINS.

Emaciation, weakness, depression of left thorax with corresponding curvature of spine.

August 11, thoracotomy—resection of one inch of eighth rib at anterior axillary line. Cough and expectoration stopped the same day, and the communication of cavity with lung closed soon afterward. Weight increased 20 pounds, in a little over a month.

September 8, the cavity was incompletely injected with Beck's paste, the supply giving out unexpectedly.

Temperature rose to 103° F. for two days, and paste was allowed to drain out. October 20 the cubic capacity of the cavity was tested by pouring into it sterile water from a measured quantity, and found to be ten ounces. It was filled with Beck's paste, and the fistula was found to be closed two days later. Patient seemed so well that it was not reopened.

Fugitive pains appeared in upper left thorax, temperature rose occasionally to 100° F., patient had slight cough and nausea, and a blue line appeared on the upper gum, parallel to the dental margin. He did not report these symptoms until later, possibly because he was anxious to be found well enough to go home.

November 11, fistula painlessly opened, discharging paste at first and pus afterwards. Patient later stated that paste used to run when he stood and pus when he lay down.

November 12, fistula was enlaged with difficulty, and on November 30, drainage appearing inadequate, the cause of the difficulty was found to be a new segment of rib, reproduced by the periosteum and having a hole corresponding to the position of the drainage tube. This segment was again resected, and ample drainage instituted.

On December 9, 1910, the Schede thoracoplasty was done, it being by that time evident that the cavity would not fill up in any reasonable time.

Our anxiety to get this 17-year-old boy with such a history away from the dangers of hospital life and into the country before he acquired tuberculosis was one urgent reason for some radical and decisive measure.

The toxic symptoms from the bismuth were sufficient to prohibit any more attempts to use the paste.

Radiographs taken while the bismuth was in the chest had given the impression that the cavity extended up only about as far as

the third rib, but during the operation it was found to extend above the second. An incision from the fistula up about the anterior axillary line was carried under the pectoralis major, and an irregular U-shaped incision was made by cutting along the eighth rib and upwards towards the posterior axillary fold. Neither limb of this incision was carried up as far as the third rib, and the posterior cut was quite short, but with good retraction access was obtained. Portions of six ribs were excised, from third to ninth inclusive. The cavity extended from about the nipple line to behind the mid-axillary line, being about the size of a man's hand.

Ribs, intercostals and parietal pleura were cut away over the cavity except where it was under the second rib and along its anterior edge near the heart. Small cavities were left at both of these sites after the main cavity had been obliterated by sewing the skin-flap in place, some stitches and a pressure bandage being used to insure approximation. These cavities were treated by packing for about a month, and then allowed to discharge as they pleased into a superficial dressing applied by the patient's father.

(The second rib is too valuable to be lightly sacrificed, and the dangers of carrying infection to the axillary contents must be considered. Some additional protection to the heart was obtained by leaving some projecting ribs which left a small cavity between them and the retracted visceral pleura.)

January 17, 1911, patient went home to the country, weighing 110 pounds, and requiring only simple external dressings without packing.

April 1, 1911, he reported himself well, and the accompanying photographs and radiograph were taken about April 24. Weight is now 125 pounds, which is as much as he ever weighed.

He is now well, has been able to play baseball, and is in good general condition. He is presented as one more illustration of the usefulness of the Schede operation in old empyema cavities that will not heal. When the lung cannot possibly expand to the chest wall, and when no tissue can fill the gap, the chest wall must be brought to the lung. In this case the Beck's paste was practically not tried at all, for it was not used according to the principles urged by Beck himself. He makes very plain the reasons why ample drainage should be maintained during that period when the infection is not yet subdued by the paste, but the apparent good condition tempted us to wait.

Beck's method of dealing with persistent empyemas should be tried before resorting to such extreme measures as the Schede. The pulmonary decortication suggested by Delorme and others is severe, difficult and uncertain. The Schede is practically no more mutilating, and the operator has more control of the dangers to the patient.

It is interesting to note in how many different ways we are confronted with the problem of slowly-healing cavities. Whether in bone or in soft tissues, the basic principles are the same. The walls reach their limit of contraction, the growth of cells from the walls becomes more and more imperfect, nutrition of the newer cells is insufficient for full development, and a condition of repair-stasis is established. The patients are subjected to the dangers inevitably attending suppurating surfaces, and impairment of general health reduces chances for good tissue-building.

To stop such a vicious circle the surgeon must often sacrifice healthy tissue and do more or less mutilating operations, but far more damage to patients is being done by alleged conservatism than is being done by intelligent and skillful intervention. We all have seen cases of obstinate cavities allowed to go on to unfortunate endings for the want of some operation which seemed to some one "too severe."

The X-Ray in the Diagnosis and Prognosis of Pulmonary Tuberculosis.

By ADOLPH HENRIQUES, M. D., New Orleans.

Of the many interesting phases of X-ray diagnosis, "The X-Ray in the Diagnosis and Prognosis of Pulmonary Tuberculosis" has impressed me for the past two years.

Since the discovery of the Roentgen ray, attempts at the diagnosis of pulmonary tuberculosis have been made, but it is only since the advent of X-ray apparatus permitting of rapid exposures that success has been obtained. For this work, the Snook generator stands preëminent.

Owing to the existence of much doubt among the profession as to the reliability of the frequent reports of the X-ray's ability to make a positive diagnosis, a visit was made to the clinics of the

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North and East in the latter part of 1910 for additional information. Personal observation of the methods of such X-ray workers as Dodd and George, of Boston; Cole and Hirsch, of New York, and Pancoast and Manges, of Philadelphia, dispelled all doubts.

In addition to the use of apparatus which permits of exposures of a few seconds, the plates must bring out the details well, and, equally as important, the plates require interpretation by radiologists familiar with this branch of X-ray diagnosis. By the use of the stereoscopic method, however, correct interpretation can be made by the general practitioner after the study of a few such plates.

The skiagraphic method has been employed, in preference to the fluoroscopic, for these reasons: First, the X-ray plate is more sensitive than the eye; second, more detail is secured; third, it allows of more careful study; fourth, we have a permanent record for future comparison.

The fifty plates which form the basis of this paper were all taken with a Snook generator. The exposures, except in the case of children, were made with the chest at rest and after a deep inspiration, to prevent blurring, due to respiratory movements, and to secure the greatest possible contrast between the diseased and the normal tissues.

In reviewing statistics as to the value of sputum examinations, Hamman reports that, taken as a whole, about 50% of patients in German sanatoria do not show the bacilli. Nagel reports bacilli present in 14.9% of 1,081 tuberculous patients, or in 1.4% of the incipient cases; also present in 38% of the moderately advanced cases. These figures show conclusively that we must frequently make a diagnosis before the tubercle bacillus is found.

From the recent literature on the diagnostic value of tuberculin, Hamman and Wolman report 57% of their patients positive to the cutaneous method. Sache, in a series of 165 cases tested by both conjunctiva and skin, reports positive reactions in the incipient cases to be 67% and 69%, respectively; in moderately advanced cases, 33% and 41%, respectively, and in the far-advanced cases, 67%, by each method.

When we remember that a positive tuberculin reaction signifies the existence of a tubercular focus somewhere in the body, without giving a definite idea of its position or extent, that it often fails

in chronic cases, and is often negative in very active cases, the fact is emphasized that many cases of pulmonary tuberculosis must be diagnosed by other methods.

These facts are mentioned, not to belittle them in any way, but to draw attention to the fact that, aside from constitutional symptoms, our main reliance in the past has been placed upon physical signs.

Of the physical signs employed, auscultation ranks the highest in the diagnosis of pulmonary tuberculosis. Many diagnosticians depend upon the presence of prolonged expiration, crepitant rales, and jerky or cog-wheel breathing to diagnose incipient cases. Diagnosis can often be made in early cases by auscultation, if the lesion is at or near the apex, or near the surface of the lung. On the other hand, deep-seated foci may escape detection by physical examination. The mediastinal pleura, the root of the lungs—in fact, a large portion of the lung—cannot be examined physically, but can be by the X-ray.

The X-ray will reveal what is discoverable by physical examination in this disease, and gives additional information. It acts as an eye which penetrates the entire thorax, demonstrating areas of congestion, isolated and conglomerate tubercles, gaseous areas, cavities, thickening and shrinking of the mediastinal pleura, enlarged bronchial glands.

Early signs of infiltration are recognizable when the diagnosis is otherwise doutbful.

Physical signs, unless consolidation be present, tell little of the depth of the lesions. Sometimes difficulty is experienced in determining, by physical signs, between a displaced and a dilated or hypertrophied heart, the results of percussion being obscured by the morbid pulmonary changes. The stereoscopic method of skiagraphy demonstrates the extent of pulmonary lesions, including depth, and determines the location and size of the heart more definitely than any other known method of examination.

A brief description of the stereoscopic method: With the part in the same position for both exposures, two views are taken, each on a separate plate. After the first exposure, the tube is moved laterally 2½ inches for the second view. When developed, the plates are observed with a prism, and the part skiagraphed is seen in its three dimensions. A true optical view is secured; the part is

seen in its natural size; length, breadth and thickness are shown, as if a translucent model of the region were under observation. There is no distortion.

Prognosis.—The value of the information given by this method in prognosis deserves consideration. The progress of the disease, as shown by advancing caseation or by extension to new areas; on the other hand, the formation of fibrous tissue and encapsulation; the rapidity with which the formation of fibrous tissue occurs; and, as Turban and Rumpf believe, the extent of the disease (outweighing all other factors) can be better shown with the X-ray than by any other method of examination.

In conclusion, it is the writer's opinion that every available method of examination should be made use of to effect an early diagnosis of this disease. Every doubtful case should have the benefit of an X-ray examination. In conjunction with the symptoms it affords the most accurate means of diagnosing pulmonary tuberculosis at our command. We can often reach a positive diagnosis earlier than by other methods, and its value in prognosis is considerable.

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The Prevention of Typhoid Fever.*

By DR. W. F. SIBLEY, Robeline, La.

To infected water have been attributed the approximately 2,000,000 cases of typhoid fever which occur each year in this country. But it is the old story of the innocent blamed while the guilty escape.

It required almost three centuries of fighting, from Francisco Redi to Pasteur, before the theory of spontaneous generation could be overthrown. To-day, though the proof is certain that only from

* Read before the Bi-Parish Medical Society, held at Coushatta, La., Wednesday, April 5, 1911.

one case of typhoid fever is another begotten, we close our eyes to the fact, and go on acting as though water were the source of all typhoid infection.

To stamp out typhoid fever, in the absence of any specific treatment, requires, first, the recognition of all cases; and, second, the destruction of *all* typhoid bacilli as they leave the patient.

The process need not be so complete; *most* may be substituted for *all*. Though the water supply contain as much sewage as Red river, opposite your town, or be as foul as a surface well in a horse or cow lot, if no typhoid bacilli get into it it cannot cause typhoid fever. We hear so much of the association of typhoid fever and water that we almost come to believe that it is their natural habitat; that it must be a war of expulsion. As a matter of fact, while typhoid bacilli may, for a considerable length of time, live in water, they do not thrive there, and, under ordinary circumstances, die out within a comparatively short time.

I realize fully that this is a general statement to which some may raise objection. It is impossible, in this paper, to go into all the evidence on this question. Whether typhoid bacilli may live two weeks or two months, or even longer, in water, is immaterial. It cannot be proven that outside the body, under ordinary circumstances, typhoid bacilli thrive and multiply.

It is also probable that the infectiousness of water, or any infected material, is directly proportional to the number of typhoid bacilli it contains. It cannot be supposed that any one who takes typhoid bacilli into his mouth or stomach will develop typhoid fever.

For infection to occur in typhoid fever, probably two conditions must be present—first, a lowered resistance on the part of the patient; and, second, a sufficient number of infecting organisms.

With a disease like typhoid fever, in which the strongest and healthiest are attacked, it is difficult to determine the factors which cause this lowered resistance. Some have said that sudden overexertion may reduce the resistance of the strongest and healthiest. But proof rests only in isolated observations, and is not sufficient. Possibly chance may play a part, slight injuries to the intestinal mucosa being required.

The work of Dr. Ravanel, showing that tubercle bacilli may pass through the intact intestinal mucous membrane and enter the

lymphatic channels, is evidence against this view. But, however this may be, for bacilli to enter in sufficient numbers to cause infection, they must wage a strong battle from the time they leave one patient until they enter the next. They must battle with cold, with sunshine, struggle with millions of opponents, and then run a very slight chance of entering susceptible subjects. The vast majority must die.

There are three ways to prevent the second infection. First, have a water supply from such a source that it is impossible for bacteria to enter it; second, sterilize all water before it is consumed by the public; third (and this is one that it has taken the members of the medical profession longest to recognize), destroy all bacilli as soon as they leave the patient. The advantage of a good, clean water supply cannot be overestimated, but this is valuable entirely apart from the question of typhoid fever. So long as typhoid bacteria are being scattered about, and any possible source of contamination for a water supply exist, the danger of infection and of epidemics is not removed. In ultimately preventing and stamping out this great plague in this country, other measures are necessary besides the obtaining of a fair water supply for our cities and country.

Let us now leave out of consideration the cities where the water supply is directly under public control and consider the conditions in the country, for it is in the country and small towns that we of this Society are most interested. We know that typhoid exists to a proportionately greater extent in the country than it does in cities, and that the propagation of this disease is in general from the country to the city, and not from the town to the country. But through the water is not the only way in which typhoid infection is spread.

The proof is just as good that other methods play an important, though not so frequent, rôle. There is undoubted evidence that the bacilli may be carried by milk, oysters, uncooked vegetables, etc., and great stress has been laid on the probability of flies carrying the infection, and I am fully persuaded that it is correct. From all this it is evident we cannot depend on water purification alone to stamp out this disease. Other measures are necessary, and it is the duty of the physicians to set other procedures in operation.

Most all writers will insist that the first and most important

step in prophylaxis is *correct diagnosis.* No doubt you all remember how our physicians were criticized in the seeming negligence in disguising typhoid fever in our soldiers during the Spanish-American war, but it is not necessary to wait for exact, positive diagnosis before instituting prophylactic measures. Dr. Osler has said that every continued fever not yielding to quinin in six or seven days should be considered typhoid fever until definitely ascertained to be something else. For prophylaxis, it is better to go a step further, and not wait for six or seven days, but when there is a suspicious case prophylaxis measures should be inaugurated. These measures do not cause any great hardships; they may cause some slight inconvenience, but so do all preventive measures. Does general vaccination cause no inconvenience? Does the retention of a great ship full of people at quarantine, because there is one case of smallpox aboard, result in no discomfort? The inconvenience and discomfort entailed in combating typhoid are not to be compared with that necessary in stamping out most of the infectious diseases. It is not only the great epidemics that need to be combated, but the cases occurring in succession.

In a large part of the country typhoid fever never dies out. Even in the great epidemics, the onset is, usually, not sudden; one case begets another; there is no spontaneous generation. There is much responsibility resting upon the health board, but, however strict the laws may be governing these matters, the physicians themselves should not be compelled to do that which is so obviously necessary for the benefit of the community. At any rate, they should be the ones to inaugurate the reforms. We have waited long for the health boards to obtain the necessary authority which they now have in most cases, but the procedures necessary are not those which would be easy to compel the people to carry out. What the State can never do, the attending physician can accomplish by proper instructions, advice and directions.

So this brings us to consider the necessary procedures for preventing typhoid fever. Very simple answer, indeed. Simply sterilize the excretions as they leave the patient.

It is not necessary or expedient for me to go into the methods of doing this, for you are all so perfectly familiar with the different methods of doing it. The one important fact I wish to impress upon you is, to be sure and do it. If all physicians would *strenu-*

ously carry out the destroying absolutely of all bacilli of typhoid fever patients as they come from the eliminating organs of the body, we would soon be free from the disease.

When I went to my present place to practice I found thirteen cases of continued malarial and typhoid fever in the little town, which gave me lots of work and broken hours of rest, as well as much anxiety of mind for the welfare of my patients. I worked hard for two or three months in preventive medicine, and the result was that we have not had a single case of typhoid, and but one or two continued types of fever since, though it has been about seven years.

Gentlemen, I believe in preventive medicine, and especially in typhoid fever. In brief, let us make every effort to make an early, positive diagnosis. If unable to do this, we should not wait for positive diagnosis, but, when we suspect typhoid fever, put measures for prophylaxis in operation at once. Let us not neglect our case because others are being neglected, recognizing that each case is an added danger.

Let every physician remove as much of the danger as he can; then there will be fewer cases for others to neglect.

Clinical Reports.

Scrotal Calculus or Calcified Scrotal Hematoma.

By HERMANN B. GESSNER, M. D., New Orleans.

Case Report.—A. D., colored male, aged 35 years, cotton farmer by occupation, was admitted to Charity Hospital on November 12, 1910. He gave a history of having acquired a rupture and a lump in the left groin sixteen years ago. In the course of a wrestlling match with another boy at that time, he thinks he spread his legs too far. An hour later he noticed a swelling in his scrotum, and from that time on always had a lump there; a month later he noticed the hernial protrusion.

On admission, examination showed a small, firm mass about 1x¾ of an inch, oval in outline, in the left half of the scrotum distinctly below the external abdominal ring and above the testis. It was loose, freely movable upward, downward and to either side,

and gave the impression of lying in a bed of loose fasciæ characteristic of the scrotum. Above, the region presented an oblique inguinal hernia, easily reducible.

On November 16 a hernioplasty was done. The mass previously referred to was found in the scrotal fascia, about at the dome of the hernial sac, and adjacent to the vas, to which it was adherent. The separation of the adhesions left the vas surface somewhat rough, but the lumen unopened. The sac was separated from the cord to the internal ring, and there subjected to the usual treatment of transfixion and ligation with catgut. The steps of the closure followed the method developed by Dr. Rudolph Matas and in common use in New Orleans in his Charity Hospital and Touro Infirmary services: (1) The cord was dropped, (2) the conjoined tendon was apposed to Poupart's ligament by sutures of catgut, the loop on the tendon side, the strands carried through the ligament with a Reverdin (patent-eyed) needle; (3) the lips of the external oblique were overlapped with sutures of catgut and the edge of the overlapping lip tacked down with catgut. Stitches were removed five days later. Primary union followed.

Examination of the specimen showed it to be surrounded by a thin sheet of fascia. It was hard, elastic, and had a mulberry surface, though not pronounced; when dropped into a vessel it produced the usual sound of a hard body. It was examined by Dr. O. L. Pothier, pathologist of the Charity Hospital, to whom we are indebted for the following report, as well as for the accompanying picture, which is nearly life-size:

a. Irregular surface of "calculus."
b. Bit of fascia.

"Specimen of tissue and calculus taken by means of knife from scrotum was found to show fibrous tissue with blood-vessels. No evidence of vas calculus existed. The mass weighs 5.7 grammes and measures 2½x½ c.m. On sectioning, it was found to present a calcareous shell enclosing cholesterin crystals, red and white blood cells."

Comment: The history of the case and the microscopic findings would suggest the formation of a hematoma at the time when a mass first appeared in the scrotum. Probably this blood mass in the course of time became invested with a calcareous shell in nature's effort to sequestrate it, while at the same time complete desiccation left within the shell the calculous body described above.

The word calculus does not apply strictly to such a body, calculus denoting a concretion, a mass formed by the gradual deposition of layer after layer on a nucleus. However, in a physical way, it resembled such a concretion quite closely. I have seen but one other similar body in connection with a hernia, and that it was not my good fortune to be able to remove.

Early Hepatic Manifestations in Syphilis.

By E. M. DUPAQUIER, M. D., New Orleans.

On November 28, 1910, Mrs. X. calls me in. General malaise, chills and fever, light jaundice. Blood test results in negative Widal, negative for malaria. Jaundice grew more intense, liver enlarged, sore on pressure, chiefly in the gall bladder area.

December 28, 1910, called in consultation Dr. E. D. Martin. The same day the consultation was held, there appeared large nodular syphilids over the whole body, chiefly on the face and upper extremities. There was a case of syphilis in the house.

We felt a large fluctuating lump, sore to pressure, on site of gall bladder. Case was sent to the Presbyterian Hospital for surgical treatment, drainage. Before this was decided upon, Dr. Parham was asked to see the case. Dr. Ménage, also, was invited to take a look at the eruption. We decided to clear up, first, the suspicion of syphilis. Wassermann test was positive.

January 2, 1911, specific treatment, mercury and sodium cacodylate by needle was begun, with daily injections. Case responded beautifully; jaundice and syphilids cleared up.

January 30, 1911, patient discharged for the present manifestations.

Comments: This looks like a syphilitic hypertrophic cirrhosis. The treponema will cause hypertrophic cirrhosis, at the start, just as the tubercle bacillus or the Hemameba of malaria; just as the various infective agencies from the alimentary tract commonly infecting the bile ducts, large and small, with or without gallstone formation. Cirrhosis, we know, does not always mean abuse of alcohol. A case like this, in a total abstainer, is sufficient to set a physician who does not know it thinking. He will be still more convinced when he sees cirrhosis in cases of diabetes and heart

disease. And, what about Budd's non-alcoholic cirrhosis from dyspepsia—in total abstainers, but where highly seasoned foods and spices are used?

Again, syphilis of the liver is not always due to gummata, in the late stage, as too commonly stated, in bobtailed medical literature. In a case of acute jaundice that cannot be accounted for readily, think of syphilis; and it is, then, a cinch to clear it up.

Orleans Parish Medical Society Proceedings.

Meeting of April 10, 1911.

Dr. Eshleman's Discussion of Dr. Hummel's Paper on Intermittent Claudication.—I have been very much interested for some time in the subject which Dr. Hummel has brought up and I recall several cases recently seen. One of cerebral claudication seen recently was in a prominent man, 56 years old, whose business was that of cotton operator and who was leading a high tensioned life, which is so frequent among individuals of this class. He had, two months before, experienced his first attack, which set in with severe headache, confined to the right side of the head, transient vertigo and partial loss of mobility in the left arm and leg, also slurring speech. The attack lasted two weeks before the symptoms began to subside, and I wish that Dr. Hummel were here to make some comment upon this point. The second attack in which I saw him began similarly, but was not as severe. The dizziness, intense headache, numbness and tingling were all present. His blood pressure at the onset must have been 200 m. m. of Hg. The following day it had fallen to 180 and, along with the gradual subsidence of symptoms, it dropped to 145, and finally to 130, where it remained and which seemed to be his normal pressure.

He was completely free of symptoms in five days. His peripheral arteries were remarkably free from evidences of sclerosis.

A second case was in a man of 44 years, who showed most extreme sclerosis of all the peripheral vessels. His attacks were confined entirely to the legs and occasionally in the thighs. Paroxysmal, severe, and causing excruciating agony while they lasted—a true case of angina cruris.

A recent case of erythromelalgia, which is probably a vascular condition, gave a history of claudication pains in the calf of the leg involved.

In conclusion, I would emphasize two points: First, that spasm may occur in perfectly normal vessels. Such a case was recently reported by Dr. Bruns, in which he noted spasm of the retinal vessels in a young girl of 14 years; sclerosis was not the cause in this case. Also certain types of angina pectoris have been reported where the vessels have been normal. Secondly, that in the great majority of cases the spasm is associated with arteriosclerosis and is often an early manifestation of it.

N. O. Medical and Surgical Journal

Editorial Department.

Chas. Chassaignac, M. D. Isadore Dyer, M. D.

The A. M. A.

As the annual meeting of our national association is to take place at the end of the month, it is time that preparations be made for a good attendance from Louisiana.

It is time also that those who are going should ponder seriously over some important questions involving the integrity and prosperity of the association.

Also is it high time that the delegates and the entire membership of our State Society should give these matters serious consideration and prepare themselves to act thereupon.

It is notorious that the legal status of the national association has been questioned, including the legality of its elections. It is well known that the wisdom of limiting the power of the board of trustees has been argued. Many have claimed that it is difficult for any one disagreeing with the powers that be to obtain a fair hearing in our association journal. Our own State Society has already placed itself on record as favoring the ballot and referendum in the national association.

Granting, for argument's sake, that those giving voice or thought to the above doubts, queries, and ideas are in the minority, that some of them are kickers or cranks, that our State Society is the only one favoring democratic principles in the association, it must be equally granted that the minority has rights and is composed of a goodly number of earnest and conscientious members who are entitled to fair consideration, also that to the State of Louisiana is due a respectful hearing.

The momentous questions cannot be settled by calling members names and ignoring a State Society. They must be met without dodging, be debated seriously and weighed fairly. Nothing less will insure the future cohesiveness of the association because nothing less is just nor even politic.

American Society of Tropical Medicine. New Orleans Meeting.

It is gratifying to all interested that the meeting of the American Society of Tropical Medicine, held in New Orleans, May 18 and 19, should have been declared the most interesting session of this body ever held since its organization. The scientific sessions were all of particularly high grade and the clinical features of the meeting demonstrated more than ever the possibilities of New Orleans as a center for the study of exotic diseases, as well as those peculiar to sub-tropical and tropical climates.

The meetings were largely attended, and in addition to some twenty-five active members of the Society itself quite a number of physicians from neighboring States took advantage of the unusual occasion to be present at this gathering of scientists, many of them notable in their special fields. Not only was there a considerable delegation from the Isthmus, headed by the distinguished sanitarian, Col. W. C. Gorgas, but, as well, China, Norway and Honduras were represented.

The opening session was held on the morning of May 18 at the Orleans Parish Medical Society rooms and was especially notable for the admirable address delivered by the President of the Society, Dr. W. S. Thayer, of Baltimore. His report reviewed the organization of the Society and briefly adverted to the wonderful development of preventive medicine at the hands of Americans, as evidenced by the sanitation of Cuba, the Canal Zone, and the riddance of yellow fever along the Gulf Coast. He stressed the attitude of the public and the spirit of co-operation which now made sanitation possible. The suggestion was offered that an International Congress of Tropical Medicine be organized in connection with the celebration of the opening of the Panama Canal in 1915.

To the readers of the JOURNAL no part of the President's report could carry greater importance than the strong recommendation, which practically concluded the address, naming New Orleans as the "Logical Point" for a Department of Tropical Medicine and the Tulane University of Louisiana as the institution which better than any other in the United States could serve the purposes of administering such a school. Said the Doctor: "No greater service could be rendered to this city, this State, or our common country, than the fitting endowment of such a Chair."

The Secretary, Dr. J. M. Swan, reported an active membership of 120, with 17 corresponding and 40 honorary members. The Council of the Society nominated the following for office for the coming year and at a subsequent meeting the nominations were made effective by unanimous vote: President, Dr. J. H. White, New Orleans; Vice-Presidents, Drs. Judson DeLand, Philadelphia, and Richard P. Strong, Manila; Secretary, Dr. John M. Swan, Watkins, N. Y.; Assistant Secretary, Dr. Allen J. Smith, Philadelphia; Treasurer, Dr. C. Lincoln Furbush, Philadelphia; Councillors, Drs. Ramon Guiteras, New York, and C. C. Bass, New Orleans.

Papers were presented on malarial types of fever, experiments with syphilis and yaws, sprue; experimental work with leprosy, including the researches in the Department of Pathology of Tulane; and the treatment of leprosy with salvarsan, not showing any particular permanent results.

Clinics were held at the Charity Hospital in which numerous cases of interest were shown, notably those with pellagra.

The symposium on Amebiasis occupied most of the morning session of the second day, while in the afternoon the discussion of pellagra and yellow fever were the main topics, to which was added the presentation of an interesting case of bilateral ainhum originating in Louisiana, and a paper presented by Professor Gustav Mann, of Tulane, on Experimental Work in the Poison Glands of Snakes.

The social features of the meeting were much appreciated, though characterized by thorough informality.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of Dr. P. Michinard and Dr. C. J. Miller, New Orleans.

Primary Sterility in Women.—A. J. Rougy's (*Med. Rec.*, Feb. 18, 1911) remarks are based on the study of 120 cases applying for treatment for primary sterility, and whose husbands were also examined. He found that sterility was due to inflammatory

processes of gonorrheal origin in fully 70 per cent of the cases. Dysmenorrhea was present in 84 per cent of the patients. Displacements of the uterus are not great factors in the production of sterility, and seldom does pure mechanical obstruction cause sterility. It is the stenosis of the cervical canal produced by endocervicitis that prevents conception. Sedentary occupation in early adult life is the most important cause for the various flexions of the body and cervix of the uterus. Leucorrhea was present in 96 per cent of the patients and in 20 per cent the reaction was highly acid. The small or infantile uterus, unless associated with other conditions pointing to congenital maldevelopment, seldom, if ever, causes sterility. In nearly 12 per cent of cases of primary sterility one is unable to account for it in either the husband or wife. Seventy per cent of the husbands of women who suffer from sterility have had gonorrhea, and in 40 per cent the infection extends to the posterior urethra and neighboring structures and is incurable. Thirty per cent of men who were infected with gonorrhea suffer from azoospermia. The best operative results were obtained by the dilatation and stem pessary method in cases that had not suffered from severe dysmenorrhea. The Dudley did not cure the severe forms of dysmenorrhea. Plastic operations on the tubes and ovaries do not give much hope for the cure of primary sterility. The prognosis for the cure of sterility is unfavorable; 80 per cent of the patients remain uncured. The greatest single factor in the production of sterility is gonorrhea and its complications. A goodly number of cases require medical treatment only, and as soon as the cervical discharge is cleared up conception is likely to take place. Pathological lesions in the genital tracts of both husband and wife may in time disappear, and therefore one must never give an absolutely unfavorable prognosis unless the husband is suffering from aspermia. MILLER.

VAGINAL CESAREAN SECTION, METREURYSEO-HYSTEROTOMY AND LABOR A LA BOUDDHA.—A. Duhrssen (*L'Obst.*, Nov., 1910) says that the classical Cesarean section is the most dangerous operation known, since it transplants, if the woman is infected, the pathogenic microrganisms from the uterus into the peritoneal cavity. As a remedy, and an operation that may safely be employed in the majority of cases, the author recommends vaginal Cesarean section. Vaginal Cesarean section consists in the opening of one or both

culdesacs, the separation of the bladder from the peritoneum, and the incision of the wall of the uterus up to the insertion of the serous membrane. If both culdesacs are opened one cannot fail of obtaining an opening sufficient for delivery. The author has simplified this operation, which he calls metreuryseo-hysterotomy. It is especially useful when there is infection which would contra-indicate abdominal section. This operation may be made radical by combining with it the removal of the uterus by the vagina after delivery. Vaginal Cesarean section is recognized as rapid, devoid of danger, and not blindly done. It is indicated in all grave accidents compromising the life of mother or child when the cervix cannot be dilated by ordinary methods. The author's simplified operation can be done by any practitioner if he has studied the necessary incisions and practiced the operation on the manikin devised by the author. This simplification consists in the introduction of a balloon Champetier de Ribes, which is filled with air, withdrawing this balloon forcibly towards the vulva, and doing the section on the balloon. The assistant may be a midwife, who draws upon the balloon and holds the speculum. The advantages of this operation are that when a dilatation with the balloon is unavailing we are in a position to proceed with it at once; the traction brings the uterus down to the vulva; by continuing the incision into the uterine wall, anterior and posterior, the traction of the balloon in different directions brings the two culdesacs into view; the balloon produces an ischemia which renders the operation almost bloodless. It is of great value in pracenta previa. It transforms the vaginal Cesarean section into an easy operation. Ergotin is given after the balloon is in place, and after its removal the child may be extracted by version or forceps. Expression removes the placenta, and if hemorrhage continues the vagina may be tamponed with iodoform gauze. When it ceases the uterine wound is sutured and the vagina wound requires no sutures, a place being left for drainage, which is always essential. This method has been applied systematically at Munich for a year with excellent results, and has produced a lessening of mortality of mother and child. In deformities of the pelvis thousands of children may be saved by this method. More may be saved by a combination of vaginal and abdominal incisions made extraperitoneally below Poupart's ligament. This the author calls accouchement a la Bouddha. It is

performed by making an incision below Poupart's ligament of the same length as the ligament down to the fascia transversalis, ligature of the epigastric artery, cutting of the round ligament, and raising the peritoneum from the bladder. Metreuryseo-hysterotomy is then done, and the incision is prolonged toward the fundus of the uterus. The forceps is applied and the fetus is extracted through the pelvis or it may be delivered through the abdominal incision. This is the most perfect form of Cesarean section extraperitoneal. Drainage is perfect; it may be done in case of infection and tympanites uteri; it is not difficult to perform when the practitioner has once seen it done. It is superior to symphysiotomy in not opening the articulation; it may be employed in greater degrees of contraction without fear of tearing the organs; the child never suffers, since the infant avoids the pelvic ring. The author has performed this operation in forty-two cases with four deaths, none of which were due to the operation. In the last twenty-four operations done by the simplified method there has not been a death. This operation is outside of the peritoneum; it may be done very early; deliverance is normal; dangers for future labors are no greater than after vaginal section; the esthetic results are excellent.—*Amer. Jour. Obst.* MILLER.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

DYSENTERY CARRIERS.—Macalister (*Brit. Med. Jour.*, 1910, ii, 1506) divides carriers into two great classes. The first class consists of healthy persons, who have never suffered from the disease, and show no signs of ill health, but nevertheless harbor and scatter the specific organism. In the instance of bacillary dysentery this class is small and unimportant. The author has never found a single case, but Condadi, Collins, and Mayer have been able to demonstrate such conditions in both children and adults living among those affected with the disease. In the second class are people who have had the disease and are thereafter unable completely to eliminate the infection. As agents in the spread of the disease this group cannot well be overestimated in importance.

They consist of two groups, in the first of which convalescence is discovered only by the continuation of agglutination. They do not relapse, but they harbor infection somewhere, and an occasional stool contains mucus. The second group is of relapsing and chronic cases, a constant source of infection. Macalister emphasizes the need of isolation, observation, and care during convalescence as a means of prevention of spread of an epidemic. Unfortunately, these incomplete convalescents form a high proportion of the cases. J. A. S.

The Presence of Bacterium Coli on Out-of-Door Objects, Especially on Food.—Georg Neumann (*Deut. med. Woch.*, 1910, xxxvi, 2046) has proved the presence of Bacterium coli on the equipment of kitchens and outhouses which was constantly being touched and handled by human hands. He undertook a second investigation on foodstuffs and fruits. The Eijkmann method was used in both investigations. The Bacterium coli was found present and identified, in two out of five, on loaves of bread; once in eight times in wheat; eight times in eight different samples of milk; and two out of four times in butter—the specimen being taken from the center of the mass. Fruits tested—apples, pears, plums and grapes bought from hucksters—all showed positive results, and Bacterium coli was identified in four tests on apples, and positive three times in four tests on pears and plums. The result was practically the same on fruits bought in market from farmers. Apples, pears and plums which showed Bacterium coli were given to a maid to be washed under a spigot, and then the fruit was again tested. The two apples showed Bacterium coli after washing; of the two pears, one only was negative after washing, but both plums were negative after washing. This test was repeated with practically the same result, on fruits from a different source. Bacterium coli was isolated and identified in all the positive tests. In tracing the method by which Bacterium coli reached the fruit, Neumann found the following facts: The ground underneath and near the tree bearing the fruit showed the presence of Bacterium coli in all of ten examinations, but as the fruit was practically all picked from the trees, and did not reach the ground, Neumann took cultures from fruit still on the trees, on a hot, dusty day, to test whether or not the dust conveyed Bacterium coli to the fruit. In the fifteen examinations thus made, including many cultures

from fruit in several orchards, not one was found positive. This conclusively showed that the fruit was contaminated by the hands of the hucksters and dealers. Grapes seem the only exception, since four examinations on grapes bought from hucksters were negative, and five examinations of grapes still on the vine were also negative. The tests on drinking water were negative. Neumann points out the dangers of epidemics through the infection of the intestinal tract from fruits and also other food, grapes being apparently an exception. From his investigations he predicts it safe to eat fruit personally plucked from the trees. He claims that wherever the human hand is laid there Bacteria coli may be found.—*Amer. J. Med. Sc.* J. A. S.

The Present Status of the Colon Tube.—By means of skiagrams, Yates (*Amer. Jour. Obst.,* 1910, lxii, 761) has demonstrated that seldom, if ever, are soft rubber tubes admitted into the normal colon. When an endeavor is made to force the tube upward, even by the gentlest manipulations, it is found to coil itself up in the rectum and there do positive harm, because of pressure, irritation, and the consequent inability to retain the enema. In perhaps half the instances it is impossible to tell when the tube is coiling upon itself, even when we suspect it. Colon tubes as such are of no value, because they do not reach the colon, and they are mischievous in that proportion as we endeavor to force them higher up. Water or fluid injected four or five inches into the rectum is carried upward into the colon, and may be found at the cecum in ten minutes. There is good reason to believe that a reversed peristalis is set up when fluids are injected into the rectum. The introduction of a tube more than five inches for colonic irrigation or other purposes is useless, and likely to defeat the object desired. —*Ibid.* J. A. S.

The Treatment of Gastric Subacidity with a Coarse Diet and Lemon Juice.—Roemheld (*Therapie d. Gegenwart,* 1910, li, 285) says that it is a well-known fact that coarse foods exert a greater stimulating action upon the gastric secretions than do foods that are finely divided. Thus it is customary to give patients with gastric hypersecretion food in the form of soups or purees in order to diminish the acidity. Roemheld has observed that in patients with a diminished acidity but with unimpaired motility it was

impossible to increase the acidity by giving coarse foods, such as graham bread, fruit, cereals, salads, etc. This same effect was observed in cases of lowered acidity of nervous origin, and in gastritis with low acidity and an increase of the secretion of mucus. He believes that the coarse food excites mechanically the production of gastric juice, cleanses the mucus from the stomach, and counteracts constipation, which is so often associated with subacidity. Roemheld also believes that there are many patients who are not able to take hydrochloric acid. He advises giving such patients citric acid, especially in the form of lemon juice added to salads.—*Ibid.* J. A. S.

The Tuberculin Treatment of Pulmonary Tuberculosis in Office and Dispensary Practice.—Miller (*New York Med. Jour.*, 1910, xcii, 160) says that the present position of tuberculin therapy may be summarized as follows: (1) Tuberculin is a valuable addition to our means of treating pulmonary tuberculosis, its effects being best evidenced by a greater permanence of good results, a larger proportion of cases which lose bacilli from their sputum, and the relief from toxic symptoms, especially in chronic advanced cases. (2) Tuberculin can do no harm when given carefully in proper dosage. (3) No one of the ordinary preparations of tuberculin possesses any material advantage over the others. (4) The so-called clinical method is the most practicable guide for the administration of tuberculin in pulmonary tuberculosis, and the aim should be to produce no general reactions. (5) The time element in treatment is more important than the absolute dosage, the latter varying with every case and the former being never less than six and often more than eighteen months. (6) With unimportant modifications, this method of treatment is quite as applicable to dispensary and office patients as those in sanitaria.

J. A. S.

Miscellaneous.

Magnesium Poisoning.—Boas (*Jour. Amer. Med. Assoc.*, 1910, lv, 2038) reports ten cases of poisoning after the administration of magnesium sulphate. In seven of the cases there was no cathartic effect from the magnesium sulphate, but, on the other hand, the salt seemed to cause a paralysis of the bowel. This paralysis was

so marked in two cases that laparotomies were performed. A marked diminution of the urine also occurred, amounting in some almost to anuria. Vomiting occurred in about half the cases, and in only one case was there active purging. This patient took the salt in several pints of the beer, and possibly this death may be attributed to the violent purging. Convulsions and motor paralysis were observed in two cases. A striking effect was the depression of respirations that occurred in six of the cases. Boas draws the following conclusions: (1) Magnesium sulphate, in bulk or in concentrated solution, is absorbed, in part at least, from the gastro-intestinal tract into the blood. (2) If a sufficient amount of the salt is absorbed, at a given time poisoning will result. Of the ten cases reported, six resulted fatally. The symptoms and autopsy finding in these cases agree very well with those obtained in animals after the intravenous application of magnesium sulphate. (3) On account of the slowness of its excretion from the system, magnesium sulphate, given repeatedly in concentrated solution, may produce poisoning by cumulation. (4) In normal condition of the bowel, magnesium sulphate, in proper dilution, is a valuable cathartic (5) It is not wise to give magnesium sulphate indiscriminately in cases of so-called acute intestinal obstruction, because, when peristalsis is much diminished or absent, and in cases of mechanical obstruction of the bowel, even dilute solutions will be absorbed, with consequent danger of poisoning. (6) In cases of suspected magnesium poisoning, large quantities of normal salt solution should be given intravenously. Dilute solutions of lime salts given hypodermically may also be of benefit. (7) The subcutaneous use of magnesium salts to produce catharsis, as prepared by Wade, is not only absolutely irrational, but dangerous. J. A. S.

Calomel as a Diuretic.—Felix V. Szontagh (*Archiv. f. Kinderheilk*, 1910, lv, 121), while agreeing on the diuretic action of calomel, takes exception to the statements of various pediatric authors that calomel is a fitting and excellent diuretic in nephritis. He claimed that calomel is contraindicated in true nephritis. Aside from any general diuretic action, calomel, as an end result, acts as a strong irritant to the kidneys, and in large doses may set up a desquamative nephritis. In this he agrees with Leube, who also warns against the use of calomel in renal dropsy in children. Szontagh tends to the belief that dropsy, up to a certain point, pre-

vents uremia, the poisonous matters being held in solution and temporarily withdrawn from the circulation; and that it is a questionable practice to induce a large and free diuresis by calomel in such cases, thus causing a reabsorbtion of the poisons in large quantities, which tend to the development of uremia. In these cases, of renal dropsy, with threatening uremia, the possibility of cardiac insufficiency is of greater importance. An increase of diuresis by calomel would in this case do the heart no good. He claims that calomel should not be exhibited for its diuretic or purgative action in renal dropsy or in post-scarlatinal nephritis. It is his belief and experience that the domain of calomel as a diuretic lies entirely in cardiac dropsy. He comments on the absence of this fact in pediatric publications and text-books, where calomel in this connection is spoken of as a "two-edged sword" and a dangerous drug. He cites several cases of cardiac dropsy, as an illustration of his general experience, in which digitalis, strophanthus and caffeine had an appreciable effect on the dropsy, but when calomel was administered for its diuretic effect it brought up the urine output invariably from 200 c. c to 2,000 c. c., and even as high as 4,800 c. c. By using calomel in this way he has prolonged life at least a year in hopeless cases. He has had no bad results in the way of mercurialization in his cases, and he claims that calomel is the most efficient remedy for reducing severe cardiac dropsy in a short time without danger of mercurialization. J. A. S.

Influence of Quinin on Phagocytosis.—Smith made a series of researches to ascertain, if possible, the truth of the statement that quinin, like alcohol, in excess, inhibits phagocytosis, and is, therefore, contraindicated in septic conditions. The opsonic index was taken as a basis for the work, with the additional factor of a solution of quinin and morphia. The very soluble acid hydrochlorid of quinin was selected because it is much less irritating than the sulphate, and contains 8 per cent more quinin. Morphin hydrochlorid, ⅛ grain, was added to each 10 grains of the quinin salt. It was roughly calculated that a 10-grain dose given to a person weighing 140 pounds, if entirely absorbed, would represent in the blood a proportion of 1 to 7,500. The influence of this solution (1 to 7,500, equivalent to a 10-grain dose) on the phagocytosis of different kinds of pathogenic organisms (e. g., strep-

tococci, staphylococci, pneumococci, B. coli, B. influenzæ, B. pseudo-diphtheria, and B. tuberculosis) was contrasted with stronger and weaker solutions to ascertain the effect of varying doses. In the majority of the eleven sets of experiments, there was an increased phagocytosis, always most marked with the 10-grain dose solution. Instead of inhibiting phagocytosis, the addition of quinin and morphia, in what may be considered the "ideal" dose, greatly increased it. Smaller doses in all the groups were less effective, and one important fact was clearly demonstrated—namely, that very large doses (30 to 40 grains), instead of increasing, actually diminshed phagocytosis, sometimes to the extent of 50 per cent.—*Lancet.* J. A. S.

Influence of Alcohol on Nitrogenous Metabolism.—A study of protein metabolism and utilization, and especially the partition of nitrogen in the urine, under the influence of alcohol, was carried out on man and dogs under fixed and comparable conditions of diet. In man, the doses used were moderate—*i. e.,* 500 calories daily in the form of alcohol distributed in six portions. With the animals a range of dosage leading to distinct intoxication was employed. The findings in general were as follows: There is no pronounced disturbance in the alimentary utilization of the foodstuffs. Moderate doses exert a protein-sparing action, which is succeeded by loss of nitrogen when larger quantities of alcohol are administered. The partition of urinary nitrogen remains remarkably unaltered, with the exception of an increased elimination of ammonia nitrogen (accompanying other evidences of perverted metabolism as indicated by the appearance of optically active levorotatory) compounds in the urine, following "toxic" doses, and a higher output of purins. The theoretical significance of the latter, which affects both the endogenous and exogenous fractions, is discussed at some length, and its bearing on the assumed nutrient properties of alcohol is indicated. The most significant impression, perhaps, which the analytical data afford, is the absence of pronounced alterations indicative of markedly disturbed protein metabolism, even when comparatively large doses are continued for days and weeks. This has been interpreted as an other evidence of the "factor of safety" in metabolism.—*American Journal of Physiology—Jour. A. M. A.* J. A. S.

Rare Occurrences in the Rheumatism of Childhood.—F. J. Poynton *(Brit. Med. Jour.,* 1911, ii, 5) urges the importance of accepting the view that rheumatism in childhood is an infection. Early recognition of the symptoms is the first step in successful treatment, and this is made possible only through a thorough medical inspection of school children. His observations on the rarer forms of rheumatism in childhood are based on a series of 600 cases. Rashes in rheumatism are usually urticarial and erythematous, and, in 600 cases, Poynton found them present at the beginning of the disease in forty cases. At times the rash simulates scarlet fever and exhibits a rapid, branny desquamation. Chorea, joint complications or endocarditis frequently follows rheumatism. He mentions the tendency to purpura in acute rheumatism, and cites a number of cases in point. Pemphigus and herpes are found in rare instances, and a combination of several of these forms has been observed. Erythema nodosum, while not proved to be an effect of rheumatism, is probably closely allied to it. Tachycardia is an occasional occurrence in rheumatism, and occasionally persists for a long time. Prominence of tachycardia, with irregularity, is often found where the heart muscle has suffered more than the valves. He has never seen an enlargement of the thyroid gland in the rheumatism of childhood. Mastitis occurs occasionally.

J. A. S.

Subcutaneous and Intravenous Nourishment With Grape Sugar.—Berendes *(Zentralbl. f. Chir.,* 1910, xxxvii, 1217) says that many attempts have been made, experimentally in animals and in sick men, to supply nourishment subcutaneously with such substances as cod-liver oil, olive oil, sugar solutions, Siegfried's pepsin-fibrin-peptone, and other albuminous foods. Although many satisfactory results have been obtained, subcutaneous nourishment is not systematically employed. Kausch has been employing this method for a long time in patients who have been operated on. The nourishing material was mixed with saline solution and was given subcutaneously and intravenously. Berendes reports concerning the results in Kausch's cases in which glucose was employed. It was given in 0.9 per cent sterilized saline solution, which was usually of light-yellow color and thinly fluid. Subcutaneous absorption of this fluid was slightly slower than when a pure saline solution

was used, and the one gave no more pain than the other. During the introduction intravenously there was no pain, the patient, at most, complaining of a feeling of heat in the head or in the wound. In general, there was a feeling of warmth and slight discomfort, and the pulse became stronger. The temperature remained unchanged after the infusion, except in two cases, in which, immediately afterward, chills and a temperature of 39.5° and 40° C. occurred. In both, the temperature fell to normal after a few hours. Examinations of the urine made before and after the infusion never showed sugar, when the amount introduced amounted to 50 grams (1 liter or a 5 per cent solution)—in children correspondingly less. Only when the infusions were continued for several days was there a very slight amount of sugar in the urine in the later days. After one infusion of 75 grams (1 liter of 7.5 per cent solution) there was no excretion of sugar. From a single infusion of 80 grams and upward, sugar appeared in the urine, but in a surprisingly small amount. It was observed that generally when sugar appeared in the urine it did so in catheter urine immediately after the infusion, and then gradually disappeared. The excretion of sugar depends manifestly upon several factors—the amount of sugar introduced, its concentration, the duration of the infusion, the body weight of the patient, the degree of inanition, and the existing trouble. The patient did not suffer from the excretion of sugar or the infusion. The sugar retained in the body was manifestly used up.—*American J. M. Sciences,* December, 1910. J. A. S.

Glandulæ Parathyroideæ.—From the reports of Marogna and Massaglia it may be gathered that preparations of the parathyroid gland are of very good service in paralysis agitans. It is well known that Berkeley had previously drawn attention to this. Marogna admits that paralysis agitans is not always due to a disturbance of the function of the parathyroid gland, yet he recommends a trial with parathyroid gland (parathyroidin Vassale), for in one case of Parkinson's disease he considers that he demonstrated the utility of this treatment. On giving the remedy, he observed a definite improvement, while on leaving off the treatment the tremors reappeared. Massaglia, who has also used the remedy with success, had been led to expect a satisfactory result only in

cases of senile tremor and of Parkinson's disease, in which there is a relative or absolute insufficiency of the parathyroid glands. In his opinion, this circumstance may even be regarded as of diagnostic value.

Tetany occurring spontaneously may be successfully dealt with by the use of parathyroid gland preparations, as well as by calcium salts. MacCallum and C. Voegtlin consider it immateral from what species of animal the parathyroid gland has been obtained. In their experience, the action endures for several days, but must, for obvious reasons, be continually renewed by repeated doses. A further indication for glandulæ parathyroideæ is given by Nubiola and Alomar in uremic conditions in which the preparation is said to show a definite diuretic action. J. A. S.

Glandula Thymi.—A contribution by K. Basch to the physiology and pathology of thymus affords an explanation of the therapeutic value of thymus treatment. Fischl, some time back, was led by animal experimentation to regard the excision of the thymus as a useless procedure, but Basch has shown that in dogs, after the extirpation of the thymus gland, there occurs an over-excitability of the peripheral nervous system wihch is not so pronounced as after the extirpation of the thyroid, and rather resembles the latent tetany of infants. The enhanced excitability of animals after the removal of the thymus was found by the author to be inhibited by the subcutaneous injection of calcium lactate, but not by the administration of this preparation by mouth. Oil of phosphorus did not produce any diminution in the excitability. A diminution could be obtained by the injection of thymus juice, and this is a point of importance in organo-therapeutics. R. Webb Wilcox attributes the action of thymus treatment to the nuclein contained in thymus and in thymus preparations, and this, because of the phosphorus it contains, has a favorable action upon the general growth of the body, and especially upon the growth of the bones. In practice, the author demonstrated the value of thymus administration in a boy whose growth was retarded. This boy was given 2 grams (30 grains) of thymus substance every morning and every evening for months, with completely successful results.

J. A. S.

Keratin.—Commercial keratin, such as has been in use for coating pills, is well known to have failed to comply with the re-

quirements as regards insolubility in water and in the gastric fluid. It is, therefore, a matter of interest to pharmacists to learn that L. Golodetz has found a method of preparation which, as he declares, ensures a satisfactory product. The method is as follows: Horn shavings are treated with ammonia under a pressure of four atmosphere, with the result that the horny substance separates into keratin A and keratin B. The latter, after being cleansed from adherent albumoses, forms a substance suitable for coating pills. For use, it is dissolved in solution of ammonia.

The unsuitability of keratin, as hitherto prepared commercially, is attributed by the author to the fact that it does not contain the most resistant substances of horn, while it is mixed, to a greater or less extent, with soluble albumoses. These adversely affect the quality of the coating of pills, and entirely abolish the insolubility of keratin. Therefore, the preparation was more or less resistant to water and to pepsin-hydrochloric acid, according to the amount of horny albumoses it contained. This fact explains the contradictory statements of authors regarding the value of keratin as a coating for pills. J. A. S.

Louisiana State Medical Society Notes.

In Charge of Dr. Joseph D. Martin, Secretary, New Orleans.

Parish Society Meeting.

The Bienville Parish Medical Society met in regular session in Arcadia, La., on the first Tuesday in April, 1911, at 10 o'clock A. M., and though not a great many members present, the meeting was a success in every respect.

The following officers were elected for the current year: President, Dr. S. I. Colvin, of Gibsland; Vice-President, Dr. E. Otis Edgerton, of Arcadia; Secretary-Treasurer, Dr. W. W. Teer, of Arcadia; Member House of Delegates, Dr. E. Otis Edgerton.

Dr. F. M. Thornhill read a very interesting and instructive paper on Diagnosis and Treatment of Diseases of the Mitral Valve; discussion by Drs. Colvin, Neill, Edgerton and Pipkin. Dr. Pipkin

also favored the Society with an address on the practice of medicine years ago.

The next regular meeting of the Society will be held in Gibsland, La., on the first Tuesday in July, 1911, with the following scientific program: Bronchial Asthma, Dr. O. O. Hamner, of Bienville; Cholera Infantum, Dr. W. W. Teer, of Arcadia; Diagnosis and Management of Occipito-Posterior of Face to Pubis Presentations, Dr. Joseph Atkinson, of Arcadia; Erysipelas, Dr. J. A. Neill, of Alberta. (Signed) W. W. Teer, M. D.,
Secretary-Treasurer.

In Memory of Dr. Geo. F. Wilson.

Dr. Geo. F. Wilson was born in Butler, Choctaw County, Ala., October 4, 1861, and died in the Schumpert Memorial Sanitatrium, at Shreveport, La., October 4, 1910, age 49 years. He attended the Alabama Medical College four years and graduated from that institution March 29, 1889, and in May of that year located at Sparta, La., where he practiced until April, 1892, when he moved to the town of Bienville, in the parish of the same name, where he soon established himself in the confidence and esteem of the people, and continued the practice there with marked success until his death.

A singular coincidence connected with the death of Dr. Wilson is the fact that he died of appendicitis on his forty-ninth birthday, and on the day of a regular meeting of his Parish Medical Society, at which time and place he had been appointed to read a paper on the "Medical Treatment of Appendicitis." The Society, on that day, having learned of his death, adjourned out of respect to his memory.

As a citizen, Dr. Wilson enjoyed to the fullest extent the confidence and respect of all classes, and as a physician few have been so universally loved and esteemed in the community in which he lived. He was held in the highest esteem by the profession, and had served his Parish and State Medical Societies as their Vice-President with honor to them and credit to himself.

In the death of Dr. Wilson the Bienville Parish Medical Society and the profession of the State have lost an honorable and useful member.

Therefore, be it resolved, That this memorial be given a place in the minutes of this Society; that we deeply sympathize with Mrs. Wilson in the loss of her husband, and that she be furnished a copy of this memorial, and that a copy be furnished the New Orleans Medical and Surgical Journal and the *Bienville Record* for publication.

(Signed) F. M. Thornhill, M. D.,
O. O. Hamner, M. D.,
S. I. Colvin, M. D.,
Committee.

Medical News Items.

The Louisiana State Pharmaceutical Association held its twenty-ninth annual meeting in New Orleans on May 17. Anthony di Trapani was elected president.

The Mississippi Dental Association held a successful meeting at Hattiesburg on May 9.

The American Medical Editors' Association will meet in Los Angeles, June 26-27, under the presidency of Dr. J. McDonald, Jr.

The National Association for the Study and Prevention of Tuberculosis will hold its seventh annual meeting in Denver, Colorado, on June 20-21, under the presidency of Dr. William H. Welch, of Baltimore.

The New Orleans Pure Milk Society held its second annual meeting on May 1. Several interesting reports were read, showing the progress of the past year. The following members were named for the milk commission for the ensuing year: Dr. W. W. Butterworth, Robert H. Polack, Joseph Devereux, Dr. M. T. Lanaux, Dr. Isaac I. Lemann, Dr. C. King Logan, Dr. L. R. DeBuys, Dr. C. H. Rice. The following were named to serve on the Board of Directors: J. K. Newman, Martin Behrman, Mrs. W. J. Behan, Frank B. Hayne, Frank T. Howard, Charles A. Farwell, H. R. Labouisse, Robert H. Polack, Samuel W. Weis, Dr. W. W. Butterworth, Dr. L. G. LeBeuf, Dr. John Oechsner, Dr. Isaac I. Lemann, Dr. L. R. DeBuys, Mr. Joseph Devereux, Dr. C. H. Rice, Prof. W. H. Dalrymple, Col. George McC. Derby, Prof. James H. Dillard, Charles Godchaux, Miss Margaret Hanson, Andrew Stewart, Philip Werlein, Clarence F. Low, Dr. J. T. Halsey, Dr. J. J. Ryan, Dr. M. T. Lanaux, E. E. Soule, Dr. G. King Logan and Dr. J. E. Brierre. The meeting was presided over by Dr. W. W. Butterworth, president of the society.

Organize Health Association. — The Association of State, County and Municipal Health Boards was organized at Rome, Georgia, on April 18. The object of the organization is to conduct a campaign of publicity in behalf of better health and sanitation.

Nashville Accepts Hospital Site.—A donation of four acres of the old Peabody College campus for a site for the Galloway

Memorial Hospital, the projected Methodist institution, has been accepted by the trustees of the latter. The donation was made by the Vanderbilt University. The new hospital will cost $500,000. Nashville's share—$200,000—will be raised in a whirlwind subscription campaign.

Atlanta's Tuberculosis Hospital.—The Tuberculosis Hospital of Atlanta, declared to be the only institution of its kind in the South, was opened on April 30. The hospital surmounts historic old Battle Hill on the outskirts of the city.

Mississippi Medical College Awards Diplomas.—On April 29 nineteen students of the Mississippi Medical College received diplomas.

Bulletin of Harris County Medical Society, published at Houston, Texas, has been received. It contains forty pages of reading matter. Dr. John H. Foster is the editor.

Personals.—Dr. John R. Johnson has been appointed president of the Amite City Board of Health.

Dr. and Mrs. A. W. de Roaldes left a few weeks ago for New York, en route to Europe, where they will spend the summer.

Removals: Dr. J. C. Parratt, from Many, La., to Moreauville. Dr. D. L. Harper, from Stonewall, Miss., to Quitman.

Died: On April 24, at San Antonio, Texas, Dr. T. J. Largen, seventy years old. Dr. Largen was one of San Antonio's oldest physicians, a prominent Mason and a Confederate veteran.

On May 9, at Shreveport, La., Dr. John G. Knowles, aged thirty-one.

Tulane Notes.—The commencement season was concluded by the graduation exercises held at the Tulane Theatre on May 17. There were ninety graduates in medicine. On this occasion honorary degrees of LL.D. were conferred on Col. W. C. Gorgas and Dr. T. W. Hoffman. The Medical Class celebrated the conclusion of their efforts with the pretty ceremony of ivy planting on May 13, at which function addresses were delivered by members of the Faculty and of the Senior Class.

On the night of May 13, the Class Exercises were held at the Hutchinson Memorial, with the interesting and diverting essays of the class historian and prophet. Quartet and solo music was rendered by the class and the whole function passed off with success.

Book Reviews and Notices.

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

Hookworm Disease. Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis and Treatment, by GEORGE DOCK, A. M., M. D., and CHARLES C. BASS, M. D. C. V. Mosby Company, St. Louis.

The presentation of this volume is timely, and the authors are entitled to credit for assembling and presenting so much information in convenient form. We are inclined to believe that the authors' statement that about 50 per cent of Mississippians are affected with hookworm is too high.

The conclusion arrived at by one of the authors, as a result of the examination of 90 students in the Tulane University, residents of the State, was that 42.4 per cent of those from the country and 2.5 per cent from the city were found infected, or a total in the whole State of 20.7 per cent of young male adults were hookworm carriers. We do not consider the number of cases here cited sufficiently large enough to justify the statement that 20.7 per cent of young male adults in Louisiana are hookworm carriers.

Many of the illustrations are original, and, when not such, are from reliable sources.

The suggestion to centrifuge all specimens of feces is good, as it saves time in the long run. We have had some experience with the use of calcium chlorid as suggested by Bass, and have found it satisfactory.

The suggestion by Boycott and Haldane as to the importance of the eosinophile leucocyte count in the diagnosis of hookworm disease is emphasized.

While we agree with the authors, that cover glasses are not necessary when examining the feces for hookworm, yet their use has the advantage of cleanliness.

The work, as a whole, is representative of our present-day knowledge of the subject of which it treats. STORCK.

Diseases of the Stomach and Upper Alimentary Tract, by ANTHONY BASSLER, M. D. F. A. Davis Company, Philadelphia.

In the short compass of a review it would be impossible to point out the many good qualities of the book before us; so we must content ourselves with mentioning only a few.

Chapters II and III, on Physiology and Chemistry, are concise. Chapter IV, Anamnesis, is treated in seventeen pages, and is well presented. Chapter V, Examination of Patients, is exceptionally good, particularly the sections on X-ray and Gastroscopy.

Methods of chemical and microscopical examination of gastric contents and feces are ample, proving that Dr. Bassler is competent to handle details with skill, and that he know the requirements of the practitioner.

Diagnostic Significance and Examination of the Blood in Gastric diseases is well entitled to a place in the volume.

As for radium therapy, Dr. Bassler, like the author of another work on diseases of the stomach, fails to mention that the reviewer of this

volume has a claim prior to that of Einhorn for the introduction of the gastric radiode. (See *American Medicine,* May 21, 1904.)

We think the space given to Kussmaul's pump, page 390, and that given to Turck's gyromele, page 391, could have been used to better advantage.

Diseases of the mouth and the salivary glands come in for a fair consideration. Diseases of the esophagus are treated in twenty-three pages.

Splanchnoptosis is dealt with quite extensively. Diseases of the gall-bladder, of the liver, of the pancreas and of the kidneys are given some little consideration as causative factors in disturbances of the stomach. Less than two pages is devoted to digestitve disturbances due to or accompanying tuberculosis of the lungs.

Diseases of the intestines are dealt with only in their relation to diseases of the stomach. Dr. Bassler has given us a very creditable book, and the practitioner who will give sufficient time to a careful reading of it, and who will consult it frequently, will be the richer in information in this field of internal medicine.

It is auspicious that two such excellent works as those of Kemp and Bassler, both by American authors, should appear at the same time.

STORCK.

Diseases of the Stomach and Intestines, by ROBERT COLEMAN KEMP, M. D. W. B. Saunders Company, Philadelphia.

The text is divided into xxxiii chapters, and, including index, contains 766 pages. The opening chapter, on the Anatomy of the Stomach and Intestines, is well presented and properly illustrated for a work of this description. We think the anamnesis of patients is entitled to more than three pages. Chapter IV, General Methods of Physical Examination, is ample, and copiously illustrated.

Chapter V, Methods of Physical Examination of the Stomach, is also well done. Examination of the Function of the Stomach, comprising Chapter VI, is clearly presented and exceptionally well illustrated. Fifteen pages are devoted to the general consideration of diet in health and disease. In the chapter on local treatment of the stomach, we consider that the mention of Turck's gyromele should have been left out.

Orthopedic methods of treating ptosis of the viscera and relaxation of the abdominal walls are well illustrated and have ample explanatory text. The separate chapters on diseases of the stomach are well handled after modern methods, and the therapeutitc suggestions are sound.

We think the illustrations, Figs. 137-138, Dr. W. J. Mayo's method of partial gastrectomy for cancer of the stomach, out of place, as no description is given of the technique. Gastroptosis-enteroptosis receives satisfactory treatment.

Part III, dealing with diseases of the intestitnes, does Dr. Kemp credit. The matter is well presented and the illustrations are numerous and good.

We think the illustrations, Fig. 183, method of performing physiologic experiments, out of place in a work of this character.

As regards the treatment of intestinal amebiasis, it is disappointing to see the following: "I have occasionally employed bismuth subgallate, gr. 5 to 10 t. i. d. in combination with other remedies, apparently with benefit. On the other hand, I have seen at times that, in spite of all treatment, too frequent movements continue either in acute or chronic cases. In such event, I have employed bismuth subnitrate, as much as gr. 90 to 120 in divided doses in twenty-four hours with good results." Less than two lines is devoted to mentioning the ipecacuauha treatment, and no mention is made of instillations of hot copper sulphate solutions by bowel.

Acetozone, protargol and argyrol are mentioned as of value in the treatment of intestinal amebiasis. To this practice we subscribe.

Dr. Kemp's reason for including typhoid fever in this work is sound—*i. e.*, on account of its intestinal complications, and for the purpose of differential diagnosis.

The chapters on appendicitis, diverticulitis and peridiverticulitis deserve careful reading. Chapter XXXIII, Intestinal Parasites, concludes the book, and is up to the average.

Taking it as a whole, Dr. Kemp's book is well worth owning.

STORCK.

Publications Received.

W. B. SAUNDERS & CO., Philadelphia and London, 1911.

A Text Book of Surgical Anatomy, by William Francis Campbell, M. D.

Modern Otology, by John F. Burnhill, M. D., and Ernest deWolfe Wales, B. S., M. D.

Medical Electricity and Roentgen Rays, by Sinclair Tousey, A. M., M. D.

A Hand-Book of Practical Treatment, by John H. Musser, M. D., LL. D., and A. O. J. Kelly, A. M., M. D. Volume Second.

State Board Questions and Answers, by Max Goepp, M. D. Second edition, thoroughly revised.

Dyspepsia: Its Varieties and Treatment, by W. Soltan Fenwick, M. D.

Vaginal Celiotomy, by S. Wyllis Bandler, M. D.

The Anatomic Histological Processes of Bright's Disease, by Horst Oertel.

Surgical After-Treatment, by L. R. G. Crandon, A. M., M. D.

A Treatise on Diagnostic Methods of Examination, by Prof. Hermann Sahli, M. D. Edited, with additions, by Nathaniel Bowditch Potter, M. D.

Diagnostic and Therapeutitc Technic, by Albert S. Morrow, A. M.,

WILLIAM WOOD & CO., New York, 1911.

Food and the Principles of Dietetics, by Robert Hutchinson, M. D., F. R. C. P. Third edition.

Miscellaneous.

The Effects of a Number of Derivatives of Chlorine and Analogous Compounds on the Blood Pressure, by Reid Hunt and R. de M. Taneau. Hygienic Laboratory Bulletin No. 73. (Washington Government Printing Office, 1911.)

Hygiene of Pregnancy, by E. L. Hurris, M. D.

A Radiographic Atlas of Pathologic Changes of Bones and Joints, by Amédée Granger, M. D. (A. L. Chatterton Company, New York.)

Inspection and Analysis of Commercial Fertilizers. (Tucker Printing House, Jackson, Miss.)

New and Non-Official Remedies. Press of A. M. A., Chicago, 1911.)

Thirty-seventh Annual Report of the Medical Director of the Cincinnati Sanitarium.

Plaster of Paris, and How to Use It, by Martin W. Ware, M. D. (Surgery Publishing Company, New York, 1911.)

Digest of comments on the Pharmacopœia of the United States of America. Hygienic Laboratory Bulletin No. 75. (Washington Government Printing Office.)

Reprints.

Surdité et Nutrition, par le docteur Marcel Natier.

Recent Progress in the Serum Diagnosis of Syphilis, by Howard Fox, M. D.

Chorea (St. Vitus' Dance), by John Aulde, M. D.

The Gall-Bladder and Biliary Tract an Available Therapeutic Route to the Upper Bowel; The Fecal Origin of Some Forms of Post-Operative Tetanus (Anorectal, Intestinal, Puerperal, Genital and Lower Pelvic Operations) and Its Prophylaxis by Proper Dietetic Measures; Testing the Effciency of the Collateral Circulation as a Preliminary to the Occlusion of the Great Surgical Arteries, by Rudolph Matas, M. D.

Occlusion of Large Surgical Arteries With Removable Metallic Bands to Test the Efficiency of the Collateral Circulation, by Rudolph Matas, M. D., and Carroll W. Allen, M. D.

Radiculitis, by F. W. Langdon, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans

For April, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	1	.....	1
Intermittent Fever (Malarial Cachexia)	.....	.....	.....
Smallpox	.....	.....	.....
Measles	9	2	11
Scarlet Fever	.....	.....	.....
Whooping Cough	13	.....	13
Diphtheria and Croup	1	.....	1
Influenza	2	1	3
Cholera Nostras	.....	.....	.....
Pyemia and Septicemia	.....	2	2
Tuberculosis	31	50	81
Cancer	20	3	23
Rheumatism and Gout	2	2	4
Diabetes	4	1	5
Alcoholism	3	.....	3
Encephalitis and Meningitis	6	3	9
Locomotor Ataxia	.....	.....	.....
Congestion, Hemorrhage and Softening of Brain	23	10	33
Paralysis	4	.....	4
Convulsions of Infants	.....	1	1
Other Diseases of Infancy	5	5	10
Tetanus	.....	2	2
Other Nervous Diseases	2	2	4
Heart Diseases	46	45	91
Bronchitis	3	2	5
Pneumonia and Broncho-Pneumonia	16	34	50
Other Respiratory Diseases	3	1	4
Ulcer of Stomach	1	.....	1
Other Diseases of the Stomach	4	2	6
Diarrhea, Dysentery and Enteritis	38	21	59
Hernia, Intestinal Obstruction	4	1	5
Cirrhosis of Liver	7	4	11
Other Diseases of the Liver	7	4	11
Simple Peritonitis	2	.....	2
Appendicitis	4	1	5
Bright's Disease	13	27	40
Other Genito-Urinary Diseases	4	5	9
Puerperal Diseases	7	2	9
Senile Debility	3	2	5
Suicide	6	1	7
Injuries	13	19	32
All Other Causes	39	17	56
TOTAL	348	272	618

Still-born Children—White, 25; colored, 12; total, 37.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 15.26; colored, 32.31; total, 19.88.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.00

Mean temperature 71.00

Total precipitation ..... 13.76 inches.

Prevailing direction of wind east.

VOL. SIXTY THREE JULY 1910. NO. ONE

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Celata virtus. — HORACE.

New Orleans Medical and Surgical Journal.

ESTABLISHED IN 1844.

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New Orleans Medical and Surgical Journal.

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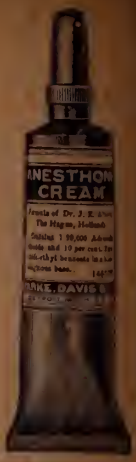

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VOL. SIXTY THREE OCTOBER 1910. NO. FOUR

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New Orleans Medical and Surgical Journal.

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New Orleans Medical and Surgical Journal.

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VOL. SIXTY THREE JANUARY 1911. NO. SEVEN

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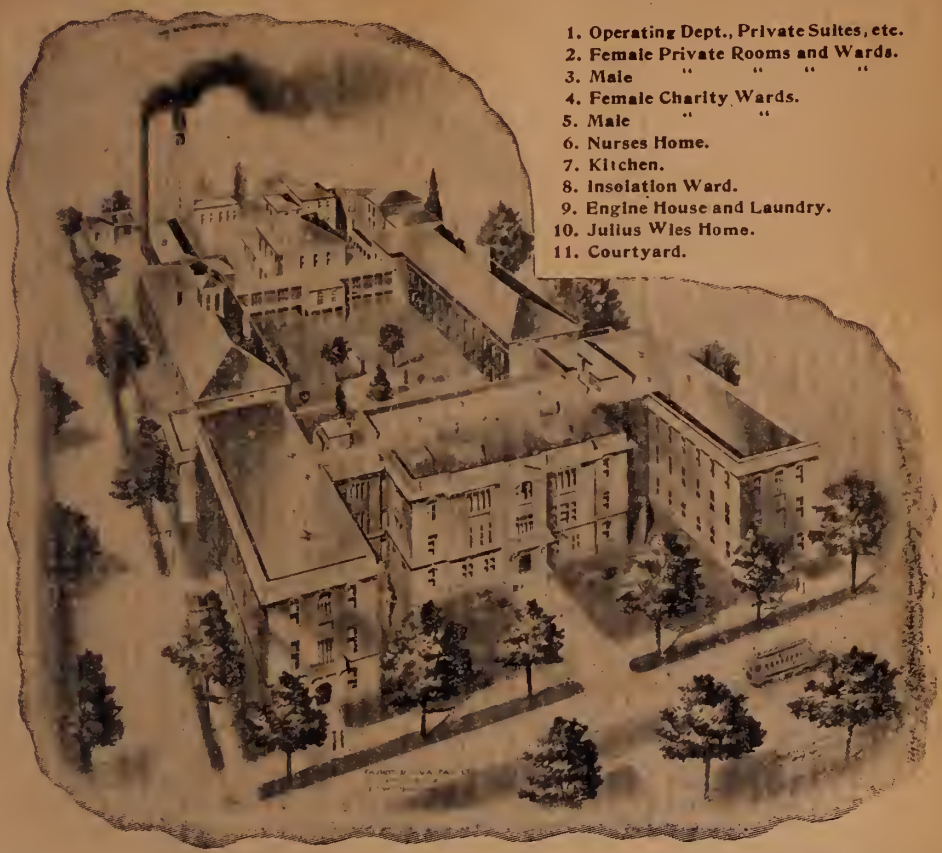

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