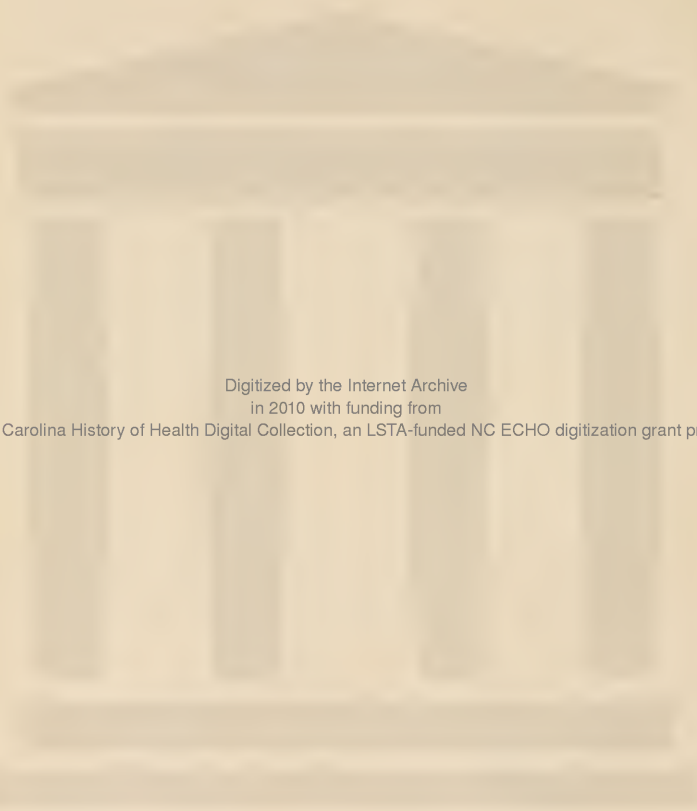

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JAMES M. NORTHINGTON, M.D., Editor

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Development of Prefrontal Lobotomy in The Treatment of Intolerable Pain*

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When the body is in pain and the mind is tortured by the implications of the pain—by fear, and even the threat of death—prefrontal lobotomy has much to offer. Pain can be divorced from the threat which it carries, and then the anxiety and apprehension disappear. In some cases, such as cancer, this merely makes the pain tolerable. In others, such as tabes dorsalis, in which nervous tension is a precipitating factor, the frequency of lightning pains is reduced and they may even disappear.

All of us have seen patients with pain who are obviously upset by it, but when the cause for the pain is explained, will reply: "As long as I know what is causing it, and it is not serious, I can bear it." The examination by a physician, and his assurance that the pain is not serious is usually enough to put the patient's mind at rest. However, if the pain continues and no cause can be found, or if treatments fail to relieve it, then it becomes a threat, the patient can't get it off his mind, obsessive thinking develops, and the pain becomes the most important thing in his life. Even when the pain is absent, he is waiting for it to strike, he cannot rest, and gradually the fear of pain becomes as dreadful as the pain itself. By relieving the patient of this preoccupation with pain and the dreadful fear which accompanies it, prefrontal lobotomy enables him to tolerate otherwise unbearable pain.

The value of prefrontal lobotomy in treating patients in whom complaints of unbearable pain are closely associated with severe symptoms of mental illness was realized shortly after the procedure was first employed. However, recognition of its value in cases of intractable pain from organic disease such as carcinoma, has come only within the past few years. The stages in our experience leading up to the discovery of the efficacy of prefrontal lobotomy in this kind of pain are evident in the following cases.

The second patient upon whom we performed a lobotomy was a woman with agitated depression who appeared to be in great pain. She complained bitterly and unceasingly of hemorrhoids, which on examination were neither swollen nor inflamed. Following prefrontal lobotomy in October, 1936, the agitation ceased and she no longer mentioned her pain. She returned to work as a bookkeeper within two months and was regularly employed for eight years.

Just a month later we saw in consultation a woman 44 years old, who had been confined to bed nearly two years because of pain in her back and legs. She gave a history of a dozen abdominal operations and a subtemporal decompression. Examination revealed a nervous individual who screamed when an attempt was made to examine

*Presented to the Tri-State Medical Association of the Carolinas and Virginia's Forty-eighth Annual Meeting, Sedgefield Inn, Greensboro, N. C., March 3d and 4th.

her back. Although she had rheumatoid arthritis with swollen knuckles and lipping of the vertebra, this was not considered sufficient cause for her symptoms. A diagnosis of hysteria was made and a prefrontal lobotomy was performed November 30th, 1936, by the Moniz technic. The next day she permitted examination of her back and said it caused no discomfort. The patient walked on the fourth postoperative day, and has been confined to bed only once during the past ten years, and then for only two weeks. When she returned to the clinic for follow-up visits, she said she felt fine; we were surprised on questioning her, when she said her knees and ankles hurt and she had a constant pain in her back, but she grinned when she told us about it. At first we feared a relapse, but as the months passed, gradually we realized that her attitude toward the pain was different. Prefrontal lobotomy seemed to have altered her reactions to pain without materially affecting her ability to feel pain.

By 1943 we had accumulated enough observations on the reactions to pain in our mental patients to feel justified in recommending prefrontal lobotomy in a case of intolerable pain due to organic disease. The patient was a woman, 50 years of age, who was complaining of severe pain in the bladder and burning on urination. She had had two operations for protruded intervertebral disc without relief of pain; she complained constantly and insisted that she had not slept for more than a year. A minimal lobotomy was performed on November 9th, 1943, under local anesthesia. While on the operating table the patient stopped complaining of pain, but a few days later her whining returned. A week later a standard prefrontal lobotomy was performed and again her behavior changed. When demonstrated at the clinic a week later she appeared to be in good spirits and in the course of casual conversation did not mention her pain. However, when she was asked if her pain were present, she said: "Sure it is. It's exactly like it was before." "But you don't complain of it any more," we reminded her. "What's the use? I can't do anything about it and it doesn't do any good." This patient has now been followed for three and a half years and there has been no recurrence of her distress. She has moderate urinary frequency and a feeling of fullness of the bladder, but the pain has disappeared and she has not required narcotics since her discharge from the hospital.

The result in this patient was so encouraging that our next step was to attempt to alleviate the pain in a man suffering from carcinoma of the prostate with metastasis to the liver, lung and lumbosacral plexus. He complained constantly of pain in the perineum and in both hips. When the pain was absent he was waiting for it to recur. Even while the nurse was cleansing his arm preparatory to giving a hypodermic he would say: "When the effect of this morphine wears off, you won't let me suffer, will you, nurse? You'll give me another hypo, won't you?" This man's anticipation of pain seemed more dreadful than the pain he was experiencing at the moment. Prefrontal lobotomy was performed in April, 1944, and, since he no longer complained of pain, the hypodermics were discontinued. When asked if he had pain he admitted that he did. Sticking with a pin elicited the usual response so it was obvious that he could still feel pain. Although he died only three months later, during that time he had not required narcotics and appeared to be fairly comfortable.

Later in 1944 we operated upon a man with tabes dorsalis, with severe girdle pain and lightning pain in the legs, who had been under observation in the Neurology Clinic for ten years. He spent most of his earnings as taxi driver on narcotics, and required hospitalization on an average of several weeks a year when the pain became too severe. This man said: "I could stand the pain if it wasn't for the thought of it coming on." Prefrontal lobotomy was performed on December 4th, 1944, and since that time he has taken no narcotics. He used aspirin for several months but since has not required any medicine.

About a year later we operated upon another tabetic. For over twenty years this patient had had severe pain which might occur in any part of the body, but most often below the waist. He described the pain as being just under the skin and about the size of a silver dollar. The pain felt like a dull knife being inserted and rotated. It would last a few minutes and disappear. For years it occurred at intervals of two or three weeks, and would recur frequently over a period of a day or two. For six months before lobotomy the pain was present every day so that he required large doses of narcotic drugs—as much as one hundred to one hundred and fifty milligrams of demerol at hourly intervals of two or three doses. He stated that if he did not get relief within a few months he would commit suicide. Prefrontal lobotomy was performed April 29th, 1946, after which narcotics were discontinued. He would grimace, grab his leg as though in pain, but when he was asked if he had pain would deny it. Because he developed a severe withdrawal reaction with restlessness, hyperpyrexia and tachycardia, narcotics had to be resumed. Later, they were withdrawn gradually without producing a recurrence of his symptoms. It has now been over a year since prefrontal lobotomy, and although the patient still has pain, he refers to it as a twinge. Occasionally, he asks for aspirin, but has taken no narcotics.

The thalamic syndrome, which is one of the most distressing types of pain and one of the most difficult to influence by treatment, has shown a striking response to prefrontal lobotomy. This is illustrated by the case of a man with hypertension, who had a stroke on July 4th, 1944, which produced weakness and numbness of the left side. Pain developed on the left side almost immediately after the stroke and gradually grew worse. It was particularly bad in the left forearm and hand, and in the left leg. It felt as though there were no skin on the arm or leg, and in addition he had a pins-and-needles sensation. Nervousness made the pain worse, and after the pain started, morphine was required to control it; otherwise, it lasted for hours. Ice applied to the painful part was unbearable. Prefrontal lobotomy was performed October 31st, 1946, after which the patient stopped complaining. The pain could be precipitated by the application of ice, but it lasted only a few minutes. Narcotics were discontinued and he was able to return to work as a linotype operator three months after operation.

Two recent cases, one of causalgia, and the other of phantom limb, show how these conditions may be modified by psychosurgery. On February 7th, 1947, we performed a lobotomy upon a soldier with causalgia due to injury to the left sciatic nerve. He received a penetrating wound of the left buttock, thigh and colon in January, 1944, and had been operated upon eight times, including neurolysis, sympathectomy and chordotomy. At the time of operation he was taking narcotics at two-hour intervals during the day and somewhat less often at night. After lobotomy the narcotics were gradually withdrawn. When he first attempted to walk, he broke out in a sweat and appeared to be in great pain. Gradually, as he used his leg and put his foot on the ground it became less painful. At the present time he is walking about on crutches, has gained weight and sleeps well. The foot and leg still hurt when he bears weight, but in bed he is quite comfortable. He has taken no narcotics since the third week after lobotomy.

Since this paper was read, he has discarded his crutches, walks with a cane, and has been home on furlough.

Another soldier had causalgia and a painful phantom limb. He was in a jeep accident on December 8th, 1945, and received a severe injury to the brachial plexus. The median and ulnar nerves were explored and soon after this he developed causalgia. He had a rhizotomy, a dorsal sympathectomy, a stellate ganglionectomy, a second rhizotomy, and when these failed to relieve pain in his hand and wrist he persuaded the surgeon to amputate his arm. At the time we saw him he was complaining of pain in the dorsum of the left hand and in the finger tips. The various operations brought about no relief, and pain in the phantom continued. He described it as burning and drawing, present all day every day, and absent only during sleep. Narcotics eased the pain but did not relieve it, and he required hypodermics every two to four hours. Following prefrontal lobotomy on February 7th, 1947, he was relieved of his distress and no longer required narcotics. He stated that the pain in the hand was just like it had been before, but he grinned when he told us about it. He asked for narcotics on two occasions that we know of, but when he did not get them he did not seem concerned. Since this paper was read he has been furloughed home.

Summary

Prefrontal lobotomy has been employed in the treatment of intolerable pain due to carcinoma, tabes dorsalis, radiculitis, causalgia, phantom limb, and the thalamic syndrome. Following operation the patient can still feel pain, but he is no longer concerned with the implications of the pain. Pain is divorced from the dread which it previously carried.

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Alcohol Kills Tubercle Bacilli
(*U. S. P H. Report*, Sept. 5th)

Alcohol is an effective disinfectant against tubercle bacilli.

Tubercle bacilli in water or sputum suspension were killed in exposure periods of 15 to 30 seconds by absolute, 95, and even 70% ethyl alcohol.

Tubercle bacilli in smears dried from sputum or water suspension are usually killed by 50 to 70% ethyl or 30 to 80% isopropyl alcohol in 1 to 2 minutes, sometimes in 15 to 30 seconds. In a very thick sputum smear, the bacilli never survived the action of 70% alcohol as long as 10 minutes.

The antiseptic action of alcohol was not reduced by the presence of sputum except where the smears were very thick.

Ninety-five per cent alcohol is best for wet surfaces; 50% for dry.

Physicians experience practically the same longevity and mortality as white males of the same ages in the genera population.

The death rate from tuberculosis among male physicians is less than half that of white males of the same ages in the general population; for syphilis the ratio is only one-third. The death rate from cancer among male physicians is four-fifths of that for white males of the same ages. Fatalities from automobile accidents among male physicians occur at a rate nine-tenths of that for white males generally; for all other types of accidents the ratio is only three-fifths.

Varicose Veins*

HARRY L. BROCKMANN, M. D., High Point, North Carolina

MR. PRESIDENT: This afternoon I am merely going to show you a few of our patients and tell you the method by which we handled them.

First Case: This patient had bilateral large varicose veins when she came to me in January, and on her left limb just above the heel she had a varicose ulcer. I put her in the hospital and operated on the right leg and thought probably the left leg would be in condition for operation before she went home. We did a high ligation, as Dr. Harvey described.* As you can see it has dark discoloration where the veins were. These were very large. It was one of the worst cases I have had in a long time. We use 2 per cent novocain in the subcuticular area and 1 per cent in the deeper tissue. We make an incison parallel with Poupart's ligament. It isn't difficult to isolate the vein.

Using the percussion technic, you can locate the vein sometimes when you can't see it. For locating the vein when standing we paint it with silver nitrate solution. The mark it makes will stay a number of days. On the operating table you have no trouble knowing where the vein is. I could easily make a longitudinal incision but sometimes we have had difficulty when the vein was not marked, in locating it quickly; so I prefer an incision parallel with the Poupart's ligament.

*The most satisfactory cure is combination ligation and injection. The groin is prepared as for a hernia operation. The incision is made two finger-breadths to the inner side of the femoral artery, which can be felt pulsating. The incision is downward and slightly medial and should extend up to the level of Poupart's ligment. The most frequent mistake is to make the incision too low, so that the tributaries of the upper end of the saphenous vein cannot be tied off. The vein before it is exposed can be seen as a bluish discoloration through the fat. The vein is isolated for a distance of some four centimeters, the superficial iliac is isolated and ligated as well as the external pudendal and the external superficial femoral. These, unless ligated with a spill-back high, will almost certainly become varicosities. Then 5 c.c. of the sclerosing agent is injected into the ligated end and the patient lies still for an hour, then may get up and walk out of the hospital—should walk around some every two hours—and at the end of 72 hours may resume his regular occupation.

*Presented to the Tri-State Medical Association of the Carolinas and Virginia's Forty-eighth Annual Meeting, Sedgefield Inn, Greensboro, N. C., March 3d and 4th.

The left limb was operated on three or four days after the right one. After the veins are isolated and the branches tied off, either end ligated with plain catgut, I go up where the saphenous begins to dilate to go into the femoral vein and place two ligatures of fine silk. I prefer silk because it doesn't slip off as catgut is apt to do. I am careful not to get too close to the femoral vein. You may have difficulty if you don't leave a sufficient stump on the upper end; the ligature might slip off. Several months ago I had a ligature slip off in the course of the operation, allowing such hemorrhage as to require ligation of the femoral vein. It is the only accident like that I have had in the past ten or twelve years. There was no subsequent trouble whatever. There was no numbness, no swelling or any discomfort. After ligating the vein close to the femoral, I put a hemostat on it a little below and then strip it down for about three inches. It is best to empty the saphenous vein as nearly as possible. For this we remove the hemostat, elevate the leg, and make pressure over the course of the vein. Then attach a syringe and inject 5 c.c. sodium morrhuate, tie the ligatures and cut off two or three inches of the vein, and quickly put in sutures. Finally apply woven elastic bandages from the top of the thigh down to the toes, just fairly firmly. It takes two or three bandages to cover the whole extremity. I let these patients walk back to the room, and see that they get up frequently. By emptying the blood from the vein the sodium morrhuate is brought in contact with its walls, and putting on pressure keeps the walls of the vein in contact for a while. Usually when the veins are successfully treated, they show dark discoloration for several days.

Second Case: This patient had bilateral enlarged veins and was operated upon in 1944. She had an ulcer on the right leg which was surrounded by a large area of eczema as is often the case. These patients are treated palliatively until the active infection has subsided. I haven't operated on the left leg. She promised to come back but didn't. Take a look at the right leg. This is the one that we operated on and you can see there remains dark discoloration in the leg and foot. She had much eczema, some of which was still present when the vein was ligated. Now look at the left leg which is still untreated. The right leg was just as bad as that and in addition had ulceration.

Patients first come to the office for detection of the patency of the valves. One could look at these veins in this patient and tell the valves are incompetent. The patient lies down and we raise

the leg; the blood goes out of the veins. A tourniquet is applied; the patient stands up; and then we take the tourniquet off and the blood comes down and fills the veins quickly if the valves are not competent.

Dr. Harvey described the examination that is made and I won't go into that further.

I would like to say a few words about treating acute inflammation and ulcers when they first make their appearance. These patients don't like to stop work. We treat each case according to its merits. A simple ulcer we clean up thoroughly with soap and water and ether. Then we paint with 0.5 per cent postassium hydroxide solution and apply a piece of gauze with zinc oxide. Then we put on an elasto-plast bandage, starting at the toes and going a little above the ulcer and let the patient go back to work, to return a week later when the condition is usually found to be much improved. Probably two or three weeks' treatment will be required. We used to use Klebro bandages which do not have rubber or elastic but are impregnated with beeswax. These bandages are crinkled and when put on retain position better than any I have seen. We haven't been able to get any since before the war. Some of the patients present inflammation and swelling that requires longer and more careful treatment; yet they don't want to go to bed. Occasionally we have to put them to bed. We give sulfonamides and penicillin to help clear them up. Most of the time we take cases with much swelling in the office in the early morning before the leg has had time to swell. We elevate the leg on several pillows and after an hour or so put on a gelatin stocking. Here is a gelatin preparation that reduces itching to the minimum. We warm this up and paint the leg and put on a gauze bandage, paint another layer of gelatin and apply another layer of gauze—three layers of gauze altogether and four coats of gelatin. These bandages are left applied for five or six weeks. In the meantime the patient is working and is much more comfortable.

When the patient comes back we may repeat the treatment, but usually one is enough. Usually the leg is soft and pliable and we can go ahead with the operation.

Third Case: This lady was operated on February 18, 1947. She had bilateral varicose veins. We operated on the right leg. She had eczema and you notice she has a dark purple stain. I have been using on it a bismuth violet and salicylic acid preparation. It isn't well but she had a terrible itching and this has been relieved. The application is used once a day for five or six days. It dries out the area pretty thoroughly and little crusts form. We then put a wet pack on the area for a half-hour and wipe it with gauze and get rid of the scales. If necessary, we apply the preparation three or four days longer. The left leg was operated on three days after the right leg. It is still a little red but otherwise it is all right.

If any of you want to see the patients a little more closely, they can come back in.

Fourth Case: The next patient was operated on four days ago. We used to keep them in the hospital a week, but we soon learned they could go out earlier. We operated Friday and she went from the hospital Saturday. Sometime ago she had an operation for prolapse, cystocele and rectocele, and following the operation she had phlebitis and varicose veins. I postponed the vein operation until the phlebitis subsided. There was a little swelling when she came in for three or four days before operation. I put on an elastoplast bandage and took it off when she went in the hospital before operation. I have left the stitches so you can see them. There was a lot of induration, and swelling with discomfort in the lower leg a week ago. After the elastoplast bandage was applied for a few days she was walking about much better.

I don't know very much more to say on this subject. You have all seen these things. These cases are just in the routine of general surgery. The short saphenous vein doesn't give trouble nearly as frequently as the long saphenous, but every now and then we see veins on the outer part of the back of the leg, the outer side and around the ankle that are enlarged from the short saphenous distribution. In that case we make a longitudinal injection into the popliteal space behind the knee just below the bend of the knee. Here the vein is straight and lies just underneath the fascia. The fascia over it is denser than over the long saphenous, but it is very easy to get to. We seldom find both long and short saphenous involved at the same time, but occasionally we do.

Of course where there is pronounced enlargement, bulging several centimeters in diameter and the skin is atrophied over the veins, occasionally the veins rupture and the patient loses blood. When we incise to reach these bulging veins, in order to keep from perforating the veins, we use small Allis clamps, make very superficial incisions, and separate the veins from the skin with dissecting scissors. We then resect a short piece of vein and inject a small amount of sodium morrhuate in the distal end. We put on a little pressure over the area with adhesive after closing the wound. I usually do that before I proceed to resect the upper end of the saphenous vein.

Fifth Case: I want to show you a man taken care of about a month ago and this will be the last case. He represents a different type in that he is slender. This patient had large veins below the knee in the long saphenous distribution, and also large varicose veins in the short saphenous distribution.

(To Page 13)

Concepts of Primary Parenchymal Liver Disease

Hugh H. Mills, M.D., Forest City, North Carolina

THAT present-day knowledge of liver physiology and pathology is of recent origin and remains very incomplete may be attributed to several factors peculiar to the liver: (1) Technical difficulties imposed by its anatomic situation and relations; (2) Multiplicity and complexity of functions; (3) Tremendous reserve and regenerative capacity which make difficult the detection and measurement of impaired functions unless impairment is severe; and (4) Variety of clinical manifestations with, and limitation of histo-pathologic reaction to, various known and unknown etiologic agents.

Since Claude Bernard's monumental announcement in 1853 of glycogen storage in the liver, great progress has been made in the understanding of liver physiology in health and disease. This progress has been characterized by periods of advance and retreat. Insignificant observations and premature conclusions have often been enthusiastically accepted, hailed as revolutionary in value, assiduously applied, and often reluctantly modified or discarded in the face of contradiction by long-delayed critical evaluation. This chain of events has applied particularly to liver function tests and therapeutic regimens. For example, unproved sensitivity and specificity have been frequently attributed to various function tests, and beneficial results have been claimed for inadequately controlled therapeutic regimens in the treatment of diseases notorious for spontaneous remissions (e.g., portal cirrhosis). The clinician is more often guilty of such misguided optimism than the investigator, but the latter certainly cannot be exonerated.

The most recent impetus to renewed interest in, and investigation of, liver function has been furnished by the epidemic outbreaks of infectious virus hepatitis during the war years. Voluminous reports have appeared and valuable information has been gained, particularly in regard to clinical[1] and pathological[2] variations seen in virus hepatitis. New liver function tests have been introduced,[3] and some of the older ones have been variously modified. The interpretation of liver function tests has been reviewed by Osgood.[4] Further observations and innovations in treatment have been described for virus hepatitis[5,6] and for portal cirrhosis.[7] Because of the historical tendency to exaggerate the worth of new additions to the literature concerning liver function and disease, and because of the wide variations in clinical and laboratory facilities and the inevitably variable quality of controls in the practice of military medicine, it is logical to regard conservatively the conclusions reached in reports based on experience in the military service in which quantity often dominates quality of experience.

Although it is not within the scope of this paper to consider in detail the known functions of the liver[8], they may be briefly summarized, and the corollaries which apply to the diagnosis and treatment of impaired liver function may be stated.

Functions of the Liver

The functions of the liver may be grouped under three headings: bile formation, detoxification and metabolism. These are closely interrelated and may be subdivided into constituent functions. Bile formation and detoxification are sufficiently well known to require no separate discussion. The liver plays important roles in the metabolism of carbohydrate, protein, fat and vitamins, as determined from animal experiments and observations of disease in man. Since these roles are of primary importance in determining the seriousness of disease, they are considered briefly below.

Carbohydrate.—The liver acts to store ingested carbohydrate as glycogen which spares protein because it is readily converted into glucose for fuel. Glucose aids in detoxification by supplying glucuronic acid for conjugation with phenol groups and acetyl groups for acetylation of various substances such as sulfanilamide. If the glycogen stores are depleted, protein is converted to glucose for energy, and the liver becomes susceptible to toxins such as chloroform (and other commercial solvents) and arsenic (and other heavy metals).[9]

Protein.—The liver converts amino acids into new proteins, maintains the plasma proteins, and through them probably regulates the tissue proteins. It is the chief site of deaminization of amino acids whereby the nitrogenous portion of the molecule is converted into urea and excreted, and the remainder is converted into glucose or fat. Protein also protects the liver against susceptibility to toxins such as those mentioned above.[10]. That the protective action is not by virtue of protein conversion into glucose is indicated by the fact that a liver adequate in carbohydrate and fat but low in protein is susceptible to such toxins.

Fat.—Fat is present in the liver as neutral fat, phospholipids and cholesterol-esters. The liver does not normally store fats. It receives them, processes them, converts some into new fats, regulates the conversion of carbohydrate and protein into fat, and by phosphorylation makes possible the mobili-

zation of fat for deposition in fat depots. The liver is the only source of ketone formation. The liver normally contains 2-4 per cent fats but may contain more than 50 per cent in which case it becomes susceptible to toxins such as those mentioned above. Fat deposition may result either from increased rate at which fat is supplied to the liver or from decreased rate of removal from the liver.

In connection with fat metabolism, lipotropic substances have been frequently considered in recent reports dealing with the treatment or prevention of liver disease, particularly cirrhosis.[11] Choline, methionine, lipocaic and inositol are lipotropic substances, such a substance being defined as one which prevents the deposition of fat in the liver or increases its rate of removal. The term was originally applied to lecithin which was used to prevent fatty infiltration of the livers of depancreatized dogs maintained on insulin. Later choline was discovered to be the active principle of lecithin. The mode of action of choline and methionine is debated, but the consensus seems to be that methionine acts to supply methyl groups in the synthesis of choline and that choline acts as a molecule in the synthesis of phospholipid from neutral fat, a synthesis necessary for transportation of fat from the liver. Choline seems to be effective only when its specific deficiency is a causative factor in the experimental production of disease. For all practical purposes, the human diet is very unlikely to result in such deficiency; hence the use of choline or methionine in the treatment of liver disease in man is probably without value.

Vitamins.—If jaundice is present, the absorption of the fat-soluble vitamins, A, D, K, and E, is interfered with. Vitamin A can be absorbed and stored, but carotene cannot be; and, since this is the largest source of vitamin A, depletion is the natural result. Vitamin D is not stored in the liver of lung-breathers as it is in the liver of gill-breathers;[12] therefore steady absorption is necessary in order to prevent deficiency. Parenteral administration of these vitamins in liver disease is of dubious value. It has been shown that the parenteral administration of massive doses of vitamin A rarely increases its level in the plasma when diffuse liver disease is present.[13] Nyctalopia is not significantly improved by administration of vitamin A to patients with cirrhosis. If prothrombin deficiency is due to deficient absorption of vitamin K, parenteral administratian of a water-soluble analogue will restore the prothrombin to a normal level unless liver damage is sufficiently extensive to prevent utilization of vitamin K.

Various factors of the vitamin B complex are stored in the liver. These are important in carbohydrate oxidation and fat synthesis from protein and carbohydrate. With liver damage, depletion of these factors occurs, and if the patient is given a high carbohydrate diet, his diminished stores of B factors may be exhausted. Accordingly, the administration of a well-balanced B complex supplement may be of value. It is important that such a supplement be balanced because an excess of thiamin exerts an anti-lipotropic effect.

In concluding these remarks about impaired vitamin metabolism in liver disease, it should be noted that such impairment is due not so much to deficient intake and absorption as it is to deficient utilization by the damaged liver. There is no conclusive proof of the value of vitamin therapy in the repair of liver damage.

Diagnosis of Impaired Liver Function

The diagnosis of early, mild or relative functional impairment of the liver has lagged far behind the detection of such impairment in other organs, in spite of the fact that numerous liver function tests, simple and complex, have been devised in the effort to assist in recognition of liver impairment in its subclinical phases. Thus far their sensitivity and/or specificity have not been able to cope successfully with the multiple functions and great reserve capacity of the liver. In consequence these tests have had their main use and value in following the progress of clinical disease.

During and following the war, several of the older tests, including the bromsulfalein, bilirubin and urobilinogen tests, have been modified and improved. Among the newer tests, the cephalin and thymol flocculation and thymol turbidity tests have been variously modified and extensively used. Properly modified and controlled, they appear to be of distinct value because of their relative simplicity, sensitivity and specificity. However, ideal function tests continue to await development. During this same period, biopsies of the liver have been done more extensively than before, often with definitive results which have contributed greatly to the understanding of virus hepatitis.

The correlation of clinical, biochemical and histo-pathological findings in icteric and non-icteric virus hepatitis has emphasized that "clinical" signs may be minimal while either biochemical or histopathologic evidence or both may indicate definite impairment or disease. This has stimulated efforts in clinical practice to search for liver disease before impairment becomes severe enough to produce obvious clinical disease. With this increased interest, with refinement of function tests, and with more frequent use of biopsies, the accurate diagnosis of early liver impairment should become increasingly more frequent.

Therapy of Liver Insufficiency

The current status of the therapy of liver impairment has gradually evolved during the last

twenty-five years. Previously, in addition to symptomatic measures, starvation was the rule in treating liver insufficiency, and this was based on the assumption that the liver would be benefited by rest from its metabolic labors. Since then, largely by means of animal experiments, it has been found that the liver best able to resist specific toxins is one which contains adequate carbohydrate, protein, vitamins and normal amounts of fat, and which continues to maintain these stores by continuous adequate intake. Deficient carbohydrate or protein or excess fat in the liver increases the susceptibility of the organ to injury by toxins. In accord with these experimental animal studies, dietary treatment of liver insufficiency in man has come to contain large amounts of carbohydrate and protein and only small amounts of fat. Such a diet has proved of definite value, although recent work seems to indicate that if adequate carbohydrate and protein are included, large amounts of fat are not only harmless but probably beneficial by increasing the caloric value of the diet.[14] In the last few years, vitamin supplements and lipotropic substances have been added to this dietary regimen. As previously pointed out, their use has been of dubious value, and further investigation is necessary to decide their actual worth. It is obvious that in addition to adequate diet as described, the elimination of possible etiologic factors, and the assurance of adequate rest are of importance in therapy.

It is reëmphasized that knowledge of liver function is very incomplete, that there remains much to be learned before adequate recognition, prevention and therapy of liver insufficiency are possible. It is reiterated that caution is necessary in order to avoid magnification of the importance of recent contributions until sufficient time has elapsed for proper evaluation.

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CANCER OF THE MOUTH

(J. D. Peake, Mobile, in *J. Med. Assn. Ala.*, Dec.)

Fever blisters on the lip for more than two or three weeks should be looked upon with suspicion. A primary chancre should be considered and darkfield examination made. If late syphilis, a Wassermann should be done. Often patients with syphilis have cancer, so if there is any question a biopsy of the lip should be done.

If keratoses, chronic crusts and cracks in the lips, especially the lower lip, persist a biopsy is demanded. White spots, smoker's lip or leukoplakia, are likely precancerous.

Cysts of the lips usually do not cause any real trouble. Changes of the lips secondary to general poor health, especially vitamin deficiency, are common. Benign warts occur on the lips and are often confusing. Cancer is to be considered in every dental and physical examination. Cancer of the lip if diagnosed early and treated promptly will give a 90% cure; after lymph node involvement, less than 25%. Do not allow a tooth to cause chronic irritation of the lip. Remove keratoses, fissures and areas of leukoplakia if they do not respond to simple medication. The patient should stop smoking, stay out of the sun, keep the lips protected with some bland ointment, and improve dental hygiene and general health.

Vitamin deficiency or primary anemia may declare itself by the tongue. Leukoplakia may occur in syphilitics or nonsyphilitics, with malignancy or simple benign white plaque. Syphilis may be primary or secondary. A Wassermann should be routine if there is a chronic tongue lesion; 20 per cent of tongue cancer is complicated by syphilis.

Tuberculosis may be primary or secondary, may be of tubercle or lupus type, and t. b. may be demonstrable. Skin test may be positive, or pulmonary tuberculosis demonstrable.

If glossitis, lesions on the tongue due to burns, infections and wounds, do not heal in a month cancer should be considered.

Rigid mouth hygiene must be carried out.

Lesions of the gums, cheeks and floor of the mouth, which persist demand biopsy. Leukemia, agranulocytic angina, and primary anemia, all should be considered in all oral examinations. Vincent's infection, like syphilis, may be present along with cancer.

Leukoplakia is common in the mouth as the result of syphilis or chronic irritation, or it may be precancerous. Chronic infection in the mouth may result from local infection, irritation from faulty teeth, or use of tobacco and snuff. If Wassermann is negative, repeat after several weeks.

Consider cancer in all oral examinations and have a biopsy if there is any question.

DEPARTMENTS

PEDIATRICS

E. L. Kendig, Jr., M.D., *Editor*, Richmond, Va.

STAPHYLOCOCCUS PNEUMONIA AND EMPYEMA IN INFANCY AND CHILDHOOD

Benward reminds us[1] that: staphylococcus pneumonia is common in infants; 75 per cent of all cases occur in children under one year of age; early empyema occurs in practically all of the cases; pyopneumothorax develops in a majority of cases; the staphylococcus accounts for 90 per cent of all empyema cases in those under six months of age, for 45 per cent in all infants under two years of age, for only 7 per cent of empyema cases in older children.

He goes on to outline proper management:

Prior to the advent of penicillin the mortality was 70 per cent in a series of 16 infants under 1 year; 34.5 per cent in 29 cases in children up to 13 years.

Penicillin therapy should be employed in all young infants suffering from pneumonia, because of the incidence of staphylococcus pneumonia in patients under one year of age. The fulminating course of the disease in some patients may kill before empyema becomes clinically evident.

Penicillin should be given in dosage of 1,000 units per kg. of body weight intramuscularly q 3 h.—10,000 to 50,000 units q. 3 h. depending upon the size of the child is usually quite adequate. If the patient fails to respond, it should be administered every two hours and the dosage increased as deemed necessary.

Sulfadiazine for the therapy of staphylococcic pneumonia is of questionable value. However, because of the great frequency of mixed bacterial infections in the pneumonias of infancy, it is wise to combine sulfadiazine with penicillin in the routine therapy of pneumonia in infants. In toxic infants who cannot take medication by mouth, sodium sulfadiazine in ½ per cent solution in saline may be given subcutaneously in dosage of 1/10 gm. per kg. of body weight q. 8 h., continued until they are able to take the usual dosage of 2/10ths gm. per kg. per 24 hours by mouth.

Staphylococcus antitoxin holds promise in controlling the severe toxemia seen in many cases. However, it has not been widely used because the result from penicillin and surgical drainage have been so gratifying.

Oxygen must be used freely to combat the dyspnea, cyanosis and toxemia. Parenteral fluids are frequently needed to relieve dehydration and electrolyte deficiency and provide food in the form of dextrose. Frequent blood and plasma transfusions are necessary in order to combat anemia and protein deficiency. Abdominal distention and adynamic ileus often require continuous return flow enemas, cold stupes to the abdomen and prostigmine.

A constant vigil should be kept for the development of tension pneumothorax, and a thoracentesis set should be kept available at all times. If pneumothorax is not present, daily needle aspirations of the empyema cavity and instillation of 40,000 to 100,000 units of penicillin is the easiest method in very small infants, provided there is a very thin fluid and drainage is adequate.

This method entails the constant hazard of a sudden developing tension pneumothorax. Closed intercostal syphon drainage is the method of choice. The procedure is easily and quickly done under local anesthesia. A No. 20 catheter is introduced into the empyema pocket through a trocar, and the trocar removed. The catheter is then connected to a rubber tube with the distal end under water contained in a bottle on the floor. The procedure is easily withstood by the most toxemic patients, permits adequate drainage and protects against the development of tension pneumothorax. In the presence of tension pneumothorax, intercostal intubation with closed drainage to reëxpand the lung and provide drainage is often a life-saving procedure. When needle aspiration affords inadequate drainage, this method should be used. The tube must be kept well opened by irrigation once or twice daily. Irrigation of the empyema cavity with penicillin is of doubtful benefit, cannot be carried out in the presence of a broncho-pleural fistula. Broncho-pleural fistulas close spontaneously. Blow bottles or balloons are of some aid in helping reëxpand the lung.

As the cavity becomes smaller and the pleural surfaces adherent, the closed drainage system may be converted to open drainage by cutting the catheter one inch from the chest wall.

1. J. H. Benward, Portland, Oregon, in *Jl.-Lancet, Minneapolis, Dec.*

DENTISTRY

J. H. Guion, D.D.S., *Editor*, Charlotte, N. C.

DENTAL INVESTIGATIONS OF GREENLAND ESKIMOS

Everywhere that white man has come into prolonged and intimate contact with the colored man, on the colored man's native heath, it has been to the colored man's hurt. Particularly is this true of the resulting changes in dietary. A Danish investigator[1] reports on dental decay so brought about among Greenland natives.

1. P. O. Pedersen, Copenhagen, in *Proc. Royal Soc. of Med.* (Long.), Oct.

The ice cap completely separates East Greenland from West Greenland. Greenland has only 17,000 inhabitants, of whom 1,000 live on the eastern coast, all in the areas around two trading stations. The Eskimos at the first of these were unknown until 1884. In 1894 the Danish Government established the second to prevent the natives from perishing. The second area became inhabitated in 1924 by Eskimos emigrating from the first. The Eskimos of East Greenland are practically without white admixture. In remote parts they still largely subsist on Eskimo protein-fat diet. The Eskimos at the two trading stations have to no small extent adopted the dietary habits of white men.

West Greenland Danish colonization was firmly established more than 200 years ago. The natives, among whom are a large number of mixed blood, have settled down under urbanized conditions and largely depend on imported food.

The author, with a varying number of co-workers, made three expeditions to Greenland in order to study dental conditions and allied subjects.

In the primitive Eskimo very few cases of gross enamel hypoplasia are met with. Rickets is unknown. The Eskimo puts great demand upon his teeth. The women use their teeth for preparation of seal hides by thoroughly chewing. Attrition of the teeth is severe during maturity and in the old Eskimo, the teeth are often worn to the gums. In most cases abundant formation of secondary dentine protects the pulp cavity from being opened.

Among 525 Greenland Eskimo skulls with 5,606 permanent and 146 deciduous teeth, only two were found with caries. These two may be more recent than early white contact. Caries incidence has risen from nil or practically nil in the pre-Danish time to a considerable level in modern East Greenland and to a simply alarming level in modern West Greenland. This increase has mainly taken place during the last 50 years in West Greenland. In East Greenland it is quite recent.

One finds a great difference in the caries incidence in villages on the one hand and in trading stations on the other. The natives who abandon the dietary habits of their ancestors and adopt the white man's food are those who become afflicted with caries. In the primitive Eskimo we have not observed any cases of generalized parodontal disease. Apparently this dental ailment will enter urbanized groups later than caries.

In modern East Greenland and in some West Greenland villages the use of tobacco-ash-quid produces a localized severe chronic marginal parodontal disturbance around the lower molars.

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

COMMON SKIN DISEASES AND THEIR TREATMENT

Of dermatologic problems confronting the general practitioner the overwhelming proportion are easily diagnosed and quite amenable to treatment, says a Baltimore dermatologist.[1] Further, he says:

A lengthy or detailed history is unnecessary when dealing with the common skin diseases, is frequently misleading. Ask about duration and location of the eruption, then conduct the examination, following which specific questions may need to be asked.

Unless the skin disorder is obvious at a glance examine the entire body in a room with good lighting, preferably in daylight.

Scabies is the most frequently misdiagnosed common skin disease; diagnosis is made, not on the type of lesion, but rather on the distribution—finger webbs, flexor aspect of the wrists, anterior axillary folds, elbows, umbilicus, nipples, buttocks and penis. The eruption is very itchy at night and other members of the family are involved. The acarus scabei or its ova may be demonstrated microscopically by examining the roof of a fresh vesicle after mounting it on a slide and adding a drop of 10% NaOH.

Treat all affected members of the family simultaneously. A double application of benzyl benzoate 25-33% in an emulsion allowed to remain on the skin overnight generally eradicates the disease, but it is wise to repeat 24 hours later. Following antiscabetic therapy all bedclothes and wearing apparel should be thoroughly washed or cleansed. Any residual skin irritation may be controlled by compound calamine lotion or cold cream with ½% phenol.

Impetigo contagiosa. The primary flaccid superficial vesicle ruptures quickly and exudes serum which dries to a thick, yellow crust. On the lower extremities it tends to deeper invasion and to scar formation, on bearded area to produce a folliculitis or a stubborn sycosis vulgaris.

Remove crusts by bathing with warm water or oil, then apply 5% ammoniated mercury ointment lightly to the lesions and surrounding normal skin. Penicillin ointment (1000 u/gm.) is a very efficient remedy. If iodine has been used mercurials will produce a severe dermatitis. Rarely is it necessary to give oral doses of sulfonamides or penicillin injections. For sycosis vulgaris use Squibb's antiseptic ointment (Quinolor).

Most patients with a mild dermatophytosis of the feet do not seek medical advice. More acute cases show vesiculation, exudation, crusting and

1. William D. Wolfe, Baltimore, in *R. I. Med. Jl.*, Dec.

edema. A secondary allergic reaction may appear about the fingers. Mycelial threads and occasionally spores may be demonstrated microscopically after the tissue is allowed to dissolve in 10% Na OH.

If the process is acute, soaks of Burow's solution, normal saline or boric acid should be used; for secondary infection soaks of 1-4000 potassium permanganate solution. After the acute process subsides Whitfield's ointment (½ strength), 5% salicylic acid in alcohol or Castellani's paint. Proprionic or undecylenic acids may be employed in practically any stage without danger of producing a dermatitis.

Tinea corporis is of less common occurrence. As a rule tinea circinata presents a well defined, annular eruption with vesicular margins and a tendency to clear in the center while extending peripherally. Diagnosis is by the microscopic demonstration of mycelial threads in tissue obtained by scraping the vesicular margin.

Apply 5% salicylic acid ointment until the superficial layers have exfoliated.

Tinea versicolor produces no reaction on the part of the skin but merely layers itself as a thin film on its surface. Covered areas of moist skin are affected most. Diagnostic are the light-tan, mottled areas resembling thin cigarette paper plastered on the skin. A scraping will reveal numerous mycelial and spore elements. It is cured by application of a saturated solution of sodium hyposulphite, but there is a tendency toward recurrence.

Tinea capitis a problem in every large city, affects children until the age of puberty when a natural immunity develops. The diagnosis is made by classic circular areas of partial alopecia. Examination of the affected hairs microscopically will reveal myriads of closely packed spores around or within the hair shaft. Between human or animal type of fungus the distinction may be made only by culture. The animal type will respond to 10% ammoniated mercury ointment or to the newer undecylenic and proprionic acid, while the human form will often require temporary epilation by x-ray.

Pityriasis rosea, of unknown etiology, is prone to occur in the spring and the fall, usually first as a solitary lesion of pea to dime size, slightly raised and erythematous, oval, becomes slightly larger, scale in the center on some portion of the trunk, followed in one or two days by many smaller lesions mostly on thorax and abdomen. The full blown eruption may be confused only with secondary syphilis; a serologic test to be performed in every case. It is self-limited, lasting 6-10 weeks without therapy.

Mild exfoliation by ultraviolet radiation in suberythema doses every second day is in order. For itching calamine liniment with ½-1% phenol and ¼-½% menthol; 3% resorcin may be added to promote exfoliation.

Contact dermatitis often requires an accurate history. Think of plants, cosmetics and occupation.

Treatment: Removal of the offending agent; lukewarm sops or compresses of sat. sol. boric acid, magnesium sulfate, or 1-30 Burow's solution. When begins to dry a light application of boric acid ointment.

The hair lost by alopecia areata usually regrows after several months. Application of phenol-alcohol to the area of alopecia, with an exposure to ultraviolet once weekly will hasten the regrowth. The scalp will readily tolerate five times the dose of ultraviolet given to other areas of the body, so the forehead and neck must be protected.

GYNECOLOGY

Robert T. Ferguson, M.D., *Editor*, Charlotte, N. C.

APPRAISAL OF THE VALUE OF HYGIENIC VAGINAL DOUCHES

Douching as a hygienic measure is unnecessary and often harmful. Normally the glands of the cervix produce a mucoid secretion and keep moist the vaginal mucosa, and a mucous secretion from Bartholin's glands keeps the anterior portion of the vulva moist. Emotional reactions can stimulate these glands to increased production of secretion from a noticeable to any annoying amount. Sexual and nervous excitement stimulate the larger amounts. A few days before menstrual flow begins and for a day or two following there is frequently a slight discharge.

So a woman physician[1] introduces a pertinent subject. What she says further is of consequence.

Any vaginal discharge sufficient to be noticeable or stain lingerie and lasting 24 to 48 hours requires the attention of a physician. Physicians are too prone to prescribe a douche without an examination, especially when the patient is unmarried.

Douching removes the mucus necessary for lubrication. The glands of the cervix will then secrete more to protect this delicate surface and often than is needed. Continued use of alkaline douches will change the pH of the vagina and destroy the protection given by the acidity.

Thorough washing of the external genitals with soap and water once or twice a day will serve all necessary purposes. There are no indications for even one douche following menstruation.

The common causes of vaginal discharge are Trichimonas, Monilia, yeast, and gonorrheal in-

1. Eva F. Dodge, M.D., in *Jl. Amer. Med. Women's Assn.*, Dec.

fections. A simple erosion of the cervix, mild endometritis or salpingitis may be responsible. Nonspecific vaginal infections may result from persistent douching. Overworking the cervical glands by douching may be the cause.

Office treatment following the cleansing of the vagina by green soap or cotton sponges is more effective than prescribing a douche. Dispensable jellies with pH 4.5, or buffered glucose solution are more physiologic than an antiseptic solution.

Postcoital douching as a contraceptive measure is unsafe and unnecessary for cleanliness.

When the diaphragm-and-jelly method of contraception was first prescribed, it was taught that douching was an essential part of the removal technique. Many physicians now feel that it is unnecessary, and probably a factor in the method's nonacceptability.

For a number of years the alkaline douche or one containing Ringer's glucose solution has been recommended in cases of infertility on the basis that spermatozoa are activated in this solution. The acidity of the vagina has nothing to do with conception in a woman with a normal cervix.

We should counteract the current lay advertising which leads women to feel that douches are essential for feminine hygiene or a remedy for any abnormal vaginal discharge.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

ANESTHESIA FOR THE AGED

Dillon[1] lays down rules, and makes pertinent recommendations.

It is important to determine the cardiovascular and respiratory reserves and the metabolic state of the patient. Diabetes, or pernicious anemia, or hepatic or renal disease influences the choice of anesthetic. Complete blood and urine studies should be made in advance. Meperidine hydrochloride, 25 to 50 mg., or codeine, 0.015 to 0.03 Gm., is the preferable opiate. Opiates can safely be done without in 20 per cent.

If the patient is not apprehensive no barbiturates need be given. Phenobarbital sodium, 0.014 to 0.05 Gm., is the most satisfactory of this class. In 26% no barbiturate is advisable. For reducing reflex activity and secretions, atropine 0.3 mg. is effective.

In case premedication has been insufficient intravenous supplementation is in order.

Inhalation anesthesia was used in 16.0% of all thoracic and upper abdominal operations. In 50% of the inhalation anesthesias the endotracheal technic was used—anesthetization of the pharynx and larynx with 2% tetracaine hydrochloride, followed by rapid induction under anesthesia with "pentothal sodium" and oral intubation under direct vision. Another technic has been the use of curare for relaxation with just sufficient "pentothal sodium" to keep asleep. Oxygen is given during the four minutes that it takes for the curare to be maximally effective. Intubation is then performed, then the anesthetic gas administered.

Ether was the principal anesthetic agent 27 times in this series of 174 instances of inhalation anesthesia—15.5% of the cases in which inhalation was used. Cyclopropane in 31%—very satisfactory when no cardiac conduction defects or other contraindications, such as cautery. Nitrous oxide-oxygen anesthesia, with "pentothal sodium" or meperidine hydrochloride, was used in the remaining 54.5% of the inhalation cases, the O content of the gas mixture being kept above 20 volumes per cent and given only sufficient to prevent movement and to control reflexes.

Curare has been used 43 times to get adequate relaxation, most often with nitrous oxide-O and cyclopropane, 4 times with ether and then in very small doses—no toxicity when ventilation is adequate.

Intravenous anesthesia was used in 6.1% of the total—only for closed reductions, manipulations and examinations—for amnesia and narcosis rather than surgical anesthesia. When "pentothal sodium" was the only anesthetizing agent used, O was routinely administered with it.

Regional anesthesia has wide application for the aged patient, either alone or with very light "pentothal sodium" supplementation—abdominal field blocks for gastroenterostomies, regional block for cystotomies, peripheral for orthopedic procedures.

Refrigeration anesthesia was used only 10 times, but was highly satisfactory. It will be used more in the future.

Spinal anesthesia was used in 55.7% of the cases. It is the method of choice for surgery of the lower extremities and the pelvis; not employed when b. p. is above 180, nor when drop in b. p. following premedication is 20, nor if hemoglobin is less than 12 Gm.

The dose is always kept small; no more than 100 mgms. of procaine or 10 mg. of tetracaine, and this infrequently. Small doses of ephedrine intramuscularly or subcutaneously are given prior to spinal anesthetic. The anesthesia is kept below the 10th thoracic segment and when possible is kept unilateral. For increasing the duration 15 to 25 mg. of ephedrine is incorporated with the drug used intrathecally.

Supporting the aged patient undergoing surgical treatment is more important than the use of any particular anesthetic technic or agent. All except

1. John B. Dillon, Los Angeles, in *Jl. A. M. A.*, Dec. 13th.

those for superficial biopsies, etc., receive some fluid, parenterally. It is a ready means of starting of blood transfusion if desirable. Sixth molar lactate is the solution, routinely used before transfusions, and has largely eliminated minor transfusions reactions; also valuable for maintaining acid-base balance.

All patients whose loss of blood is significant receive blood on the operating table—in open reduction and transurethral resections, as well as in *all* cases of intra-abdominal surgery.

All patients 70 and over receive O as a part of a regional or spinal anesthetic. Oxygen is always given when "pentothal sodium" is used. Even in the nitrous oxide-O anesthetics when "pentothal sodium" and meperidine hydrochloride are used, the oxygen concentration is kept as high above 20 volumes per cent as is possible to use and still maintain anesthesia, usually around 30 volumes per cent.

Administration of a light general anesthetic or of regional or spinal anesthetics does not necessitate keeping the patient in bed. Adequate supportive therapy lessens the period of bed rest, as the patient is not so weak from loss of blood that he cannot be gotten up at the earliest possible moment.

The use of blood and O in the operating room is essential to maximum chance of recovery.

HUMAN BEHAVIOUR

James K. Hall, M.D., *Editor*, Richmond, Va.

THAT LAST STEP

Marcus Antonius was in his day the Bonny Doon of Rome. He moved about freely amongst the people and fraternized with them in superficial fashion. But he lived aloof, too, thinking always of himself, even as the ward politician of today considers first his own welfare. He was within the bosom of Brutus and of many of the other regicides, as he looked across the plains of Philippi on that night before the military catastrophe on the next day. Brutus must have become doubtful of the beneficent results of his sending his dagger into the chest of Julius Caesar. And the devoted wife of Brutus, Portia, could endure the suspense no longer. Her ingestion of fire must have had both a punitive and a suicidal purpose. Brutus made a scabbard of his own body for his sword.

Napoleon looked wistfully into the quiet waters of the Seine as a young man when his sky had not become golden. Had he taken the fatal plunge the world's subsequent history would have been different. Abraham Lincoln's marriage was postponed for two years after the wedding guests had assembled and the bride was enrobed and veiled. Lincoln, depressed and hopeless, felt himself unworthy to marry. His friend Speed remained with him until he had emerged from his gloom. Had Lincoln succeeded in giving himself the dagger, would there have been an American Civil War? I have been told that a week before Appomattox General A. P. Hill walked alone all but into the Union lines just north of Petersburg. There was the rattle of many rifles. His body was recovered and taken into the home where his widow and infant were awaiting him. Was the thought of impending Appomattox too much for him? Yet he was amongst the bravest of the brave; of the many heroes of that Lost Cause his name was the last name spoken in the delirium of death by Robert E. Lee and by Stonewall Jackson. A military order went from each to him.

Suicide opens wide the portal of exit from the burdens of life become at last personally intolerable. Or may that opinion constitute a delusion? Does suicide always constitute irrational behaviour?

Who can make answer?

SURGERY

William H. Prioleau, M.D., *Editor*, Charleston, S. C.

ANEURYSMS DUE TO SURGICAL TRAUMA

At the last meeting of the Southern Surgical Association, Doctor Daniel Elkin of Atlanta called attention to the fact that surgical trauma is not an infrequent source of aneurysms. These aneurysms are commonly arterio-venous, however, they may involve either arteries or veins alone. Cases have been observed to follow contusion, venipuncture, suturing, and incision. In the arm an arterio-venous aneurysm followed venipuncture. A similar condition occurred in the renal artery, apparently the result of contusion due to retractors. One in the pelvis apparently was due to a transfixion suture.

As a result of these observations it was advised that venipuncture be done with great care and ac-

VARICOSE VEINS—Srom P. 5

We first resected the long saphenous at its upper termination, then the short saphenous. Also, we made two or three incisions in large varicosities and injected in each place. There are now no enlarged veins left at all.

I want to mention one more test to determine sufficient circulation of the leg before we operate. Frequently we just put a snugly fitting woven elastic bandage over the whole leg. We let the patient walk around the office or go down town and come back in an hour; if there is no discomfort, we know there is an adequate deep circulation.

curacy; that where possible vessels be ligated individually, so as to avoid more or less blind transfixion sutures which may pierce both artery and vein; that the edges of sharp retractors be well protected with gauze; and that stab incisions for drainage be used with great care.

These cases occur more frequently than is generally recognized. Due precaution should be used to prevent them.

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

PREVENTION OF RENAL DAMAGE BY USE OF MIXTURES OF SULPHONAMIDES

IT HAS BEEN established that a saturated aqueous or urinary solution of one sulfa drug may be fully saturated with a second and third sulphonamide. By employing combinations of partial dosages of two or three sulphonamides rather than the full dosage of any one the hazard of precipitation from such combinations should be only as great as if each had been administered alone and in the partial dosage contained in the mixture.[1]

A total of more than 700 unselected patients with systemic infections were treated with a mixture containing equal amounts of sulphathiazole and sulphadiazine, or sulphadiazine and sulphamerazine, on a routine dosage schedule, by the oral route in the majority of cases. In children the sulphadiazine-sulphamerazine combination was also given by the subcutaneous route. Adequate fluid intake was assured but no alkalis were employed.

Defervescence and general clinical improvement seemed to occur with greater speed when compared with previous experience with any of the drugs administered separately. Therapeutically effective blood levels (5 to 20 mg. free sulphonamide per 100 ml.) were maintained with ease. Urinary concentrations varied between 100 and 600 mg. per 100 ml.

Of more than 900 acid morning specimens of urine containing sulphonamide mixtures which were examined under the microscope after sharp centrifugation, only 7% were found to hold moderate or small amounts of sulphonamide crystals, as contrasted with the incidence of crystalluria of 29% from sulphadiazine, 26% from sulphamerazine and 70% from sulphathiazole alone. None of the patients treated with mixtures developed any sign of serious renal irritation. Nausea and vomiting were rare. No other toxic reactions were encountered.

1. David Lehr, New York City, in *British Med. Jl.*, Dec. 13th.

URAEMIC ENTERITIS.—In uremia there may occur diarrhea, with purulent or bloody stools. The enteritis is associated in some way with urea retention.

OBSTETRICS

H. J. LANGSTON, M.D., *Editor*, Danville, Va.

THE MANAGEMENT OF DIFFICULT LABOR

SELDOM, nowadays, do we find a medical article counseling waiting. Too many of them are too eager to do something. Brown[1] has written on labor—difficult labor—in such a way as to bring to mind an old doctor of the long ago, who, being asked what he would place first on the list of things to be taken to a confinement case, answered, "a pocketful of good cigars."

The postulate is laid down that, since 90 to 95 per cent of obstetrical cases are normal, it behooves the obtsetrician and physician to learn that he should seldom meddle.

The more common difficulties encountered during labor, according to this teacher, are five:

1. The Contracted Pelvis. One is able to measure a pelvis by clinical means. When this is not sufficient x-ray pelvimetry may be of help, although it frequently is misleading. Induction of labor may be in order if the patient is almost ready to go into labor and the baby is not too large. Medical induction is to be preferred. There is too much danger of infection from the use of bags or bougies. When in doubt it is well to plan on doing a cesarean section.

2. Uterine Inertia. One-half minim of pituitary, increased by ½ min., as needed, at intervals of 40-45 minutes up to a maximum single dose of three minims, is his choice. Quinine sulfate is of value in some cases. Large doses may produce deafness in mother or baby or severe skin reactions. It seems that quinine makes the uterus more responsive to pituitary preparations. When the patient and the uterine muscle have become tired during labor morphine will help much in many cases by allowing rest even to sleep for a few hours. When she awakes labor may proceed satisfactorily.

3. Cervical Dystocia. Allow time for the cervix to dilate. It may be very firm and resistant. Rupture of the membranes, in such cases, may bring about dilatation of the cervix. Use of a narcotic or a barbiturate may allow satisfactory dilatation. Suppose dilatation is up to four or 4½ fingers, then wait another four to six hours. With the patient in the best possible condition plan to do Duhrssen's incisions of the cervix. The incisions will make instrumental delivery possible. Carefully repair the incisions with 00 chromic catgut.

4. Placenta Praevia. Proper diagnosis is usually made by vaginal examination done with great gentleness. X-ray may be of value if the placenta lies in a position to cast a shadow.

Replace blood as rapidly as lost during the de-

1. T. K. Brown, St. Louis, in *Neb. Med. Jl.*, Jan.

livery and immediately postpartum. Do not start any procedure until you have blood ready to give, for it may be lost faster than you can replace it. The usual treatment today is cesarean section.

5. Occiput-Posterior; Transverse Arrest. When the attendant finds that he has an occiput posterior, he is apt to become upset over it. If enough time is allowed, in most cases the head will rotate from a transverse, or occiput-posterior position, to an anterior position and deliver. When complete dilatation for several hours, it may be possible to rotate the head manually, which will result in normal delivery. It may be necessary to use the double application of forceps as described by Scanzoni, or the Kielland forceps. Brown has had most satisfactory results from the use of Barton forceps in a transverse arrest.

In the case of a funnel pelvis with tubers measuring 7 cm.; deliver the occiput posterior, when it has already rotated into the sacrum, by bringing the bitemporal diameter of the head through the narrow archway rather than the broader biparietal diameter. The widest diameter of the head is brought through the perineum after a deep episiotomy is done.

Give a soap and water scrub followed by flushing of the field with a 1 to 2,000 solution of bichloride or 1 to 1,000 aqueous zephirin, previous to vaginal examination and delivery.

Neutral acriflavine, 8 c.c. of a 1% sol., should be instilled into the vagina upon admission and q. 4 h. during labor. The sol. not older than two weeks when used. Sterilization of the solution is not necessary. A B-D rubber tipped, ¼ oz. urethral syringe will not harm the patient and puts the instillation where you wish it to be.

A vaginal examination properly done is much less dangerous to the patient than a rectal, and reveals much more to the operator. Avoid the common error of allowing the fingers outside to contact the anus or hemorrhoids.

Maintain the nutrition and fluid balance of the patient throughout a prolonged, difficult labor. If this cannot be done by mouth, by intravenous administration.

Provide rest for the patient with the sedation choice of the attendant. Allay fear and maintain her confidence.

Attend also to prompt isolation of infected patients, early gentle exacuation of uterine debris and establishment of adequate drainage, and chemotherapy when indicated.

It's been all of 30 years since a word has come to us in favor of quinine in labor, and pretty nearly that long as to bichloride. It would be a safe bet that the author's students call him "Granny."

Note well the fractional doses of pituitary, the use of sedatives for rest and recuperation, and the faith in Nature's ability to right things, if we will only wait; and then the definite, assured instruction as to how to be prepared for and to take vigorous action in the few cases requiring it.

Whether, doctor, you have been attending deliveries for 50 years or are just entering on this kind of work, here is much for your instruction and encouragement.

GENERAL PRACTICE

WILLIAM R. WALLACE, M.D., *Editor*, Chester, S. C.

SOME PRACTICAL CONSIDERATIONS IN THE MANAGEMENT OF ARTHRITIS

IT IS heartening to find an article on arthritis which tells how to diagnose and treat, and which promises good results in many cases from old measures. What Hollander[1] has to say is abstracted at length.

First establish the proper diagnosis in each patient who complains of joint pain.

Rheumatoid arthritis, "the great crippler," in its later stages, can be diagnosed at a glance. In the early stages the spindle-shaped swelling of joints, particularly the proximal interphalangeal joints of the fingers, the metacarpo-phalangeal joints, and the joints of the wrists, elbows, knees and ankles, make diagnosis easy. The swelling is soft and tender but not often red or hot unless very acute. It is a systemic disease producing anorexia, fever, marked weight loss, muscle wasting, early fatiguability. It consists of a series of spontaneous exacerbations and remissions, which are partial or complete, temporary or permanent. *Less than one-fourth of the cases* of rheumatoid arthritis go on to the severely deforming stage.

The characteristic changes in the blood are anemia, moderate leukocytosis, occasional eosinophilia, and an increased erythrocyte sedimentation rate. X-ray study may be very helpful, but it is not the final diagnostic criterion.

Rheumatoid arthritis of the spine, known under a host of terms, begins in the sacroiliac joints, producing pain and muscle spasm in the lower portion of the back, often accompanied by sciatica. Again, spontaneous remissions and exacerbations of the process are usual. The process may stiffen the back in an ascending fashion, with ankylosis of the entire spine as the frequent end result. Involvement of the spine may accompany, precede, or follow rheumatoid arthritis of the peripheral joints, but in most cases the only peripheral joints involved are those of the shoulders and hips. Usually the weight loss and systemic manifestations are not severe. Tenderness over the sacro-iliac joints, lumbar muscle spasm, atrophy of the back muscles,

1. J. L. Hollander, Philadelphia, in *W. Va. Med. Jl.*, Jan.

and almost complete loss of spinal motion, with marked reduction of chest expansion, make a clinical diagnosis of rheumatoid arthritis. Here the x-ray is the final criterion.

Under the term degenerative joint disease, Hollander includes those conditions termed osteo-arthritis, hypertrophic, senescent, menopausal and post-traumatic arthritis. Here the process is the result of joint wear and tear. Certain hereditary tendencies are exhibited. The condition is seldom crippling. These patients are often overweight, and generally healthy. Blood shows no particular change. Swelling, except for bony enlargement, is rare.

Gout is a metabolic disease with joint manifestations. History is of short, acute attacks of arthritis with complete remissions, in men over 35, involving one or only a few joints at a time, and gradually becoming more widespread and chronic for years. Symptoms are swollen, red and tender joints (often the first joint of the great toe), fever, and perhaps tophi in the ears or near the joints. There are increased serum uric acid, increased sedimentation rate, and leukocytosis, at least during the attack.

X-ray findings of punched-out areas along the margins of involved joints may be fairly late.

Colchicine, q. 3 h. in 1/120 grain doses to the point of mild diarrhea, often dramatically terminates a severe attack in 24 to 48 hours.

A very frequent complaint is from fibrositis, or so-called "muscular rheumatism." No joint swelling, or other definite physical signs. Weather changes, excessive physical effort, and rest in cramped positions make the patient acutely aware that something is wrong with the muscles and joints. The diagnosis is made by exclusion of arthritis and psychoneurosis. Relief is had from the use of one of the salicylates, or from the application of heat. The prognosis is good, but the condition often is recurrent for many years, never producing more than slight disability.

Treatment of rheumatoid arthritis includes the following measures:

Rest of the entire body as well as the joints involved. In the mild form, *moderation* of activities will suffice. There is danger of producing an invalid reaction and muscular atrophy by too much rest. Patients on general rest are to keep the joints moving by regular scheduled exercises. An optimistic a prognosis as possible, strong efforts to relieve worries, entertainment, occupational therapy, and even psychiatric treatment when indicated.

A diet, high in vitamins and minerals, and high in calories, supplemented with multivitamins. No massive doses of vitamins for a so-called specific effect. Increase the appetite when indicated with sherry, beer, and whisky at times

Many patients have anemias which require iron, liver, and/or transfusions. At times, transfusions are given even in the absence of anemia, since a beneficial, occasionally dramatic effect sometimes follows.

Hollander does not believe that rheumatoid arthritis often, if ever, is cured by the removal of a so-called focus of infection. Any infection is a drain on the body. All obvious infections, such as abscessed teeth, acute or chronic sinusitis, tonsillitis, prostatitis, et cetera, are to be treated.

Heat and massage should be given daily, and active and passive exercises many times a day. Inflamed joints require adequate rest, but complete rest of a joint often results in permanent stiffness; thus, a fine balance between rest and regular exercises must be maintained. Types of heat used include infra-red, diathermy, paraffin baths, heat cradles, therapeutic baths, and contrast baths, most of these treatments in a physical therapy department. Substitute or supplemental therapy may be employed at home with simple measures.

The anticipation of deformities or their recognition at an early stage is emphasized. Deformities usually occur in a position of flexion. Every effort is made to prevent or overcome spasm by exercises and massage and by splints, bivalved plaster casts, traction and other measures. *Placing pillows beneath the knees is one of the surest ways to produce a deformity.* In the few cases in which permanent deformities develop in spite of vigorous treatment, the orthopedic surgeons are called upon.

Practically all patients are given sodium salicylate or aspirin in regular doses in an effort to keep patients free of pain, so that they will move their joints more freely, and thus prevent deformities.

Only 60% of cases can go through a course of gold salts without slight toxicity, but severe complications are rare if precautions are used. "Myochrysine," gold sodium thiomalate and "Solganol B. Oleosum" (aurorhioglucose) are drugs of choice. These drugs contain 50% actual gold. The injections are given intramuscularly in the upper outer quadrant of the buttock. All dosages are given in total milligrams of gold salt. Begin with 10 mg. of gold salt once weekly for two to three injections then increase gradually to 50 mg. once weekly until a total of 1 Gm. has been given. Then 25 mg. every two or three weeks as a maintenance dose to prevent recurrence. Therapy with gold salts is of definite value in cases in which the diagnosis is definite. Evidence of renal disease, history of drug allergy, severe anemia or other blood dyscrasia, and skin or liver disease are contraindications to gold therapy. Its use should be attended with care, and supplemented by physical therapy and other general measures of proved value.

In periarticular fibrositis or rheumatoid arthritis

in its early stages, fever therapy by means of typhoid vaccine injections is well worth trying. Inject an initial dose of 10 million killed organisms intravenously every other day, doubling or even tripling the previous dose if the response has been minimal. Each bout of fever is usually preceded by a chill, and nausea and headache may come with fever, which is controlled by mild sedatives, but salicylates should not be used because of their antipyretic effect. Optimum fever is 101 to 103 for six to eight hours.

A course of six to eight injections, giving a total of 40 or more hours of t. over 100° F. should be sufficient to produce remission, if the treatment is going to benefit the patient at all. In the Army Rheumatic Disease Centers, this therapy improved the patient greatly in 50% of the cases including rheumatoid arthritis of the spine.

Roentgen irradition has little effect on rheumatoid arthritis in peripheral joints. In the spinal variety remissions follow courses of x-ray therapy in over one-half of the patients so treated.

For relieving pain and spasm, heat and gentle massage, or hydrotherapy with underwater exercises, are the most successful means. For patients unable to obtain adequate physical therapy several drugs have been used. A treatment of real promise for muscle spasm is the use of curare, 1 c.c. intramuscularly as d-tubocurarine, suspended in beeswax and oil, every two to three days.

In degenerative joint disease the patient is seldom ill or greatly disabled. The management should consist of reduction of weight, moderation of exercise, and salicylates and hormones as indicated.

Hot applications give great relief. If an osteoarthritic joint becomes acutely painful injection of 1% procaine solution around the painful area helps. Osteoarthritis of the hip may require orthopedic measures.

Failure of sulfonamides and penicillin in arthritis with gonorrhea, or following it, indicates that it was not gonorrheal arthritis, but a rheumatoid arthritis precipitated by the gonorrheal infection, and it should be treated accordingly.

Colchicine is the remedy in an acute attack of gout, with low-purine diet, avoidance of trauma, and abstinence from use of alcohol. Intermittent use of salicylates in doses of 15 to 20 grains four times daily for three-day periods at intervals of one to two weeks seems to act as a uric acid diuretic almost as effective as cinchophen, without the dangers of toxicity.

Every doctor who has arthritic patients may learn from this much of encouragement and other helpfulness for these patents. Our gratitude is expressed.

Bronchoscopy in Early Diagnosis of Lung Carcinoma

(A. Q. Penta, Schenectady, in *Clinical Med.*, Dec.)

Carcinoma of the lung is responsible for 10% of all cancer deaths. Bronchoscopic examination with removal of tissue for histological study is one of the most important diagnostic procedures available.

The symptoms in primary carcinoma of the lung depend to a great extent on the degree of bronchial obstruction. The most important early symptom is a dry, hacking cough accompanied by a slight bronchial wheezing. In the early stage there may be a few coarse moist rales and asthmatoid-like wheezing over the involved pulmonary area. Roentgenographic studies of the chest during this stage may be entirely negative; the tumor is not large enough to cast a shadow. At this time the patient usually seeks medical advice because of the troublesome cough and wheezing. It has been the author's experience when these patients are referred for bronchoscopic examination they invariably had been under symptomatic treatment for a long period of time and had shown no improvement.

Of the 44 cases of bronchial carcinoma, bronchoscopically examined by the author in the last five years, 15 because of recent wheezing, cough, and slight dyspnea, had been treated for bronchitis or bronchial asthma. Every patient, particularly of the cancer age group, presenting this chain of symptoms, should immediately be x-rayed and have a bronchoscopy. Blood streaked sputum or frank hemoptysis is frequently an early symptom.

New Agents in the Treatment of Epistaxis

(B. A. Cope & M. M. Hipskind, Chicago, in *The Eye, Ear, Nose & Throat Monthly*, Aug.)

In the management of epistaxis new effective agents have become available to the general practitioner in the use of the gelatin sponge and oxidized cellulose.

The site of bleeding is determined after debris, clots and blood have been removed by gentle suction with a capillary tip. he area located may have an application of pontocaine (2%) with a drop of adrenalin 1-1000, for a few moments. A small gelatin sponge cut to a size to cover the site of the bleeder, and 3 to 5 mm. around, is introduced and held in place a few moments while the edge of the sponge is tamped down to the mucous membrane. The nose is examined periodically for any oozing or bleeding The pack disappears in four to five days, either by absorption or by being picked or blown out by the patient.

Stilbamidine and Pentamidine for Multiple Myeloma

(L. F. Craver, New York, in *Bul. N. Y. Acad. of Med.*, Jan.)

The relief of pain in most cases of multiple myeloma has been reported, from 15 or more intravenous or intramuscular injections of 150 mgm. of stilbamidine or 20 to 30 intramuscular injections of 100 mgm. or pentamidine, provided the patients were kept on a diet low in animal protein. In some instances partial recalcification and healing of bone lesions was observed. In four of 20 patients treated with stilbamidine a late sign of intoxication was a dissociated anesthesia in the trigeminal area, beginning two and one-half to five months following the treatment.

Great caution in use of the drug is advised in patients with renal failure. The treatment merely checks the disease, but does not cure it.

In trials of urethane in this country in general the effects have been rather unpredictable. In dosage of 1 gm. t.i.d. in adults only moderate toxicity results (nausea, vomiting, and some drowsiness); but a good effect on the leukemia is found in only one-third of the cases, and usually only after administration of the drug has been continued steadily for a month.

SOUTHERN MEDICINE & SURGERY

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As is true of most Medical Journals, all costs of cuts, must be borne by the author.

PRELIMINARY PROGRAM

FORTY-NINTH ANNUAL MEETING
of
THE CAROLINAS and VIRGINIA
CHARLESTON
FORT SUMTER HOTEL
February 9th and 10th

Monday, February 9th
10 a. m.

CALL TO ORDER—
DR. F. E. KREDEL, Chairman Local Committee.
INVOCATION—
GREETING—
RESPONSE—
THE CHAIRMAN hands over the meeting to the President.

UNORTHODOX TREATMENT IN CORONARY OCCLUSION—
Dr. Robert Wilson, Jr., Charleston

LYMPHO-SARCOMA OF THE INTESTINAL TRACT—CASE REPORT WITH REVIEW OF LITERATURE—
Dr. Edward R. Hipp and Dr. John A. Brabson, Charlotte

BUERGER'S DISEASE: TREATMENT WITH TETRAETHYL AMMONIUM CHLORIDE—
Dr. Russell Buxton, Newport News

PERFORATIONS OF THE COLON: NON-TRAUMATIC—
Dr. Furman Wallace, and
Dr. E. M. Colvin, Spartanburg

FURTHER OBSERVATIONS ON EARLY POSTOPERATIVE AMBULATION—
Dr. I. Grier Linton, Charleston

1:00 p. m.—Recess

A Luncheon given by the present officers to all Ex-Presidents is set for the hour from 1:00 to 2:00.

2:00 p. m.—Reconvene

CLINICAL CASE PRESENTATIONS

Medical College of South Carolina—Baruch Auditorium—Calhoun Street at Gadsden

VARICOSE VEINS—
Dr. W. H. Prioleau

CARCINOMA OF LUNG—
Dr. E. F. Parker

AORTIC VALVULOTOMY—MOVING PICTURE—
Dr. H. G. Smithy

LOCAL CHEMOTHERAPY IN CARCINOMAS—
Dr. F. E. Kredel

CHEMOTHERAPY IN LEUKEMIA—
Dr. G. H. Parks

TATTOOING IN EYE SURGERY—
Dr. Clay Evatt

UNUSUAL CHEST X-RAYS—
Dr. W. A. Smith

Gastro-intestinal Cases—
Dr. Vince Moseley
Spastic Colitis—
Dr. D. B. Remsen
Renal Calculosis—
Dr. J. J. Ravenel
Clinical-Pathological Conference—
Dr. K. M. Lynch

7:00—Subscription Dinner
Dinner Session

(Entire Membership, their Ladies, and the Interested Public)

Address—Contributions of Urology to Life Expectancy—
Dr. Harold P. McDonald, Atlanta
President's Address—Carcinoma of the Prostate—
Dr. Raymond Thompson, Charlotte
President-Elect's Address—The Doctors' Public Relations—
Dr. Charles N. Wyatt, Greenville

Tuesday, 9:00 a. m.

REPORT OF MEETING OF COUNCILLORS
REPORT OF SECRETARY
(Few minutes only)
ELECTION OF OFFICERS

Geriatrics—
Dr. James A. Hayne, Columbia
Low-Back Pain—
Dr. R. B. Davis, Greensboro
Bacterial Endocarditis: Its Early Diagnosis and Modern Treatment—
Dr. Paul D. Camp, Richmond
Modern Psychiatric Therapy—
Dr. O. R. Yost, Aiken
Psychosomatic Medicine: Problems in the General Hospital—
Dr. John F. Williams, Richmond
Virus Pneumonia and Its Treatment with Vitamin C—
Dr. Fred R. Klenner, Reidsville
Rational Therapy of Extensive Burns—
Dr. Karl Morgan Lippert, Columbia
Anemia in the South—
Dr. Karl Schäffle, Asheville

1:00 p. m.—Recess
2:00 p. m.—Reconvene

Lessons From Surveys of Obstetrics in the Carolinas and Virginia—
Dr. Oren Moore, Charlotte
The Present Status of Penicillin in the Treatment of Syphilis—
Dr. J. Lamar Callaway, Durham, and
Dr. Kathleen A. Riley, Charleston
Benign Hypertrophy of the Masseter Muscle (Lantern Slides)—
Dr. R. Douglas Neal, Charlotte
Carcinoma of the Colon (Lantern Slides)—
Dr. W. C. Cantey, Columbia
Esophageal Tamponage—
Dr. O. D. Baxter, Charlotte

IN MEMORIAM

1946
Dr. E. C. Person, Pikeville, N. C.....Sept. 30th
(No notice received until April 3rd, 1947)
1947
Dr. F. T. Harper, Burlington, N. C.....July 4th
Dr. T. R. Littlejohn, Sumter, S. C.....July 26th
Dr. LeGrand Guerry, Columbia, S. C.....Aug. 15th
Dr. Frank A. Sharpe, Greensboro, N. C...Nov. 21st
Dr. James McLeod, Florence, S. C.....Dec. 9th
Dr. G. L. Kennedy, Ninety-Six, S. C.....Jan. 12th
Dr. J. L. Rawls, Norfolk, Va.....Jan. 18th

N. B.—If you note any errors or omissions, please notify the secretary promptly.

FIGURES SHOW NO NEED FOR SOCIALIZING MEDICAL CARE

We Are Doing Wonderfully Well Under Our Present Plan

"A statement made to WRMS Friday night by Representative Dingell (D., Mich.): 'It (S. 545) [the Taft Bill] is a bigger and better plan for pauperism of hospitals. It is a raid on the Treasury, just what Taft accused the Murray-Wagner-Dingell bill of being. He had brazen guts to say that. He's deliberately lying. I mean exactly that.' Dingell said he would not be averse to modification of S. 1320 in the interest of simplification or even to restrict its coverage to persons in $5,000-or-less income brackets, along lines advocated last November by Bernard M. Baruch. But drop the compulsory feature? 'Never.'"

The paragraph is quoted from "Washington Report on the Medical Sciences," No. 31, January 5th.

Apparently Representative Dingell has the same breeding and the same idea of convincing argument as had the union Teamsters who beat up two young Naval officers in a Washington hotel lobby because the officers declined to echo the political sentiments of those devoted followers of the malodorous Dan Tobin. It will be recalled that these toughs were never punished for this unprovoked assault on these officers.

But decent people, still a big majority in this country, will have no difficulty in deciding which is the honorable and intelligent person, a Taft or a Dingell.

No one is surprised that Dingell will not drop the compulsory feature. Compulsion is the essence

of the political theories of the Wagners, Murrays and Dingells, and their fellow travelers, on this and the other side of the ocean. Very different from the foundation stone of Jefferson's political belief: "That Government is best which governs [compels] least."

It is unlikely that even Mr. Dingell will question the honesty of the Metropolitan Life Insurance Company, or the reliability of its *Statistical Bulletin.* From that Bulletin for December:

"The natural increase in our population in 1947 set a new high mark. An extraordinarily large number of births and a very low death rate gave an excess of births over deaths of 2,400,000 in 1947.

"About 3,900,000 babies were born in the United States in 1947. In 1947, for the first time in our history, births exceeded the 3,500,000 mark; it was the fourth time that the 3,000,000 mark was passed, all four of these years falling within the present decade.

"It is noteworthy that the increase was country-wide and that the relative rise varied little from one area to another.

"Coincident with the exceptionally large number of births in recent years, there has been a remarkable improvement in the mortality among infants. The infant mortality rate in 1947 was 32 per 1,000 live births, a drop of fully 10 per cent from the previous low established in 1946. The rate has been reduced by one-third since 1939, and by one-half since 1930. The number of deaths among infants in 1947 was the same as in 1933, although the number of births was 70 per cent higher. The reduction in infant mortality from the 1933 level has meant the saving of about 100,000 infant lives in 1947 alone.

"The general death rate in 1947, provisional figures indicate, was 10 per 1,000, slightly higher than in 1946. This small rise probably reflects simply the increase in the number of babies and of older people—with death rates higher than the average for the population as a whole. When adjustment is made for these changes in the age composition of the population, it is very likely that the death rate in 1947 will prove to be the lowest ever recorded.

"Very significant it is that our natural increase in 1947 was greater than the combined figure for natural increase and net gain through immigration in any year in the period just prior to World War I, years in which the wave of immigration was at flood tide.

"As a result of the high birth rates and the low death rates which have prevailed during the war and postwar periods, more than 12,500,000 have been added to our population through natural increase alone since the census of 1940."

In the face of such a showing as this, is it not astounding that those we, the people, send to Congress to represent us, do not turn their attention to some of the hundreds of evils that are crying out for legislative correction? Right here there comes to mind one of the Wisdom Jingles written by Ruth McEnery Stuart, of Tennessee, some forty years ago:

"Sis Tin-cage Polly wid 'er Roman nose,
Dat roams from 'er eyes till it pints to 'er toes;
She keep up 'er constant, clackin' race,
To call off attention from de shape of 'er face;
But she ain't no new politician in dat."

There is not a profession or any other group that can show a record of efficiency comparable to this proof that the medical profession is rendering a wonderfully efficient service to all the people.

In his address to the Congress, made January 7th, President Truman said:

"The greatest gap in our social security structure is the lack of adequate provision for the nation's health. We are rightly proud of the high standards of medical care we know how to provide in the United States. The fact is, however, that most of our people cannot afford to pay for the care they nede."

Mr. Truman's small sop to the medical profession, and his plain intimation that we know how to provide high standards of medical care, but do not provide them, is unworthy of the high position which he occupies.

Whether or not most of our people *can afford to pay for* the care they need, abundant proofs are adduced that they *are getting* this care.

To have to blush for our President is humiliation indeed. But while we blush for him, we must continue to exert ourselves to circumvent him and his malignant and mendacious coadjutors.

IT IS NOT WITH BRITAIN'S DOCTORS' CONSENT THAT MEDICINE IS SOCIALIZED IN BRITAIN

A GREAT many statements have been made by those bent on pushing through the Wagner-Murray-Dingell bill, that the members of the British medical profession are pleased with the socialization of medicine in that country and that the people are being given better medical care than ever before.

Read something of what the editor of the *British Medical Journal* and some of its correspondents say in its issue for December 27th.

Under the title "Mr. Bevin's Gloss," the editor writes:

The Minister of Health's appeal is in its general effect a misstatement of fact, made none the less a misstatement by the persuasive language in which it is couched. . . . He says, for example, that there is no hierarchy of super-

vision, when the whole administrative structure of the Act is a pyramid of lesser hierarchies with the Minister himself the arch hierarch at the apex. . . . To state that the doctor is not "under orders" is to evade the plain fact that the Minister has set up a mechanism for distributing doctors, with facilities for appeal to him against the decision of the Medical Practices Committee. . . . . If one is a servant of the State in receipt of a salary, by what process of reasoning does Mr. Bevan reach the conclusion that doctors are "not State employed?"

Mr. Bevan's idea of cooperation is to refuse to accept any one of the Negotiating Committee's arguments for amending the Act, although Mr. Bevan encouraged the Committee to resume discussions with the possibility of amendment in mind. . . . . We must remember what Parliamentary spokesmen have themselves said: "There is no rational stopping-place between the first incursion of the State into preventive medicine and a fully developed State medical service." That is the doctrine. During the debate on the Second Reading of the Bill in the Commons in April, 1946, Mr. Bevan, in reply to Mr. Reid's observation that he (Mr. Bevan) was "out for a full-time salaried service as soon as he feels he can impose that upon the country," made this revealing statement: "There is all the difference in the world between plucking fruit when it is ripe, and plucking it when it is green." . . . . The Labour Party's phamphlet published in April, 1943: "In the Labour Party's opinion it is necessary that the medical profession should be organized as a national full-time salaried pensionable service."

A Sate medical service is something to which the medical profession has always been resolutely opposed. . . . . The National Health Service Act is the first and most important step towards denying the medical profession any degree of freedom. If the medical profession, after deep reflection concludes that this Act is the first irrevocable step towards a wholetime State medical service, then it must have the courage and the integrity to refuse to serve under the Act until it has been amended in those particulars which the profession holds to be essential to its continued existence as a body of free men.

Now, to an Englishman, a gloss is "a superfical and plausible, but misleading explanation, frequently intended to conceal a fault."

General Practitioner Branch writes the Editor:

Doctoring in a busy panel practice at the height of the winter is an absurdity. Even in an eleven-hour working day the average time it is possible to allot to each patient during surgeries [office practice] is 2 to 4 minutes. For visits, it is 10 to 15 minutes including travelling time from house to house. Added to this pressure of work, the strain of after-dinner, night and Sunday calls leads to progressive tiredness, and it is a miracle that more and bigger and better errors of judgment are not made more often. It speaks highly of the ability of the G. P.

General Practitioner Miller ditto:

I suggest that a questionary be sent to all doctors' wives asking whether or not they are willing to work a 24-hour day for no remuneration. The doctor is to be nationalized but his wife is not. Who therefore is to perform the work carried out just now by his wife? It would appear that if the proposed National Health Service is to work efficiently each doctor will have to be provided with a secretary-receptionist to answer telephone and door bells and attend to his correspondence. But, as the doctor must be on call for 24 hours per day, three secretaries would be required if each were to work only the 8-hour day of everybody but doctors.

If all doctors' wives were to say "No" to becoming unpaid Government servants then the proposed Health Service would collapse in two weeks.

Does it seem as though British doctors are in love with the plan? There come to mind the words:

Perhaps it were well to dissemble our love,
But why did you kick me down stairs?

Unhappily our brethren in The Tight Little Isle can not kick as hard as they would like to, but it is plain that they are doing their best.

SOUTH CAROLINA DOCTOR REPORTED CASE OF "SLOW PULSE" SAME YEAR AS AND INDEPENDENTLY OF STOKES' REPORT

Dr. Lee reported[1] reported a case of remarkably slow pulse, in a patient subject to pseudo-apoplectic attacks. The subject of this case was a colored woman aged 50 years, of remarkable obesity. Two years ago the patient occasionally complained of indigestion and rheumatic pains, but offered no symptoms which could be referred to this derangement in the circulation. About 12 months ago, she was troubled with giddiness upon making any unusual exertion, and soon after she had a slight apoplectic attack, from which she recovered completely. These attacks increased in frequency and severity. During the time they lasted, they presented the appearance of ordinary apoplectic fits; but the intellect recovered its integrity immediately after they were over, and there was no subsequent paralysis. During the two years, the pulse was never 40 beats in a minute, generally it was 30; occasionally, in the latter part of her life, preceding and during a fit, it was not over 24 beats, these labored and and sometimes intermitting. The impulse over the region of the heart was feeble, and the sounds obscure; immediately after the systole a prolonged murmur was heard. When seen during a premonition of an attack, six or eight ounces of blood were taken by venesection, and diffusible stimulants administered immediately after. The last fit in which she was seen lasted three or four hours, and convalescence was unusually slow; two weeks after this she was found dead in her bed. Postmortem examination was not permitted.

Dr. William Stokes' initial article on the subject[2] is abstracted:

In the fourth volume of the Dublin Hospital Reports, Mr. Adams has recorded a case of permanently slow pulse, in whichthe patient suffered from repeated attacks of an apoplectic nature, though not followed by paralysis. The following case will still further elucidate the subject:

A man, 68, admitted to hospital Feb. 9, 1846; health robust until three years ago, at which time he was suddenly seized and would have fallen, if he had not been supported. This occurred several times during the day, and always left him without

1. In *Trans. Med. Soc. S. Car.*, Oct. 1, 1846.
2. In *Dublin Quarterly Journal of Medical Sciences*, Aug. 1846.

any unpleasant effects. Since that time he has had at least 50 such seizures, uncertain as to period of invasion, and very irregular as to intensity. They are induced by any circumstance tending to impede or oppress the heart's action, such as sudden exertion, distended stomach, or constipated bowels. There is little warning. The patient feels a lump first in the stomach, which passes up through the right side of the neck into the head, where it seems to explode and pass away with a loud noise. The duration of the attack is seldom more than four or five minutes, but during that time he is perfectly insensible. He never suffered unpleasant effects after the fits, nor had anything like paralysis. His last fit occurred one month before. At first he found that spirits was the best restorative or prophylactic, but latterly he has not used them, being "afraid to die with spirits in his belly."

Pulse is 28 in the minute, of a prolonged, sluggish character; the arteries pulsate visibly all over the body, but no bruit is audible in them.

The circumstance which makes the coincidence perfect is that Dr. Lee's report and the abstract of Dr. Stokes' report are published in the same issue (that for January, 1847) of the *Southern Journal of Medicine & Pharmacy,* Charleston.

ABUSE OF PENICILLIN SERIOUSLY LIMITING ITS USEFULENESS

THE issue of the *British Medical Journal* for November 29th gives solemn warning of the waning power of that marvelous curative agent, penicillin.

The situation is analyzed and remedies, at least of amelioration, prescribed.

There is now considerable literature dealing with the question whether the acquisition of penicillin-resistance in bacteria generally is the result of selection or of mutation. As it concerns staphylococci any answer to this question must take account of the fact that there are two quite distinct types of resistance. Naturally acquired resistance is accompanied by no loss of pathogenicity, whereas organisms artificially rendered resistant lose this property. In one case a highly resistant staphylococcus recovered after penicillin treatment proved identical serologically and in every other property with the more sensitive strain isolated a fortnight earlier. There is no reason why two quite distinct types of resistance should result from habituation to penicillin, one in a test-tube and the other in the body, nor is the capacity to form penicillinase a property likely to be acquired in such a way. The best explanation of the facts is that penicillinase-producers are naturally resistant, and from very small beginnings are rapidly coming to occupy the places left vacant by their more vulnerable cousins.

It is a problem not peculiar to staphylococcal infection, although more serious in relation to this than to any other. The capacity of staphylococci to acquire resistance, at least artificially *in vitro,* is very great; whether naturally resistant strains reach the same levels, or can increase their form of resistance in response to the same stimulus, is not clear. It has been found that, whereas the resistance of Staph. aureus could be raised 3,000 fold; that of a pneumococcus could be raised only 27-fold, and that of Strep. pyogenes only 5-fold.

It is for its power over grave staphylococcal infections that we have always had most reason to be grateful for the discovery of penicillin, and that power is already on the wane.

We must, as this distinguished Britisher sees it, look to a future in which the problem of treating these infections has almost to be faced afresh. Streptomycin is unlikely to do more than help to bridge a short gap between penicillin and some new form of chemotherapy; there are already abundant records to show that staphylococci, like other species, may acquire immense resistance to this antibiotic within a very short time. There is little, he believes, that can be done to delay the time when a majority of staphylococcal infections will be resistant, at least to a dangerous degree, to treatment with penicillin. The correct policy is to test the sensitivity of the organism in each case, and to give from the first a dose which should be adequate to control it, which is not universally feasible.

All will agree with his statements that a useful measure within the capacity of every practitioner is to restrict the use of penicillin to cases in which there are clear indications for it; that the present enormous consumption of the drug can be accounted for only by much indiscriminate use, and that widespread use, particularly of inadequate doses, is a potent factor in breeding resistance strains of bacteria.

TOO SEVERE A TEST OF DIGNITY

Dr. H. Thomas, of the eclectic school, was in Chatfield from 1865-1881. Dr. Thomas was one of dignified presence, who habitually wore a tall silk hat and carried a cane. On one occasion, however, dignity and sartorial splendor were forgotten; on a day when the wooden sidewalk in front of Briley's Store was being torn up for replacement, sundry of the citizens were at hand, looking in hope of coins among the debris that had accumulated under the boards. A clerk in the store (the old gentleman of this reminiscence), happening to have a five dollar gold piece in his pocket, palmed the coin, ostensibly joined the search, and suddenly with a shout announced this imposing find. To his great delight, among the group of searchers which now rapidly increased, was Dr. Thomas, on his hands and knees, fine clothes, silk hat, cane and all.—Nora H. Guthrey, Rochester, in *Minnesota Med.,* Dec.

THE HISTORY is the most important feature of the investigation of a case of supposed *heart disease.*

PAIN radiating to the back is usually not due to heart disease.

NEWS

AMERICAN COLLEGE OF PHYSICIANS RESEARCH FELLOWSHIPS IN MEDICINE 1948 AWARDS

The Board of Regents of the College, on the nomination of the Committee on Fellowships and Awards, has awarded six research Fellowships in Medicine for the year beginning July, 1948. The awards were made to the following physicians:

Charles Gordon Campbell, M.D., C.M., Vancouver, B. C., Canada.

Frank Herbert Gardner, M.D., San Bernardino, Calif.

Samuel P. Martin, M.D., Durham, N. C., now Resident in Medicine in the Duke University Hospital. With the aid of the Fellowship, Dr. Martin will undertake studies of bacterial metabolism in the Rockefeller Institute for Medical Research, New York City, under the direction of Dr. René J. Dubos.

Peritz Scheinberg, M.D., Miami, Fla., now Assistant Resident in Medicine in the Duke University Hospital. Dr. Scheinberg has served as interne and Assistant Resident in Medicine in the Grady Memorial Hospital, Atlanta. He will conduct an investigation of cerebral circulation and peripheral vascular flow in normal and hypertensive persons in the Duke University Hospital under the direction of Eugene A. Stead, Jr., M.D., F.A.C.P.

Lutfu Lahut Uzman, M.D., Istanbul, Turkey. Dr. Uzman received the B.S. degree from the University of Istanbul Faculty of Science in 1940. Following several years of study in the Medical School of that institution, he transferred to the Harvard Medical School and completed his work for the M.D. degree there in 1946.

John Martin Weller, M.D., Ann Arbor, Mich. Dr. Weller received the M.D. degree from Harvard Medical School in 1943, served as Medical House Officer, Peter Bent Brigham Hospital, Boston, from January to October, 1944; as Assistant Resident in Medicine in the Vanderbilt University Hospital, Nashville, from October, 1944, to July, 1945 Since January of 1946, Dr. Weller has been Medical Resident in the Veterans Administration Hospital, Hines, Ill.

Recent Research Grants by the National Cancer Institute of the U. S. P. H. S.

Among these are grants to:

School of Medicine, University of Virginia, Charlottesville. Improvement of teaching in cancer and stimulation of investigation in the field of cancer, $24,800.

University of Georgia, School of Medicine, Augusta, Ga Improvement and coördination of the teaching of cancer in the medical school, $25,000.

Medical College of Virginia, Richmond. Teaching of cancer problems, diagnosis and treatment to medical students and house staff, $16,800.

Duke University School of Medicine, Durham, N. C. The development of a teaching program in neo-plastic disease, $24,948.

Medical College of South Carolina (K. M. Lynch), Charleston. Carminoca of the lung: experimental study of the inhalation of suspected substances and study of natural occurrence under suspected conditions, $13,950.

Eye, Ear and Throat Hospital for Richmond

Plans for erection of a 48-bed hospital for the treatment of eye, ear, nose and throat cases at 824-826 West Franklin Street, have been announced by the committee of doctors in charge.

The hospital, to be called "The Richmond Eye Hospital," is made possible largely through the will of the late Mrs. S. T. Beveridge, who left 40 per cent of her estate as a trust fund for erection of a hospital for eye work.

Other funds are expected to be procured to build and equip the portion of the building used for treatment of ear, nose and throat patients.

Construction of the hospital by a nonprofit corporation will start early next year. The estimated cost will be $350,000. The hospital will be operated for private, semi-private and charity patients.

The building will be of fireproof, brick and steel construction. It will have three stories and a basement with provision for adding two stories later if needed. There will be private, semi-private and ward accommodations.

All rooms will be equipped with built-in dressers, running water and toilet facilities.

Plans for construction of the hospital, which will be the only one in Richmond for the exclusive care of eye, ear, nose and throat patients, are being formulated under a board of physicians composed of Dr. John Burke, of Washington; Dr. S. M. Cottrell, Dr. E. T. Gatewood, Dr. W. Wallace Gill, Dr. Rudolph C. Thomason and Dr. Randolph Wellford, of Richmond.

Postgraduate Course in Diseases of the Chest

The American College of Chest Physicians, Pennsylvania Chapter, and the Laennec Society of Philadelphia are sponsoring a postgraduate course in diseases of the chest to be held during the week of March 15-20, at the Warwick Hotel, Philadelphia.

The emphasis in this course will be placed on the newer developments in all aspects of diagnosis and treatment of diseases of the chest.

The course will be limited to 30 physicians. Tuition fee is $50 for members, $90 for non-members.

Further information may be had from the office of the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10.

Lee County (N. C.) New Medical Officers

Dr. John Dotterer has been chosen chairman of the staff of the Lee County Hospital, Sanford, N. C., for the coming year, succeeding Dr. J. H. Byerly. Other officers are Dr. Hayden Lutterloh, vice-chairman, and Dr. W. R. Hartness, Jr., secretary.

Chosen as president of the Lee County Medical Society was Dr. Mary Margaret McLeod, succeeding Dr. A. A. James, Jr.; Dr. John Dotterer, vice-president; and Dr. Waylon Blue, secretary and treasurer.

Miami to Establish Medical School

(The Diplomate, Dec.)

Meeting April 16th, 1947, the Trustees of the University of Miami authorized the establishment of a school of medicine to be opened by October. The step was taken as the state legislature was debating bills to establish a medical and dental college as a branch of the University of Florida, at Gainesville. President Bowman F. Ashe, of the University of Miami, said that the decision of the Trustees "has no connection" with the proposed state school. The City of Miami has offered 10 acres near the James M. Jackson Memorial Hospital as a site. The building is not needed to open the schools, says Doctor Ashe, since first year's classes can be held in present classrooms.

Colorado White-cane Law

(The Diplomate, Dec.)

This act restricts the carrying of a white cane in public places to persons wholly or partially blind, and failure to heed the approach of a person carrying a white cane, or to come to a full stop when approaching such a person, or to take precaution against accident or injury to such

person after coming to a stop, as provided by this act, is a misdemeanor punishable by a fine not to exceed $100.

The Twenty-seventh Annual New Year's Meeting of the Marlboro County (S. C.) Medical Society was held at the Country Club, Bennettsville, the evening of Thursday, January 8th.

Program

5:30—Social Hour and Refreshments.

7:00—Dinner.

8:00

Introduction of President of South Carolina Medical Association—Dr. Olin B. Chamberlin, Charleston.

Diagnosis and Treatment of Chronic Diarrheas — Dr. Vince Moseley, Medical College of the State of S. C., Charleston.

Practical Points in Pediatrics—Dr. Samuel F. Ravenel, Greensboro, N. C.

Iredell-Alexander

Dr. James L. Pressly, Statesville, has been elected President-of the Iredell-Alexander County (N. C.) Medical Society, with Dr. Ernest Ward as Secretary. Dr. James W. Davis and Dr. Ross S. McElwee, both of Statesville, were named as delegates to the State Medical Society.

The Alamance-Caswell County (N. C.) Medical Society has elected the following officers for the next year: Dr. George W. Lawson, Graham, President; Dr. A. W. Simmons, Burlington, Vice-President; Dr. George T. McLamb, Burlington, Secretary-Treasurer.

Beaufort County Group Selects New Officers

Dr. William C. Piver, Jr., Washington, N. C., a member of the staff of Tayloe Hospital, is 1948 president of the Beaufort County Medical Society, succeeding Dr. George Salle, of the Fowle Memorial Hospital staff.

Other officers elected were Dr. Charles W. Hawes, vice-president, and Dr. D. E. Ford secretary-treasurer.

Manteo to Have Hospital

Dr. James A. Crabtree, acting surgeon general, has informed Representative Bonner that Manteo would receive a 15 bed general hospital under the provision of the Federal Hospital Act. This hospital was approved by both the North Carolina Medical Care Association and the United States Public Health Service.

Catholics Buy 150-Bed Hospital at Portsmouth

The Most Rev. Peter L. Ireton, Bishop of the Roman Catholic Diocese of Richmond, as president, has acquired Maryview Hospital, at Portsmouth, Va.

The 150-bed hospital was built in 1944 by the United States Government at an estimated cost of $1,000,000.. It was purchased from the Federal Works Agency for $85,000. Besides the hospital, a convent, a nurses' home and a school for the training of nurses are included in the transaction.

Recently elected officers of the Wake County Medical Society for 1948 are: President, Dr. George W. Paschal, Raleigh; Vice-President, Dr. A. G. Crumpler, Fuquay Springs; Secretary-Treasurer, Dr. J. Walter Neal, Raleigh.

Dr. Emily Chenault Runyan, Richmond's first woman doctor, celebrated her ninetieth birthday December 12th. Dr. Runyan spends most of her time in bed, but she takes an active interest in the happenings of the day, keeps up with things generally, things medical especially, through her reading, and radio, and advised her patients by telephone.

Dr. Runyan was graduated in medicine by Northwestern University in 1888.

She took a house in Richmond across Franklin Street from Dr. Hunter McGuire's home and offices.

In 1907 she felt a call to go to China to serve in a mission, and went. Illness prevented a long stay there. Back in Richmond, she felt the necessity of getting away from her office work. She went to Mississippi, where she spent five years as director of health work at the State College for Women. Then back to Richmond again.

In 1918 she was laid low by influenza. Her work has been confined almost exclusively since then to office work and consultation by telephone. At 90 she is still at it.

Dr. R. B. C. Franklin will serve as Health Officer of Wilson County, N. C., beginning February 1st. Born in Simcoe, Ontario, Dr Franklin is a graduate of Queens University at Kingston, Ontario. He interned in the New York General Hospital. Later he attended the University of North Carolina where he majored in a course of Public Health. In 1939 he was Health Officer of Surry County.

Dr. Franklin was discharged with the rank of captain in April, 1946, after spending ten months in the Walter Reed Hospital. He was awarded a bronze star for meritorious military service.

West Virginia Woman Doctor Honored

Dr Elizabeth McFetridge, of Shepherdstown, has become the first woman ever to head a component society of the West Virginia Medical Association.

Dr. McFetridge has been elected president of the Eastern Panhandle Medical Society.

Dr. Robert T. Odom, Winston-Salem, N. C., has received certification by the American Board of Surgery.

B. D. Spencer, M.D., announces the opening of offices for the practice of Medicine, at 1527 South Boulevard, Charlotte, N. C.

MARRIED

Miss Janet Shaw McGeachey Fisher, of St. Pauls, N. C., and Dr. Curtis Lansing Coleman, of Lexington, Va., January 10th, at St. Stephen's Episcopal Church, Richmond.

Miss Doris Gwynne Knight and Dr. Jack King Finnegan, both of Richmond, January 10th. Dr. Harvey B. Haag was best man and the ushers were Dr. Paul S. Larson and Dr. Erling S. Hege, all of Richmond.

Dr. Robert Hilliard Shackelford, of Kinston, and Miss Evelyn Thomas Holden, of Raleigh, were married on December 20th.

Dr. Halkup Kennard McCain, of High Point, and Miss Alberta Harris, of Gibson, were married on January 3rd.

DIED

Dr. Joseph Roscoe Latham, 52, chief of staff of St. Luke's Hospital, New Bern, N. C., a former county coroner and public health officer, died December 29th. For the last six months he had been in failing health from nephritis and during the past six weeks his condition had been critical. Born at Belhaven, N. C., he was educated at Chapel Hill, and the Jefferson Medical College, Philadelphia.

During the first World War Dr. Latham was a first lieutenant in the Medical Corps. For a time he taught at

Columbia University, then practiced a short while in Wyoming, then moved to New Bern where he had served since as a general practitioner and diagnostician and specialist in psychosomatic medicine and internal diseases.

During the recent war, he was a civil doctor in charge of Army, Navy and Coast Guard work in this area, including the Army's Camp Battle. For two terms he was president of the Craven County Medical Society; for six years he was county coroner; and for some time was public health officer.

Dr. Latham was versatile. He taught a class in gymnastics for sometime. After the war he taught English to the German war prisoners at Camp Battle, while he polished up on his German. He was a philosopher, writer, poet, artist and teacher. Besides a book, "Cahoque," about residents of a nearby section, he had written numerous articles for medical journals and a number of other essays, short stories and poems on diversified subjects. His stamp collection is one of the largest in the state. His other hobbies included boating, swimming and deep sea fishing.

Dr. Thomas Dwight Sloan, 68, retired physician and medical missionary, died January 10th, at his home at Charlottesville, Va., following an extended illness. He was graduated from the Medical School of the University of Virginia in 1909 and had served as a medical missionary and hospital superintendent in China from 1912 to 1925. From 1925 till his retirement in 1944 he was superintendent of a number of hospitals from Cleveland to St. Augustine.

Dr. A. L. Hill, 40, prominent Kings Mountain, N. C., physician, was found dead at his home the morning of Dec. 19th. Death was attributed to natural causes, probably a heart attack.

He had been practicing at Kings Mountain since 1934 with the exception 3½ years in the Army, when he served as a captain with the 82nd Airborne Division. A native of Rutherford County, he was educated at Drake University, Des Moines, Iowa, where he received his A.B. degree in 1926. He attended the University of North Carolina for two years and received his M.D. degree in 1930 from the University of Pennsylvania.

Dr. Flint Klutz, 55, Maiden, N. C., physician, died at his home Dec. 13th. He was a son of the late Dr. P. J. Klutz and Louella Carpenter Klutz and was born and reared at Maiden. Dr. Klutz retired from active practice five years ago.

Dr. R. Herbert Wright, 68, a native of Petersburg, Va., died December 22nd at his home at Newton Center, Massachusetts. He practiced in Richmond as a specialist in diseases of the eye, ear and throat for 30 years, but had retired and lived at Newton Center the last ten years. Funeral rites were held on the 26th at the grave in old Blandford cemetery, in Petersburg.

Dr. Stanley B. Ellis, 65, of Wakefield, Va., died Jan. 3d in Petersburg Hospital. He was a native of Sussex County and had practiced at Wakefield the last 34 years.

Massengill Company Occupy New Building in San Francisco, Occupy Larger Quarters in New York

At a cost of a quarter million dollars, the San Francisco Division of The S. E. Massengill Company has recently completed, at 250 Fourth Street, one of the most modern industrial buildings on the Pacific Coast.

With the addition of this building, Massengill will continue its efficient service to the medical profession as it has for over one-half a century.

The New York Division of The S. E. Massengill Company has recently moved into larger quarters located at 507 West 33rd Street, New York City. This building provides over 40,000 square feet of floor space for the increased business now being handled throughout the northeastern United States.

Schering Award Winners Announced

Paul J. Kopsch, Richmond Hill, Long Island, N. Y., a senior medical student at the Long Island College of Medicine, has been announced as the recipient of first prize of The Schering Award for 1947. The subject of his paper was "The Clinical Use of Androgens in the Female."

Robert C. Foreman of Western Reserve Medical School, Cleveland, was awarded the second prize of $300; and Dr. Bernard L. Rosenberg, recently graduated from Georgetown University Medical School, Washington, won the $200 third prize. Forty-three contestants received "honorable mention" by the judges and each will receive as a special award a triple-head sethoscope in a leather case.

The Schering Award is given annually for the best manuscripts prepared on a designated phase of endocrinology. Medical students of the Untied States and Canada are eligible for the contest. Each year, the majority of medical schools are represented by the applicants.

Award to Merck and Company for Distinguished Service to Humanity

The 1947 Award for Chemical Engineering Achievement recognizes the valiant group effort of scientists and engineers in an organization long distinguished for its chemical contributions to modern medicine. The Committee of Award, comprised of more than fifty leading educators under the chairmanship of Professor-Emeritus Alfred H. White, makes the not alone on Merck's successful pioneering in the large-scale production of streptomycin and other vital medicinals, but also on the company's constructive policies and practices in encouraging its chemical engineers to participate broadly in all affairs of its growing industry.

Since 1933, an Award for Chemical Engineering Achievement has been presented biennially by McGraw-Hill, publishers of *Chemical Engineering*, to recognize and encourage the co-ordinated group efforts of an entire organization—of its executive, research, engineering, administrative, production and sales staffs.

Merck & Co., Inc., have been chosen for this honor in 1947, the first instance of the award being made to a company primarily concerned with the manufacture of medicinal and nutritional products.

Schering Introduces Micropellets Progynon

To meet many requests, Schering Corporation has introduced Micropellets Progynon. In this product the water is absorbed and the Micropellets remain in the tissue with all the advantages of a pellet implantation. Freedom from the pain of injection, which is an objection to other suspensions of large crystals or bulky amorphous masses, is assured when these tiny Micropellets are employed.

Stilbestrol in the postpartum woman will relieve the painful engorgement promptly, given in divided doses of 25 to 50 mg. over a period of three to seven days. The larger dose of 5 to 10 mg. three times a day gives a more prompt response.

Painful engorgement may occur if the mother does not nurse her infant. Lactation may be suppressed if the neurogenic factor of the suckling infant is removed from the breast, with or without stilbestrol. But, so long as the infant is put to the breast and continues to nurse, stilbestrol is without effect on lactation, but is useful in relieving painful engorgement. Stilbestrol, therefore, may be used on the nursing as well as the non-nursing mother to relieve painful engorgement—Matlin, in *Penn. M. J.*, Oct.

BOOKS

SURGICAL TREATMENT OF THE ABDOMEN: Supervising Editor, FREDERIC W. BANCROFT, A.B., M.D., F.A.A.C.S., Formerly Associate Clinical Professor of Surgery, Columbia University; Professor of Clinical Surgery, New York Medical College; Associate Editor, PRESTON A. WADE, A.B., M.D., F.A.C.S., Associate Professor of Clinical Surgery, Cornell University Medical College; Clinical Professor of Surgery, New York Medical College. With 457 illustrations and 3 color plates. *J. B. Lippincott Company*, E. Washington Sq., Philadelphia 5. Dec., 1947. $18.

The original volume on Operative Surgery was put out by another publisher in 1941. This publisher not caring to continue with the series, the rights were acquired by the present publisher. For this volume the authors have completely rewritten their original chapters. The death of two of the original authors has necessitated the rewriting of two of these chapters by other authorities in the respective fields.

This book is the result of the collaboration of some two score of the prominent practitioners and teachers of surgery in this country. The latest of well-tested methods and operative procedures are presented, each by a master in his special field. The descriptions are so clear as to be ample guides for well-trained surgeons not hitherto conversant with the special technic under consideration. Both indication and contraindication are given due consideration. Dangers and complications are well covered. Prognosis is not neglected. Not all methods, but best methods are described.

THE 1947 YEAR BOOK OF GENERAL SURGERY, edited by EVARTS A. GRAHAM, A.B., M.D., Professor of Surgery, Washington University School of Medicine; Surgeon-in-Chief Barnes Hospital and of Children's Hospital, St. Louis. *The Year Book Publishers, Inc.*, 304 S. Dearborn St., Chicago 4. $3.75.

Special attention is paid penicillin therapy in surgical infections, pentothal and curare for anesthesia, thyroid surgery, bone grafting, cardiac surgery, chlorophyll as a therapeutic agent, and gastric surgery.

Practically every advance in surgical diagnosis or treatment is covered, and the pithy editorial comment continues to add greatly to the value of the articles abstracted.

THE 1947 YEAR BOOK OF GENERAL THERAPEUTICS. edited by OSCAR W. BETHEA, Ph.M., M.D., F.A.C.P., Professor of Clinical Medicine, Tulane University School of Medicine (retired). *The Year Book Publishers, Inc.*, 304 S. Dearborn St., Chicago 4. $3.75.

As a matter of course sulfa therapy, and penicillin, streptomycin and other antibiotic therapy hold the center of the stage. Contraindications for estrogen therapy are emphasized. Noteworthy is the treatment of diabetic coma, that of catarrhal jaundice, use of propacil in thyrotoxicosis. Articles are included on the treatment of malaria and conditions are laid down for the parenteral administration of digitalis.

SEXUAL BEHAVIOR IN THE HUMAN MALE, by ALFRED C. KINSEY, Professor of Zoology, Indiana University, Bloomington, Indiana; WARDELL B. POMEROY and CLYDE E. MARTIN, Research Associates, Indiana University. Preface by ALAN GREGG, M.D., Director, Division of Medical Sciences, Rockefeller Foundation. 804 pages, 173 charts, 159 tables. *W. B. Saunders Company*, West Washington Square, Philadelphia 5; London: 7 Grape Street. 1948. $6.50.

This book is based on surveys made by members of the staff of Indiana University and supported by the National Research Council's Committee for Research on Problems of Sex by means of funds contributed by the Medical Division of the Rockefeller Foundation.

The problem is presented from the biologic, medical, psychologic, psychiatric and sociologic viewpoints, material drawn from upper level groups as well as from the more poorly educated and the economically lower levels.

It is anticipated that this study will prove especially significant to general practitioners, psychiatrists, neurologists, obstetricians, gynecologists, urologists and pediatricians. Reliable data, never before available in such quantity, offer helps to the physician, and the surgeon, on such matters as: impotency, relation of early sexual activity to subsequent capacity, age as a factor in sexual capacity, preadolescent sexual development and activity, counselling the newly married, what is normal and what is abnormal sexual activity, incidence and frequency of the homosexual, discussion of variance in sexual behavior.

The 57 pages of Clinical Tables provide a valuable quick-reference compilation of all the findings of the study from which one can find any of the facts you may need for any individual situation.

A TEXT-BOOK OF PATHOLOGY: An Introduction to Medicine, by WILLIAM BOYD, M.D., Dipl. Psych., M.R.C.P., Edin., F.R.C.P., London, LL.D., Sask., M.D., Oslo, F.R.S.C., Professor of Pathology and Bacteriology of the University of Toronto. Fifth Edition (published October, 1947, reprinted January, 1948). 1049 pages, 500 illustration, 30 plates in color. *Lea & Febiger*, Washington Square, Philadelphia 6, Pa. $10.00.

It is a pleasure to recall our welcoming of the first edition as an authoritative book on pathology, with application to problems of bedside medicine and surgery as its aim. The present edition evidences that the author has become confirmed in the idea that he is providing the kind of pathology textbook that is needed and desired.

Among the new sections are those on: stasis, lipotropic factors in liver disease, vitamin C and wound repair, botryomycosis, the carcinogenic action of acetyl acetaminofluorine, liver lesions in

pellagra, hypertensive heart disease, cardiac infarction without coronary occlusion, alloxan diabetes, primary splenic neutrophilia, the anemia of infection, fibrous dysplasia of bone, and odontogenic tumors.

New material is added on cystic fibrosis of the pancreas, the pituitary-thyroid axis, folic acid in relations to anemia, the pathogenesis of poliomyelitis, terminal endocarditis, and a number of other subjects of clinical importance.

Among the sections which have been rewritten are those on carcinogenesis in its relation to enzymes and viruses, necrosis and cirrhosis of the liver, Cushing syndrome, the Rh factor in congenital hemolytic disease. There is a new section on allergy.

It is likely that there is nowhere as good, certainly there is no better, textbook of pathology for meeting the needs of the clinician.

AN INTRODUCTION TO GASTRO-ENTEROLOGY: A Clinical Study of the Structure and Functions of the Human Alimentary Tube, by James Dunlop Lickley, M. D., Hon. Consulting Physician, Sick Children's Hospital, Newcastle-upon-Tyne; Late Lecturer on Medical Applied Anatomy, Medical School King's College, University of Durham. With 21 illustrations. *The Williams & Wilkins Company*, Mt. Royal & Guilford Aves., Baltimore. 1947.

The book lays a foundation for the clinical study of gastroenterology by an approach which lays emphasis on the fact that function is more permanent than form. For this study the division of the alimentary canal is made more on embryological than on anatomical considerations. It is well conceived and executed and will well serve its purpose.

TONSILLECTOMY AND ADENOIDECTOMY UNSATISFACTORY RESULTS DUE TO CHRONIC MAXILLARY SINUSITIS

(F. M. Walker, M.B., Ch.B., Ear, Nose and Throat Surgeon, Ayr. Co. Hospital & Ayr. C. C., in *Brit. Med. Jl.*, Dec. 6th)

Ayrshire has a pre-school population of 23,000 and a school population of 47,000. Since 1936 a minimum of 25 beds for children requiring operative treatment of the ear, nose and throat has been provided. The number of beds at present so reserved is 34.

With increasing frequency children who had been operated upon months or years previously were referred afresh by school medical officer or family doctor, parents declaring the child's signs and symptoms were the same or worse than before operation. The unsatisfactory results were found to be due to infection of the maxillary antra in the great majority.

In 1946, of the 1,779 cases of removal of tonsils and adenoids, 442 (25% of the total) had symptoms to warrant the puncturing of both antra immediately before operation. The method used was to continue lavage through the antral cannula with normal saline until all traces of pus had disappeared. Swabs were taken at once from the gross pus and sent for culture. In 106 cases no pus was collected—in some it passed into the nasopharynx and was swallowed or contaminated, and in others no actual infection was present. Incompleteness of reports in 24 of these 106 cases brings the number to be considered down to 82. In 336 cases the material was grossly purulent, mucopurulent ,or mucoid. A number of the results of swab examination were lost, however, and some of the case histories were incomplete so that for these and related reasons 46 cases had to be deducted. The number of cases on which this paper is based is therefore 290, or 16% of the total.

Local Anesthesia in the Treatment of Abscess

(F. D. Stanton, Boston, in *Clinical Med.*, Nov.)

It is usually necessary only to inject so as to completely anesthetize the skin. The opening of an abscess is usually an office procedure. In case of an ischiorectal abscess it is the doctor's duty to open at once, rather than to waste time in finding an available operating room, and an available surgeon. Every minute that an abscess is permitted to continue developing pus and pressure, complications become more likely. Also, maybe the patient cannot afford hospitalization. To have a patient spend money that he cannot afford in order to buy these facilities is not fair treatment. The operation may be completed, including the anesthesia, in 10 minutes. The patient is ambulant and his suffering has ceased. He will not suffer while his abscess is draining and it will drain better if he is somewhat active. When such an abscess is opened or breaks down spontaneously it is no longer an abscess. It is then a fistula, and should subsequently be treated as a fistula.

Technic: Mark with silver nitrate or iodine what looks like the spot where the abscess would head, or we are likely to lose sight of it after the anesthetic is injected. It is a good idea to mark the lines of the incision intended; a line two or three inches and as far away from the anal margin as can properly be done. The injection is begun at a point two inches from the center of the site of incision, through a spot on the skin made with phenol 95% on wood applicator. The needle is inserted into the superficial layers of the skin. The first drop of anesthetic establishes a wheal, the needle is carried a bit deeper and progressively advanced forms a ring of injected skin around the summit of the abscess. After the first syringeful has been injected, or even before, change to a slightly larger needle, a 23 gauge. If the skin over the summit of the abscess is too thin keep away from it. It will be anesthetized anyhow.

Make the incision directly over the point with a new, sharp pointed blade, keep cutting, not stabbing, until the abscess is reached. The opening should be liberal, but packs, wicks or drains are not used.

Pruritus Ani

(*Clin. Med.*, Dec.)

Many patients get relief, and even cure, from simply washing the anus with water-soaked cotton or toilet paper after each bowel movement. This effect is aided and scratching prescribed by painting the anal area with this prescription, after drying: Coal tar, collodion and acetone equal parts.

Each physician should make a practice of asking himself, "Why am I keeping this patient in bed?"

Prostatic hypertrophy causes symptoms in no more than eight per cent of men past sixty.

THE "SPREADING FACTORS" IN ECZEMA

(I. L. Schonberg, Cleveland, in *Ohio Medical Jl.*, Dec.)

Treatment of fissures accompanied by edema and exudation should be initiated with wet dressings of penicillin in 500 units to 1 c.c. of water, tyrothricin introderm, or ¼% silver potassium permanganate 1-8000 may be employed—listed in order of preference. When the edema has subsided the application of 10% silver nitrate, 2% gentian violet, or 95% phenol followed by alcohol hasten healing.

Mild wet dressings should be employed early in all acute processes presenting vesiculation and edema. Bland lotions and pastes may be used in subacute areas. The employment of soaps, strong reducers, etc., should be reserved for dry, chronic processes.

Acquired hypersen-itivity to medicaments is to be kept in mind. Mercurials, resorcin and benzocaine should be cautiously prescribed in dermatoses of long duration. Patch tests should be performed before treatment.

An exaggeration of symptoms following the use of a new prescription should be the clue to a possible hypersensitivity.

In industrial dermatoses due to chemicals, repeated exacerbations of an eczematous process demands a change in occupation.

Traumatic effects due to excoriation, to abrasive action of tight clothing, shoes, and the rubbing of the thighs, in the axilla, and between the toes frequently result in dissemination of the local processes. This factor may be eliminated by the relief of pruritus when possible by baths, wet dressings, and appropriate bland local applications, benadryl or pyrobenzamine, sedatives and restraint if necessary particularly in infants. In severe processes rest in bed is desirable. The adjustment of clothing to relieve tightness and rubbing is important.

A Simple and Quick Blood-Test for Distinguishing Between Different Forms of Coma

(Dr. J. Kleeberg, Jerusalem, in *Jl. Palestine Jewish Med. Assn.*, Sept.)

The filtrate of blood and trichloracetic acid enables the practitioner to distinguish between the four forms of coma:

1. In the case of uremic coma the direct filtrate often has a slightly pink color and smells faintly feculent; heating the filtrate with nitric acid always yields a positive Xanthoprotein reaction.

2. In a case of diabetic coma, heating the filtrate with potassium hydroxide produces a yellow-brown color. The intensity of this caramelization varies with the amount of serum sugar.

3. In a case of hypoglycemic coma the same procedure of caramelization leaves the filtrate uncolored or very faintly colored.

4. In a case of coma hepaticum one finds the Xanthoprotein reaction strongly positive, the bloodsugar, on caramelization test, low or normal.

5. The same trichloracetic acid filtrate is also suitable for the determination of urea, indican, creatinin.

Streptomycin Not for the Tuberculosis Patient Doing Well

(H. McL. Riggins and H. C. Hinshaw, in *Am. Rev. Tbc.*, Aug.)

The toxicity of streptomycin now appears to be sufficiently great to deny use of the drug to those patients who are making satisfactory progress under conventional forms of treatment. Most experienced physicians prefer to reserve the limited supply for patients acutely ill, especially for those in whom the disease has been progressive during recent months, and no other treatment is likely to be effective. Streptomycin is of no lasting or significant benefit to patients who apparently have hopeless, destructive types of pulmonary tuberculosis.

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President's Address*

Carcinoma of The Prostate

Raymond Thompson, M.D., Charlotte, North Carolina

From the Urological Service of the Charlotte Memorial Hospital

Cancer is probably as old as man, for scientists have demonstrated evidence of malignancy in bones, discovered in the very oldest fossil remains. With the increase of life expectancy in modern times—to 47 years in 1900 and almost 67 years in 1947—there has been a startling rise in the number of deaths from cancer—now second only to those due to cardiovascular disease. It has been estimated by Hinman that at least three to five million, and perhaps as many as eight million, men in this country now have carcinoma of the prostate. It is, therefore, obvious that we are faced with a problem of the greatest magnitude. Among the profession as well as with the lay people, however, one encounters an attitude of pessimism, and the general belief is that notthing in particular is being done or can be done for patients with cancer of the prostate. The facts, nevertheless, clearly show that more has been done about cancer in general during the last hundred years, and about cancer of the prostate in particular during the last two decades, than in all the previous thousands of years of man's existence.

Let us review, then, this remarkable achievement. It is said that Petroncellus, who lived in the eleventh century, made digital examination of the rectum for cancer. Until the beginning of the present century, however, cancer of the prostate was commonly confused with other prostatic enlargements, especially benign hypertrophy. Even today it is by no means infrequently that malignant and benign prostate growths are mistaken the one for the other. Since that time it has been recognized as a distinct entity, being at first referred to as scirrhus. Langstaff in 1817 was probably the first to report an authentic case of prostatic carcinoma. The first attempt at operative removal by Billroth in 1867, using the perineal route, was unsuccessful, but it broke the ground for the later work of Young, who first described his radical perineal prostatectomy in 1905, and reported four cases operated on with success.

The discovery of radium by the Curies in 1898 was followed in a decade by its use in the treatment of carcinoma of the prostate by Loumeau in 1907. Imbert is credited with the first use of x-ray for the treatment of prostatic cancer in 1904. Even though irradiation therapy is not generally used for the treatment of prostatic cancer at the present time, the recent work of Pendergrass using radiaactive isotopes in the treatment of specific types of cancer must be kept in mind as a possible future solution of the cancer problem.

*Delivered to the Tri-State Medical Association of the Carolinas and Virginia, meeting at Charleston, February 9th and 10th.

In 1921 McGowan obtained five cures by electrocoagulation of the prostatic new growth through a suprapubic incision. The perfection of the modern resectoscope using both cutting and coagulating currents, 15 years later, by Stern, Davis and McCarthy was a tremendous step in the treatment of the obstructive prostatic cancer. In 1942 the work of Huggins, Alyea, and others clearly demonstrated that castration or the administration of female sex hormones has a remarkable effect upon the growth of carcinoma of the prostate and diminishes the pain caused by its metastases to bones. Life expectancy has in the last few years been increased, and the operative mortality immeasurably reduced, by the use of the sulfonamides and penicillin and, most recently, streptomycin. With the help of these agents, the operative mortality in 143 cases of prostatic cancer 1941-1947 at the Charlotte Memorial Hospital was 3.5 per cent. Contrast this with an operative mortality of 12.6 per cent in a series of cases from 1930-1940 reported by Vest and Price in 1942.

All of these therapeutic measures in the armamentarium of the urologist are merely palliative with the exception of one, the radical perineal prostatectomy. This is, however, a useless and unsuitable procedure in all but the very early cases where the cancerous growth is confined to the prostate gland itself. According to Hinman less than five of every 100 prostatic cancers are diagnosed this early and find their way to the urologist. Of a series of 189 cases reported by Vest and Price only three cases were considered eligible for the radical operation. A careful review by the resident of 143 cases admitted to the Charlotte Memorial Hospital between 1941 and 1947 discovered no case which had not progressed too far for prostatectomy. The average duration of symptoms prior to hospital admission was 17 months. In 41 per cent the process had advanced so far as to cause acute urinary retention before admission to the hospital. Nineteen per cent were found to have skeletal metastases.

What can be done about this deplorable situation? The solution must be in the development of greater awareness of the probability of prostatic disease being cancerous on the part of the general practitioner. Vest and Price found that 90 per cent of their cases were referred by the general practitioner. Early diagnosis can be made only by routine yearly rectal examinations on men over 45 years of age. Our series of 143 cases shows an average age of 72 years on admission, the youngest being 44, the eldest 87. The onset of the disease is so insidious that, generally, when the first symptoms of prostatism occur the cancer has extended too far for operative removal to effect a cure. On rectal examination any small firm nodule or area of induration in the prostate gland should be suspected of being malignant. Such areas are usually due to inflammation or prostatic calculi, the latter of which may usually be ruled out by x-ray examination. Vest advocates perineal biopsy and frozen section examination of any such area, followed by radical prostatectomy if carcinoma is found.

Now, one word in regard to longevity. Many people, medical as well as lay, are prone to believe that carcinoma of the prostate occurs in an age group in which life expectancy is minimal even in the absence of prostatic cancer. This is not true. To quote Hinman: "Of 100 men at the age of 60, between 80 and 85 will be living five years later, but of 100 men with untreated prostatic cancer only five will be living in five years." Bumpus found that the average duration of life from the onset of symptoms due to prostatic cancer in a series of untreated cases was 31 months. At the present time there are no figures reported in the literature on the five-year survival in cases treated by transurethral prostatic resection and castration or endocrine therapy. We are compiling our own series, but as this means of treatment has been in use only six years, we do not have the data available to present to you at this time. Nesbit and Plumb have presented a series of cases closed 35 months and Vest and Frazier a series closed 20 months, but it is difficult to draw any definite comparative statistics from a series closed such a short length of time.

Diagnosis

Symptoms.—All of the patients in our series of 143 cases on admission were in varying degrees of prostatism, that is, suffering hesitancy and straining on urination, diminished urinary stream, sensation that voiding is inadequate. Forty-one per cent were in acute urinary retention. Those with skeletal metastasis, 19 per cent of our series, complained of low-back pain. In the cases of obstruction of long standing, there were the usual symptoms of uremia.

Signs.—Eight of these patients were admitted in a comatose condition and two in our series died of uremia shortly after admission. There were the usual signs of urinary retention, including a percussable bladder. Rectal examination revealed a prostate gland which was stony hard in one area or throughout, was nodular and irregular in outline, usually non-tender, and varying in size from normal to tremendously enlarged and immovable by the examining finger. The area of induration in some cases extended to the lateral pelvic wall and the seminal vesicles. Passage of a urethral catheter was in some cases possible only with a stilet or filiform due to the rigidity and narrowing of the prostatic urethra. There were varying amounts of residual urine.

Laboratory procedures.—In cases of chronic retention the blood non-protein nitrogen was elevated. The serum acid phosphatase level was elevated in most cases in which there were skeletal metastases. Most patients who had been previously catheterized due to the presence of residual urine had infection. The phenolsulfonphthalein excretion was diminished in most cases in which there was chronic retention of urine. The recent work of Papanicolaou on the diagnosis of prostatic carcinoma by the demonstration of tumor cells in the smear of prostatic secretion has not yet been utilized by us to any extent.

X-ray studies.—In the 143 cases studied, skeletal metastases had taken place in 19 per cent. There was metastasis to the pelvic girdle in all of these cases, with additional metastasis to the femur in one case and the lungs in another. Intravenous urography was not generally used because of poor kidney function. Air or opaque cystography revealed varying amounts of prostatic protrusion into the bladder depending upon the duration of the disease. Opaque urethrograms revealed a thread-like urethra in advanced cases.

Cystoscopy.—Passage of a cystoscope or resectoscope into the bladder almost always revealed a rigid and tight prostatic urethra which made manipulation of the instrument difficult in advanced cases. In the resection of the gland the tissue was found to be very firm and non-resilient, in contrast to the elasticity of the tissue of benign hyperplasia.

Pathological sections.—The tissue on section was found to vary from well differentiated adenoma to highly undifferentiated carcinoma.

Treatment

Radical prostatectomy.—None of the cases in our series of 143 was thought to meet the requirements for radical excision.

Transurethral prostatic resection. — All these cases prior to 1942 (12) were treated by transurethral prostatic resection alone to remove the prostatic obstruction. Since that time 85 cases have been treated by transurethral resection and stilbestrol, 34 by transurethral resection and orchiectomy, eight by suprapubic prostatectomy and stilbestrol, and four cases by suprapubic prostatectomy and orchiectomy. Of the entire series of 143 cases, in 38 (27%) castration has been a feature of the treatment. The patients treated by suprapubic prostatectomy were those given a preoperative diagnosis of benign prostatic hypertrophy and found to have inclusion carcinoma on pathological section. It will be interesting to follow this latter group of cases for five-year survival statistics. In some of the cases resection was done four times on different admissions because of exacerbation of obstructive symptoms. Regardless of the size of the prostate gland, no attempt was made to provide more than an adequate channel through the prostatic urethra. An average of seven grams of tissue was removed at resection, the largest amount, 34 grams, from a gland not suspected of being cancerous.

Palliative measures.—Chordotomy has been performed in two cases of advanced disease with intractable pain, which had recurred due to metastases despite orchiectomy and endocrine therapy. The pain is effectively relieved by this surgical procedure but the patient becomes an invalid. X-ray therapy in addition to the usual measures has been utilized in two cases with poor results.

I am indebted to Dr. Kenneth M. Lynch, Jr., Resident in Urology at the Charlotte Memorial Hospital, for his assistance in preparing this paper, and to Drs. Hamilton W. McKay, Robert W. McKay, Walter E. Daniel, Aubrey Hawes, Preston Nowlin, and Brodie C. Nalle, Jr., for permission to use their cases in the statistical analysis presented.

The photographic work was performed by The Heineman Research Foundation.

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Leukoplakia of the Vulva

(N. F. Miller *et al.*, Ann Arbor, in *Amer. Jl. Obs. & Gynec.*, 1947)

The cause of vulvar leukoplakia is unknown. Treatment is unscatisfactory. Both hypertrophy and atrophy occur, and cancer often develops in the affected tissues. In 4/5ths of cases the condition develops after the menopause. Occasionally the disease appears as early as the 23rd year and during pregnancy.

The leukoplakic area is frequently infected and injured by scratching or rubbing and sometimes is associated with lichen planus. The commonest symptom is pruritus; soreness, tenderness, burning, and vaginal discharge are fairly frequent. Urine is usually normal.

Allergic sensitivity was detected in 11 of 25 subjects.

Treatment is largely empirical and palliative. Improvement is often temporary. None of the preparations tested was helpful in all cases, though each afforded relief at times.

Alpha-ray ointment applied five to nine times at weekly intervals with airtight dressings; chlorophyll ointment, petroleum jelly, lanolin; oreton in ointment 5 mg. per c.c., or in 10-mg. oral doses t.i.d.; ascorbic acid in daily doses of 1,000 mg.

Even after partial vulvectomy the disease may return, and complete vulvectomy is little less than mutilation.

Carcinomas, found in 23% of the group, were removed by radical excision that included the inguinal lymph nodes.

Virus Pneumonia and Its Treatment With Vitamin C

Fred R. Klenner, M.D., Reidsville, North Carolina

VIRUS PNEUMONIA (primary atypical pneumonia, non-specific pneumonitis, epidemic non-bacterial pneumonia, desseminated focal pneumonia, viral pneumonia) has been accepted as an entity and has been under observation in this country and abroad for the past twelve years. No bacteriological studies have confirmed the etiology of this disease other than by negative findings. The sputum shows the usual flora of gram-positive and gram-negative organisms. In 1938, Reimann reported that a filterable infectious agent was recovered from the nasopharynx of one and from the blood of another out of a series of eight cases, but not sufficient evidence could be found to determine such as the causative factor. It must be closely allied to the virus causing influenza, because in the first twenty-four to thirty-six hours it is very commonly thought to be that type of infection. Horsfall and his co-workers at the Rockefeller Institute have cultured an organism, which they have designated Streptococcus MG, from a large percentage of their patients with primary atypical pneumonia. The exact role of this bacterium is not known, but it is seldom found except in persons ill of this disease. Since it is not present in all cases, it is not the primary cause, but only a characteristic secondary invader or associate. The disease also resembles psittacosis in many respects and since penicillin might be of value in such cases it is of great importance to establish the diagnosis quickly.

The onset of this type of virus infection is always gradual. Like all virus diseases there is a wide variation of the prodromal symptoms. There might be none; there might be the classical generalized malaise. This disease is highly contagious, and our observations over a five-year period point to a definite incubation period of from five to fourteen days. We have also noted that the longer the incubation period the milder the infection; the shorter the incubation period the more severe is the infection. This must be interpreted in the first instance as either a mildly virulent organism or a high degree of resistance or immunity on the part of the host and in the second instance as a very virulent organism or no immunity at all on the part of the host. In some instances, however, the patient will have a slight attack with apparent recovery due either to good resistance against a weak virus or good response to treatment only to be followed in seven to ten days by a return of symptoms in a more severe form and producing a critically ill patient. This type of case cannot be classified as a fourteen-day incubation period, but rather it is one in which the virus was only attenuated or else there has been the factor of a second infection.

The chief complaint, however, will always be one of sudden onset, since the patient begins his concept of his illness from the time he first experienced waves of chilly sensations or a frank chill alternating with hot spells and associated with burning in the nose, a sore throat, hoarseness, a bad taste in his mouth, moderate vertigo, nausea and grade-two type frontal headache. This picture will then develop to the point where severe frontal headache is noted along with a feeling of weakness in the lower extremities so marked that the patient complains of a dragging sensation when moving about in bed. This weakness persists for some days after clearing of all symptoms and negative chest films. The patient can hardly support his body weight without the feeling of buckling at the knees. Added to the above might be substernal pain or generalized tightness in the chest with varying degrees of tracheo-bronchitis. The fever is usually found during this phase to be about 102° F. After pulmonary involvement of as much as 6 by 8 cm. areas have been reached the fever will be up to 103 and 104° F. in adults and up to 105° F. in infants and early childhood. Dry hacking cough is a most constant factor especially after the second day of illness. Occasionally this cough is paroxysmal, and if the invasion is severe enough it will in the final clearing stage of the disease be thick, tenacious, brownish-gray — even blood-streaked. This disease shows remarkable versatility in that it will vary its symptoms and signs to fit with that of a mild cold on one hand to a very serious medical complexity on the other. It suggests sometimes that more than one bacteriologic unit is involved. The pulse will be increased in a very definite ratio to the toxic effect of the virus. If the invasion is mild the pulse rate will be normal even though the fever may be recorded at 103° F. If, however, the invasion is severe, meaning that physical findings approximating those of a lobar pneumonia (with or without a definite complicating encephalitis or meningitis) are present, or with an accompanying pleurisy, then the pulse rate will be rapid and will follow the temperature curve. Sweating is common and it is usually very profuse. Cyanosis and dyspnea occurred only in those patients that had at least as much as a lobe of lung involvement and where the fever continued to climb to a 104° F. each night.

Read by Title to the Tri-State Medical Association of the Carolinas and Virginia, meeting at Charleston, February 9th and 10th.

The physical findings are limited to the head and chest. There is marked rhinitis with swelling of the turbinates. The accessory nasal sinuses are involved; the frontals being the chief offenders. The tonsil bed is not remarkable but the lymphoid tissue on the posterior pharyngeal wall is thickened and edematous and scarlet in color. The vocal cords appear like those seen in any simple laryngitis. In the lungs diminished breath sounds with moist and dry rales (sometimes very coarse) are usually the only evidence of disease. When there are extensive areas of consolidation the usual dullness to percussion, tubular breathing and pectoriloquy are present.

The laboratory findings are of little importance. The white blood count and differential are nearly always within normal limits. A 6500 white count is typical regardless of the lung pathology. The sedimentation rate will be normal except in very acute cases, with cerebral symptoms. The sputum examination is valuable only in its negative findings.

Chemotherapy may be tried where x-ray facilities are not convenient or not obtainable. If sulfonamides and or penicillin are given for twenty-four to thirty-six hours without response both should be discontinued and treatment for virus infection instituted. In our age it requires some measure of boldness to discontinue these important drugs so early especially with the patient still running a fever of from 102 to 104° F. In this case boldness counts.

There is no constant x-ray picture to be found in virus pneumonia, but some evidence of pneumonitis will nearly always be present regardless of the physical signs—even when the physical signs are absent. The chest film will show anything from extensive consolidation to a patchy and sometimes fleecy infiltration suggestive of tuberculosis. This patchy form will be scattered in all diameters of the lung fields. Plates taken daily or every second to third day will often show the pneumonic process clearing in some areas while new areas are developing at other points. The disease begins as an infiltrative process starting at the hilus, and then, by a peribronchial route gradually spreading to the interbronchial regions. Usually there will be an involvement of several segments of lung comprising several lobes. These isolated segments soon become confluent, giving the film a smoky appearance. This process may go on to involvement of an entire lobe and in many respects look like a lobar pneumonia. The marked difference lies in the fact that even when the density is massive a streaky background can always be seen; the shadow in virus pneumonia is never entirely solid. Resolution, either spontaneous or from some method of treatment, may give positive x-ray films days and even weeks after there has been a complete clinical response.

The treatment of virus infections, including frank virus pneumonia, has been for the most part without specific recommendations. Oppenheimer in 56 cases employed x-rays in doses from 35*r* to 90*r* which he states relieved cough and shortened the course of the disease. Offutt employed 100*r* doses daily or every other day, depending on the severity and response, alternating front and back or alternating sides if both lungs were involved. None in his series of twelve cases received over four treatments. Both men report surprising uniformity in the disappearance of fever and symptoms after one or two exposures. No unfavorable reactions occurred in either series. Aminophyllin in doses of three grains every four hours has been given with varying results in the belief that it improved the circulation through the lung fields. We have employed the drug in smaller doses when there was evidence that the patient had a coexisting coronary impairment. Since this was given along with the drug of our choice, ascorbic acid, this paper cannot evaluate its merits. Multiple transfusions from multiple donors and blood from patients convalescing from virus pneumonia have also been used.

The purpose of this paper is to outline a new and different form of treatment for this type of virus infection which in 42 cases over a five-year period has given excellent results. The treatment has double merit due to the simplicity of its schedule. The remedy used was vitamin C (ascorbic acid) given in massive doses. Since it is common knowledge that there are definite individual variations in absorption of vitamin C from the intestinal tract and under certain pathological conditions still greater variations in the absorption factors the I. V. and I. M. routes were used. When a diagnosis of virus pneumonia was entertained the patient was given 1000 mg. vitamin C intravenously every six to twelve hours. If it was by chance that a diagnosis was established in the home the usual initial dose was 500 mg. given in the gluteal muscle. Subsequent injections were given I. V. because the injection was thus made painless and the response was faster. In infants and very small children, however, 500 mg. I. M. every six to twelve hours was the method of choice. From three to seven injections gave complete clinical and x-ray response in all of our cases. The series comprised types of cases from very slight consolidation to those resembling lobar pneumonia. Two cases were complicated by cerebral manifestations. Vitamin C was also given by mouth in one-third of this series but there was no outstanding difference in the response. The dosage was from 100 to 500 mg., depending on the age of the pa-

tient, and it was given every four to six hours. In almost every case the patient felt better within an hour after the first injection and noted a very definite change after two hours. Nausea was relieved by the first injection as was the headache. The heat regulating center showed a quick response and it was the rule to find a drop of 2° F. several hours after the first 1000 mg. Penicillin was given in conjunction with ascorbic acid in five cases. It was our observation that penicillin had some retarding effect on the action of vitamin C, since the response was not so rapid and in one case the results were not obtained until the penicillin was discontinued.

Supportive treatment was given by forcing fluids, particularly fruit juices, to tolerance. Soda-water was given to adults in the amount of four glasses in 24 hours, each glass containing one teaspoonful sodium bicarbonate. Infants and children were given this alkaline drink in proportion to age. The rationale of bicarbonate of soda is based on the findings of Hawley and others that the amount of vitamin C excreted in the urine may vary according to the acid:alkali content of the diet, a highly alkaline urine having lower amounts of vitamin C than a highly acid urine. Codeine sulfate and aspirin were given by mouth. In adults the dose was codeine 0.5 grain, aspirin 10 grains given every six hours. Infants and children according to age. Some few patients complained of severe chest pain and some others of a constricting sensation that they described as cutting off their breath. These symptoms were relieved by employing either Numotizine as a plaster or the old-fashioned mustard plaster. The mustard plaster was made up with cold water and was applied cold for a period of about 15 minutes. The proportions used were one part mustard and two parts flour. The amount of flour used in preparing the plaster for children was according to age but in no instance was the ratio greater than one to six. In childhood an expiratory grunt was taken as an index to use plasters. Oxygen inhalation was not employed even though cyanosis existed in twelve cases of the series; an additional injection of 500 mg. of vitamin C was given with almost spontaneous alleviation of the distressing condition. In two cases codeine sulfate was given in one grain amounts because of the weight of the patient. Diet was forced even though there was no desire to eat.

It is difficult to evaluate the role played by vitamin C against the virus organism. We have seen ascorbic acid give response in other types of virus infections but not sufficient evidence is on hand to state that it is a virus killer. It has been shown histologically that vitamin C regulates the intercellular substance of the capillary wall. In the human body its chief function is concerned with the formation of colloidal intercellular substances. The intercellular substances which appear to be regulated by vitamin C are of mesenchymal origin—this means the collogen of all fibrous tissue structure, all non-epithelial cement substances including the intercellular substance of the capillary wall. Gothlin found increased capillary fragility in individuals with blood levels of 1 mg. of vitamin C per liter or less. It must be remembered too, however, that ascorbic acid has been reported to function as a respiratory catalyst, aiding cellular respiration by acting as a hydrogen transport.

Finally we consider the case of the liver in that the saturation of the blood plasma with vitamin C betters the detoxifying powers of this organ. It has been known that fever, toxemia and specific bacteria do act on the vitamin C concentration of the blood plasma with a lowering effect. Could it be that, by maintaining a high blood level of this vitamin, all body tissue is allowed to return to normal in spite of the existing fever and the presence of the specific organism, and that, acting as a respiratory catalyst, it enables the body to build up adequate resistance to the invader?

SUMMARY

Virus pneumonia is a true clinical entity. Although it gives symptoms similar to influenza in the early stage of illness the virus has not been identified. The onset is gradual and has an incubation period of five to fourteen days. The usual beginning is a hanging-on cold or generalized malaise. The chief symptoms, although not all are necessarily present each time, are chilly sensations or a single frank chill, followed with hot spells, burning in the nose, sore throat, hoarseness, bad taste in mouth, nausea, frontal headache, dry cough at first—later productive in the clearing phase of the disease—sweating, and this is usually profuse, normal pulse unless complicated with cerebral symptoms, pleurisy or a condition approximating lobar pneumonia when it will be rapid. Fever is from 100 to 104° F. The physical findings are inflammation of the turbinates and accessory nasal sinuses, hypertrophy of the lymphoid tissue on the posterior pharyngeal wall. Breath sounds are diminished and moist and dry rales are sometimes present. In extensive consolidation dullness to percussion, tubular breathing and pectoriloquy are found. The laboratory findings show the blood picture within normal limits; the sputum is negative. Sulfonamides and penicillin are good diagnostic aids since they have no effect on the disease. The x-ray findings can be anything from negative films through pneumonitis on to frank consolidation. Vitamin C in doses of 1000 mg. every six to twelve hours for three to seven injections has been specific in the experience of the author. X-ray in

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Observations Made On The Study Of Mortality Statistics In The Tri-State Area

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THIS writer is well aware that detailed enumeration of statistics in any discussion before a medical group accumulates about the lowest Crossley rating that can be found in the field of entertainment. However, statistical studies are the bases for the collection of truth and in no other fashion can accurate conclusions be reached and corrective procedures be instituted. The long hours of drudgery spent in the field with questionnaires, and in the office with the slide-rule, produce the material from which progress can be made, and within the particular bounds of this discussion the results are glamorous and dramatic in the extreme.

In this study the figures, copied and analyzed, are from the Maternal Welfare Committee records in the component Commonwealths of the Tri-State Association's geography. In all cases they are set over against the national averages as our only yardstick for comparison, although we do not assume, for one moment, that the national standard represents perfection—for example, the national rate in 1945 was 2.1 maternal deaths per 1000 live births, a rate regarded by all competent authorities as entirely too high. Indeed, in our own area it has already been bettered (Virginia 1946, 1.8).

Stop for a moment to consider that, in all three of our States, the coldly unprejudiced conclusions of competent committees point with cruel clearness to the ghastly fact that at least two-thirds of our maternal deaths studied by these committees were preventable, and remember that these conclusions were reached by detailed investigations and an analytic study of each death reported, after which it was catalogued under the head of the responsible factor, that is, the disease itself, the type of attention, and the adequacy of facilities for treatment. These studies, therefore, are no longer as dry as the dust of the Arizona deserts; on the contrary, they frequently disclose high-lights of drama, tragedy, and occasionally, comedy; but to all medical men they should be, and by all rights are, compellingly interesting and important.

As a whole the death rate in the maternal state, all over America, has been progressively downward for years, and it is also true that the Southern States, as a group, have lagged in somewhat disturbing fashion behind other sections of our country in this laudable decline. However, since 1935 our progress has been truly gratifying.

For reasons which are manifest, today's discussion will deal with the subject of maternal mortality as reported by the committees of the three States that compose our Association, and at this point it is entirely proper to call attention to the splendid work done by the dedicated groups which compose these committees.

Let us consider the disease factors, and when we do we reach interesting results. For example, the age-old threat to safe motherhood, that is, puerperal infection, is rapidly losing its distinction as the main cause of maternal deaths. In North Carolina, for instance, it is responsible for less than 10 per cent of such deaths, a decline from 33 per cent in the last five years, and a decline which is directly traceable to improved technique, to a greater efficiency in chemo-therapeutics, antibiotics, and increased facilities. A further study of infection reveals the disturbing fact that abortion, criminal and legal, is responsible for approximately 70 per cent of these deaths from infection. However, mismanagement, injudicious operative procedures, and errors in diagnosis still leave a lamentably large percentage on the doctor's doorstep.

In the Tri-State area toxemia of pregnancy still takes the greatest toll, and still heads the list of fatal diseases, as it does in all sixteen Southern States. While we are still ignorant of the etiology of the toxemias in the basic sense of the word, we have learned so much about the symptoms of its approach, their treatment and prevention, that we cannot, in honesty, take much comfort from our basic ignorance of its cause. In fact, committees generally register toxemia deaths as preventable, and while this assumption may be debatable within narrow bounds, it is not in the broadest aspects, and the medical profession must so regard it and act accordingly. It is happily true that deaths from toxemia are steadily declining—Virginia in 1936, 70 deaths in 51,000 live births; 1946, 31 deaths in 71,000 live births. In North Carolina, in 1946, toxemias were responsible for 23 per cent of maternal deaths. Nevertheless, a study of this factor (toxemia) presents one of our finest opportunities for improving our statistics in this field.

These committee reports produce clear evidence that adequate prenatal care, which represents our only method of detection and prevention, is woefully lacking. (The North Carolina 1946 report shows 47 deaths in which adequate prenatal care was given in only six cases.) Remember, please, that all 47 cases are regarded as preventable. Igno-

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rance on the part of patients or relatives, noncoöperation, etc., are regarded as being responsible for 22 cases, and yet, for that group, the medical profession may be properly indicted since, in indirect fashion at least, our failure to properly educate the layman is in great measure responsible for his ignorance and indifference, which results in death.

The next largest factor in maintaining the high level of maternal deaths is hemorrhage—27 cases in Virginia, 47 in North Carolina in 1946—and while deaths from this cause are declining, by comparison with sepsis and toxemia, the fall is not so rapid as in the other two categories, and again the North Carolina committee states that every one of these 47 deaths can be truthfully classified as preventable. Errors in diagnosis and in management account for 28, lack of equipment for eight, the rest chargeable to ignorance and noncoöperation. It is perfectly obvious that the important treatments in hemorrhage are, first, prevention, and second, transfusion of whole blood. In 36 cases of the North Carolnia group no blood was given, in 11 cases insufficient quantities, and in no case was an adequate amount, that is, 50 per cent of the blood lost, replaced.

There are well known and tested methods of recognizing, preventing, and treating obstetrical hemorrhage, and every physician who accepts maternity cases is in duty bound to familiarize himself with these methods and provide himself with adequate materials for treatment. Nothing, in all the practice of medicine, is so startlingly dramatic, and nothing so rapidly and starkly dangerous, as post partum hemorrhage. Rapid and efficient treatment is of the essence, and unless the attendant has planned for, and prepared for, such a contingency, the Grim Reaper will, all too often, collect his unearned profit.

Other causes of maternal deaths in this area are in small and scattered categories, and need not be discussed in great detail except, perhaps, that list of deaths from anesthetics. In North Carolina, during 1946, twelve such deaths are reported, and while all of us who find ourselves compelled to use anesthetics realize that there is an unescapable hazard inherent in these procedures, and that an occasional death will surely follow the routine administration of these drugs, still the rate reported in these records is disconcertingly high.

The North Carolina committee found that spinal anesthesia produced the highest number (6) of the twelve deaths attributed to this cause, and they were unable to escape the conclusion that inexperience on the part of the anesthetist was to blame.

Final conclusions, from which there seems to be no possibility of disagreement, leads, then, to the belief that our maternal death rate can be reduced to an almost unbelievably low level if we persistently, consistently, and efficiently prepare ourselves, the public, and our patients for the experience of motherhood. We are well aware, as the result of these repeated studies, and these collected data, of efficient methods of prevention and treatment. The necessity, then, is for applying these methods. First, a more diligent application of the known principles of prenatal care, which includes a widespread and detailed education of the public for whom we practice, an education which gradually dispels the ignorance, disproves and banishes that great mass of folklore, tradition, and old wives' tales which has accumulated in the layman's mind, and substitutes for it scientific information, education which enables the patient to understand and coöperate with the efforts of an enlightened and diligent profession. Only by this means can the doctor in attendance recognize the approach of the toxemias and prepare for their treatment.

A determined campaign against the criminal abortionist, both in and out of the profession, will go far towards eliminating the death rate from sepsis, and forebearance from unwise operative interference on the part of the attendant will erase another decimal or two in this grim column of fatalities.

For hemorrhage there is one great and highly satisfactory treatment, and that is whole blood by transfusion, repeated again and again. It is more than passing strange that, with our widespread knowledge of the magnificant efficiency of blood in shock and hemorrhage, and with an unlimited supply all around us, we have reached no greater heights in procuring this splendid agent and making it available for ourselves and our patients. We cannot, with any degree of honesty, take refuge in ignorance, because there are few departments of our science in which more knowledge has been gained than that of hematology. It would seem that our failure to employ whole blood is almost entirely a question of laziness or indifference. The steps taken by the American Red Cross, in war times, to establish blood reserves, were splendidly efficient and successful, but in peace times much less has been accomplished. Indeed, it is doubtful whether or not Red Cross Blood Banks should be relied upon as the pool from which we are to draw our material, and certainly this writer feels that the future, in urban centers at any rate, must depend upon community and commercial organizations. The difficulties in preparing, listing, and preserving adequate quantities of blood in the average Southern hospital are almost insurmountable, but a union between hospitals, or with a community group, overcomes these difficulties and presents an ever present supply which, in Scriptural terms, can be used "for the healing of the nations."

My final conclusion, stated in the expressive language of slang, is IT'S UP TO US!

Acute Epigastric Pain and Blood Amylase Activity

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THE PANCREAS must be considered as the organ most likely to be involved in a patient suffering acute epigastric pain, developing several hours after a heavy meal or during an alcoholic bout. Shock and acute toxemia increase the probability.

Many more correct diagnoses of acute pancreatitis are being made since it has become common knowledge that the disease is fairly prevalent. Some of the diagnoses are made on the clinical manifestations alone, but the majority are made or confirmed by means of the blood amylase test. This test should be employed in all cases of acute upper abdominal pain wherein emergency exploratory laporotomy is being considered.

That increased blood amylase activity is manifested only in pancreatic involvement has been shown by many, particularly Naffziger and McCorkle.[1] These observers noted increased activity in traumatic injuries to the pancreas, also, whether due to operative manipulation or to penetrating or non-penetrating violent injuries. This view is shared by Shallow and Wagner.[18]

Multiple pathologic states are the rule,[2] so increased amylase activity should not lead us to believe that the pancreas is the only organ involved. The value of the amylase test lies in the fact that, if positive, it shows the pancreas to be diseased. The test is simple and requires only 30 minutes. It is based on the saccharogenic activity of the enzyme, amylase. It is expressed in terms of the copper-reducing power of glucose so that a level of 120 units signifies that it has the same copper-reducing power as 120 milligrams of glucose. Somogyi[3] gives as the normal limits 80 to 150 units. Increased activity occurs only in pancreatic pathologic processes. The idea that liver deficiency increases amylase activity has been refuted. In fact, in such cases the activity is reduced. Levels up to 400 units can be accepted as being accurate; however, in higher levels, due to dilutions involved, errors are possible.

The amylase test should be considered as a "stat" procedure because the levels rise and fall rapidly. The possibility of a high peak of activity can be lost with a few hours delay. Likewise due to the deterioration, the analysis must be made directly after receiving the blood sample. As an indication of the extent of pathology and for the prognosis, tests should be made at frequent intervals. Low positive levels may mean edematous pancreatitis secondary to contiguous disease, as gastritis, peptic ulcer, etc.[2] Immediate high levels (2000-3000) with rapid fall indicate diffuse interstitial or edematous pancreatitis, while slowly rising levels with a slow fall indicate acute hemorrhagic or acute necrotic pancreatitis. Slowly rising levels might be considered as indication for surgical intervention, but Shallow and Wagner[18] treated one patient with traumatic pancreatitis showing a high persistent level by conservative measures. Carter,[4] in a series of eleven cases complicated by chronic alcoholism in which severe epigastric pain was the predominant symptom, found levels ranging from 268 to 942, with the majority below 400. In a few of the lower level cases, in which diagnosis was doubtful, operation was performed with edema of the pancreas and thin sanguinous peritoneal fluid being found. A positive amylase test will serve, not only to rule out emergency operations, but also as an index of the amount of opiate required for the relief of epigastric pain. It has been shown that more than the average dosage of an opiate is required for the relief of pancreatic pain.

Although Fitz[5] first described the disease in 1889, it was Lord Moynihan[5] who pictured it with such vividness that it is not easily forgotten: "The suddenness of its onset, the illimitable agony which accompanies it, and the mortality attendant upon it, all render it one of the most formidable of catastrophes."

The position of the pancreas makes difficult the diagnosis and the surgical treatment. Accurate knowledge of the regional anatomy is essential. This capsuleless hammer-shaped gland is retroperitoneal lying at the level of the first and second lumbar vertebrae. Directly posterior lie the large vessels of the abdomen and, further posterior, the celiac plexus and the splanchnic nerves. The gland has a distinct head which lies within the horseshoe-shaped loop of duodenum, and a body and a tail which extend to the left behind the pylorus and the greater curvature of the stomach, the tail almost touching the spleen. Crossing the head, anterior to the duodenum, is a portion of the transverse colon which, in severe cases of pancreatitis, sometimes becomes dilated (Gabich's sign[8]). Of particular surgical interest is the relationship of the pancreas to the common bile duct—a relationship so intimate as to cause some observers to believe that pancreatitis is always secondary to biliary tract disease. The common duct empties into the ampulla of Vater which also receives the main pancreatic duct (Wirsung); the accessory pancreatic duct (Santorini) usually empties into the duodenum somewhat more superiorly. Bile flow into the duodenum is believed to be regulated by

the sphincter of Oddi, spasm of which causes a reflux of bile into the pancreatic duct producing inflammation. Man and Giordani,[7] however, found the sphincter to be present in the terminal portion of the common duct, just before it empties into the ampulla.

The internal secretion of the pancreas, produced by the islands of Langerhans, is taken up directly by the blood and has to do with sugar metabolism. Its external secretion, produced by the acini and discharged through the pancreatic ducts, has to do with protein (trypsinogen), fat (lipase) and carbohydrate (amylase) metabolism. Trypsinogen is believed to be activated in the duodenum by enterokinase into trypsin.

Behrend[9] states that the cause of acute pancreatitis is unknown; however, biliary reflux is considered generally as the most important factor. Other probabilities are: obstruction of the ampulla of Vater by stone, etc., hematogenous infection, infection by contiguity from adjacent tissues, infection via lymphatics, and degenerative changes within the gland itself.

Acute pancreatitis is commonly classified as edematous or interstitial, and hemorrhagic or necrotic. Anderson[10] terms the condition "benign," if of the edematous type; while the hemorrhagic (with trypsin liberated) and the necrotic (with lipase liberated) he terms "malignant." All have the same clinical manifestations but have radically different pathological changes and prognoses. In the edematous type there is a diffuse swelling of the gland and peripancreatic tissue with no structural damage. In the hemorrhagic the gland and peripancreatic tissues are filled with blood, due to the digestive action of trypsin on the blood vessels. In necrotic pancreatitis the organ may be reduced to a slimy mass with only fragments of glandular tissue remaining.[8] In all types the peritoneal fluid may be sanguinous or serosanguinous with an increase in the amount of amylase.

The exact cause for the severe symptoms is not known. Some blame the proteolytic action of trypsin, formed from trypsinogen by enterokinase in the duodenum. But in complete obstruction, the trypsinogen does not enter the duodenum, which causes others[11] to believe that infected bile activates trypsinogen. Opie showed that injection of 5 c.c. of bile into the pancreatic duct of dogs produced inflammation and death in 24 hours. Stretching of the celiac plexus has also been considered as the cause for such symptoms, and it is noteworthy that Albanese[13] treats pancreatitis by repeated, bilateral, anesthetic, splanchnic semilunar block. Sweet[12] believes that localized peritonitis and toxemia cause the symptoms. Death appears to be due to the overwhelming of the patient by split proteins formed as a result of partial digestion of pancreatic tissue. The wholesale absorption of these poisonous substances accounts for the extraordinarily rapid termination in some cases. It is the same mechanism as shown by Whipple[5] to be responsible for intoxication in high intestinal obstruction.

Although acute pancreatitis appears more often in corpulent alcoholics in the third to the fifth decades, especially in those with preëxisting biliary tract disease, no age, sex or race is exempt. Holt[14] describes a case of acute hemorrhagic pancreatitis in an infant five months of age, operated on as a case of acute intussusception.

That the symptoms of acute epigastric pain, shock and toxemia usually appear shortly after a heavy meal or during an alcoholic debauch is due to the fact that these conditions stimulate pancreatic secretion. The severity of the symptoms depends largely upon the extent of the pathologic process. The acute epigastric pain is the most significant symptom. Moynihan[8] states, "Of all the pain, the human body can suffer, this is by far the worse." The pain is constant, splitting, and its course is from the right epigastrium to the left transversely. It may radiate to the left shoulder, the left costovertebral space, or the left loin. The pain may be aggravated on standing and the patient assume the right lateral decubitus position for relief. Persistent vomiting and retching is the rule and there are signs of shock and toxemia. The facies assumes an ashy-gray cyanosis. Later grayish ecchymotic areas will develop over the epigastrium and left loin. All evidence points to a severe epigastric catastrophe. The upper abdomen will be flat, the lower usually distended. There is marked rigidity and tenderness over the pancreas and in the left costo-vertebral angle. The lower abdomen usually will be tympanitic. At times the transverse colon will be distended (Gabrich's sign). Palpation of the left lower abdomen will cause reflex pain in the epigastrium. In severe cases palpation over the cecum will likewise cause reflex epigastric pain, but this is more commonly found in cases of acute perforation of duodenal ulcer. The abdomen is "quiet." Later large, foul-smelling, greasy stools may be passed, containing undigested muscle fibers.

The laboratory offers the greatest aid in establishing the diagnosis of acute pancreatitis. The blood amylase activity will be increased. The blood picture in general, otherwise, may not be different from that of any other abdominal catastrophe. In severe toxic cases hemoconcentration is the rule. Peritoneal aspirations will show increase in amylase, as will the urinary examination. X-ray examination is not apt to afford positive evidence, but must be employed whenever perforation of a viscus is being considered in the differential diag-

nosis. The picture in pancreatitis is that of a sluggish left diaphragm, dilated transverse colon and thickening of the retroperitoneal tissues. Paralytic ileus, if present, is demonstrated.

There is no short cut to the diagnosis of acute pancreatitis[2]; but if borne in mind whenever an acute abdominal condition presents itself, it offers no greater difficulty in diagnosis than does any other surgical condition.[13] There are a few acute abdominal conditions which do not allow for temorizing. Of these, the two most important are perforation of a peptic ulcer and rupture of the gallbladder. Other surgical conditions which might simulate an attack of acute pancreatitis are: strangulation of an intraäbdominal organ, acute left renal colic, acute cholecystitis, acute abdominal apoplexy, and cholelithiasis. Of the medical conditions, acute coronary disease must be considered. An exhaustive history, physical examination and laboratory examination will usually establish the diagnosis, except in the case of peptic ulcer perforating into the pancreas. Excluding this, all other conditions will have normal amylase activity.

The pain of perforated ulcer is not as severe, is usually intermittent, and radiates to the xiphoid, the left shoulder or the appendiceal area. Vomitting is quite persistent and it is not relieved by means of suction as readily as in pancreatitis. The blood picture might be the same ranging from a normal to a high count with no characteristic differential. Perforation of a gastric ulcer most often occurs in the posterior distal portion of the lesser curvature, while perforation of a duodenal ulcer occurs usually on the antero- or postero-superior surface of the first portion of the duodenum near the pylorus. The abdomen, in the case of a perforated ulcer, is scaphoid and rigid. Shock and toxemia are less than in acute hemorrhagic or necrotic pancreatitis. Patients with ulcer perforating into the pancreas are discouraged and depressed probably as a consequence of the protracted severe intractable pain.[16] X-ray examination in perforation will usually show air under the diaphragm, on the upright examination, unless there is present the *forme fruste* ulcer of Thorek,[15] in which case this pattern is lacking due to the fact that the perforation has become rapidly sealed and the air entrapped or concealed.

The prognosis of acute pancreatitis is usually good if conservative measures are instituted. Operative procedures should be reserved for the complicating pancreatic conditions, pseudocysts and abscesses. Serum calcium levels below 7 mgm. per cent are exceedingly grave portents.

In the treatment of acute pancreatitis, conservatism is the watchword. In severe cases, before undertaking the diagnosis, measures for the relief of pain, the combatting of shock and toxemia must be instituted. This is best accomplished by the use of large amounts of opiates, plasma, amino acids, glucose and saline. Wangansteen suction is usually indicated. After the establishment of the diagnosis: To inhibit pancreatic secretion, all food, orally, is withheld. Penicillin and/or streptomycin is used in fulminating cases. Elman[17] does not believe that conservatism should be the rule when necrosis (as evidenced by shock), or suppuration (as evidenced by the continuation of symptoms under conservative treatment) have developed. Parsons[19] believes that, with increasing jaundice or evidence of abscess, operation should be performed and as atraumatically as possible. A fenestrated soft-rubber tube containing a catheter should be inserted into the necrotic area, and, if jaundice is present, drainage of the gallbladder should be done. Intestinal drainage, if indicated, is best accomplished orally by means of the Wangansteen or Miller-Abbott tube. All complicating conditions should be corrected as soon as possible. In uncomplicated acute pancreatitis, there is no surgical prophylaxis. In the past cholecystectomy had been performed. This, if the gallbladder is not diseased, is not a wise procedure. At times a short-circuiting operation may be indicated and this is best performed by anastomosing a portion of the biliary passageway to the stomach, duodenum or jejunum according to Behrend's technique.[9]

A series of four cases has been selected from the writer's service at the St. Eugene Hospital, Dillon, S. C., demonstrating: (1) Pancreatitis recurring after cholecystectomy, (2) pancreatitis associated with chronic alcoholism, (3) pancreatitis associated with biliary-tract disease, (4) pancreatitis associated with peptic ulcer.

Acute epigastric pain was the predominant symptom. Blood amylase activity confirmed the diagnosis. All cases were treated conservatively, and in all cases recovery was prompt and satisfactory.

Case Reports

Case 1.—A white man, aged 32, admitted to hospital March 2nd, 1945, with the chief complaint of severe epigastric pain beginning 12 hours before admission, several hours after eating a heavy meal. There was marked shock and prostration, vomiting was persistent. Blood pressure was 70/50 and there was ashy-gray cyanosis. History was given of similar pain in 1940 for which an appendectomy was performed. Later the same year a similar attack of pain was experienced, this time radiating to the left costo-vertebral angle. Examination revealed calculus and left nephrectomy was performed. The attacks continued and in 1943 a cholecystectomy was done, after which there were several recurrent attacks of pain, but none so severe as the present.

The impression of acute pancreatitis was gained on the history. The abdomen showed a right McBurney scar, an upper-right-rectus scar and a left-lateral-lumbar scar. There was tenderness and muscular rigidity over the right epigastrium, tenderness on deep palpation over the left costo-vertebral angle. The blood amylase activity was 1300

units, r.b.c. 5,060,000, w.b.c. 15,000—neutrophils 84 (stabs 13, segs 71), hb. 99. Symptomatic conservative treatment was instituted. After 24 hours the amylase activity was 220 units and the patient was remarkably improved. He was discharged to the care of his physician after three days in the hospital.

This case is remarkable for the various operations performed, indications for which were evident, without affording relief, and for the multiple pathology which is the rule, and because of the social problem involved. A relative stated that it was the impression patient was a drug addict—because of the frequency of attacks, the large amounts of opiates required for relief and the failure of multiple operations to effect a cure.

Case 2.—White man, aged 29, admitted to hospital May 24th, 1945, with chief complaint of severe epigastric pain following meal three hours before. History was given of previous attacks, always associated with drinking "stumphole" whiskey. The patient when seen for the first time was walking about with hands held tight against the epigastrium. There was odor of whiskey on the breath. The patient was in mild shock and was vomiting bile-tinged matter. There was tenderness over the right epigastrium and right-upper-abdominal rigidity. Blood pressure 120/80. Impression as to diagnosis was acute edematous pancreatitis along with chronic alcoholism. Blood amylase activity was 240 units; r.b.c. 5,300,000, w.b.c. 8,400—normal differential count, hb. 101.

Patient was treated symptomatically with marked improvement and discharged in two days.

Case 3.—Colored woman, aged 60, admitted to hospital July 18th, 1946, 2:20 a. m., with history of severe acute epigastric pain beginning four hours after heating a heavy meal, four hours prior to admission. Patient was in moderate shock, vomiting purofusely, vomitus tinged with bile. History was given of previous gallbladder colics, this by far the worse. The patient was a typical gallbladder subject—short, far, with icteric tinge to conjunctivae and sclerae. There was tenderness over the gallbladder and pancreas and upper-right-rectus rigidity. Lower abdomen was soft. Impression was acute pancreatitis associated with biliary-tract disease. Laboratory examinations had to be deferred for several hours. Blood amylase 656 units; r.b.c. 4,850,000, w.b.c. 14,000—neutrophils 75, hb. 84. Icterus index was 59, Van den Bergh direct—immediate; indirect—increased. Cephalin-cholesterol was two plus. Patient was treated symptomatically and conservatively. On July 24th blood amylase was 163. Patient was discharged after being placed on gallbladder diet and advised to return for evaluation of biliary-tract disease.

Patient did not return, but seen one year later stated she had had no recurences and felt well.

Case 4.—White man, aged 40, admitted to the emergency room of hospital 8:20 p. m., November 4th, 1947. He was in moderate shock, sweating profusely, crying out with severe epigastric pain. Pain was most severe on standing. The right lateral decubitus position was assumed spontaneously. Blood pressure was 90/60, skin cold and clammy, ashy-gray cyanosis. Shock therapy was instituted. Opiates were given for pain.

History (from family): The patient was suddenly seized with moderately severe epigastric pain while working in the field, two hours after eating a heavy noon-day meal with dessert of banana-pudding. The patient thought that the pudding had given him indigestion and he took home remedies for relief. The pain gradually became worse and at 7 p. m he was seen by his family physician who gave 100 mgms. of demerol and advised hospitalization.

The patient was tall and thin—the build of an ulcer patient. There was marked right-upper-rectus rigidity and marked tenderness over right and left epigastrium. The lower abdomen was distended and palpation over the cecum caused reflex epigastric pain. The abdomen was quiet and tympanitic. R.b.c. 4,700,000, w.b.c. 22,800—neutrophils 83 (stabs. 15, seg. 62), hb. 90. Blood amylase was 240, blood sugar 111 mgms. per cent, npn 29 mgms. per cent. Because of the low positive amylase activity and the reflex appendiceal pain, perforation of a peptic ulcer into the pancreas was considered and an upright plate of the abdomen was made. This failed to show free air in the peritoneal cavity; "however, evidence of early paralytic ileus is present." Conservative symptomatic treatment was instituted: Wangansteen suction, penicillin and streptomycin. On November 5th, blood amylase was 158 units, w.b.c. 21,000—neutrophils 90 (stabs. 8, segs. 82). The patient began to improve slowly. Tenderness over the epigastrium persisted. X-ray examination, November 7th: "The stomach is normal except for the prepyloric region which demonstrates marked spasm and irregularity. During 30 minutes of intermittent fluoroscopy no barium passed the pylorus. At six hours the stomach was empty and the barium was in the terminal ileum. There is now no evidence of ileus, obstruction or other abnormality in this region.

"Impression: Marked spasm of pylorus-prepyloric region of the stomach. This is of such extent to support probability of ulcer in this region, although unable to demonstrate actual crater."

On November 12th, the blood count was normal, blood sugar 95 mgm. per cent, blood amylase 88 units.

The patient was discharged November 13th with instruction to return for reëvaluation of the pyloric condition.

Conclusion

Acute epigastric pain is significant in acute pancreatitis. Definite diagnosis is made on increased blood amylase activity. Conservative treatment is the treatment of choice, surgery being reserved for those cases with complications and associated conditions. A series of four selected cases has been presented.

—West Harrison Street

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DEPARTMENTS

HUMAN BEHAVIOUR

James K. Hall, M.D., *Editor*, Richmond, Va.

OF MENTAL ALIENATION

Language serves as the passport which enables one to enter the mind of another and to receive into one's own mind a visit from another's. But the constituent units of language are symbols, and symbols must be interpreted in order to be meaningful. And because no symbol may mean quite the same even to two individuals, it is improbable that even a single word means exactly the same thing to many individuals. Whatever one may see must be identified not visually merely, but also through the utilization of one's entire experiences.

The audience is addressed always by as many speakers as there are persons in the assemblage. Each hears a different speaker. Nothing is so nearly impossible as to make one's self understood, unless, indeed, it be to understand another. Man's insistence upon group-living—for man is gregarious—makes necessary the use of language to prevent the persons in the group from living separately from each other. Intimacy of association is made possible by linguistic activity, rather than by physical proximity. He who possesses the capacity to use language in interesting and appealing fashion is a welcome visitor to the eyes or to the ears of mankind.

"I Question" is a well-bound and well-printed booklet of 82 pages, by "Anonymous," a copy of which was sent to me by Dr. Frank H. Luton, who wrote the Foreword. In it he tells us that he was privileged to be associated with the author during the writing of the book. The little volume reveals the suffering experienced by the writer during the long period of mental distress, of which the book constitutes a frank and interesting, but not always an understandable, portrayal. Dr. Luton is the psychiatrist of the School of Medicine of Vanderbilt University, Nashville, Tennessee. The profession of medicine is indebted both to Dr. Luton and to the author for giving us a detailed account of the condition of the emotions, of the intellect and of the spirit of an honest human being, many of whose sensations and ideas almost defied verbal description.

"Since I have questioned many of the things that have happened to me and many of the things that I am supposed to believe, I feel that this book will add much to the questioning attitude and spirit that all of us should have."

And the author continues his self-revelation: "As a child I craved immortality; I prayed to God that I might live until the millenium, thinking thereby I would live on forever without dying. They tell me from the spirit world that God wills that I live approximately twenty-five years longer—that my expectancy will be seventy-nine years. This does not mean, of course, that I will surely live this long, because this is a defaulted world and the spirits in it become more evil every day."

The writer has introduced us to two words that he repeatedly uses—spirit and defaulted. All of us possess some idea of the meaning of spirit, but defaulted will have little definite meaning for most of us.

Again the author speaks of the influence in his life of the immaterial. "At the time of writing this, I have known of the spiritual world through their voices, seeing their faces, and having certain spiritual feelings for about two years. I am aware at times of seemingly thousands of souls leaving the world. I get this not only in speech from them but also a feeling of thickness in the air, either in an area below, above, or in some other direction from me. Frequently there is within my own body an area that seems thick like soup which leaves me with a feeling as one might have after a dive in a pool followed by a cool sensation. This feeling of coolness at a distance seems strange. I also have sensations of pain at a distance."

The author says the trouble, his own troubled condition, first started back about 1919, when he had a physical breakdown. He observes that Communism started at about the same time in Russia. And Communism even so far away struck fear into his soul, because it meant destruction of all our economic ideas and of our faith in God, with the offer of nothing in exchange except beastliness.

The author went to Florida on a vacation. But he had a breakdown and his heart raced and beat heavily. He did not feel comfortable for thirty days.

Many times he has been a patient in a hospital. Once, at least, he became unconscious and remained so for a few weeks. At another time he could not eat, and he was fed by the use of the nasal tube. Often voices have spoken to him; sometimes threateningly, seldom pleasantly. He realizes that many of the things he saw lacked material reality. He pulled little snakes from the pupils of his eyes, and tumor-like growths from his body. But later he understood the experiences to be hallucinatory. Once when he was in a hospital he felt that he was Jesus, and he baptised himself in a bath tub. At another time he believed that God had promised to allow him to rule the Universe for a day.

Although the author is manifestly deeply religious, his religious beliefs are individualistic, and

his religious ideas would probably make him unacceptable to any religious group. He speaks of Gods and of Goddesses, many of them, and he asserts that Gods are impossible without Goddesses. He thinks little of the virgin birth; he cannot understand why God would wish a son; and he speaks skeptically of Mary the Mother. His unbelief is not accompanied, however, by irreverence.

He asserts that the time will come during our life time when man will cease to reproduce, and within a century and a half he believes the earth will be uninhabited by man.

Anonymous, who writes the exceedingly unusual little book, has undoubtedly experienced sensations so weird and ideas so unusual that he can scarcely describe them by the use of words. He is hard put to it to find an explanation of his experiences. But he accounts for them by populating the Universe with spirits, some of them devils, some of them benign; and the spirits are in numbers as uncountable as the sands of the seashore. The spirits often invaded his body, overpowered his mind, and caused him to see, to hear, and to experience sensations few mortals know anything about.

Because Anonymous has not practised writing about himself and because most mortals know nothing of such experiences, neither the writing of the book nor the reading of it is easy.

But many symptoms of physical dysfunction are difficult to interpret. Anonymous has not always been mentally well. In "I Question" he has conscientiously tried his best to tell us how he has felt. And he has offered his own explanation of his conception of his condition.

There should be much more such pathopsychobiography. Every effort should be made to induce the mentally sick to reveal themselves as fully as possible. Their accounts of their own feelings should be heard, never derisively, but always respectfully, and an earnest attempt should be made to understand their symptoms, expressed largely through words and through other behaviour manifestations.

The old statement is still true that the person who is mentally sick needs most an interested, intelligent, understanding, kind friend.

I wish that all physicians and all nurses and many others might slowly and studiously read "I Question," by Anonymous. It possesses the candor of Samuel Pepys, the pathos often exhibited by the Psalmist, and the courage of Saul of Tarsus.

In psychiatry especially we need more information brought forth by the patient from deep within himself. Too often our conceptions of our mentally sick folks represent our misconceptions projected into them. We must encourage such patients to express themselves fully, and we must fit ourselves patiently and understandingly to interpret their condition. Only through behaviour can one declare self, and language constitutes an impressive feature of conduct. Nothing is foolish to the actor, but only to the observer who makes it so.

VIRUS PNEUMONIA—From P. 38

doses from 35 to 100*r* daily, or every second to third day, for not more than four exposures, aminophyllin and transfusions from convalescing or multiple donors have some usefulness as adjuvants in some cases.

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TUBERCULOSIS

Streptomycin in Tuberculosis*

From an authoritative source we may learn what streptomycin has shown itself able to do for the tuberculous.

Tuberculous Meningitis. — Intensive parenteral and intrathecal streptomycin therapy is advised for treatment of tuberculous meningitis. Clinical remissions of varying duration are induced frequently by this treatment, although subsequent relapse is likely to occur. Residual neurologic disorders are frequently noted, but complete clinical remission may be anticipated in a sufficient proportion of cases to justify treatment of all patients.

Acute Hematogenous Miliary Tuberculosis.— Prompt streptomycin therapy is advised.

Pulmonary Tuberculosis.—Streptomycin is not indicated for all types of pulmonary tuberculosis. Tuberculous pneumonia should be treated with streptomycin. Encouraging results are noted following treatment of recent, extensive and progressive pulmonary lesions, especially if these appear in roentgenograms as diffuse and finely disseminated shadows. It is recommended at this time that only those cases of pulmonary tuberculosis be treated with streptomycin in which it is believed that conventional therapeutic methods such as surgery, when indicated, and bed rest, will not suffice to control the disease.

Tuberculous Laryngitis & Ulcerating Tuberculous Lesions of the Oropharynx.—Streptomycin therapy is advised for the treatment of more severe cases. The palliative benefits justify treatment in instances in which the ultimate prognosis of associated pulmonary tuberculosis appears grave. Combined parenteral and topical treatment is suggested.

Ulcerating Tuberculous Lesions of the Tracheobronchial Tree. — Parenteral streptomycin treatment should be employed. It is not yet apparent whether results are superior when combined aerosol and parenteral treatment is used.

Tuberculous Cutaneous Sinuses.—Streptomycin appears to be highly effective in a large majority of cases, regardless of the underlying disease, except that sinuses associated with tuberculous empyema are less likely to respond.

Chronic Tuberculous Empyema.—Streptomycin is not recommended for treatment of chronic empyema of tuberculous origin because of its apparent ineffectiveness.

Other Tuberculous Conditions.—More extensive observations will be required to determine whether streptomycin is of sufficient value to justify its use in (a) prophylactic treatment pre- and post-operatively, (b) tuberculosis of the genitourinary tract, (c) tuberculosis of bones and joints, (d) tuberculosis of the skin, (e) tuberculous lymphadenitis without sinus formation, and (f) ocular tuberculosis.

Streptomycin cannot be recommended at this time for treatment of (a) chronic fibroid or fibrocaseous pulmonary tuberculosis, (b) acute destructive and apparently terminal types of pulmonary tuberculosis, (c) minimal or early moderately advanced pulmonary tuberculosis with favorable prognosis.

Dosage

It has not been fully determined what the minimal effective therapeutic dose of streptomycin is, nor how the dosage should be modified to obtain optimal results in each of the many different types of tuberculosis. A total parenteral dose of 1 to 2 Gm. in 24 hours is suggested. It has not been established how frequently intramuscular injections should be made or how long treatment should be continued. The successful results observed usually have been in patients who received injections at intervals of four to six hours for three to four months. Until further studies have been concluded, it cannot be recommended that injections be made less frequently or that the treatment period be shortened.

*Summary of Annual Report of the Committee on Therapy and the Subcommittee on Streptomycin Therapy, American Trudeau Society, published in the November 8th, 1947, issue of *The Journal of the A. M. A.*

RHINO-OTO-LARYNGOLOGY

Clay W. Evatt, M.D., *Editor,* Charleston, S. C.

HOARSENESS MAY MEAN CANCER

We need to be reminded frequently of the dangers of ignoring slight hoarseness which does not disappear within two or three weeks. Putney's[1] reminder to the doctors of New Jersey recently, is passed on to you.

Hoarseness is a warning not to be ignored. Examination of the larynx, by mirror or direct laryngoscopy, or both, is mandatory to determine the cause of hoarseness; and when an abnormality is found, measures to find out its nature must be carried out at once.

Most tumors arise in the anterior portion of the larynx, and time and skill may be needed to view this area completely.

The common benign neoplasms causing hoarseness are papillomas and inflammatory lesions, which are not true neoplasms but have been variously designated an angiomas, fibromas, and polyps.

The diagnosis of carcinoma is not difficult provided the disease is suspected; and any chronic dysphonia should arouse suspicion. Carcinoma most often affects the anterior half of the larynx and

1. F. J. Putney, Philadelhia, in *Jl. Med. Soc. N. J.*, Jan.

usually originates on the vocal cords, but may be found in any portion of the larynx. Hoarseness occurs early and is persistent, becoming progressively worse. Aphonia and pain are late symptoms. Mirror examination frequently reveals an uneven cord with a rough, nodular surface or an infiltrating lesion with fixation of the involved vocal cord. Malignant lesions of the epiglottis, arytenoids, arytenoepiglottic folds and posterior portion of the larynx are not uncommon.

Many cases are too far advanced to be treated surgically when first examined. A high proportion of cures is obtained in laryngeal carcinoma, as compared with cancer elsewhere in the body, due chiefly to the anatomic construction of the larynx and the poor lymph supply.

Tuberculosis and syphilis are always possibilities in chronic hoarseness, and the laryngeal appearance may be confused with carcinoma. Routine serologic examinations and roentgen studies of the chest are helpful in any laryngeal disorder. Always remember that carcinoma may coëxist with syphilis or tuberculosis.

Before a diagnosis of laryngeal syphilis is made, make a roentgen study of the chest and sputum examination for tubercle bacilli, and a biopsy.

The diagnosis of chronic laryngitis is made after all other possibilities have been eliminated. It develops following repeated acute attacks of laryngitis, chronic sinus disease, exposure to irritants as smoke and dust, or misuse of the voice.

Paralysis of the larynx arises from peripheral or central lesions involving the vagus nerve or its laryngeal branches in its course intracranially or in the neck.

The most frequent cause of paralysis is malignant tumor, from primary involvement of the thyroid gland, trachea, bronchi, and esophagus or metastatic lesions of the mediastinal and cervical lymph glands. Injury to the recurrent laryngeal nerve in thyroid surgery and aneurysm of the aortic arch are responsible for most of the remaining cases.

PULMONARY COMPLICATIONS DUE TO ENDOBRONCHIAL FOREIGN BODIES

(P. H. Holinger *et al.*, Chicago, in *Ill. Med. Jl.*, Jan.)

In a series of 1026 consecutive cases of foreign bodies in the air and food passages, 353 (32%) were found in, and removed from, the tracheo-bronchial tree. Pulmonary complications depended upon the location, sojourn, and character of the foreign body. Vegetable objects (peanuts, corn, beans, twigs, grass heads, etc.) produced the most acute inflammation and were often overlooked as the cause of the disease. Metallic objects (tacks, screws, parts of toys, safetypins and common pins) were more often responsible for extensive bronchiectasis, severe hemoptysis, empyema and pneumothorax when they remained in the bronchi for weeks, months or years. It is important to obtain an accurate history in the obscure lung disease.

There were 2 fatalities in the 352 cases of bronchial foreign bodies—one due to metastatic brain abscess from a bronchiectasis caused by a foreign body; the other following one of a number of surgical procedures carried out for a drainage of multiple abscesses secondary to a kernel of corn remaining in the bronchus two months.

To establish the diagnosis of a foreign body in the air or food passages one must carefully evaluate the history, the symptoms, the physical findings and the x-ray studies, and then confirm or deny the diagnosis by the endoscopic examination. A positive history of choking or gagging or the statement of a patient, no matter how young, that he has swallowed something, must never be ignored. Yet, no matter how strongly one relies upon a positive history to lead to a diagnosis of a foreign body, a negative history should not be accepted as final.

A study of the symptoms and physical findings aids in establishing the presence or absence of a foreign body, and often gives an accurate indication of its location. The x-ray examinations follows, and this should go far enough to establish the diagnosis, if necessary, including a complete x-ray study of the patient with fluoroscopy, anteroposterior film, laterals, comparison of inspiration and expiration and extra density films.

Finding a peanut in the bronchus of a child who has a negative foreign body history but an unresolved pneumonia of unknown etiology is a common example of the diagnostic phase of the endoscopic procedure in foreign-body work. To find and remove the object early will avoid the many serious complications herein described.

SURGERY

WILLIAM H. PRIOLEAU, M.D., *Editor*, Charleston, S. C.

THE USE OF TANTALUM MESH IN THE REPAIR OF LARGE VENTRAL HERNIAE

THE REPAIR of large ventral herniae has always presented a problem, due primarily to the fact that there is insufficient aponeurotic tissue to effect a closure. In some cases fascia from the same region can be mobilized sufficiently to cover the defect. The use of pedicle fascial graft has been reported to have been used with success. To a limited extent the use of free fascial grafts in the form of a suture or a sheet has been satisfactory. Large grafts used for such purposes are not often satisfactory on account of their tendency to slough in whole or in part. In such wounds healing is impaired by the poor blood supply, and commonly by the presence of excessive fat.

At a recent meeting of the Southern Surgical Association, Doctor Amos Koontz of Baltimore reported the successful use of tantalum mesh in the repair of a number of cases of large ventral herniae. The tantalum mesh was well tolerated by the tissues. It gave adequate support during the healing process. The final strength of the wound depended upon fibrous tissue invasion of the wire mesh.

This method gives promise of a satisfactory solution in a great many of these cases. It obviates the need of extensive dissection for mobilization of neighboring fascia, with associated increased contamination, and danger of loss of fascia. It

makes use of the principle that certain metals are well tolerated by the tissues. Its limitations, especially as regards its use in the presence of sepsis, are yet to be determined.

PEDIATRICS

EXPERIENCES WITH BRUSH'S METHOD FOR THE INITIAL STABILIZATION OF DIABETIC CHILDREN

CLARK'S[1] experience with Brush's method of laying the groundwork for the management of the diabetic child has proved so gratifying that an abbreviated account is passed on to our readers.

That diabetes in children and in adults represents two different diseases is becoming well recognized and that there is a uniform response of children with diabetes mellitus to the treatment of their initial episode of glycosuria. The islet system relieved from the driving stimulus of the child's hyperglycemia may recover a portion of its normal functional capacity.

With this working hypothesis, Brush developed, over a 10-year period, a standardized treatment of the initial episode of hyperglycemia. The entire need of the child for insulin is supplied, initially, by the exogenous route until signs of the recovery of the islet system are noted. Brush supplied complete tables for calculation of the daily dose of insulin, the calories, and the amount of carbohydrates, fats and protein.

The tables should be followed strictly. The initial dose of insulin is high and is divided into four daily doses, one to be given 15 minutes before each meal and a smaller one at four in the morning. The chief sign of beginning recovery of the islet system is insulin shock; this to be expected on the 6th to 10th day of treatment during daylight. It is easily controlled by a small amount of sweetened orange juice. As soon as shock is noted, the dosage of insulin is reduced daily according to the schedule as given by Brush until the minimum level which does not produce glycosuria is reached, usually three to nine units per day. In this method, then, there is but one variable, the exogenous insulin: the diet and exercise are constant factors.

Brush's method holds the patient under close observation until he has reached a steady state. Such a state will not be lost eventually through an intercurrent infection or a bout of dietary indiscretion.

It confines the patient to the hospital for a minimal time for stabilization.

It permits the child to be stabilized on an insulin dose lowest compatible with efficient metabolic economy. With the improved level of control possible with this method one may predict a lessening of complications, sequelae and fatalities.

While it does require a strict regimen, it is easily followed and can be placed within the facilities of physicians anywhere. Close check with frequent blood sugar determinations is unnecessary. Elevated renal thresholds for sugar are very uncommon in early diabetes in children and the blood sugar level in children is subject to rapid and frequent fluctuations. Thus, frequent urinalysis is usually a sufficient guide to response to therapy. An occasional spill of heavy sugar in the urine preceded and followed by negative tests can be ignored.

To give four daily doses of insulin, the first coming at 4 a. m., is not pleasant. However, one is not justified in an attempt to alter the regimen in this respect: to do so will prolong the period before recovery starts and may interrupt the process of it has started.

The diets given by Brush are somewhat low in caloric value. It is to be expected that these children will be hungry during the period of hypoglycemia, but initial diet should not be altered during the stabilization process. One may use the optimum rather than the actual weight, but if one does so, he must be prepared for a longer period before the appearance of shock.

These children require close watching during the days before the appearance of the shock and for a few days thereafter. Using Brush's diets, shock may be expected from the 6th to the 10th day, rarely earlier, occasionally later. Shock may appear between 11 a. m. and noon or around 4 p. m. It is not known to occur at night. It may recur on the following day but will not thereafter. It is important to keep these children in the hospital until they can be discharged on the final regulating dose. They are kept at strict bed rest until the shock episode occurs but may be permitted up thereafter. There is a strong temptation to increase the diet during the regulating period as these children complain bitterly of hunger. However, to do so defeats the purpose of the treatment by creating a relative hyperglycemia which then stimulates the islet system to overactivity before it has sufficiently recvored from its fatigue.

1. B. P. Clark, Gadsden, in *Jl. Med. Assn. Ala.*, Oct.

ASPIRIN POISONING

Three cases of poisoning, one of them fatal, due to acetylsalicylic acid (aspirin) are reported in infants under one year of age. The correct dosage is one grain per year of age, every 4-6 hours. Due to the very extensive use of aspirin in the treatment of infants, salicylism is probably more common than is generally belitved. In an infant who presents the picture of fever, hyperpnoea and dehydration, without diarrhea or other evidence of infection, salicylism must be suspected.—M. H. Bass, New York, in *Jl. Mt. Sinai Hosp.*, Sept.-Oct.

DENTISTRY

J. H. Guion, D.D.S., *Editor*, Charlotte, N. C.

USE OF NITROUS OXIDE-OXYGEN ANESTHESIA IN DENTAL SURGERY

For the average dental patient, Seldin[1] believes nitrous oxide-oxygen conforms more closely to the ideal than any other anesthetic thus far introduced. It is noninflammable and nonexplosive. When prolonged and severe hypoxia is avoided, it does not interfere with or alter the functions of the body organs. It is nonirritating, pleasant to take, and produces excellent analgesia with rapid recovery.

This thesis is elaborated:

In certain cases smooth anesthesia with nitrous oxide and oxygen is maintained with difficulty. Forcing pure nitrous oxide on a resistant patient in order to induce secondary saturation is dangerous. The combination of vinethene, metopryl, or pentothal sodium with nitrous oxide-oxygen, will produce an even anesthesia with greater degree of safety.

Some degree of anoxemia is present during most, if not all, anesthesias, no matter what agent is employed. A mild degree of hypoxia is less dangerous with nitrous oxide than with any other anesthetic, because this agent does not depress the protective mechanism of the body and it is rapidly eliminated.

Data on 14,790 anesthesias show that 85% of the patients required 20% or more oxygen with the nitrous oxide. Aged and anemic patients require high oxygen percentages, whereas the overstimulated types seem to do well on low oxygen percentages in anesthesias of short duration.

Cerebral damage or death may occur with any anesthetic. The danger lurks primarily in two types of patients, the debilitated and the overstimulated.

The debilitated, especially the anemic patient, is prone to lapse into dangerous anoxemia. Breathing will become slower and shallower. The color may remain good. Constant watchfulness of all symptoms as well as the maintenance of high oxygen percentage in the anesthetic is essential.

The overstimulated patient, especially the alcoholic, will resist the anesthetic. Forcing nitrous oxide during the struggle is dangerous. These patients can be anesthetized with greater safety and ease by adding a heavier anesthetic such as pentothal sodium, vinethene, or metropryl, to the nitrous oxide.

1. H. M. Seldin, D.D.S., New York City, in *Anes. & Analg.*, Nov.-Dec.

The tuberculosis control program appears to have been quite successful, as to material reduction of death rate among women, while in the case of men the principal evidence of success has to do with the advancing age at death.—Mary Dempsey, *Am. Rev. Tbc.*

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

SULPHAMERAZINE TREATMENT OF PNEUMONIA IN ADULTS

There is a tendency to regard the sulphonamide drugs as superseded by penicillin not only in the severely ill but even in mild conditions where the former have proved adequate. Sulphonamide treatment for primary pneumonia in adults is satisfactory in the vast majority of cases, and should be given before confirmation of a clinical diagnosis by bacteriological and radiological reports is available. Further, we feel that all but the most severe cases in aged or debilitated patients are reduced by this treatment to a two-day fever which can be adequately treated at home. Hospital care, with facilities for fuller investigation and treatment, is needed only for patients who fail to respond rapidly to sulphonamides, or who are critically ill, or whose condition is otherwise complicated.

Thus two Britishers[1] begin an article full of help for us all. Further they say:

Pneumonia commonly occurs without the classical physical signs. In the absence of an influenzal epidemic, patients complaining of respiratory symptoms are suffering from some measure of lung consolidation if they have a t. higher than 100° for more than one day. Many such patients skiagrams show segmental or central consolidation, and all these should be given the benefit of a full course of a suitable sulphonamide without delay.

At the outset a specimen of sputum will indicate the causal organism in 70% of the cases. Radiological confirmation that resolution is complete, particularly in every patient over 40, is essential.

The treatment now used almost invariably is that with sulphamerazine.

A single dose of sulphamerazine will produce a higher blood level of the drug, and more quickly than the same dose of sulphadiazine, and this blood level will be longer maintained. Being more soluble there is less risk of urinary obstruction with crystals. The rapid absorption renders parenteral administration almost unnecessary, since an oral dose will produce therapeutic blood levels in two hours, while within four hours the blood levels remain the same as those obtained by equal intravenous dosage. The course found satisfactory consists of an initial dose of 3 g., followed in eight hours by 2 g. and then 1 g. eight-hourly. Six pints of fluid is given daily, but alkali is not required.

1. Horace Joules & S. D. V. Weller, in *British Med. Jl.*, Dec. 13th.

since it decreases tubular reabsorption of the drug and therefore increases its loss by excretion.

The t. falls to normal in 24 to 36 hours in most cases and rarely rises more than 1° above normal afterwards. Treatment is continued, according to the severity of the case, for 48 to 72 hours after the t. is normal, so that a moderately severe case will need about five days' treatment (18 g. in all). Such a dosage produced no reduction in granulocytes in the blood.

Adequate sleep on the first night of treatment was best obtained with an injection of codeine; in older subjects pethidine, 100 mg. by injection, is adequate and in many ways preferable. A linctus for the first two or three days may be helpful to control the cough. Pleural pain rarely persists long after the start of sulphamerazine, and is well relieved by spraying the chest wall with ethyl chloride q. 3 h. Strapping the chest has never been resorted to.

The patient should be advised to see that his future life is modified so as to avoid a recurrence of those circumstances that render him an easier victim to pneumonia.

A spike of t. to 99.4° was seen in 60%, most frequently after the t. had settled. In some cases there were two or more such spikes. In no instance was this phenomenon correlated with any failure of treatment or the development of any complication. It was met with as often in patients under penicillin as under sulphonamide therapy, and it need cause no misgiving.

In 17 cases the response was inadequate and further treatment was given. Fluid developed in five cases sufficient to justify aspiration. The fluid remained sterile throughout and no empyema occurred in the series. Parenteral penicillin was given in each such case. One severely ill woman developed a confusional psychosis after 7 g. of the drug, which was stopped and penicillin substituted. Her confusion cleared rapidly and she left hospital on the 15th day.

Six patients were refractory to sulphonamides. One showed on the third day a transient rubelliform rash which faded in spite of further administration of sulphamerazine.

A series of cases of primary pneumonia in adults is presented. No deaths occurred among 113 cases treated with sulphamerazine. Five deaths (7% mortality) occurred among 76 treated with other agents, including combined therapies. The total mortality was 3%.

The results show that pneumonia can be treated at home and be reduced to a "two-day fever." Should no response follow within 48 hours the case should be reviewed at once and the facilities provided by the hospital for further investigation and treatment be employed.

The need for radiological demonstration of complete resolution is emphasized, as is the need for adequate time for convalescence.

PRINCIPLES GOVERNING THE CHOICE AND PARENTERAL ADMINISTRATION OF FLUIDS

An important means of therapy much in use is the administration of fluids by vein or under the skin. Hartmann[1] writes on what one may hope to accomplish and how to go about it.

There are usually but two things to expect of fluid administration: 1) to make up directly a deficit in the body water and its solutes, such as salt, sugar or protein, or to produce certain types of renal activity; 2) or to stimulate liver activity.

When a baby has been so starved that the protein stores have become quite low, the plasma proteins, particularly, sometimes it is vital to give plasma protein or some substitute for it, or some derivative of it, while salt solution is being given.

An extremely athreptic infant with alkalosis and active tetany or one with complicating infection which is not being handled well because of malnutrition, should be safeguarded against convulsions or laryngeal spasm and asphyxia by administration of 5% calcium chloride ¼ c.c. per Kg. of weight, and having him breathe 30% CO_2 and 70% O.

With those emergencies met turn from the kidney to the liver and make the liver work. A single dose of 30 c.c. per Kg. body weight of isotonic, or 1 6 molar, ammonium chloride. It cannot be given too rapidly if it is given subcutaneously. It is desirable to add the ammonium chloride to Ringer's solution, so that it becomes 1/12 molar ammonium chloride.

Liver cells quickly convert the ammonium ion into urea, and the chloride ion, thus freed, acts just like hydrochloric acid, taking away base from base bicarbonate and so reducing the alkali reserve of the body fluids.

Next the problems of severe diabetic acidosis. These are the things we want to do away with rapidly but safely:

1) Acidosis itself, which is a reduction of bicarbonate and pH of body fluid; 2) the dehydration and the anhydremia; 3) the complex electrolyte change in body fluids; 4) ketosis; 5) exhaustion of glycogen reserves; 6) degree of hyperglycemia and glycosuria.

The method consists of the use of three tools—insulin, sodium lactate, and hypotonic Ringer's solution in order of importance.

First we give insulin 2 units per Kilo. A half unit per Kg. body weight abolishes ketosis at a maximal rate. Anything beyond that has its effect

1. A. F. Hartmann, St. Louis, in *Jl. Iowa Med. Soc.*, Dec.

chiefly in lowering blood sugar and in helping to restore glycogen.

Then we give to restore blood volume quickly and improve blood flow quickly 1/6 molar (isotonic) sodium lactate 30 c.c. per Kg. While that is running in a vein, we give a similar amount subcutaneously mixed with 40 c.c. per Kg. of Ringer's solution. That is all the treatment for the first six hours.

If severe acidosis persists, we give more lactate and always more insulin. If that dilution has lowered the plasma protein content so that poor renal function and edema are present, then we begin to supply plasma protein at the six-hour period.

We think there is no need for administration of more glucose. When you use 60 to 90 c.c. per Kg. body weight of 1/6 molar lactate solution, you are giving a good substantial amount of potential glucose. We rarely have to give more glucose unless the subject, on the second or third day of treatment, is unable to eat.

DERMATOLOGY

TREATMENT OF ACNE VULGARIS

ALL OF US have patients with acne. A famous dermatologist[1] says it usually lasts a long time no matter who treats it, and he favors the family doctor treating it after a certain plan for weeks, in most cases months, after a definite plan.

If this treatment, carried out for several months, does not succeed, it is best to refer to a specialist for probable x-ray exposures.

The patient is instructed to avoid traumatizing the face, which should be washed gently with soap and no unguent applied. Embedded comedones and waxy cysts must be removed mechanically. The use of viosterol in doses of 20,000 to 100,000 units daily has been followed by improvement in many patients and harm in few.

He prescribes a low fat diet, which may contain as many calories as the patient can swallow. To accomplish low-fat nutrition the patient must be on a high-protein, high-carbohydrate diet. A diet to be followed for a long time must be adequately nutritious, easy to follow and fit to eat. There is no restriction of quantity eaten. The patient is instructed not to go hungry and to keep a record of weight. This is not a diet for allergy, wherein 100 per cent of certain items are interdicted. "Avoided" does not mean "not any of."

Allowed. Fruits, cereals and bread, vegetables, sugar and sugary foods (syrup, honey, jelly and sugar candy), lean meats, birds, game, fishes, gelatin, cottage cheese, egg white, two cups of coffee, tea or coca cola per day.

Avoided. Milk (do not drink it), cream, butter (one square per meal is all right), ice cream, cheese (like butter), gravy and salad dressing (a teaspoonful makes foods more palatable, is allowed), pork, fried things (potato chips are 35 per cent oil by weight), popcorn; any substances rich in lipochromes, such as tomato catsup and juice, carrot, excessive amounts of egg yolk and orange juice, and cod-liver oil.

Thyroid extract enhances lipid metabolism and lowers lipemia. The correct dose is found by experiment: by placing the patient on one grain U. S. P. with breakfast each morning, it is easy to discover whether this dose is (1) too little and does nothing, (2) too much and poisons the patient however mildly, or (3) just right. "I am like perhaps half of all internists in disregarding the B. M. R., in which I have neither confidence nor interest. I sometimes give regard to the basal temperature, obtained by holding an accurate thermometer in the mouth for five minutes prior to arising and reading it to the tenth of a degree. A t. below 97.8° suggests that thyroid may be increased a trifle, but at 98.2° overdosage symptoms are present or imminent. The maximum tolerated dosage is just less than that which produces any symptom of overdosage—nervous tension, insomnia and restlessness, headache, dizziness, weakness, tremor, palpitation, or continued loss of weight."

Milk is the antidote for thyroid overdose as sugar is for insulin. At the first appearance of any symptom of intolerance, the dose is diminished to a tolerated level. This necessitates keeping seeing the patient each week, recording his weight, inquiring of him how he tolerates the medication and making suitable adjustments of dosage.

Correctly administered, this regimen of diet and thyroid substance cannot be harmful, for enough vitamin A "leaks" into the diet to prevent hypovitaminosis, which Sutton has never seen in his patients. As soon as a proper level of thyroid intake is established, seborrhea and inflammation greatly diminish.

The diet is strict at first and is broadened as the disease is controlled until the patient discovers how much fatty food he can ingest without erupting. Thyroid is continued as long as it is necessary. Some patients take it for years and relapse if they omit it; others reach a balance in a few months and become overdosed by a dose which for a time was correct.

In addition to diet and thyroid, use is made of painstaking surgery, x-ray therapy after the correct dose of thyroid is established, such measures as attention to focal infection and administration of penicillin if they are indicated, and no local medication at all.

1. R. L. Sutton, Jr., Kansas City, Mo., in *J. Kansas Med. Soc.*, Dec.

Dr. Sutton's remarks on the B. M. R. test attract favorable attention. They apply to diagnosis and treatment in general medicine as well as to dermatology. Certainly it's a lot simpler to try the effects of thyroid extract in small doses.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

THE MANAGEMENT OF CARDIAC EMERGENCIES

We need to be oft reminded and posted to date on what to do in these emergencies. Overholt's advice is passed on to you.

In coronary occlusion the basis for treatment is complete bed rest for four to eight weeks. There is a movement to get such patients out of bed earlier in order to prevent embolic and thrombobphlebitic phenomena.

Morphine, ¼ gr. and atropine, 1/150, are the drugs of choice for relief of pain and to combat shock. Reassurance and reëducation are important features of the management. Some prefer to give papaverine, gr. 1, three or four times daily, because of its vasodilator effect. Aminophyllin, thesodate, calpurate or purital are of questionable value. Quinidine sulphate, grs. 3, four times daily, is used routinely by some; others limit it to cases which show premature systoles. Digitalis is indicated only when cardiac failure threatens.

Diet: First 48 hrs. mainly liquid, not over 600 calories; later protein one gram per kilogram of body weight, fat at a minimum, the rest of the 1,000 calories carbohydrate—in four or five feedings rather than in three.

Oxygen should be used almost routinely during the first 24 hours.

The use of anticoagulants reduces the incidence of clinical embolism or thrombosis from 16 to 2%. The dosage is 200-300 mgms. of dicumarol initially, subsequent dosage determined by prothrombin clotting times, every other day.

For angina pectoris nitroglycerin 1/200 to 1/100 gr. under the tongue.

The patient should never eat a heavy meal. Tobacco should probably be discontinued.

For paroxysmal auricular tachycardia, the most effective treatment is carotid sinus pressure; next pressure on the eyeballs. Change of posture may be effective. Syrup of ipecac will stop most attacks. Digitalis is the most satisfactory drug for the difficult and recurring case.

Ventricular tachycardia almost always means heart disease. Quinidine is the drug of choice, six grs. q. 2 hr. for eight to 10 doses, orally, intramuscularly; or intravenously, 5 grs. in 50 c.c. of normal saline.

1. B. M. Overholt, Knoxville, in *Jl. Tenn. Med. Assn.*, Jan.

Paroxysmal auricular flutter is readily diagnosed by the ecg. Digitalis is the drug of choice in most cases, causing reversion to normal rhythm. In other cases it converts the flutter to fibrillation. Full digitalizing doses are given during a period of 24 hours.

Paroxysmal auricular fibrillation may occur with heart disease but frequently where there is no evidence of heart disease. Digitalis to slow the ventricular rate, then a test dose of quinidine, and if no toxic effects are noted, 6 grains of quinidine q. 2 h. for six to eight doses.

In Adams-Stokes syndrome, there is sudden loss of consciousness due to cerebral anemia from standstill of the heart. The diagnosis is clinical and ecg. The drug of choice is epinephrine, five to eight minims subcutaneously as often as q. 2 to 3 hrs. If continued treatment is necessary, ephedrine, ⅜, or paredrine gr. ½ q. 4 to 6 hrs. by mouth may prove adequate. Barium chloride, 1 to 3 grs. t.i.d. by mouth is occasionally used. Atropine, gr. 1/30th subcutaneously is sometimes effective. Oxygen and aminophyllin are also used at times.

When excessive fluid accumulates in the pericardial cavity, in an occasional case the pressure reaches a critical point quickly and the pericardium should bbe tapped immediately.

In acute left ventricular failure venesection 300-600 c.c. of blood may give prompt and dramatic relief. The application of tourniquets to the extremities with sufficient pressure to prevent venous return flow may also help. Morphine, gr. ¼, at the onset is in order. Strophanthin K, gr. 1/100th, used intravenously produces dramatic results. Oxygen may also be employed. Aminophyllin intravenously is at times helpful.

THE DIAGNOSIS AND TREATMENT OF BRUCELLOSIS

The most diverse opinions are held as to the prevalence and importance of human brucellosis. Some go so far as to say it is in the first five diseases as a cause of disability in the U. S. Others regard it as of negligible importance. An article which takes a middle ground[1] is abstracted.

The incidence of human brucellosis in the United States is very difficult to ascertain. According to Jordan, 20,594 cases were reported in the 12-year period 1930-1941, an average morbidity rate of 1.87 per 100,000 population. From 1935 to 1939 the annual morbidity rate in Iowa was 5.3 per 100,000, while for the five-year period of 1940-1944 the rate was 13.00 per 100,000.

The diagnosis is established when Brucella are isolated from the body fluids or tissues, but this is possible in only one-fourth of the cases. Therefore, it is necessary to consider a history of ex-

1. W. W. Spink, Minneapolis, in *Cincinnati Jl. of Med.*, Jan.

posure to the disease; the symptoms, physical findings—particularly lymphadenopathy and splenomegaly; the presence of a normal total leukocyte count with an absolute or relative lymphocytosis; and the presence of agglutinins in the serum. Caution must be exercised in labelling a case chronic brucellosis on the basis of a vague symptomatology and a positive dermal reaction to Brucella antigen. In such cases, it is extremely doubtful the opsonocytophagic index will be of any value.

Brucellosis is rarely transmitted from human to human. The reservoir is in domestic animals. Eradication of this source will take several years of effort. Since it is transmitted through the ingestion of contaminated milk and milk products, the proper pasteurization of milk should be vigorously demanded by the medical profession.

The diagnosis of brucellosis depends upon a correlation of epidemiologic data, clinical manifestations, and information from the laboratory such as the presence of a normal total leukocyte count with a relative or absolute lymphocytosis, the demonstration of agglutinins in the serum and isolation of Brucella from the body fluids or tissues.

The most satisfactory treatment to date for acute and chronic cases is the simultaneous use of streptomycin and sulfadiazine.

GENERAL PRACTICE

William R. Wallace, M.D., *Editor*, Chester, S. C.

TREATMENT OF PEPTIC ULCER WITH CASEIN HYDROLYSATE

Recent reports on the treatment of peptic ulcer with a high-caloric and high-amino acid (protein hydrolysate) mixture, have been so promising and the method of administration is so simple and economical as to invite more general application. Smith and Friedenthal's[1] patients had physical examination and x-ray, their history and habits established, and were then immediately put on the hyperalimentation regimen—2 grams of hydrolysate per pound of body weight and dextromaltose equal in weight to the hydrolysate, giving a total of 16 to 20 calories per pound. The hydrolysate and the dextromaltose were each suspended in a pint of water, mixed, divided into eight feedings, q. 2 h. from 7 a. m. to 9 p. m. Fresh fruit juices to mask the taste if desired. Vitamins q. s. Abatement of pain and discomfort usually followed the first few feedings. Patients usually gained in weight. The diet was continued for 14 to 21 days, or longer. Casein hydrolysate was then partly or completely replaced by a bland diet with a gradual return to normal diet, with caution about former dietary indiscretions.

At first, most patients object to the taste of the preparation; but it is generally well tolerated, and causes neither nausea nor vomiting.

Fifteen patients with peptic ulcer were treated with a casein hydrolysate. Fourteen were clinically cured or greatly improved. Casein hydrolysate, in addition to rapidly regenerating plasma proteins and repairing the tissue defect in the ulcer, appears to act as a natural antacid.

The economic saving resulting from being able to continue at work is a factor of considerable importance.

1. Marshall Smith & Bernard Friedenthal, New Brunswick, in *N. Med. Soc. N. J.*, Jan.

CARONAMIDE: A NEW ENHANCING AGENT FOR USE IN CONJUNCTION WITH PENICILLIN THERAPY

Penicillin is truly a wonder remedy. Its use has been considerably limited, so far, by the rapidity of elimination making it difficult to maintain a sufficient concentration in the blood.

Penicillin that is absorbed into the circulation is excreted almost quantitatively in the urine, and from 85 to 100 per cent of a given intramuscular dose can beb recovered in the urine in from one to three hours. Of the amount of penicillin in the urine, 20 per cent is eliminated by glomerular filtration, 80 per cent by tubular excretion.

Now we have a new drug, which, given along with penicillin, has removed this difficulty.[1]

The new compound, caronamide, is effective when administered by mouth and is capable of elevating penicillin plasma concentrations from two- to seven-fold by inhibiting the penicillin transport system of the renal tubules.

Administration of 3 Gm. of caronamide q. 3 h. elevates the penicillin plasma concentrations following 50,000 units intramuscularly to the level of those obtained following 125,000 units alone; those after 125,000 units to the usual levels anticipated after 500,000 units alone; and those after 500,000 units to levels equal to or exceeding those ordinarily obtained by the injection of 1,000,000 units of penicillin alone. At the higher dosage levels the conservation of penicillin is tremendous.

The toxicity manifestations following the administration of caronamide have been surprisingly few. Nausea and vomiting have been observed rather frequently, a major part of this due to mechanical irritation incident to swallowing the number of 0.5-Gm. tablets required at higher dosage levels. Many patients can continue at the same level of dosage without symptoms if a caronamide *suspension* is substituted for the *tablets*. It has been found that at least two patients who vomited had plasma caronamide concentrations of 70 mg./100 c.c. One instance of typical drug rash and fever has been proven to be due to caronamide, but the

1. W. P. Boger, Philadelphia, in *Trans. & Studies. Col. of Physicians of Philadelphia*, Dec.

drug appears to have a low order of toxicity.

Caronamide administered orally enhances penicillin plasma concentrations from two to 10 times.

Three grams every three hours will maintain plasma caronamide 20-40 mg. per 100 c.c. in the majority of patients, and these concentrations will produce maximal inhibition of tubular excretion of penicillin.

Individualization of caronamide dosage is strongly recommended and is made possible by the availability of a method for determining caronamide in the body fluids.

In many instances we read of some effective curative agent, only to learn, when we ask about it, that it is not yet on the market. Caronamide is on the market.

MALIGNANT TUMORS MAY OCCUR IN THE YOUNG

As a warning to suspect malignancy in all tumors at all ages, Murphy and DuShane[1] report a case as follows:

A white child 33 months of age was admitted to the clinic Nov. 6th, 1946. A year before, the parents had noted a little blood around the vulva and examination by their family physician had revealed a tumor of the vagina. This was excised in March, 1946, and diagnosed histologically as a "botryoid sarcoma (rhabdomyoma) of the vagina." The operative site was given radium and roentgen therapy and the child was well for several months. Then more vaginal bleeding was noted and more roentgen therapy was given. On admission to the Clinic the patient presented no apparent signs of distress but the parents said she held back urine as long as possible. Examination revealed a soft mass in the vagina. At operation on November 8th, 1946, a soft polypoid tumor mass was found filling the vagina. Frozen sections showed evidence of a high-grade malignant process and, since the tumor was infiltrating the vaginal wall, a local removal only was performed. The tumor was found to originate on the right anterior vaginal wall over an area of 5 x 2 cm. The child was discharged in good condition, but the parents were told that the prognosis was extremely grave.

We speak of "the cancer age." We are too prone to think of all malignant tumors as affecting only those past middle life. One of the means at hand for reducing cancer mortality is to suspect every tumor, at whatever age, as possibly malignant. But, while investigating the possibility, we should keep our suspicions to ourselves.

1. G. H. Murphy & J. W. DuShane in *Proc. Staff Meet. Mayo Clinic*, Jan. 7th.

TEMPORAL ARTERITIS affects principally elderly women. During the prodrome the dentist, the ophthalmologist, the otolaryngoloist, and even the internist may be consulted for a diagnosis. Because of the possibility of permanent blindness, all doctors should be acquainted with this syndrome, even though the etiology is unknown, and as yet no specific treatment is available.

PREVENTION OF MISCARRIAGE

Two New Yorkers[1] report on the use of anterior pituitary-like hormone, corpus luteum hormone, and alpha-estradiol in combination in treating 27 patients who had previously miscarried one to three times. Dosages as follows: anterior pituitary-like hormone—1000 to 2000 units three times a week until 4½ months' gestation, then 1000 units twice a week until 8 months; corpus luteum hormone—5 mg. three times a week until 4½ months, then twice a week until 8 months; estrogen (alpha-estradiol) ½ to 1 mg. daily, in most cases; although ethinyl estradiol, 0.05 mg. three times a day, was given in a few cases with no apparent difference in effect.

Twenty-seven infants were delivered. All except one were normal. Bleeding sometimes occurred during the first trimester. The authors have started giving all their pregnant patients 2000 units of anterior pituitary-like hormone three times a week in the hope that such bleeding will be prevented.

The authors conclude that "therapy for repeated miscarriage should be prophylactic" inasmuch as after miscarriage has been threatened, treatment is in many instances hopeless.

1. L. Kurzrok & C. Birnberg, New York City, in *Am. J. Surg.*, Aug., 1947)

DANGER FROM USE OF LUBRICATING JELLIES IN SURGICAL PROCEDURES

(C. E. White, Muskogee, in *Jl. Okla. Med. Assn.*, Jan.)

Recently, in preparing for a curettage, a large amount of jelly was squeezed out of a used tube on sterile gauze to be used for lubricating uterine dilators.

The surgical supervisor said lubricating jellies were always used to the last drop for any surgical procedure where jellies were indicated.

Four tubes of jelly were cultured. The tube that had not been opened was sterile; the tubes that had been opened were all contaminated.

Many of the obscure pelvic inflammatory diseases that occur after sterile technique are probably due to the contamination from lubricating jellies. Once a tube has been opened, the lubricant should not be used in any surgical procedure—unless re-sterilized.

LESSLR INCIDENCE OF DENTAL CARIES IN PYORRHEA

(Samuel Dreizen & Tom D. Spies, Birmingham, in *Jl. Dental Research*, Dec.)

Indole and indole -3-acetic acid, products of the bacterial decomposition of tissue proteins, in dilute solutions did not support the maximum growth of a strain of the oral *Lactobacillus acidophilus* recovered from a various lesion. This lends support to our working hypothesis that the products of protein putrefaction may to some extent be responsible for the decreased incidence of dental caries accompanied by extensive peridontal disease which is often seen in endemic pellagrins and persons with chronic vitamin B-complex deficiencies.

President's Page

In assuming the presidency of the Tri-State Medical Association, I do so with a great deal of pride, and also with a great deal of trepidation. Few are the associations today that can boast of as great a list of leaders as can this Association. I look upon them in awe, because of the accomplishments and the progress made by this group. It was founded upon friendship and understanding, and I know of no other body that tolerates and even encourages the free expression of thought as this Association does. I hope that it shall always be so, and certainly for the coming year it shall be.

To say that I feel honored to have the presidency bestowed upon me is putting it very feebly. I feel very humble in this position, but in my humbleness shall try in every way possible to preserve and enlarge upon the past.

Charles N. Wyatt, M.D., President

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As is true of most Medical Journals, all costs of cuts, must be borne by the author.

THE LATEST TRI-STATE MEETING IN CHARLESTON

THE first meeting of the Tri-State Medical Association in which I took part was held in Charleston. Among those in attendance in that year of 1915 were Dr. Addison Brenizer, Dr. J. Allison Hodges, Dr. Andrew J. Crowell, Dr. Stuart McGuire, Dr. J. F. Highsmith, Dr. C. W. Kollock, Dr. Joseph A. White, Dr. Isaac M. Taylor, Dr. A. E. Baker, Dr. Chas. O'Hagan Laughinghouse, Dr. Chas. R. Robins, Dr. J. Howell Way and Dr. James K. Hall, and many more, few of whom remain.

It was a pleasant and profitable meeting, as had been all those held in that city so famous for its learning and its hospitality, as was the one we so recently enjoyed.

Our Local Committee arranged that all would go smoothly at the meeting hall at the Fort Sumter, and provided an afternoon of clinics of the highest order at the Medical College of the State of South Carolina.

One of the greatest pleasures of the occasion was that of seeing Dr. Robert S. Cathcart and Dr. James Adams Hayne, those two perennially young doctors who—the one at 77, the other at 76—retain a zest for work in medicine and surgery that is a rebuke to those of us much younger. Their example is going to shame me into starting work sooner, staying at it for longer hours, and taking even fewer vacations.

As a matter of course, no doctor's lady could be left at home when her spouse was hieing him to Charleston. Some of these were heard to bewail the fact that the weather lacked something of being ideal for the enjoyment of their visit; but they might have reflected that much worse was being experienced all over Virginia and North Carolina.

In all probability we shall meet next year in Williamsburg. Last year, at Sedgefield Inn, it was demonstrated that a successful and satisfying meeting could be held elsewhere than in a city. Restored Williamsburg and nearby Yorktown and Jamestown, and colonial homes along the James and York will prove attractions akin to those of Charleston.

Individually and by formal vote, the Association expressed its appreciation to the Charleston doctors, especially the members of the Local Committee, which expression the secretary-editor now fervently repeats.

THE PRESIDENT OF THE TRI-STATE MEDICAL ASSOCIATION

Our new president is the son of a doctor whose full name so worthily he bears.

Charles N. Wyatt was born at Easley, S. C., in 1904, obtained his general education in the public schools of his native town, at Wofford College and the College of Charleston, his medical degree from the Medical College of the State of South Carolina in the year 1927. He interned at Salvation Army Hospital, Greenville.

His first practice was at Laurens, November, 1928, to August, 1929, when he returned to Greenville and went in the office of Dr. Hugh Smith where he stayed for four years. He became assistant physician at Furman University in 1930, college physician in 1933, faculty manager of athletics in 1938.

Dr. Wyatt entered service in the U. S. Army Medical Corps June 1st, 1941, and served at Camp Forrest, Tennessee, until October 1st, 1942, as hospital inspector, Assistant Chief of Medicine and Chief of Medicine. He sailed for overseas duty January, 1943, as Commander of this unit. He served as Commander of the 19th Field Hospital January 1st, 1944, to April, 1944, in Persia; Commander of 21st Station Hospital, Iran (Persia), April, 1944, to June, 1945, when he was placed in command of the 118th Station Hospital—served in Iran (Persia) for 23 months, Italy three months and Okinawa for three months. He was honorably discharged February 19th, 1946, with rank as Colonel (attained rank August, 1944).

Dr. Wyatt is a member of the active staff of St. Francis Hospital and of the Greenville General Hospital. He was president of St. Francis Hospital Staff in 1947, and a member of the executive committee General Hospital Staff in 1947 and 1948. He is president-elect of the Greenville County medical Society and secretary of the South Carolina Chapter of the recently organized Academy of General Practice, and is doing a large general practice with some surgery.

Dr. Wyatt brings the lessons of a great and varied experience to the service of the Association, and has entered on his new duties with the enthusiasm and energy which insure a year of great accomplishment.

SOME REMARKABLE FACTS AS TO SUICIDE

From an editorial in the *British Medical Journal's* issue for December 20th:

Statistics for the years 1939-45 show that the number of suicides and attempted suicides in England and Wales decreased during the war. In 1938 there were 5,263 suicides, and the number diminished almost regularly until 1944, when the total was 3,651. There was a slight rise to 3,818 in 1945. The numbers increased then in each decade, and reached a maximum in persons aged 60 and over.

Collected figures on the suicide rate per million in nine belligerent countries and non-belligerent Sweden and Switzerland in the years immediately before, during and after the first world war show, in each instance, a notable decline occurred during the war. The figures appear to show that mental strain is not one of the prime causes of suicide, but that lack of interest in life itself is one, if not the most potent, factor. However this may be, the fact that the percentage decline in 1915 to 1918 was greatest in Sweden, and greater in Switzerland than in six of the belligerent countries, suggests a complex motivation. The view formerly held by many that suicide was inevitably due to mental disease is no longer acceptable. Norwood East, in an analysis of 1,000 consecutive cases of attempted suicide, estimated that one-fourth were certifiable as insane.

Seasons, by greatest incidence of suicide, are in the order summer, spring, autumn and winter. It is not without reason that suicide has been described as our most baffling social disease.

PSYCHOLOGICAL ASPECTS OF OBESITY

Few doctors have any great faith in the "fat-reduction specialists" who make great claims for the curative value of endocrine products.

For the greater majority of fat people, says Bruch,[1] there is no uncontested evidence of any specific physiologic disturbance that could be regarded as the cause of obesity. This New York pediatrician goes on to emphasize the psychological aspects of obesity.

Obesity becomes a medical problem in a strict sense only when it interferes with wellbeing. In many cases it is a serious hazard to health when it is combined with other disorders such as diabetes, hypertension, orthopedic and cardiac disease conditions.

It is amazing that the quintessence of the cause and cure of obesity has been known since the time of antiquity: it was the application of the knowledge in the treatment of fat people which so often was found disappointing. In a booklet called "Obesity Considered a Disease: with a Critical Examination of Ancient and Modern Opinions Relative to Its Causes and Cure," published in London in 1816, the author, William Wadd, Surgeon, says: "The person who depends solely on the benefit to be derived from the use of any of [the therapeutic practices] will find himself grievously disappointed." He mentions as remedies the chewing of tobacco, fennel water, acids of various kinds,

1. Hilde Bruch, New York City, in *Bul. N. Y. Acad. of Med.*, Feb.

soaps, eating of much salt to increase the absorption of fat by producing thirst, etc. Wadd outlines a plan of treatment which would be useful today. He understood very well the reasons for the many fanciful regimes which he discards as useless. "A gentleman who was fond of good living, and found himself becoming more corpulent than he thought convenient, having heard of the salutary effects of Mr. Wood's regimen, ordered his cook to prepare the miller's pudding, which he ate with great regularity every day after his usual dinner."

It seems that each generation has to rediscover the simple basic facts about causes and cure for obesity. The diet Banting [1863] excluded was bread, butter, sugar, beer and potatoes; this is in good agreement with the diet which we would calculate today. Yet the search for more specific explanations and treatment of obesity has continued, and we are just now emerging from the promise and allure of miracles to be worked by endocrine treatment.

The basis of rational treatment of obese patients is an understanding of and respectful attitude towards their problems. If an obese patient, particularly the fact that he over-eats, is approached with a respectful tolerance, he is franker in giving information, his efforts at reducing more genuine and lasting. The sympathetic support of a physician can best be accomplished by regular and continuous contact. The dependent attitude of an obese patient is as much a fact of his existence as his over-eating.

If, in order to insure regular visits to the office, some prescription is given, this will not interfere with a rational psychological approach as long as the drug is not presented as a magic pill that will do the job. Drugs which are said to have a curbing influence on the appetite might be of direct help.

There is strong psychological objection against the use of endocrine products for treatment of so-called sexual mal-development in obese boys. Cases in which there is true indication for such treatment are so exceedingly rare that they can be neglected for our discussion. In a very large number of obese pre-adolescent boys who are made the object of such therapeutic zeal, there is no medical justification whatsoever for exposing the family to the expense and the young patient to the emotional trauma of being branded as suffering from an essential physiological deficiency. Such young people are already handicapped by grave adjustment problems due to the difficulties of their background and the embarrassment of being fat. The additional psychological trauma of such unwarranted diagnosis and treatment aggravates the situation since it seems to confirm their worst fears about being inadequate for life.

Travel by Airplane Still Extrahazardous

In 1947, thirteen United States doctors of medicine lost their lives in airplane crashes, not one while traveling by railroad. It is certain that, in that year, many more times the number of doctors traveled many more miles by rail than by plane.

There are many good reasons for travel by plane, but relative safety to life is not one of them; and, except in case of urgent reason for undertaking to arrive at a distant destination in the shortest possible time, doctors and others will do well to travel by rail.

A Convenient Method of Giving Some Useful Remedies to Children

(*What's New*, Jan.)

Penicillin, Diazoline and Tridione are now available in Dulcet tablet form. They may be chewed or allowed to melt in the mouth without medicinal after-taste.

While instantly accepted by children as candy, from the therapeutic standpoint Dulcet tablets can be relied upon to provide the precise dose intended and to be as therapeutically effective as any other type of tablet.

Penicillin, buffered Dulcet tablets, 50,000 units, are available in bottles of 12. The penicillin content is in the form of crystalline penicillin G (potassium salt). Each tablet contains 0.25 Gm. of calcium carbonate as a buffer. As with other forms of penicillin for oral administration the dose is taken at least 30 minutes before or 1½ to 2 hours after meals.

Diazoline Dulcet tablet sare available in bottles of 100. Each contains: sulfadiazine and sulfathiazole each 0.15 Gm. This dosage form is especially useful when these sulfonamide drugs are prescribed for young children. Also it can be used as a troche to obtain direct medication of the oral and throat surfaces. This combination of sulfonamide drugs reduces the incidence of crystalluria, and that it is equal in therapeutic effectiveness to the total amount of either drug.

Tridione, 0.15 Gm., Dulcet tablets are available in bottles of 100 especially useful when it is necessary to give Tridione to young children over long periods of time. In the control of petit mal and other convulsive disorders. Since these tablets have 80 mg. of magnesium trisilicate per tablet, they should not be given in quantity to patients who are on a ketogenic diet.

A Case of Cerebellar Tumour Simulating Pyloric Obstruction

(R. L. Mallows, in *British Med. Jl.*, Dec. 20th)

In cases of intracranial tumour nausea and vomiting may be so prominent, especially in children, as to attract attention to the stomach as the cause of the trouble. Bailey et al. (1939) mention one case of their own in which appendectomy had beben performed, and two others, reported by Babonneix, which had been treated for some months for enteritis and chronic appendicitis, respectively. Cushing (1930) found cyclical vomiting and pyloric stenosis among various erroneous diagnoses of cases of cerebellar tumour which eventually came under his care.

A final diagnosis of tuberculosis should not be made on the first x-ray film, since a disturbing number of cases showing definite infiltrations of the lung fields will be found to have cleared completely on a re-examination two weeks later.—J. D. Wassersug, *N. E. Jour. Med.*

NEWS

University of Virginia School of Medicine

On November 21st, 1947, Dr. Eugene Stead, Professor of Medicine at Duke University, gave the annual Phi Lambda Kappa lecture. Dr. Stead spoke on the subject of "Edema."

A bequest of $10,000 for medical research was included in the will of the late Mrs. Lottie Antrim of Waynesboro, Virginia, as a memorial to her late daughter, Miss Mildred M. Antrim.

On January 5th, Dr. Alfred Blalock, Professor of Surgery at the Johns Hopkins University, spoke on the subject of "Pulmonic Stenosis."

A research grant of $24,800 has beben received from the Cancer Control Branch of the Federal Security Agency.

On January 8th, Dr. H. B. Mulholland, Professor of Practice of Medicine, spoke on the subject, "Difficulties of Treatment of Diabetes, including Insulin Atrophies and Hypoglycemia," at the Symposium on Diabetes, held in Cleveland, Ohio. This symposium was held under the auspices of the American Diabetes Association, in connection with the interim meeting of the American Medical Association.

On January 12th, Dr. Frank L. Meleny, Associate Professor of Surgery at Columbia University, spoke on the subject of the "Employment of Antibiotics in the Treatment of Surgical Infections."

On January 16th, Rear Admiral Clifford A. Swanson, Surgeon General of the U. S. Navy, spoke on the subject of "Nutritional and Medical Conditions in Europe and the Near East."

N. C. Doctor Named to White House Post

Dr. Anderson Page Harris, son of former Lieut. Gov. G. Reginald Harris, of Roxboro, has been appointed assistant White House physician. He succeeds Capt. Thomas J. Burns, who resigned to re-enter private practice.

Dr. Harris will serve under Brig. Gen. Wallace H. Graham, chief White House physician. His duties will be "to attend anyone of the White House family or staff who may be stricken ill."

He is a graduate of Johns Hopkins University and holds the rank of first lieutenant in the Army Medical Corps.

Dr. Gavigan Clinical Director at Marion

Dr. Arthur J. Gavigan has taken over his duties as clinical director at the Southwestern State Hospital, at Marion, Va.

Dr. Gavigan is a native of Massachusetts, did pre-medical work at Tufts College and received his degree in medicine from Yale.

Following his internship and residency, Dr. Gavigan served on the staffs of several Massachusetts State hospitals, and in the Army as a psychiatrist. He came to Virginia from the State Hospital, Alton, Ill., where he has been clinical director since January, 1947.

Dr. Gavigan is a member of the American Psychiatric Association and the Massachusetts Medical Society. He is a diplomate in psychiatry of the American board of Psychiatry and Neurology.

Presentation of Portrait of Dr. Miller

On Friday, January 30th, at 3:30 p. m., in Baruch Auditorium, of the Medical College of Virginia, with appropriate ceremonial, a portrait of Dr. Roshier W. Miller was presented to the College.

With Dr. J. Morrison Hutcheson presiding, fittings words were spoken on "Dr. Miller and the College," by Dean Harvey B. Haag; on "Dr. Miller as a Citizen," by Mrs. Henry W. Decker; on "Dr. Miller and the Alumni Association," by Dr. Waverly R. Payne.

The Presentation Address was made by Dr. W. Lowndes Peple; the Acceptance Address by President W. T. Sanger.

Former M. C. V. Dean is Parke-Davis Medical Consultant

Announcement that Dr. J. P. Gray has joined the staff of Parke, Davis & Company in the capacity of Medical Consultant to the Sales and Promotion Division has been made by Harry J. Loyd, vice-president of the Company.

A graduate of Hopkins with the M.D. degree, and of Harvard with that of M.P.H., Dr. Gray served in public health work for many years, including posts with the United States Marine Hospital in New Orleans, the State of California and the City of San Francisco, and the Michigan Community Health Project of the W. K. Kellogg Foundation. As an educator, he lectured in public health at the University of California, served as dean of the School of Medicine of the Medical College of Virginia in Richmond, and also as dean of the School of Medicine, University of Oklahoma, and superintendent of the University hospitals.

Dr. J. B. Carlyle, of Burlington, N. C., has plans for the construction of an office and hospital at a cost of some $40,000. The building will be arranged to care for clinical and maternity cases and will be equipped for a small number of bed cases.

The Nalle Clinic announces the addition to its staff of Dr. Allan Tuggle as Director of the Department of Roentgenology.

Dr. Fred H. Fleming, of Coats, N. C., has been elected president of the Harnett County Medical Society.

MARRIED

Dr. Marvin Worth Phillips, of Asheboro, N. C., and Miss Mary Elizabeth Crim, of Walnut Cove, were married on January 16th.

DIED

Dr. William Lownes Peple, 73, died February 7th at his home in Richmond. He had been a member of the staff of St. Luke's hospital since his graduation in 1897 from the University College of Medicine and held many teaching posts with that school and later at the Medical College of Virginia.

He served as an intern under Dr. Hunter Holmes McGuire, at St. Luke's Hospital, then on Governor Street, and was associated with the hospital until the time of his death.

He served in France in World War I, with the rank of major, and was chief of the surgical staff of Base Hospital 45.

He was a past president of the Richmond Amadecy of Medicine and the Tri-State Medical Association, and at the time of his death was a member of the Southern Medical Association, the Southern Surgical Association and of the American Medical Association. He was also a member of the Founders Group of the American Board of Surgery and a fellow of the American College of Surgeons.

Surviving are his wife, Mrs. Dorothy Stuckey Peple; a daughter, Mrs. Richard T. Wilson, of Richmond, and a son, Dr. William Lownes Peple, Jr., of Norfolk General Hospital, Norfolk.

Dr. Julian Lamar Rawls died January 18th after an illness of several months.

Dr. Rawls was the first Virginia doctor to receive the J. Shelton Horsley Memorial Award presented by the American Cancer Society in recognition of his contributions to the cause of cancer control. He was greatly responsible for the establishment at Norfolk in 1938 of the diagnostic tumor clinic.

Since 1910, Dr. Rawls had served continuously on the staffs of St. Vincent DePaul, Norfolk General and Leigh Memorial Hospitals and was a former president of each. He had been president of the Tidewater Hospital Service Association since its inception in 1935 until his recent resignation.

He was graduated from the Medical College of Virginia in 1904, and served as an interne at St. Vincent DePaul and at Sarah Leigh (Leigh Memorial) Hospitals.

During World War II, he was chairman of the medical division of the procurement and assignment service of the Second Congressional District.

Dr. Rawls was past president of the Norfolk County Medical Society, the Seaboard Medical Society, the Southeastern Surgical Congress, the Association for the Study of Neoplastic Diseases, and the Medical Society of Virginia. He had been a member of the Tri-State Medical Association for many years.

Dr. Anna M. Gove, 80, the third woman physician to practice in North Carolina and a member of the staff of Woman's College, Greensboro, N. C., since 1893, died January 28th at St. Leo's Hospital. As the college's resident physician, professor of hygiene, and director of the department of health since the second year of the college's existence, she had known successive generations of students.

Dr. Gove retired from active work in 1937. The college infirmary bears her name.

She was a native of New Hampshire, and the daughter of a physician. After graduation from Massachusetts Institute of Technology, she took the medical course at Woman's College of New York Infirmary, later consolidated with Cornell Medical School. In 1918 she went overseas and served with the American Red Cross in charge of dispensaries for refugee children. She returned to this country in 1920.

In addition to her college work, Dr. Gove did private clinic work in Chicago, and studied at Cornell Summer School, the Skin and Cancer Hospital in New York, and the Polyclinic and Post-graduate Hospitals in New York. She had affiliated with the county, state, and national medical societies and had been an officer of the American Student Health Association.

In recent years Dr. Gove served the college as part-time physician. Her health began to decline several weeks ago and she entered the hospital a week before her death.

Dr. William Sydney Burgess, for 36 years a physician and surgeon of Sumter, S. C., died at Tuomey Hospital January 31st. His health had been poor for two years, critical for several weeks.

Dr. Burgess was born born in 1890, son of the late Dr. Warren Hamilton Burgess, graduated from the Medical College of the State of South Carolina in 1912. He did post-graduate work at Johns Hopkins, at Lying-In Hospital, New York City, at the University of Leeds, England, and at the University of Montpellier, France.

He saw active service in World War I as a captain in the U. S. Army, attached to the British Army.

A leading obstetrician, Dr. Burgess was for a number of years head of obstetrics at Tuomey Hospital and a member of the hospital staff.

Dr. Leland Eggleston Cofer, 78, retired industrial hygienist, died Feb. 17th at his home at Palm Beach after an illness of six weeks. A native of Richmond, Dr. Cofer graduated from Medical College of Virginia in 1889. He served in U. S. Marine Corps hospitals between 1889 and 1900. He was president of the Hawaiian Board of Health for many years, assistant surgeon-general of the U. S. P. H. S. in 1908.

Dr. Caroline Hilborn, 81, of Albemarle, N. C., died January 19th, after an illness of six months. She had been a practicing physician for 35 years, specializing in diseases of women and children. She was graduated from Ohio State University and spent three years in the private practice of medicine among the Arabs of French Morocco. She was a former member of the staff of Mountain Sanatorium at Fletcher, N. C. For ten years, she had practiced medicine with her husband, Dr. R. R. Hilborn, in Stanly, Cabarrus and Moore Counties.

Dr. Ernest Mosby, 71, died at his home at Waynesboro, Va., January 29th, after an extended illness. Dr. Mosby, who entered practice in 1904, was a native of Richmond and attended the University of Richmond and Medical College of Virginia. He was a member of the Augusta County Medical, the Medical Society of Virginia, the American Medical Association and Virginia Pediatric Society.

Dr. George L. Kennedy, 53, a native and for many years a resident of Chester County, S. C., died Jan. 12th at his home in Ninety Six, where he had practiced medicine 22 years. Dr. Kennedy was a graduate of the Medical College of the State of South Carolina, 1921, and a member of the South Carolina, the Tri-State and the American Medical Associations.

Dr. Edward L. W. Ferry, of Miller's Tavern, Virginia, died Feb. 17th at a Richmond hospital. He was 75 years of age, and a graduate of the Medical College of Virginia in 1900.

When 200 consecutive autopsies were done in a general hospital which does not knowingly admit tuberculous patients, 41 cases of tuberculosis of all types were found. Of the 41 cases, 31 died of causes other than tuberculosis, and the patients as well as the physicians were completely unaware of the disease. In view of the high incidence of undetected tuberculosis, the conclusion is that no patient should be admitted to a general hospital without x-ray examination of the chest.—A. dePaula, *Prensa Med. Argent*, Abst., *Am. Rev. Tbc.*

Think of the benefit from a campaign to stop the spray of infected mouth and nose droplets! Not only would the spread of the disease be slowed but the seasonal surge of diseases like the common cold, influenza, measles, whooping cough and pneumonia would diminish, and dodging the tubercle bacillus, in and out of the hospital, would be possible for all of us.—E. Bridge, *NTA Bull.*

BOOKS

A MANUAL OF PHARMACOLOGY—And Its Application to Therapeutics and Toxicology, by TORALD SOLLMAN, M.D., Professor Emeritus of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Seventh edition. 1132 pages. *W. B. Saunders Company*, Philadelphia and London. 1948. $11.50.

This, the 7th, edition of Sollman's Pharmacology is written largely, as were the other six, from the point of practical importance in therapeutic and toxicology. The period between the 6th and the 7th editions has shown by far the greatest advance made between any two of the editions; indeed it might perhaps be said with truth that this is a greater advance than was made from 1917, when the first edition was published, to 1942, which was the year of issue of the 6th edition. As in the former editions material that, in the author's opinion, all students should know, is presented in ordinary type; that which the special student would wish to consult in smaller type. That is all one would need to know to be convinced that any book put out by the author would be of the very first order. The book is just what a doctor would need as a reliable guide to keep him from believing all that is appearing in the journals about the efficacy of the newer remedial agents, yet to give these truly wonderful remedies their due.

HERNIA: Anatomy, Etiologyl, Symptoms, Diagnosis, Differential Diagnosis, Prognosis, and Treatment, by LEIGH F. WATSON, M.D., F.I.C.S., Formerly Associate in Surgery, Rush Medical College; Formerly Assistant Professor of Surgery, University of Oklahoma Medical School. Third edition, enlarged and thoroughly revised; with 323 illustrations, by HELEN LORRAINE, WILLARD C. SHEPARD and RALPH SWEET. *The C. V. Mosby Company*, 3207 Washington Blvd., St. Louis 3. 1948. $13.50.

A historical introduction is given from 4,000 B. C. up to the present. The author is a supporter of the orthodox belief that in the great majority of cases of the commonest form of hernia, the indirect inguinal, the sac is preformed. As to treatment of strangulated hernia, Stromeyer is quoted: "If seen in the day time the patient should be operated on before the sun sets; if seen in the night, he should be operated on before the sun rises." Local anesthesia is usually preferred.

Hernial tuberculosis is discussed. The reader is reminded that inguinal hernia follows an operation for appendicitis more often than is generally supposed, a circumstance which the author ascribes to division of the nerve supply of the muscles in that area. Interstitial hernia is a variety which the author traces back for nearly 300 years, yet which attracts little even today. The problem of recurrent hernia is given a chapter of its own, as are hernia of the vermiform appendix, hernia of Meckel's diverticula, hernia of the bladder, and hernia of the uterus and its appendages.

The injection treatment of hernia is recommended for a small number of patients who do no heavy manual labor, and the treatment is described in detail.

Part 1 considers such subjects as industrial medicine and workman's compensation, the need for scientific proof in medico-legal controversy, functions of the industrial physician, laboratory procedures in industrial diseases; Part 2 deals with impairment of health of those employed in the manufacture or handling of various liquids and gases; Part 3 with the same as to metals; Part 4 with dusts.

The final chapter is devoted to the consideration of industrial hernia.

The whole is an exhaustive dealing with this subject of perennial practical importance.

OCCUPATIONAL MEDICINE AND INDUSTRIAL HYGIENE, by RUTHERFORD T. JOHNSTONE, A.B., M.D., Consultant in Industrial Health; Lecturer at the University of California, Los Angeles; Formerly Assistant Professor of Medicine, University of Pittsburgh School of Medicine. With 117 illustrations, seven in color. *The C. V. Mosby Company*, 3207 Washington Blvd., St. Louis 3. 1948. $10.

The author's thesis is that occupational medicine should concern itself earnestly with the working and living habits of "the worker" as well as with the physical condition under which he works and lives. The author regards the medical profession as being very remiss in not having attended to all this, which certainly could not have been done without laws and a spirit of bossism comparable to those in effect in communistic countries. In Chapter 1, subject "Tomorrow's Doctors" he asks: "Why is it that America has no adequate system of rural medicine?" "Why has this Nation lagged in its nutritional program, and in slum clearance?"

The most intelligent, the wisest, professor this reviewer ever sat under would often tell his classes: "Nearly always when someone asks you, Why is such and such a thing true?, the answer is, It is not true."

It seems that the technical features of the book are well handled. With its philosophy—that the medical profession, the employers, the theologians, the social "workers," or the government itself, should wet-nurse "the workers," from womb of mother human to womb of mother earth—this reviewer must regard as the height of absurdity.

MINOR SURGERY, by FREDERICK CHRISTOPHER, B.S., M.D., F.A.C.S., Associate Professor of Surgery at Northwestern University Medical School, Chief Surgeon, Evanston (Illinois) Hospital. Sixth edition. 1058 pages, 937 illustrations on 595 figures. *W. B. Saunders Company*, Philadelphia and London. 1948. $12.

The author realizes that the line between minor and major surgery cannot be accurately drawn. He considers in this volume the pathogenesis, diagnosis and treatment of those conditions which make up the large majority of surgical practice. He supplies information for the general practitioner, for the physician who does not have at hand the facilities of a large hospital and the physician who has not had a long apprenticeship in surgery. The book is based on 30 years of out-patient and hospital practice. In these 30 years the author has learned much from his own experience and he has kept himself thoroughly acquainted with the advances made in the field of surgery the world over. All this has been expressed concisely and accurately and it comprises a book of unusual excellence.

COMMUNICABLE DISEASES. by FRANKLIN H. TOP, A.B., M.D., M.P.H., F.A.C.P., Clinical Professor of Preventive Medicine and Public Health, Wayne University College of Medicine; Extramural Lecturer in Infectious Diseases and Epidemiology, School of Public Health, University of Michigan; and collaborators. With 95 text illustrations and 13 color plates. Second edition. *The C. V. Mosby Company*, 3207 Washington Blvd., St. Louis 3. 1947. $9.50.

All the chapters for this second edition have been revised and many have been enlarged. The chapters on influenza, malaria and rickettsial diseases have been completely rewritten. Many new illustrations, black and white and colored, have been added. Section I deals with general considerations applicable to communicable diseases, Section 2 with communicable diseases classified by common portal of entry. Section 3 is taken up with an appendix containing valuable statistical tables and a useful glossary.

The book will be found especially valuable for its elaborate instruction in the principles governing infection and immunity, and in the reporting and other methods of control of the various dangerous communcable diseases. As an illustration of its practical character the fact is cited that there is a special chapter on management of communicable diseases in the home.

A MANUAL OF CLINICAL THERAPEUTICS — A Guide for Students and Practitioners, by WINDSOR C. CUTTING, M.D., Professor of Therapeutics, Stanford University School of Medicine. San Francisco, California. Second edition. 712 pages, with 30 illustrations. *W. B. Saunders Company*. 1948. $5.

The author has aimed to present the facts of therapeutics briefly, yet adequately. Many extensions and additions have been found necessary. It is truly remarkable how well the field of the therapeutics of today has been covered in a book of such modest size.

MORPHOLOGIC HEMATOLOGY: Special Issue No. 1 of Blood, The Journal of Hematology, by WILLIAM DAMESHEK, M.D., Editor-in-Chief. *Grune & Stratton,* 443 Fourth Avenue, New York City. 1947. $4.75.

This special issue of that invaluable Journal of Hematology *Blood* is a very remarkable volume, of greatest value to students of the history of medicine, and to research workers in hematology.

ACUTE POLIOMYELITIS IN PREGNANCY
(M. E. Baker & Ilene G. Baker, Minneapolis, in *Minn. Med.,* July)

Acute anterior poliomyelitis occurs in all three trimesters of pregnancy. It occurs in the pregnant woman more frequently than can be attributed to mere chance.

In general, pregnancy has little influence on the course of poliomyelitis or the extent of paralysis.

There is a high percentage of abortion (30.4%) among pregnant patients with poliomyelitis.

This study produced no evidence to show that the fetus can or cannot contract poliomyelitis in utero.

OLD ARTIFICIAL LEG.—In 1885 a skeleton was unearthed in Capua, Italy, from a grave dating from 300 B. C. which had an artificial leg completely made of wood and covered with bronze.

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JAMES M. NORTHINGTON, M.D., Editor

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Treatment of Thromboangiitis Obliterans and Thrombophlebitis With Tetraethylammonium Chloride

Russell Buxton, M.D., and Everett C. Eickhoff, M.D.
Newport News, Virginia

In view of the advancing age of the population in this country, there has been noted a definite increase in the number of persons afflicted with degenerative diseases. This is particularly true in regard to the incidence of peripheral vascular disorders.[1] For this reason, and because of the fact that this type of disease is being diagnosed more frequently, any new method of treatment of peripheral vascular disease should be of great interest to the medical profession. Although this paper deals with a small number of cases, it is felt worth while to present the results obtained in using a different compound in the therapy of thromboangiitis obliterans and thrombophlebitis.

The name of this compound is tetraethylammonium *bromide* (or *chloride*), which, although not new, has only recently been used therapeutically. Structurally, it is similar to acetylcholine and has been shown by Acheson and Moe[2] to block the nerve impulses in the autonomic nervous system at the ganglia. The drug may be used intravenously or intramuscularly and has proved especially successful in establishing a form of sympathetic nerve block. It has long been recognized that surgical division of the sympathetic nerves or novocaine block of these nerves will result in an improvement in the condition of the extremities affected with thromboangiitis obliterans or thrombophlebitis.[3] A recent paper by Lyons and Moe[4] has demonstrated that tetraethylammonium bromide or chloride when injected intravenously or intramuscularly, is followed by a decrease in arterial pressure and increase in the skin temperature of the extremities. When the drug is given intramuscularly, the effect may last from two to eight hours and the effect is similar to that found after sympathetic block or sympathectomy. In an extensive study Coller[5] has also shown that tetraethylammonium chloride exerts the same influence upon diseased extremities as nerve block or resection and reported excellent results when the drug was used in the treatment of thromboangiitis obliterans and thrombophlebitis as well as in other types of peripheral vascular disorders.

During the past year, seven cases of thromboangiitis obliterans and five cases of thrombophlebitis have been seen and all except one have been treated with tetraethylammonium chloride.

Reports of Cases of Thromboangiitis Obliterans

Case 1.—A 69-year-old Jewish salesman, was seen October 27th, 1946, complaining of pain in the left foot with burning and swelling of the foot. Examination disclosed absence of arterial pulsation, spotting of the skin and

Presented to the Tri-State Medical Association of the Carolinas and Virginia, meeting at Charleston, February 9th and 10th.

blanching of the skin. The right foot was apparently unaffected. The patient was treated conservatively and arrangements were made to treat him with tetraethylammonium chloride but he refused to stop smoking so the drug was not used.[6] His condition has gradually become worse and though he still works, his right foot is giving him pain and he has some signs of vascular changes in both hands.

Case 2.—A 41-year-old white fisherman was seen as an out-patient in 1939, a diagnosis of thromboangiitis obliterans was made and he received several types of therapy. He drifted from one clinic to another and finally developed osteomyelitis of the second toe of the right foot. He was admitted to the hospital April 26th, 1947, and the first and second toes were amputated on April 28th. He progressed very nicely and during the second week of his convalescence he was given tetraethylammonium chloride twice daily intravenously for two days and then intramuscularly. By the time of his discharge he had been taught to give the drug to himself and kept it up for approximately three months, during which time the open wound of the foot healed and the arterial pulsation returned. At the present time, he is under no treatment and seems to have made a complete recovery.

Case 3.—A 55-year-old white carpenter, first admitted to the hospital September 30th, 1946, following a fracture of the first lumbar vertebra, never made a complete recovery from the injury, and was readmitted July 16th, 1947, complaining of pain in the right foot. Examination showed the foot to be cyanotic and somewhat cold to touch. Arterial pulsation was absent. The patient did not receive tetraethylammonium chloride in the hospital but was treated as an out-patient with 2 c.c. doses intramuscularly twice a week for a period of six weeks, after which he drifted away from treatment but when last seen was not complaining of pain or burning of the foot.

Case 4.—A 64-year-old colored postman was admitted to the hospital November 1st, 1947, with the history of pain in the right foot. He had been sick only five weeks when the pain became so severe that he consented to come into the hospital. Examination showed bilateral bunions, bilateral fallen arches and on the right foot the skin was bluish. There was one area of gangrene on the second toe and marked tenderness of the foot. There was absence of arterial pulsation in both feet. A diagnosis of Buerger's disease with arteriosclerosis, bilateral, of the legs, was made. The patient was treated with tetraethylammonium chloride but the gangrenous area became infected and on November 25th the great and second toes were amputated. The patient did nicely while in the hospital but insisted upon going home two weeks following operation. He was readmitted three days later with marked infection of the foot and leg. During this hospitalization sugar was found in the urine. For relief of pain and because of fear of generalized infection, the leg was amputated above the knee and he made a complete recovery. The left foot showed no evidence of Buerger's disease at this time.

Case 5.—A 43-year-old white postal clerk was admitted to the hospital December 16th, 1947, with a small ulcer on the right foot at the base of the little toe. Examination disclosed absence of arterial pulsation, marked blueness and some pain of the foot when in the dependent position. He was treated with bed rest and intramuscular injections of tetraethylammonium chloride and was discharged in ten days as greatly improved. Since that time he received the drug intramuscularly as an out-patient once a day for two weeks and the condition of the foot is greatly improved.

Case 6.—A 62-year-old Jewish salesman was first seen in 1944 when he was treated for varicose veins and varicose ulcers. Multiple high ligations were done without relief. He went to various clinics and was treated for varicose veins and ulcers over a period of years. In October, 1947, he was admitted to this hospital where a diagnosis of thromboangiitis obliterans of the right leg was made. Arterial pulsation was absent and the foot was puffy and of a dusky red color when dependent. He got over his acute pain promptly and as an out-patient received daily injections of tetraethylammonium chloride over a period of eight weeks, when he was readmitted to the hospital with marked edema, no cause for which could be found. He left the hospital in two weeks apparently improved. Tetraethylammonium chloride was started again while in the hospital and continued as an out-patient. He returned in two weeks again with edema so the drug was discontinued and a lumbar sympathectomy was done on January 6th, 1948, following which he made an uneventful recovery except for inguinal adenitis.

Case 7.—A 64-year-old Jewish retired merchant was admitted to the hospital December 25th, 1947. He had been well until three months before admission when he had an infection between the third and fourth toes on the left foot. About December 1st, this patient was seen by a specialist who made a diagnosis of Buerger's disease and advised a sympathectomy which was done. He was later advised to have an amputation which he refused. At the time of admission he was found to have absence of dorsalis pedis and posterior pulse in the left leg with gangrene of the toe on the left foot. He was treated with tetraethylammonium chloride and the second toe was amputated. There was marked improvement though at the present time it is impossible to be certain whether or not further amputation will be necessary.

Reports of Cases of Thrombophlebitis

Case 1.—A 65-year-old bricklayer was admitted to the hospital on November 5th, 1947, complaining of severe pain in the left leg with swelling. He had had a fracture of the thigh in an automobile accident six weeks prior to this admission. A diagnosis of thrombophlebitis of the left femoral vein was made and the patient was treated by intramuscular injections of tetraethylammonium chloride daily for about two weeks. He made an uneventful recovery and was discharged as cured in fourteen days.

Case 2.—A 25-year-old model-maker had had pain in the right ankle, following an injury, for two weeks. He was admitted to the hospital on November 10th, 1947, and treated with penicillin and two intramuscular injections of tetraethylammonium chloride. He was greatly improved and discharged in four days as cured. Some swelling continued over a period of weeks but there was no further acute pain.

Case 3.—A 58-year-old white contractor was admitted to the hospital on May 15th, 1947, with infected varicose veins of the right leg. He was very uncomfortable for two days when he was given two injections of tetraethylammonium chloride intravenously. The second dose caused marked nausea, vertigo and dizziness but he had prompt relief of pain in the leg. He was kept in bed one week and discharged, having refused treatment for varicose veins.

Case 4.—A 70-year-old colored woman was admitted to the hospital on April 23rd, 1947, with a diagnosis of diabetic gangrene of the left foot. She was treated conservatively for one week but failed to respond and the leg was amputated on April 28th. The patient developed a wound infection and remained in the hospital for 4 weeks. At the end of the third week she developed thrombophlebitis of the right saphenous vein and was given daily injections intramuscularly of tetraethylammonium chloride for five days. She was discharged at that time as cured and had no further pain in the right leg after the second

day of treatment.

Case 5.—A 57-year-old white insurance agent was admitted to the hospital November 6th, 1947, with partial duodenal obstruction from a duodenal ulcer. After preparation, partial gastric resection was done on November 28th. After ten days, and despite the fact that he was gotten out of bed immediately after operation, he developed thrombophlebitis in the calf of the left leg with fever and pain. He was given tetraethylammonium chloride intramuscularly for five days. The pain of the phlebitis disappeared 24 hours after the first injection and all signs and symptoms were gone after five days. He bas had no recurrence.

In these two series of cases, tetraethylammonium chloride was used intramuscularly by choice because of its more prolonged action and because of noticeable absence of untoward effects. These side reactions in one case, case six, made it necessary to discontinue the drug entirely and in several other cases, because of headaches and nausea, it was necessary to reduce the dose of the drug. Other authors have stated that when tetraethylammonium chloride is used intravenously marked depression in blood pressure results causing vertigo and syncope so that after the drug is given intravenously, it is necessary to have the patient lie down for approximately one hour.[5,7] In this series it has been the custom to give one c.c. of tetraethylammonium chloride intramuscularly as a test dose to make certain that no sensitivity exists. In the absence of a bad result, three c.c. are given three times daily intramuscularly until improvement of the affected part is noted. It is felt that when the drug is given in the affected extremity the result has been better. After improvement is noted, the dose is reduced gradually until a maintenance schedule is established. In most cases this has been two c.c. daily or every other day, and may be kept up indefinitely, but in this series of cases the use of the drug has usually been eliminated in about six weeks. As used in these cases, there have been no contraindications to the use of the drug in prolonged use except in one case, though as has been stated, in some instances it has been necessary to reduce the dose of the drug. It should be stressed, however, that tetraethylammonium chloride is an addition to the treatment of thromboangiitis obliterans and thrombophlebitis and other measures designed to give the patient relief must be continued.

In summary, seven cases of Buerger's disease are reported, six of which were treated with tetraethylammonium chloride. Of these six, three have been definite successes, two have been failures and one is still hanging in the balance. It is of interest to note that the good results have been obtained in the younger patients and that poor results are in the patients where age foreordained arteriosclerotic changes in addition to thromboangiitis obliterans. In the five cases which suffered with thrombophlebitis and which were treated with tetraethylammonium chloride, all were definitely and almost immediately relieved of pain but as yet no detailed studies have been undertaken to determine whether the drug is of value in shortening the course of the disease.

The following conclusions are drawn:

1. Tetraethylammonium chloride is a valuable drug in the treatment of thromboangiitis obliterans, particularly in younger individuals.

2. Tetraethylammonium chloride, when given intramuscularly in the prescribed doses, is a relatively harmless drug even for prolonged use.

3. The pain of thrombophlebitis can be relieved by the intramuscular use of tetraethylammonium chloride.

The drug for this research was supplied as Etamon Chloride by Parke, Davis & Company.

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Management of Minor Lesions of the Anal Canal (Curtice Rosser, Dallas, in *Clinical Med.*, Oct.)

The first stage of *hemorrhoid* formation involves simple, flat, dilated veins above the dentate line. The mucous membrane is normal. The only symptom is bleeding without pain or protrusion. Injecting a simple sclerosing solution, such as 5% quinine urea hydrochloride, into the hemorrhoid results in a flattening or obliteration and retraction of the hemorrhoid.

The second stage presents polypoid masses of enlarged veins which are beginning to prolapse. Injections may give relief in such cases, and are safe because there is no infection of the tissues, but injections will not result in a cure.

In the third stage the *hemorrhoid* becomes larger and more pedunculated, with chronic protrusion. It has a fibrous cover so bleeding is decreased. On section practically all show cell infiltration or small abscesses. Injection of any chemical is dangerous; surgery is the best treatment.

If the anus is small, a *fissure* may result when a crypt or pocket is injured by trauma at stool. In clean cases no infection, one may inject aqueous diothane solution underneath the painful fissure which relieves the spasm and tends to healing. In case of chronic anal fissure with persistent infection of the fissure, crypt and a skin tag, surgically remove all infected tissues.

A perianal abscess should be incised promptly.

A Rational Treatment of Extensive Burns

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I DO NOT PROPOSE to discuss the history of treatment of extensive burns; however, I should like to mention in the course of this presentation some methods of therapy other than those we are now using which may be of great help in circumstances less advantageous than ours. Now is a good time to look into the subject of burn therapy because with the coming of cold weather, explosions of fuel oil and other accidental conflagrations associated with overheated stoves, etc., occur frequently. The mortality and morbidity statistics from extensive burns should be better nowadays than in the past; however, we are still receiving in hospitals, patients almost moribund, three or four days after the burns have occurred. These patients could have been transported to the hospital within an hour or two of the injury. Before proceeding further, let us define "extensive burns." We recognize that there are many burns which occur every day, of such minimal degree and extent that the patients recover without the necessity of special medical treatment and, as a rule, have no lasting sequelae, such as scars and contractures. On the other hand, from my viewpoint, an "extensive burn" is one which is either of such degree or extent of involvement of the body that, unless given adequate care immediately, the patient's life will be in danger or the resulting disfigurement or the functional disuse of parts may be of such character as may greatly alter for the worse this individual's life thereafter. Let us, first, recall that burns may be the direct result of intense heat, either in the form of fire or steam; second, the result of chemicals and, third, of electricity. Each of these has its peculiar character with respect to local therapy but so far as the constitutional symptoms are concerned, there is great similarity. The recent experiences, beginning with the Cocoanut Grove disaster and following through this recent war, have made us more conscious of the necessity of treating the patient's economy as a whole rather than directing most attention to the local injury, as though it were the principal factor in treatment of a patient whose life is in danger. There is still a considerable amount of information we do not have regarding the factors associated with physical-chemical changes which take place in the body as a whole following burns. It appears that some of our foremost investigators in this field; namely, Dr. Blalock at Johns Hopkins and Dr. Moon in Philadelphia, each of whom has a good explanation for the changes which occur in the body economy, are in disagreement on certain points. What we do know, however, is that we must prevent the burned patient from experiencing certain pathologic changes associated with a decreasing circulating blood volume or he will eventually undergo an irreversible circulatory failure and die in a state known as "shock." To combat this shock, at one time, large amounts of saline and glucose were injected intravenously. We then found that the patient became very edematous and, in the more severe cases, succumbed in a day or two. Inasmuch as there is evidence that there is a large loss of serum proteins, and subsequently blood, into burned tissues, the practice now is to anticipate this inevitable loss of body proteins from the blood stream by injecting the patient with large amounts of plasma, serum, albumin or blood in supportive therapy. Certain investigators have developed a formula for determining the amount of plasma required for replacement of this early loss of blood proteins into the tissues according to the extent of body surface burned. I prepared a small card that can be carried in the pocket or bag for reference in such an emergency. You will note that each portion of the body is given a relative percentage of skin area in proportion to the entire body. The chart also shows that 50 c.c. of plasma would be required in the initial treatment of a patient per 1 per cent of body surface involved.

Head	6
Upper extremities:	
Both arms and forearms	13.5
Both hands	4.5
Total	18
Lower extremities:	
Both thighs	19
Both legs	13.6
Both feet	6.3
Total	38.9
Trunk:	
Anterior surface	20
Posterior surface	18
Total	38

50 c.c. plasma per 1% body surface involved, as initial treatment.

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Further administration of plasma or blood serum is controlled by giving 100 c.c. of plasma for each unit above 45 that the hematocrit rises during the succeeding 24 hours. It is important to remember that apparently there is some toxic agent operating in more extensive burns which, after the second or third day, begins to make itself evident in the rapid destruction or loss of red blood cells from the circulating blood. If one anticipates this blood loss and gives transfusion before the fall in blood count and hemoglobin becomes marked, the patient, as a rule, responds much better to treatment and healing is much more rapid. Chemotherapy by oral and parenteral route is begun early in the treatment, but allow me to give details when we discuss our *modus operandi* in relation to a hypothetical case.

Now, as to local therapy, you will recall that history has repeated itself time and again in regard to what the vogue will be. I am told that the early Chinese used strong tea as a local wet dressing in case of burns. Not many years ago we were using 5 per cent solution of tannic acid for wet dressing. A mixture of linseed oil and lime water, under the name Carron oil (from Carron Iron Works, in Scotland), was used as local dressing for burns for a great many years; also, there was the era of picric acid-ointment treatment, but in each instance the advantages of one preparation over others was offset by its disadvantages and certain ones had definite toxic effects when used over large areas. During a recent period various dyes as a local application were used widely. I believe, in certain instances, these can still be used to advantage. Dr. A. G. Bettman of the University of Oregon, has, for a number of years, insisted that he got excellent results in treatment of burns using tannic acid-silver nitrate applications; and that this is better than any other known method. A great deal of Dr. Bettman's work has been with children. The treatment we prefer is difficult to carry out in children and his method may have more specific application in the young individual. From a recent letter received from Dr. Bettman:

"I have talked to many surgeons who have treated burns and some like and some do not like the tannic acid-silver nitrate treatment. I have found, however, that those who like it carry out the treatment as I have indicated, and those who do not like it have not carried it out in detail. The application of tannic acid and silver nitrate is not the complete treatment. It is necessary to dry the area at once and to keep it dry. Those who have done this get good results; those who have not get poor results. It is difficult, of course, to do this in warm climates where the humidity is very high. Where drying cannot be properly accomplished and maintained, this treatment should not be used. Where properly used, patients with as much as 80 per cent of their body surfaces burned have been saved and one with over 90 per cent. It seems to me that the burn of the skin is the cause of the alteration in the general physiology and therefore if the burned area can be rendered innocuous the general physiology should be improved and the patient recover; fluids and other systemic treatment, of course, not being overlooked. As long as the surface continues to add injury to the general physiology the patient has a much more difficult time than when this source of continued injury is removed."

At the beginning of this last war, ointment dressings were advised for burns, some of which contained sulfanilamide and others sulfadiazine and still others sulfathiazole, each of which was supposed to be better than the other. Discussion was brought up regarding the hydroscopic nature of the vehicle carrying these drugs. Evans at Richmond felt that it must be a nonwater-soluble unguent. All of these drugs and dressings have about the same amount of value. In England a group advised wet dressings and intermittent irrigation with hypochlorite solution, the idea being to precipitate and facilitate the removal of burned tissues. In applying this type of treatment they developed the Bunyan bag and its routine, with good results in certain cases, but as a whole it was a messy affair and not superior to the methods gradually evolved by the U. S. Army Medical Corps.

Following a good deal of experimental study it was decided that in the local treatment of burns, it is best not to debride the area except of gross dirt, contrary as had been previously advised by most surgeons. It is obvious that when one debrides a burned area in primary treatment, he opens up many avenues for the invasion of bacteria into the deeper tissues. Therefore, wash off the burned surface and immediately apply a dressing of sterile strips of vaseline gauze covered by adequate layers of either cotton sheeting or gauze, then wrap with light-pressure elastic bandage. In such instances where hands are involved, this type of dressing, applied as a muff supporting each finger, the whole covered with light plaster dressing, is excellent. Similarly the light plaster applied to burns of the lower extremities gives excellent additional protection in that it prevents contamination by dust and flies and prevents the patient from opening his dressing and scratching the burned area.

Burns of the face are often treated by local wet dressings with good results. One General Hospital overseas used a wet dressing of 1:500 penicillin in saline on all face burns. On the other hand, we found that initial dressing of sterile vaseline gauze

strips to the face with light supporting bandages and a headmask, gave the best results. It has been our experience that these dressings should remain *in situ* for a minimum of ten days, regardless of the amount of bad odor or drainage which accumulates. At the first change of dressing one should be prepared to do a debridement of all remaining devitilized tissue, and estimate the amount of skin graft necessary. In some instances it will be possible to do a skin graft at the time of this dressing and complete the operative treatment; or, with one or two days of local wet saline dressing to the affected area, the graft can be done. The best results in skin grafting of burns obtains when the grafting is done before there has been opportunity for the formation of dense granulation beneath an eschar and before there is invasion of the area by fibrous tissue. A large amount of drainage coming from the burn dressing is indicative that at the time the original dressing was applied an inadequate amount of gauze and cotton was used.

Permit me to digress at this time to illustrate by a remark made by the originator of the famous Orr treatment of osteomyelitis. When questioned as to his method of keeping the stench of the patient's lesion from overpowering him, he stated he was not troubled by that situation, and explained that in osteomyelitis, as in other draining wounds, it is not the penetration of the dressing from within by discharge which makes the stench, but rather that the wound was not covered deeply enough by dressings so that the discharge was invaded from outside by saprophytic, fermentative and putrefactive organisms.

Now let us, temporarily, leave the type of treatment given to a burn caused by heat and pass rapidly through the care of burns resulting from chemical agents. As a rule these are strong acids or strong alkalies, or, during war there is a possibility of burns by certain chemical gases. Each of these burns has to be combatted by a specific antidote. An alkali burn should be given local treatment immediately by weak acid dressing, such as acetic acid; and acid burns should be treated with weak alkali solution, such as sodium bicarbonate. As to electric burns, the situation is somewhat different. Electric burns result in something which resembles gangrene, inasmuch as beside what tissue is destroyed directly by the heat generated at the site of the burn, there is a large amount of surrounding tissue which will become ischemic as the result of the coagulating effect in the blood vessels going to or from the burn area. This type of lesion, wherever it is possible, is best treated by maintaining the area in a dry state until a definite line of demarcation forms, and then, by primary surgical attack, remove the devitalized tissue, making reconstruction by amputation and/or skin graft.

Let us now postulate a hypothetical case of extensive burn arriving, soon after injury, at the hospital, and describe the procedure which we will attempt to follow in the future. Suppose the patient has had extensive burn of, let us say, 30 per cent of his body surface, involving the hands, arms and face. Suppose the patient has had as yet no sedation. Let us immediately give him, if he is the average size, ¼ gr. of morphine hypodermically. Then, if possible, let us check his rectal temperature and blood pressure. It will be wise to have a hemoglobin estimation and complete blood count, including hematocrit index. The patient should then be taken to the operating room where, with doctors properly gowned and masked, the intravenous injection of plasma will be started.

Estimating the percentage of body burn by the table I have presented, determine the total amount of plasma which we will inject initially. If his burned area is not grossly dirty, I advise that, immediately, gauze strips in sterile vaseline be applied over all the burned areas, followed by rather thick cotton gauze or wadding layer, on top of which elastic bandage is applied rather firmly. This procedure ended, the patient is returned to bed. If possible, in the future carry him on babrbiturates and codeine for sedation and analgesia. If he is able to drink freely without vomiting, allow him plenty of water, orange juice, etc. Within 24 hours, the hematocrit should be repeated and plasma be given at the rate estimated as 100 c.c. per unit above 45 hematocrit value. Ordinarily in a 30 per cent burn, a fall in hemoglobin and total blood count will begin about the third day. This can be suspected as the hematocrit falls below 45. At this time it is wise to give a blood transfusion of 500 c.c., or the proper fraction thereof, according to the patient's size. Blood count should be repeated again on the next day and if there is any marked departure from normal this should be balanced by further transfusion of blood, plasma or other fluid, as is indicated. One should check the urine frequently for albumin and formed elements. Attempt to maintain the urine at about 1.015 to 1.020 specific gravity.

Now, as to chemotherapy: if the patient tolerates sulfadiazine by mouth, it should be started immediately in therapeutic doses. On the other hand, if the patient is vomiting, it is wise to give 5 grams of sulfadiazine in 1000 c.c. of 5 per cent glucose intravenously soon after admission to the hospital. In addition I believe that penicillin should be given in doses of 25,000 units every three hours intramuscularly. After four or five days patient should be fairly well stabilized and gradual improvement should occur. As I have said before, dressings should not be changed within ten days, and by that time the wound will show evidence of where grafting will be necessary and where normal

healing will occur. Again let me emphasize that early skin grafting is important. Whenever the burns involve the face, one should determine on initial inspection whether or not the conjunctiva or cornea have been burned. I believe it is wise to routinely place a small amount of ophthalmic ointment, either of the sulfathiazole or the penicillin type, between the eyelids before covering them with dressings. It is also wise to pay special attention to lips and put either sterile vaseline or some bland ointment on them regularly. In the instance of burns which involve any of the genital organs, dressings are very difficult to place and maintain. In these areas I feel sure that the triple dye spray can be used to good advantage, placing the patient thereafter on a sterile sheet. The patient can be washed frequently to remove contamination and discharge, followed by repeat spraying of the triple dye solution.

I feel certain that if this routine is used as a basis for your therapy and if it is applied faithfully, the incidence of morbidity and mortality from burns can be greatly reduced. It used to be that death followed every extensive burn, but now there are numerous instances of recovery from burns involving 60 per cent of the body surface. (Dr. Bettman cited even better results with his treatment.) We have noted also that such complications as nephritis, peptic ulcer and severe anemia are becoming less frequent. A word of caution concerning the patient who has been burned about the face. Occasionally these patients will have irritation of the larynx and without much warning will become maniacal, straining at their dressings, and it will be almost impossible to restrain them by physical force. They will continue with this until they actually exhaust themselves and die. When such a case is observed, immediately give that patient intravenous sedation, preferably in the form of barbiturates. Meticulousness in details of the care of the individual burn patient should be more emphasized than treating them by routine methods.

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Discussion

DR. W. H. PRIOLEAU, Charleston: Dr. Lippert has covered a tremendous amount of ground, certainly more than one could expect in the brief time allotted.

Dr. Lippert emphasized taking a patient to the operating room immediately after he is taken into the hospital. We find a tendency, if the patient is taken to the emergency room, for someone to put on a dressing with the policemen standing around and all kinds of opportunities for increased contamination.

We found anemia to be one of our greatest problems. Not long ago we saw one patient who came in for skin graft and her hemoglobin was down to 8. You couldn't expect a skin draft to take under those conditions.

My one criticism about tannic acid is that it does destroy too much epithelium. I have no doubt it is lifesaving in certain cases of extensive burns where one does not have blood plasma in satisfactory quantities.

One other point—it is most important to anticipate systemic needs and try to prevent rise in pulse, hemoconcentration, and all those findings indicative of the fact that we have missed the boat. Compensation is broken. It will not wait for laboratory changes which occur only later.

DR. F. E. KREDEL, Charleston: I should like to emphasize one point Dr. Lippert brought out, i.e., blood volume replacement in burns. He has indicated 30 per cent burns as needing for initial treatment 1500 c.c. of plasma, which required six donors. In long convalescence whole blood taps fewer donors. We have had a single patient require as many as 36 donors.

DR. LIPPERT (closing): I appreciate very much Drs. Prioleau's and Kredel's remarks. Since we are no longer stingy about using blood and plasma we have made real progress in therapy. It is hard to create in the mind of the interne the idea that a patient who doesn't look anemic can actually be anemic from the nutritional standpoint. If one has had an extensive burn, it follows as night the day that he will become anemic unless active measures are taken to prevent it.

Why give blood? Why give plasma? Some people are advocating the giving of blood in the initial treatment of burns and others believe that blood should be given as it is needed. If a patient has been losing blood proteins, as occurs in burns, he will draw on his tissue proteins for replacement, but if plasma is supplied by injection, his tissue proteins will be spared. When he loses blood cells, the hemopoietic centers exercise a priority and demand protein for the manufacture of hemoglobin and cells even at the expense of tissue proteins. Therefore, the giving of whole blood not only lessens the load on the hemopoietic centers but helps to maintain the normal blood status during that period when blood cells are being lost by destruction and extravasation as a result of breakdown of burned tissue. It is wonderful to observe the improvement in an undernourished patient suffering from either a disease or a burn after you give him blood and more blood until one might say he had too much blood. You will find that instead of just getting the patient by, or preventing him from dying, you will have a well man in a short time and what was a severe illness becomes a minor one.

If I may emphasize one more thing. You remember the days when it was acceptable practice to scrape the burned skin from a patient before applying dressings. We unthinkingly were opening avenues for infection into already devitalized tissues. I can't see any reason why we should convert a first-degree or second-degree burn into a more extensive wound by breaking the continuity of the skin during treatment, if it can be avoided. Thank you very much.

MEDICAL MANAGEMENT OF THYROTOXICOSIS

(W. S. Middleton, Madison, Wis., in *Jl. Indiana State Med. Assn.*, Mar.)

Propylthiouracil seems to answer the indications for an antithyroid drug safer than thiouracil. In a series of 100 thyrotoxic patients treated with this agent there was not a single instance of agranulocytosis. In another series of 26 and still another of 42 patients no serious adverse reactions to propylthiouracil were encountered. An initial daily dosage of 100 to 150 mgm. sufficed. With the control of thyroid toxicity reduce the dose to 100 or to 50 mgm. daily. Maintenance requirements were as little as 25 to 30 mgm. Current opinion favors higher dosage.

DEPARTMENTS

HUMAN BEHAVIOUR

James K. Hall, M.D., *Editor*, Richmond, Va.

DR. WILLIAM LOWNDES PEPLE

Good fortune accompanied him into life. His father, Gustave A. Peple, Belgian-born, came soon after Appomattox into old Manchester, now a portion of Richmond. He was by training an engineer. But in spirit and in digits he was an artist. The mother of Dr. Peple was Sarah Lowndes, a member of a family old and honored throughout the South.

The five children of that union—four sons and a daughter—have enriched the intellectual and the spiritual life of Richmond and of the nation. Blest by such ancestry, the children were equally fortunate in the place and in the time of their births. The Civil War had left Richmond in ashes. Even the civil government had been overthrown. Poverty was universally prevalent. But a brave and resourceful people looked the economic disaster as squarely in the face as they had resolutely met the enemy on the field of battle.

Dr. Peple often talked to me about the days of his happy childhood in old Manchester. His home-life must have been ideal. He told me that once his mother was reading and telling stories to the children in midwinter as they were gathered around the fire-place. Suddenly his little brother Edward, who became the dramatist, asked his mother if she believed in ghosts. Her instant reply was that she did not, but that she was dreadfully afraid of them. Dr. Peple was grateful for his parentage and for the home-life with which his childhood was blest. Each of the five children, by individualized self-development, evolved into such excellence as to enable each of them to make an impressive contribution to our civilization. Parents and the five children constituted a unique family.

Dr. Peple, born in December, 1874, grew up in old Manchester. His education was had in the public schools of the city. He was graduated in medicine from the University College of Medicine in Richmond in 1897.

Almost immediately after graduation he became a member of the teaching staff of his college. His interneship was served in St. Luke's Hospital under the tutelage of Dr. Hunter Holmes McGuire, surgeon-in-chief of the Stonewall Brigade in the Confederate Army. At that time, and until his death in 1900, Dr. Hunter McGuire must have been the most distinguished surgeon in the South. St. Luke's Hospital was at first on Governor Street, near The Mansion. In 1899 Dr. Peple participated in the transfer of the patients to the splendid new St. Luke's Hospital on West Grace Street.

The next year that widely known hospital suffered the loss through death of its great medical director, Dr. Hunter McGuire. Both necessity and opportunity called to one side of the operating table his son, Dr. Stuart McGuire; to the other side, Dr. Lowndes Peple. The young surgeons took up the torch and carried it so high throughout the years that few private hospitals have a greater or wider fame than St. Luke's in Richmond. I can think of no other two physicians who for fifty years have meant more in healing and in comforting ministrations to more patients than Dr. Stuart McGuire and Dr. Lowndes Peple. Each, endowed with spacious surgical knowledge, with dextrous operative skill and with a rare understanding of the personalities of their patients, they constituted together a unified duality in their activities in the operating room and in their bedside ministrations. Thousands of human beings brought by them from sickness to health and comfort bless their names. Dr. McGuire comforts us by his daily presence; Dr. Peple will always inspire us as a precious and ennobling memory.

Dr. Peple was generously endowed with many high attributes. He possessed sound character. He was highly intelligent; he respected truth and his professional life represented a search for it and the utilization of it in diagnosis, in therapy and in the uplifting and inspiring influence he exercised over his patients. Dr. Peple was engaged in teaching medical students, dental students, students of pharmacy and of nursing for many years. He possessed innate didactic skill. No sort of meanness could exist in Dr. Peple's presence. All of his outgivings were healthful.

He became a soldier. When the first World War came he volunteered. He served throughout that historic period as a member of Base Hospital 45 in the European Area. After peace had come, he returned to heavy duty at St. Luke's Hospital and to his teaching at the Medical College of Virginia.

No one appreciated friendship more than Dr. Peple. With him it was probably a biological necessity. He yearned for the understanding and sympathetic human heart. His friends were bound to him by bonds of the strongest affection. Love for his fellow occupied a hallowed and sustaining place in his life. He was the friend of his patients; they came to rely upon him for assurance and for support.

He was a civic asset to the city of Richmond. He felt that the character of the city should be protected by the citizens and be kept above reproach. He was blest by a happy home. Deep

affection existed between him and his sister and his brothers. His wife, his daughter and the three grandchildren will cherish the solemn satisfaction that comes from the realization that steadily and unselfishly and unostentatiously and generously and skillfully he lived his life for his fellow mortals. His only son, who bears his father's name, pays the highest possible tribute to him by walking in his professional footsteps.

How could I know on Saturday afternoon, January 30th, 1948, in the Baruch Auditorium of the old Egyptian Building of the Medical College of Virginia, that I was looking upon him and listening to him for the last time? With others, Dr. Peple had assembled to pay tribute to his medical classmate, Dr. Roshier W. Miller. A painting of Dr. Miller was unveiled and Dr. Peple presented to the Medical College the artist's portrayal of his classmate; with sweet and whimsical language Dr. Peple spoke the appreciation of us of our friend and neighbor, Dr. Miller.

Surely no one of us suspected that Dr. Peple was bidding us all farewell. On the following Friday, February 6th, he became unconscious; he remained so until the Boatman came for him at noon on the next day. He was interred in hallowed and historic Hollywood Cemetery on February 9th.

Do we not recall having heard many a time from the depths of his heart the unspoken words?

I want to remember,
When gray Death sets me free,
I was a man who had many friends,
And many friends had me.

We doubt not that Abou Ben Adhem has looked with sweet approval upon the Angel's writing in the book of gold, alongside his own, the name of William Lowndes Peple, as one who loved his fellow-men.

HOSPITALS

R. B. Davis, M.D., *Editor*, Greensboro, N. C.

SOCIALIZED MEDICINE AND WHY

Almost everyone, lay and professional, is familiar with the effort being put forth by the politicians to bring about socialized medicine in the United States. The lay public is oftentimes misinformed about the assets and liabilities of so-called socialized medicine. This term, in its best sense, is a misnomer, because there is no profession that works so constantly for the good of all persons who come for service—socially, spiritually, and physically—as does the profession of medicine. Propaganda has been put out in an enormous amount by politicians who either are misinformed, or whose minds are running in political channels only. Few politicians are able to think in any other terms than of power and money. It follows then, that they think no progress can possibly be made for the benefit of the masses except by the expenditure of much money.

The profession is not misinformed. The rank and file of doctors, nurses, dentists, and their coworkers are just simply plain dumb. The more politicians that we have in Washington, the more autocratic bureaus, the less freedom we have and the more taxes.

Not so many years ago, the lay public was satisfied with the services of the doctors and the nurses. The most honored and respected and loved individuals in any community were those that ministered tenderly, carefully, efficiently, and lovingly to the sick. This was a great day for the doctors and the nurses. But, as to every other great day, there must come a sunset and unless the blessings and the benefits of that day are appreciated by the benefactors, the dawn of the next day will bring many alterations. In those days a sick person could obtain the services of the doctor and the nurse without much delay. In those days the medical schools and training schools for nurses welcomed any young man or woman desirous of dedicating his or her life to the service of sick humanity. The question was not so much how brilliant your brain was, but rather how willing your heart was. Most medical schools operated on a small capital and the curriculum was composed of practical subjects taught by men who had made a success, and were still making a success, of the practice of medicine. Almost every hospital considered it a privilege and a duty to run a training school for nurses, where young women who wished to dedicate themselves to the ministry of nursing could be trained in that wonderful profession. But, alas, the sunset of that day came, and we did not appreciate what we had received from our sick public.

The dawn of the new day broke upon us in a rather insidious manner, and we, the profession, were blind to its portents. Far and near the cry for raising standards was heard, and few took the time to analyze the "why" and to look beneath the sheep's clothing for the wolf. We swallowed the propaganda—hook, line and sinker. Our lay public would not have accepted it had the practicing physicians of this country said it was not good.

One has only to read the daily press to be well informed of the attitude of mind of the lay public today. Doctors and nurses are thought of as denying services in the time of emergencies and grasping life's financial savings in a very short time during illness. No wonder our dear public has lost its admiration for the profession. No wonder they are clamoring for anything that will promise in the time of need services at a fee that they are able to pay. This fact was not overlooked by the pro-

fessional politicians. They realized the public's dilemma and they knew the public would fall in behind them if they could be made to believe that these evils could be corrected through the passage of a socialized medicine bill.

Why then, have all these things been allowed to creep up on professions supposed to have brains and use them? The reasons are two. First is unadulterated selfishness on the part of those who have already obtained their degrees; the other is ignorance. There is not much to be said about selfishness, except that it is the *heart worm* of any individual or group of individuals that practice it. That heart worm is deadly and will destroy as surely as will cancer. The evil of selfishness is cured only with the sincere desire to do unto others as you would have them to do unto you. Ignorance can be and must be cured by propaganda—propaganda that deals only in facts. Too many doctors today believe the propaganda put out by the so-called medical educational leaders, who have been far too active for the wholesome growth of practical medicine. Much of what has been done in the way of "raising of standards of the medical profession" is nonsensical. The word "standard" should never have been applied in this phase of attempted medical progress. Standardization does not in its strictest sense mean qualification, but rather unification. Our need is better medical service in the form of volume as well as in science and art. It is absolutely impossible for any curriculum to standardize any profession, unless it takes the above into consideration.

Therefore we see the "why" of socialized medicine, and it behooves every member of the medical and allied professions to put forth every effort possible to overcome the difficulties that now beset us. More doctors, more dentists and more nurses of a higher moral character; rather than less of these individuals with more brilliant memorizing powers, is the remedy—the only remedy that can possibly satisfy the public; and it is your duty and mine to preach and to pray for the dawn of another day which shall be a reflection of the old days wherein doctors and nurses were loved and respected by all with whom they came into contact.

CARDIAC EMERGENCY EQUIPMENT FOR THE DOCTOR'S HANDBAG

(Moses Barron, Minneapolis, in *Jl.-Lancet*, Feb.)

Proper equipment of the doctor's handbag for cardiac emergencies:

Morphine sulphate vial sterile solution. 1 c.c.= Gr. ¼
Dilaudid Gr. 1/12—Pantopon Gr. 1/3
Nitroglycerine Gr. 1/100 (H)—Atropine sulphate Gr. 1/100
Adrenalin 5 c.c. vial 1:1000—Quinidine sulphate, 3-grain capsules
Caffeine sodium benzoate (H) tablets.
Ampoules: Cedilanid 2 c.c.—2.2 mgm. Mercuhydrin 2 c.c.
50% glucose 50 c.c.—Mecholyl 25 mgm.
Coramine 2 c.c.—Metrazol 1 c.c.—0.1 Gm.
Aminophyllin 20 c.c.—7½ Gr.
Sterile syringe 1 c.c. in 1:100—Sterile syringe 3 c.c.
Sterile sponges
Cotton—Alcohol
Syphgmomanometer—Tourniquets

Parker and Barker of the Mayo Clinic conclude that dicumarol alone or in combination with heparin showed a lowering of the secondary thromboembolic complications from 37 per cent to 4 per cent. They believe that their results warrant the use of the anticoagulants in cases of acute coronary thrombosis.

NEUROLOGICAL SURGERY

For this issue CHARLES E. TROLAND, M.D., *Editor*, Richmond, Va.

SPONTANEOUS SUBARACHNOID HEMORRHAGE

THE EXTREME SERIOUSNESS of subarachnoid hemorrhage is rarely appreciated. Recent observations, however, indicate that the mortality is very high and many of the surviving patients are seriously handicapped by neurological sequelae. A statistical review indicates that 35 per cent of patients die as a result of their first subarachnoid hemorrhage, and an additional 20 per cent die of recurrent hemorrhage within a month of the first hemorrhage.

The original hemorrhage usually occurs with no antecedent or prodromal symptoms. Onset is sudden and is usually ushered in by intense headache followed rapidly by prostration. The neck becomes stiff and lumbar puncture reveals bloody fluid. Localizing signs as to the source of the bleeding, such as a dilated pupil, ptosis, or hemiplegia, may develop at any time, but many cases never show such signs. If the hemorrhage is a large one, the patient usually does not regain consciousness and statistics indicate that the prognosis is bad in at least 50 per cent of the cases.

Subarachnoid hemorrhage may occur in any age group. The most common source of the bleeding is rupture of an aneurysm of an artery of the circle of Willis. These aneurysms are usually congenital but a very few are arteriosclerotic or mycotic. The immediate precipitating factor of the hemorrhage is unknown. It is apparent that activity of the patient is not of major importance in precipitating the original hemorrhage.

Immediate treatment following a subarachnoid hemorrhage is purely supportive. The patient must be kept at rest and this period of complete bed rest should extend over six weeks. Lumbar puncture is indicated as a diagnostic procedure only, and repeat punctures are of no value in the treat-

ment of this condition. Thus, the first unheralded hemorrhage offers little opportunity for therapeutic measures. Attempts at preventing a second hemorrhage in patients who survive the first onslaught are of supreme importance. Young individuals, with or without localizing neurological signs, should have arteriography performed in an attempt to locate an aneurysm. If such a lesion is demonstrated in a favorable location, craniotomy should be performed in an attempt to obliterate the bleeding source. The very least that should be done is ligation of the appropriate carotid artery in the neck. Older individuals with hypertension who do not show localizing signs following the original hemorrhage should have primary attention directed to the hypertension, including sympathectomy if they appear to be suitable candidates.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

MANAGEMENT OF THE DIABETIC PATIENT

Now a diabetic can do everything that a non-diabetic can do. He can take a liberal diet, can have a major operation with practically the same safety as a non-diabetic, can go through infections if provided with an adequately increased dose of insulin, can recover from diabetic coma, can be carried through childbirth with reasonable safety. Diabetic children can look forward to normal development and accomplishment.

It is gratifying to have this assurance from so eminent an authority.[1] Many will recall that Dr. John was a distinguished guest of the Tri-State's meeting of twenty-one years ago, and that, when he spoke to us words of wisdom on the disease which has been his constant study throughout his professional life.

There are still disturbing problems. Arteriosclerosis is frightening, especially among younger diabetics, often causing retinal hemorrhages and cataracts, or intercapillary nephrosclerosis, or gangrene.

Moderation in eating goes far in preventing diabetes. The incidence and mortality from diabetes dropped conspicuously during the war years and for a year or two afterward. When the incidence of diabetes is high in a family, it is wise to investigate the children and find out which have a predisposition to the disease, so that they can be protected. There is no need for those not predisposed to be subjected to specially restricted diets.

Is there any cure for diabetes? The answer is an emphatic no.

Recurrence is apt to be brought about by excessive intake of food and/or drink; by any infection, especially one with prolonged fever, by pregnancy, by acidosis or coma, or by gangrene.

A young person's diabetes is likely to go on to a more severe degree, and require more and more insulin; whereas the older diabetic's condition is likely to remain stationary, and he may require less and less insulin. Some require no insulin at all, and only a slightly restricted diet.

If the diabetic child receives enough food to satisfy him, and the insulin dosage is adjusted so that he does not develop hypoglycemia, he presents few problems.

A diabetic should have close supervision during pregnancy to make certain that her blood sugar throughout the day is nearly normal. If she develops hyperglycemia, this stimulates the pancreas of the fetus, which becomes hypertrophic, manufacturing excessive insulin to supply the combined circulation of the mother and the fetus. The infant may have too much insulin for its own needs when separated from the maternal circulation; this may cause death from insulin shock shortly after birth. The responsibility for protecting both mother and child to prevent such occurrences rests with the doctor.

If a patient is hyperglycemic during most of the 24 hours, his diabetes will become more and more severe with time. After each meal a normal individual is hyperglycemic for two hours. If the blood sugar is normal before breakfast, normal or nearly normal before lunch and dinner, and the patient is not having any reactions, his diabetes is well controlled. If the fasting blood sugar is normal and the noon and evening blood sugar high, treatment needs adjustment. Determination of the fasting blood sugar alone is inadequate and may be misleading.

The ideal is to keep the urine sugar-free. If 10 grams of sugar or less is being lost each 24 hours, control is satisfactory. The excretion of sugar in 24 hours can reach 70 grams, and yet all three blood sugars during the day be normal. The patient has a low renal threshold for sugar; the large excretion of sugar in the urine must be accepted as normal, and the blood sugar level must be the sole criterion in evaluating the diabetic condition.

When insulin and protamine zinc insulin are combined in one injection, the insulin starts its action immediately and by the time its action is completed, the protamine zinc insulin becomes effective and acts until the next morning. The use of a multiplicity of insulins leads to much confusion. If a physician learns to work with insulin and protamine zinc insulin, he can accomplish all that can be accomplished with any of them.

Principal upsets of the diabetic state are due

1. H. J. John, Cleveland, in *Ohio State Med. Jl.*, Jan.

to infection, ketosis, and disregard of therapeutic routine.

Infections cause blood sugar increases. The insulin dosage has to be stepped up and kept high until onset of insulin reactions indicates that it should be lowered. Increase the intake of insulin, to preserve function of the pancreas, and prevent acidosis and even coma.

Diabetic coma is usually due either to disregard of treatment routine or to infection. It requires prompt action. Elaborate reports of blood chemistry are not necessary at the start. The physicians should be able to recognize coma clinically. The patient is dehydrated, vomiting, has a parched, dry tongue, and is breathing heavily and slowly. A severe insulin reaction presents a quite different picture to this condition. The patient is drenched in perspiration, the breathing is normal or rapid, the tongue moist. If it is difficult to differentiate 10 c.c. of sterile, 50% glucose solution should be administered intravenously. If it is an insulin reaction, the patient will recover in five to 10 minutes. If it should prove to be coma, no harm has been done, and the routine treatment for coma is instituted.

The requirements in the treatment of diabetic coma are plenty of insulin; adequate liquids, intravenously or subcutaneously; aspiration and lavage of the stomach, which usually is filled with food from the past day or two.

As soon as coma is recognized, 40 to 60 units of insulin should be given, then the patient transferred to hospital. At least 40 units q. ½-hour, or hourly until the blood nears 250 mgm. per cent, when the intervals are lengthened and the dose reduced. Ten per cent glucose in normal saline is given intravenously at the beginning; 250 to 500 such doses are usually adequate. At times normal saline is given by hypodermoclysis in addition. The patient should not be drowned in fluids. When the patient is out of coma there can be no relaxation of the routine, for he can drift back into coma, and then the hazard is greatly increased.

After recovery from coma, usually a considerable increase in the insulin dosage will be required. This may be temporary, although in most instances it is permanent.

A surgical operation as a complication of diabetes requires careful medical supervision of the patient that he does not drift into acidosis or coma. If a patient is well controlled, and the administration of insulin is carried out faithfully, a diabetic can undergo a major operation with safety practically equal to that of a non-diabetic.

What you have just read may be accepted as the last word on this still common and still dangerous disease condition. Read it again, learn well what Dr. John has to say. Keep it in the front of your mind. It is not complicated. Those who know a subject thoroughly can present the salient features simply. Keep on hand these few necesary remedial agents and the means of applying them promptly, and most of your diabetic patients will live to be old and die of disease other than diabetes.

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

THE USE OF ANDROGENS IN MEN

EXTRAVAGANT claims for testosterone have about subsided to the point where we can know what it will and what it will not do. Two Oregon University[1] teachers and investigators reported their results before the New York Academy of Medicine recently. This valuable information is passed on to our readers for their guidance in management of an important group of patients.

All the clinical conditions in which testosterone produces a desirable response and is the drug of choice have the common denominator of being instances of primary testicular (Leydig-cell) failure.

Testosterone is the drug of choice in—

A. The male climacteric. This may have its onset at any time after puberty. It is not, as is the menopause in women, a physiological accompaniment of the ageing process. The main symptoms are loss of sexual potency with or without loss of libido, nervousness, melancholia, crying spells, inability to concentrate, easy fatigability, weakness, paresthesias and occasionally hot flashes. It is differentiated from psychogenic impotence and anxiety states by, in an instance of male climacteric, positive response to the therapeutic test using testosterone.

This test.—Give 25 mgm. testosterone propionate intramuscularly daily for two weeks. Allow one week to elapse (without R). Interview patient and note change. If the patient has Leydig-cell failure gradual alleviation of symptoms will continue for a day or two after injections are stopped. Sexual potency gradually returns. From the 3rd to the 7th day after injections are stopped, symptoms and potentia return toward the pretreatment level.

If no Leydig-cell failure—either no response or, in the case of coöperative neurotics, a sudden change at the beginning and at the cessation of therapy.

The diagnosis of male climacteric established, testosterone propionate in oil is given intramuscularly or by implanting pellets of unconjugated testosterone. In the usual case injecting 25 mgm. of testosterone propionate 3 times weekly suffices; optimum determined by trial-and-error.

1. C. G. Heller & W. O. Maddock, Portland, Ore., in *Bul. N. Y. Academ. of Med.*, March.

More usually, as soon as the diagnosis is made three 75-mgm. pellets are placed into the subcutaneous tissue of the anterior-medial aspect of each mid-thigh. The six (occasionally eight) pellets exert their effects for six to eight months during which time symptoms are usually minimal or absent and sexual potency is restored to normal.

B. Eunuchs should have replacement therapy with testosterone to alleviate climacteric symptoms, restore sexual vigor and produce a positive nitrogen balance, and in order to maintain muscle mass and strength, prevent osteoporosis, etc.

C. Individuals whose testicles are undeveloped, or who have suffered irreparable testicular damage before puberty exhibit the signs and symptoms of eunuchism and sexual infantilism. Treatment is either 25 mgm. of testosterone propionate daily until full sexual maturation (usually in 2-3 years), or implanting eight 75-mgm. testosterone pellets Thereafter maintenance therapy amount judged by trial-and-error.

D. Puberal seminiferous tubule failure is one of the commonest forms of hypogonadism and least often recognized. Its main features are onset *during* puberty, azoöspermia, atrophic testes and elevated gonadotrophins. There is wide variation in clinical appearance, little in the way of physical signs is exhibited by the largest share of cases.

Recognition of the syndrome is important because of the great good that can be accomplished by treatment with testosterone. The patient suffering from this syndrome is psychically and physically much below normal. With treatment the secondary sex characteristics achieve a normal level, muscle mass, strength, endurance and vitality are all increased, amazing psychic changes are achieved. Treatment is the same as outlined for the functional prepuberal castrates.

The administration of testosterone in cases in which it was not indicated has done much harm.

In testicular failure due to lack of pituitary stimulation, gonadotrophins is the treatment of choice, rather than substitutional therapy using testosterone.

The prepuberal boy will make a response that is highly undesirable—early sexual maturation—to the injudicious administration of testosterone at any age.

Testosterone produces no specific beneficial effect in sterility, psychogenic impotence, homosexuality, angina pectoris, cryptorchidism, or benign prostatic hypertrophy.

LIMITATIONS AND DANGERS OF THE QUECKENSTEDT TEST

(H. R. Merwarth, in *Brooklyn Hospitol Jl.*, Jan.)

Queckenstedt, in 1916, showed that when digital pressure is made over the juglar veins, if the cerebrospinal fluid pressure fails to rise, or if its rise is delayed, there is lack of patency of the subarachnoid space. He utilized this information as a means of recognition of compression of the spinal cord—a real contribution to precise diagnosis. A prompt rise in pressure simply indicates patency of the subarachnoid space.

It is well known that the mere withdrawal of spinal fluid (without jugular compression) in the presence of tumors or other intracranial lesions associated with hypertension, may cause herniation of the cerebellum into the foramen magnum or, less commonly but still extremely serious, herniation of the tip of the temporal lobe beneath the tentorium. Either of these occurrences may result in compression of the brain stem with interference with the vital centers and so may prove fatal; digital compression of the jugular veins elevates the intracranial pressure and thus increases the risk.

Whenever a spinal puncture is performed one should be prepared to record pressures—preferably with the glass Ayer manometer. A mercurial manometer registers too grossly except for the initial degree of pressure.

In many hospitals, whether the patient is suffering from a tumor, inflammatory disease or bleeding, the formula, apparently transmitted from one interne class to another, is that regardless of the nature of the illness for which the lumbar puncture si being done, the impressive manipulative measure must be performed. After the needle is in place and the manometer adjusted, readings are taken. Then pressure is made on the jugular veins.

Only in the presence of disease processes affecting the spinal cord do such manometric readings yield worthwhile evidence.

DERMATOLOGY

HEMORRHAGIC GANGRENOUS EXFOLIATIVE DERMATITIS FOLLOWING PENICILLIN

Combined Immediate and Delayed Reactions

Few doctors think seriously of the likelihood of penicillin causing severe reactions. An article[1] is abstracted which shows the wisdom of warning every patient, before giving penicillin, that, though the cases in which severe reactions are very few, there is such a possibility in every case. Such information is much better given before than after.

Reactions following the topical, oral and parenteral administration of penicillin are legion. Contact allergic manifestations are typically erythema, edema and vesiculation, occasionally a toxic type of reaction due to absorption. Following parenteral administration the severity of reaction varies from a few wheals to an extremely trying serum sickness type of urticaria with arthralgia, nausea, vomiting and diarrhea. Less frequently erythematous vesicular, bullous, exfoliative, or gangrenous reactions are observed.

Report is made of the case of a white man, aged 56, who received one injection of 300,000 units of penicillin in oil and beeswax vehicle by intramuscular injection on June 22d, 1947, for treatment of traumatic cellulitis of the right ring finger and

1. J. L. Derzavis & Jos. Beinstein, Washington, in *Med. An. D. C.*, Jan.

regional epitrochlear lymphadenitis. Within six hours he experienced severe generalized itching, which was intolerable over the lower extremities. On the following day there was an acute erythematous, macular and maculopapular eruption upon all the extremities and genitalia, most severe upon the legs and thighs. Because the painful cellulitis and lymphadenitis had progressed by the 18th hour after penicillin therapy, sulfadiazine q. 4 h. for a total of 8 grams was prescribed. During the next four days the eruption progressed through a vesicular stage in these regions followed by the appearance of hemorrhagic vesicles upon the legs and thighs and a few scattered hemorrhagic vesicles upon the trunk, accompanied by bullous lesions in the intertriginous areas.

The patient was now hospitalized. During the next week the hemorrhagic vesicles about the heels, lower legs and right popliteal fossa agminated, ulcerated and exposed black superficial gangrenous bases. The t. remained normal until the 10th day after penicillin therapy and then rose to 99.8°. The affected areas were exquisitely tender. On the following day there was edema and erythema of the face and eyelids general malaise and apathy—a delayed serum sickness reaction. The second week of hospitalization there was gradual improvement of the lesions, but new hemorrhagic vesicles appeared about the ears, neck, and elbows, and ulceration followed. During the course of the eruption vesicles appeared profusely over the extremities, neck and face and were particularly agminated upon the webs of the toes, where there had been a moderate dermatophytosis. The peak of the dermatosis was apparently reached between the 15th and 20th days, and gradual subsidence followed during the next fortnight with healing of all lesions and exfoliation of almost the entire skin. All lesions healed completely in the following month. The superficial gangrenous areas filled in with very slight atrophy.

Treatment consisted of the administration of benadryl and pyribenzamine, neither of which was of any apparent value, and the topical application of potassium permanganate solution and a paste of aluminum acetate, anhydrous lanolin and zinc oxide.

Laboratory data: 11,450 w.b.c. with 86% polys and 2% eos. June 22nd on admission; 13,200 w. b.c., with 67% polys. and 6% eos. July 2nd, the day the delayed reaction was noted.

The incidence of penicillin reactions has increased significantly. It should now be realized by all physicians that penicillin is not a reactionless drug, and one should carefully weigh the indications when it is used in the treatment of an individual with a skin disease. Let it be recalled that such dermatoses responded to other less allergenic medications before the advent of penicillin.

GENERAL PRACTICE

WILLIAM R. WALLACE, M.D., *Editor*, Chester, S. C.

HEADACHES

EGLOFF[1] expresses the earnest hope that the effort which doctors have made to establish sinusitis as a cause of headache will be diverted into more profitable channels, particularly to the detection of recurring, disabling types of headache, which are dramatically amenable to the proper treatment. He goes on:

The pain of migraine and histaminic cephalgia apparently is produced by vasodilatation of the extracranial vessels, and relieved by vasoconstrictor drugs. Happily, the two are easily differentiated clinically, unilateral headache and periodic recurrence constituting the only similarity between them.

Migraine generally has a hereditary factor and onset before the second decade. Nausea occurs and frequently vomiting. Position of the body has no effect upon the headache but exercise may increase the intensity. The headache is markedly relieved by pressure over the temporal or carotid arteries on the affected side, but immediately recurs when pressure is released. Ergotamine tartrate will relieve the headache. The largest intravenous dose should not exceed 0.25 mg., nor bbe repeated more than once in 24 hours. The largest subcutaneous injection should not exceed 0.5 mg. for a single dose and no more than two in 24 hours. The number of weekly parenteral injections should not exceed two, and not more than six be given per month. When given orally the maximum daily dose should not exceed 10 mg. or 30 mg. per week. Ergotamine tartrate is contraindicated in intravascular infections or obliterative vascular disease. The majority of cases will be relieved by 0.25 mg. of the drug given intravenously, but usually an equal dose is required subcutaneously before an attack is completely dissipated. The subcutaneous route is to be preferred. Usually it gives effective relief within an hour to an hour and a half. The patient should be instructed in self-administration.

Of other drugs, amphetamine sulphate is perhaps the most effective, in doses of 3 to 20 mg. intravenously. If this is effective, the regular use of this drug orally in 10 to 40 mg. doses daily will frequently abort an attack if taken early. Smaller oral doses daily usually decrease the frequency of the attacks, but because of side effects this drug is not entirely satisfactory. Another form of treatment is the administration of oxygen for periods of two hours or longer. Histamine may be effective, but not as spectacularly so as in histamine cephalgia.

1. Wm. C. Egloff, Mason City, in *Jl. Iowa Med. Soc.*, Feb.

Histamine cephalgia is unilateral headache which may recur with clock-like regularity, usually at night a few hours after retiring. Duration is usually less than an hour and frequently only a few minutes. Onset is sudden, frequently disappearing when individual sits up or stands erect, but recurs on reclining. The pain is severe, may cause watering and congestion of the eye and nostrils, frequently swelling of the temporal vessels. The distribution of pain follows roughly the branches of the external carotid artery. There are no trigger zones such as characterize trigeminal neuralgia, but there may be marked tenderness to pressure over the branches of the external and common carotid arteries during and after an attack. It usually occurs in the fourth and fifth decades. No hereditary factors. Relief is had from minute doses of epinephrine intravenously. Patients respond spectacularly to a course of subcutaneous injections of histamine acid phosphate over a period of two or three weeks. The initial dose of 0.05 mg. of histamine base, or 0.25 c.c. of the ampule of histamine acid phosphate, twice daily for two consecutive days; third day the dose is increased to 0.066 mg. and by the fifth day 0.1 mg. is reached. This dose is continued twice daily for the remaining part of two or three weeks.

All of us have to contend with headaches, most of us with headaches in our own families and persons. Probably most of us have had cause for dissatisfaction with headaches which have been ascribed to "sinus disease."

More headaches are migrainous or histaminic than is generally realized. Bearing these two conditions in mind will go far toward diagnosing the atypical forms.

CLINICAL REPORT ON INTRAVENOUS USE OF BENADRYL

Eight months ago, Goldman[1] started some clinical investigation on the use of benadryl by the intravenous route. All of the cases selected were those in which the oral use had produced no clinical improvement. In all 14 cases studied—12 in a hospital, two out-patients.

Angioneurotic edema. 50 mgs. dissolved in 50 c.c. of normal saline were given intravenously, using 10 minutes to make the injection. The patient was drowsy for three hours following this; the swelling receded and she remained comfortable for four days when she had a severe recurrence. The patient was hospitalized and 50 mgs. in 50 c.c. normal saline was given twice daily for two days. Marked improvement was almost immediate. Several recurrences since have been easily controlled by oral benadryl.

Urticaria, generalized. Ten mgs. of benadryl were given intravenously and in 15 min. there was marked relief from her itching and she fell into a sound, restful sleep. Itching recurred in eight hours. The patient was hospitalized and 10 mgs. were given intravenously q. 4 h. (100 mgs. in 48 hours). In addition an elimination diet of lean beef and water. A recent report from this patient was that there had been no recurrence of any itching or wheals.

The treatment was used in three cases of asthma with little if any effect, in 8 cases of urticaria with almost immediate marked improvement. In one case of contact dermatitis it had only a fair effect on the itching. In the other case of contact dermatitis it relieved the itching quickly but use of other therapy at the same time causes uncertainty as to the part played by intravenous benadryl.

From this small series the author concludes that benadryl by the intravenous route is an excellent drug for urticaria and pruritus, of doubtful value in asthma, and in this series relatively free from toxic effects.

1. H. I. Goldman, Denver, in *Rocky Mountain Med. Jl.*, Dec.

PEDIATRICS

E. L. Kendig, Jr., M.D., *Editor*, Richmond, Va.

ANEMIA FOLLOWING TRAUMA AND SEPSIS IN INFANCY

An Oxford teacher[1] calls attention to a form of anemia of infants which seldom engages our attention.

Dr. Vaughan's discussion and conclusions deserve careful consideration, and bearing in mind.

Fifteen infants between the ages of 4 and 16 months were observed in whom a severe megalocytic anemia developed in association with acute infection and was corrected by the parenteral administration of liver extract. In only one was a prolonged course of liver therapy needed. The anemia was associated with a temporary complete achlorhydria. Twenty-six presumably similar cases were reported in infants 2 to 11 months old in which the bone marrow resembled that of pernicious anemia—megaloblasts and giant metamyelocytes being present in large numbers. The anemia was not always megalocytic, but was often associated with leucopenia, neutropenia, and thrombocytopenia. Such cases responded to folic acid or liver extract. It is not clear whether the anemia followed the infection or vice versa.

The anemia of Brucella infections merits special mention. It has been recorded as both macrocytic and hyperchromic, as being sometimes like pernicious anemia—at least four times with a high color index and young red and white cells in the peri-

1. Janet Vaughan, Dept. of Pharm., Oxford, in *British Med. Jl.*, Jan. 10th.

pheral blood—in fact, a leuco-erythroblastic type of anemia, which caused confusion in diagnosis. Characteristically it is of the normocytic hypochromic type.

During the war observers investigating the blood picture of air-raid and battle casualties were struck by the fall in hemoglobin level that occurred after injury. A similar anemia may occur after operative intervention, not preceded by injury and not complicated by sepsis or treatment with sulphonamides—in our own series there were 14 cases. The picture was similar to that seen in sepsis: a normocytic normochromic anemia which become hyprochromic and microcytic. This anemia occurred even with slight trauma—for instance in a man with a simple fracture of the patella.

Iron and liver are in general ineffective in the treatment of either condition. There are certain cases of megalocytic hyperchromic anemia in infants associated with sepsis which are reported to respond to tretment with liver extract or folic acid. There are cases of hypochromic anemia associated with both tuberculosis and "rheumatism" which respond to iron, but such cases are exceptional. Recent experimental results on animals suggest that cobablt is worthy of trial.

A high-calorie high-protein diet may exert some sparing action upon protein breakdown, but however much protein is given a negative balance cannot be prevented.

Transfusion of compatible whole blood is at present the only means of restoring hemoglobin and red-cell levels in both types of anemia.

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

THE MANAGEMENT OF PRURITUS ANI IN THE ARMED FORCES

Every practitioner wants to know a better way of relieving his patients of their pruritus. An encouraging article[1] is abstracted.

Every effort was first made to find the causative agents: marginal ulcers, fissures, hemorrhoids, cryptitis or papillae are surgically removed. Each patient in this series was questioned for sensitivity to ingested material or to contact agents. In order of their frequencies, citrus fruits, their juices, wheat products, beer, tobacco and soap were found to be the most frequent inciting substances. Dietary corrections could be made only to a limited degree.

Eighty-one per cent of those suffering from chronic perianal itching also had moderate to secere dermophytitic involvement of the interdigital spaces of the feet. Once each week the involved portions of the feet were painted with 6 per cent salicylic acid in equal parts of alcohol and compound tincture of benzoin. The perianal skin was moisted with water and the pruritic parts painted with an indelible pencil. The crystalline gentian violet of the pencil readily penetrates the chorionic layers of the skin. It is not painful when used in this manner and is an admirable antiseptic and fungicidal agent. Used more often, this dye can be sufficiently caustic to produce painful burns.

Self medication is limited to the use of cold water, half-strength witch-hazel or Burrough's solution. A bland ointment was prescribed to dry the parts and allay the itching; the following to be used before retiring:

Menthol 1 gr.
Aluminum sulfate 3 gr.
Starch
Zinc oxide, pulverized, aa 2 dr.
10% benzocaine ointment
Aquaphor aa q.s. ad 1 oz.

The use of toilet tissue was strictly prohibited. Soft, disposable cleansing tissue or cotton was substituted. The feet and intercrural areas must be thoroughly dried after bathing. If intractable itching did occur, pinching was advised instead of scratching.

During a 3-year period in an Army medical installation only one was entirely refractory to all treatment. Six others were tattooed with cinnabar with minimal results. Subcutaneous injection of oil-soluble anesthetic gave temporary relief in four cases and subcutaneous neurotomy was performed in two. The treatment outlined proved to be highly effective in the majority of cases.

1. M. M. Marks, Kansas City, Mo., in *Amer. Jl. Dig. Dis.*, Feb.

TREATMENT OF CORONARY THROMBOSIS

Any doctor wishes to know in advance just how to proceed in meeting the emergency of so serious and commonly encountered a condition as coronary occlusion.

Crossfield[1] has clear ideas and he sets them forth in a convincing manner. The immediate treatment he lists under seven heads in the order of application to the instant case.

1. Morphine or dilaudid—the latter in case of nausea or vomiting, intravenously if the pain is severe, in less than subcutaneous dose, varying with b.p. and severity of pain. Atropine, grain 1 75 is given also, especially when the heart rate is not rapid.

2. Aminophyllin intravenously 3¾ grain. If pain persists repeat three or four times in 24 hours.

3. Papaverine intravenously grain ½ to 1, especially if the heart's action is irregular.

4. Oxygen—60 to 80% for the relief of pain, dyspnea or shock. Intranasally with Tudor Ed-

1. H. C. Crossfield, East Orange, in *Jl. Med. Soc. N. J., Feb.*

ward spectacles or BLB mask, this gives the highest oxygen concentration.

5. Quinidine sulfate, grains 3, two or three times a day (except in old fibrillators or in patients with heart block) is one of the best insurances against sudden death from ventricular fibrillation.

6. Ouabain or strophanthin. If the heart is not compensating, and is not partly digitalized, 1 c.c. intravenously (1/250 grain) should be given. Digitalis should not be used.

7. Bleeding may be advisable if the patient is near moribund with right heart failure. Follow this with an infusion of 5% glucose in distilled water at 30 drops per minute.

Then is outlined treatment, after the acute phase of pain is over.

Psychic and Physical Rest: The doctor should be slightly more optimistic to the patient than the condition warrants. If patient does not coöperate it is sometimes necessary to point out the dangers. On all other subjects, it is better to agree with the patient if at all possible.

The patient may be turned from side to side and his head should be elevated even in case of decompensation. Willius has the legs massaged twice a day. Ordinarily, patients should be rolled on and off the bedpan, but the commode may be used by the less seriously ill if assistance is given to rise from the bed. Movement of the legs and arms should be encouraged; but the patient should not raise his body up from the bed alone. A mild sedative should be given frequently.

In general, allow 800 to 1200 calories a day, half the patient's usual intake.

No laxatives the first two to four days; may use a tablespoonful of mineral oil daily. Glycerine suppositories, cascara (one or two grains) or a very small enema if necessary.

No tobacco and very little alcohol.

Heparin, 50 mgms., should be given intravenously, immediately and q. 4 h. until the prothrombin time has been effectively lowered. Dicumarol, 300 mgms., the first day after determining that the prothrombin time is not already above normal. The prothrombin time should be determined no less than three hours after the last dose of heparin. Daily determinations should be made thereafter by the modified Quick method. Be prepared to give fresh citrated blood at any time if there is evidence of hemorrhage; but 60 mgms. of synthetic vitamin K, given intravenously, sometimes is sufficient without a transfusion. This may be repeated in two hours, if needed. If bleeding occurs, it most often comes from the kidneys or the gastrointestinal tract. Occasionally ecchymotic hemorrhage occurs or there may be minor nose bleeds. Seldom is there significant hemorrhage when the prothrombin is more than 10%. By the Mayo technic, that would be equivalent to less than 58 seconds prothrombin time. Allen states that thrombosis seldom occurs when the prothrombin is less than 30% (more than 27 seconds prothrombin time).

This course of management of the emergency and of the patient who survives the emergency is endorsed for its reasonableness and its forthrightness. There is no "may do" this, or that "may be tried." All of it is "should do," for best results.

PUBLIC HEALTH

N. Thomas Ennett, M.D., *Editor*, Greenville, N. C

THE COMPLICATIONS OF MUMPS

Various are the opinions of doctors as to the variety, frequency and seriousness of the complications of mumps. A statistical study[1] made in wartime is informative.

In 1946 a few cases of mumps occurred in a military camp in New Zealand just before the departure of 2000 soldiers for Japan. On ship and after arrival in Japan, 235 cases developed in seven months. It was posible to follow up 208 of these.

There had been symptoms or signs of meningeal involvement in 60 cases: 18 had moderate headache only, and this single symptom is of doubtful significance as no lumbar punctures were performed; 36 had severe headache, were drowsy and had a positive Kernig sign or neck rigidity; and six showed a definite meningo-encephalitis. One man complained of deafness and vertigo, and two had vague aural symptoms on one side in the early stages.

Owing to the size of the epidemic and the limited facilities available, lumbar puncture was not performed in some cases in which it was indicated.

Meningitis is the most frequent nervous involvement in mumps, less commonly generalized meningo-encephalitis with or without fits, dysphasia, monoplegia, hemiplegia, tetraplegia, or cranial nerve palsies.

The nervous symptoms were most pronounced at the height of the illness, usually before orchitis.

Orchitis occurred in 26%: in 17 cases while still confined to bed, in 5 at onset, in 6 before reporting sick, and in 21 after starting to get up.

In the follow-up 31 were found to be normal. There was some difference between the healthy and the affected sides in 42% of those with orchitis. Sexual activity was unimpaired.

Some degree of pancreatitis was considered to be present in 8%. Symptoms lasted one to five days. No sugar was found in the urine of 11 cases tested at follow-up, nor were there any sequelae.

Only 131 pulse charts were available, and 52

1. Desmond Laurence & Donald McGavin, in *Brit. Med. J.*, Jan. 17.

showed readings of *less than 50* for varying periods, chiefly in the second and third weeks. In five cases an apical systolic murmur was heard, without bradycardia: in only one of these had the murmur disappeared several months later.

Two cases relapsed with recurrence of glandular enlargement after discharge from hospital. A third patient relapsed with submandibular sialo-adenitis after an initial orchitis. Eighteen men gave a definite history of a previous attack of mumps.

There were no cases of urethral discharge, pericarditis, arthritis, nephritis, or suppuration of glands, all of which have been recorded as complications of mumps.

STREPTOMYCIN AND SULFADIAZINE USED TOGETHER CURES BRUCELLOSIS

(C. W. Eisele et al., in *Jour. A. M. A.*, Dec. 20th)

Brucellosis is transmitted to humans by contact with diseased hogs, goats or cows, or by drinking the milk of infected animals. In its acute form the symptoms may easily be confused with those of typhoid fever, acute tuberculosis, malaria, acute rheumatic fever, influenza and other diseases; in its chronic form, which is much more common, the disease is even harder to diagnose. Relapse and recurrence of symptoms even after apparent recovery are common. Neither a sulfa drug nor streptomycin, by itself, proved effective against the bacteria of brucellosis except in the test tube.

In the case cited by the writers, an acutely ill patient was hospitalized five months after he had begun to have daily attacks of chills, fever and dizziness. A diagnosis of undulant fever was made, and he was given penicillin and blood transfusions. He improved enough to leave the hospital after ten weeks, but shortly afterward he was admitted to another hospital with a high fever and other symptoms. In spite of prolonged streptomycin treatment his blood tests remained positive for the bacteria of brucellosis, and after three months there was no improvement.

Finally a 28-day course of sulfadiazine treatment was started. The daily dose gradually increased from 4 to 12 Gm. The patient still showed no improvement until streptomycin was given, 6 Gm. daily, in addition to the sulfadiazine during the last ten days. After termination of this combined treatment blood tests for the bacteria of brucellosis were negative for the first time, and the patient's fever dropped and remained around normal. He recovered completely, and after 17 months had had no relapse.

OKLAHOMA CITY CASE-FINDING DEMONSTRATION

(G. F. Mathews, Comm. of Health, Okla. State Health Dept., *et al.*, in *Jl. Venereal Disease Information*, Feb.)

A straightforward appeal for blood testing for syphilis was directed to the general public. Feature articles, editorials, large advertisements in the local newspapers, local radio announcements, posters displayed in store windows, on billboards, and on street lamps. Local civic organizations providing speakers and opportunities to appear before various groups, in manning information booths erected at busy intersections, and in helping to arrange the blood-testing of school and industrial groups.

Special blood-testing facilities were set up at strategic spots throughout the city. The location and schedule of each testing station were well advertised.

The local medical society endorsed the project, and individual physicians participated by drawing blood specimens when requested and in the follow-up of persons found to have a positive reaction. Free supplies of penicillin were available to physicians for the treatment of gonorrhea, and the facilities of the Oklahoma Medical Center were available for the treatment of private patients with infectious syphilis.

This campaign of public information by the Oklahoma City Health Department, in coöperation with the State Health Department and the U. S. Public Health Service, succeeded in blood-testing 48,874 persons in the area in a 45-day period. Four times as many cases of primary and shecond syphilis were discovered as were found in the average 45-day period preceding the demonstration.

Helpful points from—THE ALLERGIC CHILD

(H. J. Lee, Milwaukee, in *Wisc. Med. Jl.*, Feb.)

The allergic background is often obvious in the explosive angioedema, rhinitis, or asthma which may be seen in an infant upon exposure to foods such as egg, nuts, fish, or seed products, or to inhalants such as animal danders or dusts.

Eczema is the commonest manifestation of allergic disease seen in the first years of life.

The allergic reactions of the respiratory tract comprise the largest number of cases seen in preadult years.

Skin reactions are important only if they point to foods which upon ingestion provoke or increase clinical symptoms.

Allergic reactions to foods commonly are quantitative. A slice of bread may be tolerated in a wheat-sensitive patient where more is not. Egg often may be tolerated in baked goods without provocation of symptoms. The allergic reaction to milk may be eliminated by the heat of condensation or evaporation.

Food sensitivities observed in infancy or early childhood may disappear by avoidance or by partial or quantitative elimination. Inhalant allergens which cannot be eliminated usually continue to cause symptoms, and further breaks in tolerance upon subsequent exposure are the rule.

Both benadryl and pyribenzamine have rapidly established a place in the symptomatic treatment of allergic rhinitis and pollinosis, as well as urticaria. The results in asthma and atopic dermatitis have not been as encouraging. Side reactions particularly drowsiness and gastrointestinal disturbances, may accompany the use of either.

Penicillin in asthma is effective in the elimination of secondary infection due to penicillin-sensitive organisms. But penicillin is a sensitizing substance and unless specific indications are present its use may worsen the condition.

OUABAIN BELONGS IN EVERY DOCTOR'S BAG

(*Jl. Kansas Med. Soc.*, Jan.)

Ouabain (U.S.P.) is never given by mouth; only intravenously, or intramuscularly. It is almost instantly effective, and is therefore the drug of choice for the emergency treatment of acute decompensation, acute pulmonary edema of cardiac origin (acute cardiac asthma), and selected cases of coronary thrombosis with decompensation. Ouabain is so rapidly excreted that it is virtually non-cumulative. It is often used in combination with an orally administered digitaloid drug of long latent period, and which is slowly dissipated. Ouabain is of such importance that every physician should be familiar with its use. It belongs in every doctor's emergency kit.

FIFTY-FOUR cases of pruritus ani and pruritus vulvae or both were treated with a 2% undecylenic acid lotion. There were four total failures—no response after a month's treatment.—R. H. Aldrich, Boston. *Industrial Medicine*, Oct.

BRITISH DOCTORS NINE-TO-ONE AGAINST SOCIALIZING MEDICINE

BIG MAJORITY SAY THEY WILL NOT PARTICIPATE

OVER AND OVER those bent on socializing the practice of medicine in this country have told us that the British doctors favored the socialization of British medicine. A plebiscite just concluded in Britain shows the falsity of this statement and indicates the unscrupulousness of those who are determined to push through the plans of President Truman, Senator Wagner, Mr. Dingell and their vociferous coadjutors.

The plebiscite was conducted in an entirely above-board manner and it showed by a nine to one majority of a poll in which 84 per cent of the medical profession of Britain participated that the advocates of socialized medicine among British doctors constitute a ridiculously small minority. It is pertinent to call attention, too, to the fact that these returns were supervised by a well established firm of auditors and so all chance of interpretation according to bias for or against was removed.

Of those directly concerned in service under the act—consultants and specialists and general practitioners—who answered the question as to whether they would take service under the act in the present form, more than 22,000 said they would not, as against less than 3,500 who said they would, accept such service. The *British Medical Journal* of February 21st comments: "If nothing happens to change the views of these men between now and July 5th, Mr. Bevin will have at his disposal 3,560 general practitioners (giving him the benefit of the non-voting G. P.) and 971 consultants and specialists to operate the national health service act designed for a population of 47,000,000."

It is of interest to note that of the 762 medical men and women working whole-time in government service, 634 disapprove of the act and only a 127 express their approval; that of the 548 whole-time teachers of medicine in Great Britain, 424 disapprove and only 110 approve; that of the 530 whole-time research workers, 220 disapprove and 104 approve. Almost certainly this is a much smaller percentage of medical men and women not engaged in private practice of medicine favoring socialization of medicine, than is the case in this country. Of doctors in the U. S. Public Health Service, and the various state, county and municipal health officials, a majority appears to be in favor of the socialization of medicine. Indeed, if one may judge by the expressions of opinion of such officials which come to our attention, pretty nearly all of them are enthusiastic for the plan which would place all doctors of medicine in the U. S. under the czaristic control of the Surgeon General of the Public Health Service. Incidentally, we wonder why Dr. Parran

was "retired" recently. Surely his enthusiasm for the Wagner-Murray-Dingell-Truman program was hot enough to satisfy Stalin himself.

Likely, the size of the rejecting vote was increased by the attitude of Minister of Health Bevan, as editorialized on in the *British Medical Journal's* issue of January 31st. A member of a Negotiating Committee, duly appointed by the British Medical Association, asked Mr. Bevan a sensible question, and the self-important one retorted "Don't be impudent." And as the journal remarks, this is while the member is "still an independent practitioner." One can only surmise the abjectness which would be demanded of doctors by vulgar politicians in high places, in the U. S. as certainly as in Britain, once all practitioners were hired servants of the Government.

Even under a Government elected under the name Socialist, and which has taken over a large part of the business of Britain, British doctors say they will not submit to enslavement, that they will not accept assignments to practime medicine under a Socialistic plan. Surely, should, by any chance, the Wagner-Murray-Dingell bill he enacted into law, self-respecting doctors in our country will refuse to participate. Our brethren in Britain have shown us the way.

GENERAL REFLECTIONS ON GERIATRICS

Some writers contend that the normal span of life is one hundred years or more, but this conclusion is based on doubtful assumptions, such as that the total length of life of an animal should be five times the time it takes to reach maturity. Gatch[1] disagrees, and gives his reasons. Here is a synopsis of his admirable discussion.

Alexander Graham Bell's agents interviewed a large number of centenarians. Bell's hope was to discover something in the habits of these aged people which could be imitated by all who wished to live a long life. Many of the centenarians had violated almost every rule of hygiene and what is generally regarded as good conduct. Many of them had used alcohol and tobacco to excess. *All of them came from long-lived families.* This investigation showed that longevity is an inherited characteristic and that environment and habits of living have far less to do with it than is commonly supposed. It depends upon inheritance of a good nervous system, of good arteries, of immunity to infection, and of resistance to neoplastic disease. Life is like the flight of a bullet. Its possible length depends on the force which sets it in motion. By good care of a man, we may be able to keep him alive until the vital force he inherited is expended, but nothing we can do for him will keep him alive longer than that. This fatalistic view should not make us think that whatever we may do for people over 50 is of but little value. It can keep most of them alive, reasonably happy, and very useful to society for many years.

At the age of 50 man is commonly afflicted by presbyopia and diminished physical vitality. Many men resent this and pride forces them to try to show everybody that they are as strong as ever. This is why many of them do physical exercise and indulge in dissipation dangerous to their hearts; also why husbands at this age are apt to stray.

In the sixth decade man's habits made up most of his life. To break up these habits is a very unwise thing to do. In some cases it kills the patient; in others it reduces him to a state of premature senility or dementia. It is often observed that the retirement of elderly farming people to an easy life in town, at the behest of their prosperous children, proves anything but easy for these old people. They long for the daily routine of the farm, and the companionship of their old cronies. They become introspective, miserable, decrepit, and often die in a year or two. California is filled with unhappy people of this kind who have moved from the Middle West.

They may have arthritis, defective vision, high blood pressure, coronary disease, and other dreadful ailments, but they still can do a great deal of useful work, and will last a long time if their mental and physical powers are kept in proper daily use. How best to do this is the most important problem of geriatrics. Changes in our country in the last 25 years have made its solution difficult. When most of our people lived on farms and families were large and community life settled, the older people were useful and happy. They had an honored place in the family and community. Their lifelong habits were not broken at the age of 50 or 60. They were sure of the respect and support of their families in time of sickness or trouble. The artisans of the rural community—blacksmiths, shoemakers, carpenters, weavers, etc. —shared this settled and satisfying existence. The community furnished its own entertainment—the church the schools the lodge, the political meeting. This happy way of life is gone forever even from most of our rural communities. A laborer of 50 is now considered too old to hold his job in the factory. He loses it, and with it his accustomed routine of living. His children, if he have any, live in distant cities. He may be divorced. He faces a life of loneliness, idleness, and neglect. What has society so far done to help him? A regular income from social security is about all. This falls far short of meeting his needs.

Who will question the wisdom of the conclusion?

1. W. D. Gatch, Indianapolis, in *Jl. Indiana State Med. Assn.*, Nov., 1946.

What the man of 50 or past needs to keep him happy and alive, to occupy his time, and to preserve his self-confidence is a steady job which he is able to do. How to give him this job will require coöperative efforts of physicians, labor leaders, industrialists, and legislators, as well as enlightenment of the public.

How to preserve the aging in a happy and useful existence is more a social than a medical problem. Too much medical care is now a chief peril to people over 50. Too much attention, even though it be kindly, is bad for them. They resent it, because they do not want to be objects of pity.

AN UNORTHODOX DISSERTATION ON "SPECIAL DIETS"

An internist, graduated (and presumably reared) in Canada, and a member of the Royal College of *Surgeons* of England, writes so refreshingly, withal so sensibly, on dieting that the greater part of what he has to say is copied in his own words.

The physician, in matters of diet, should be influenced first by the body of scientific knowledge known as Nutrition and second, by *the food knowledge of the race*. It is both asinine and wicked to restrict a patient's diet without abundant reason. Our inherited diet—*what Americans have always eaten*—is a hundred-fold safer than the faddy, ill-balanced menus frequently prescribed even by the Doctors of Medicine.

Today there is a movement away from special diets. Diabetics are being given more carbohydrate. Nephritics are being allowed as much protein as they can take care of. Some persons with mucous colitis do better on a general, than a "smooth" diet, simply because they eat more. Today, acceptability is a primary criterion in constructing a menu. Mental and emotional tranquillity is three times as important to the ulcer patient as diet. The fat patient fails to lose weight on a low-calorie diet unless something in his brain is altered, because otherwise he will not follow the diet. So far as vitamins are concerned, the public has taken us too literally, as evidenced by the rising generation of young "giants," particularly from the homes of the affluent. We do not know as yet what the future holds for these products of an advanced pediatrics—these unfortunate children who, because of too much stimulation, have missed childhood.

There are many unexplainable facts in diet. In certain sections of Canada the exclusive winter diet of salt pork, potatoes and maple syrup can boast few vitamins except ascorbic acid, yet here we find men vigorous in their late seventies. In the Himalayas certain men withstand the rigors of sub-zero weather, whose total daily intake consists of a handful of parched corn. The wild dogs of Northern Canada who draw heavily-laden sleds for 10 hours a day across the frozen wastes customarily receive, as their maximum daily allowance, not more than a cupful of cornmeal cooked with tallow. We see women with true *anorexia nervosa* survive for months and years on diets of 200 calories per day. On the other hand they are gourmets, frequently adipose, living and well at 80. We see fat men waddling happily along in their 70's with perhaps only a little arthritis and blood-pressure. Such facts, of which many more could be cited, should make us humble in our assumption of dietary knowledge.

It is said that Caesar's soldiers subsisted mostly on parched wheat, and by all accounts they were sustained in vigorous health over years and years.

When a special diet is actually needed it should, while serving its special purpose, approximate a "normal diet" as nearly as possible. Furthermore, the patient should be relieved of the special diet as soon as its function has been fulfilled. The evolutionary process by which the race has learned what to eat, constitutes an experiment on a grand scale and deserves our humble respect. Smugness in dietetics betrays a dwarfed and limited viewpoint. Nutritional science is invaluable, but the long life span of man makes him an unsatisfactory experimental animal.

Now, isn't all that fine? As to the possible injury done by the excess of vitamins more than one of us has often wondered.

This journal has spoken out many a time for consideration for our appetites as guides to diet.

CANCER IN CHILDREN FROM BIRTH TO FOURTEEN YEARS OF AGE

Among the causes of childhood mortality in 1942 in the United States, says Dargeon,[1] cancer and allied diseases stood tenth in the 2-year age group; third, from 3 to 10 years; sixth, from 10 to 14 years of age. In New York in the 3-year period 1942 to 1944 the deaths from neoplastic diseases during childhood exceeded those from all forms of tuberculosis. No doctor can fail to agree with him that wider recognition of this high mortality would stress the need for greater effort toward the establishment of early diagnosis of neoplasms in children.

This New York cancer specialist goes on:

Although certain tumors are almost always rapidly fatal, there is encouragement in reliable reports of long periods of survival among children who have had many of the other varieties of cancer.

The six sites most frequently affected by cancer in children are: 1) the bones; 2) the kidneys; 3)

1. Editorial by B. S. Cornell, Fort Wayne, Ind., in *Amer. Jl. Dis. Dis.*, Jan.

1. H. W. Dargeon, New York, in *Jl. A. M. A.*, Feb. 14th.

the eye and orbit; 4) the lymphatic and blood-forming organs; 5) the soft somatic tissues, and 6) the nervous system.

Initially benign types of osseous tumors, such as osteochrondroma and giant-cell tumors, may become cancerous.

Embryonal adenomyosarcoma of kidney (Wilms' tumor) is one of the more commonly observed tumors throughout the childhood periods and occurs chiefly between 4 months and 4 years of age. A mass in the abdomen or flank is usually the first indication of the disease. Because the tumor is usually highly malignant biopsy is contraindicated.

Retinoblastoma is rare after the fifth year, most frequent during infancy. In more than half the 84 cases at Memorial Hospital it was bilateral. There may be an interval of some years before the second eye becomes affected. There is apparent awkwardness in the use of the arms, and if the child is old enough to walk he stumbles and runs into objects.

Leukemia, lymphosarcoma and Hodgkin's disease are among the neoplasms of lymphatic and blood-forming organs observed in children.

There are many tumors, histologically benign, which involve such important structures that they result in a high mortality.

A satisfactory cancer program for children should include 1) periodic health examinations; 2) excision or biopsy of swellings as indicated; 3) excision of potentially cancerous growths; 4) systematic clinical investigations, and 5) a revision of the attitude toward benign tumors.

Examinations should be monthly from birth to one year of age, quarterly from one to 6 years and semiannually thereafter. In this examination a roentgenogram of the thorax and a complete blood count should be included.

These periodic examinations should not be undertaken "to find out whether the child has cancer," but "to find out if it is in complete good health."

What all of us need most to do is to stop thinking of cancer as a disease of *old age*, and to think of it as a disease of *any age*.

DIAGNOSIS OF RESPIRATORY VIRUS INFECTIONS

Special Laboratory in Arkansas

A teacher of bacteriology[1] discusses influenza diagnosis, and a special laboratory to aid doctors of his State in the diagnosis.

Influenza virus in nasal or throat washings can be demonstrated best by the inoculation of the allantoic fluid of four- or five-day old chick embryos with bacteria-free filtrates of nasal or throat washings of influenza patients. The amount of virus which develops in the allantoic fluid of the inoculated eggs can be estimated because of the remarkable and distinctive property of this virus to agglutinate *in vitro* the red blood cells of the chicken. This is known as the Hirst phenomenon and can be seen when the infected allantoic fluid is mixed with chicken red cells whether in the usual agglutination tubes or on a microscope slide.

With convalescence from influenza, antibody specific for influenza virus appears in the blood. This antibody will inhibit in the test tube the agglutination of chicken red cells by the influenza virus.

All known strains of influenza virus can be expected to agglutinate chicken red cells. The serums of patients convalescent from influenza sometimes inhibit agglutination by one strain of virus but not by another. A patient will produce antibody only against that strain of virus with which he becomes infected. It is possible, then, by means of the inhibition of agglutination reaction to identify the precise strain of virus which elicited antibody in any given patient. Two distinct types of influenza virus have been identified—Types A and B—and still other types are suspected to exist.

Thus far, diagnostic methods directed toward isolating or otherwise demonstrating the virus of primary atypical pneumonia are in the experimental stage; however, most patients with this disease develop autohemagglutinins (cold agglutinins) at or near the end of the febrile period, their agglutinin titer when tested at 0° C. usually reaching 1-160 or 1-320. Since with no other respiratory disease are cold agglutinin titers of this level demonstrable, this test is useful as a laboratory technic for identifying cases of primary atypical pneumonia.

As an aid to physicians in the State of Arkansas, the Department of Bacteriology of the University establishes February 15th, for a trial period of three months, a laboratory for the diagnosis of influenza and primary atypical pneumonia. It is hoped that the physicians of the State will avail themselves of this service by sending serum samples (5 c.c.) from patients suspected to have either influenza or primary atypical pneumonia with the request that the serum be tested for the corresponding antibody, to—

Respiratory Virus Laboratory, Department of Bacteriology,
University of Arkansas, School of Medicine,
Little Rock.

We wonder if such provision by our State Laboratory would be feasible?

And here the thought obtrudes: would it not be in order for the Bulletin of the North Carolina State Board of Health to carry, every three or four months, a statement of what aids to diagnosis it is prepared to offer, and directions as to collecting specimens and transmitting to the Laboratory.

1. J. T. Culbertson, Little Rock, in *Jl. Ark. Med. Soc.*, Feb.

IN MEMORIAM

Tri-State Medical Association

DOCTOR LeGRAND GUERRY

DR. GEORGE H. BUNCH

DR. LeGRAND GUERRY was born in Florence, S. C., in 1875 of French Huguenot ancestery. After finishing at the public schools of Summerville, S. C., he took his academic collegiate work at the University of the South at Sewanee, Tennessee. Entering the Medical Department of the University of Georgia in Augusta in 1893, he was awarded with honors the M.D. degree in 1896. During his interneship at the University Hospital, he also served as demonstrator of anatomy and until 1899 assisted the Dean, Dr. W. H. Doughty, at his surgical operations.

Locating in Columbia, Dr. Guerry began in general practice, but after 1903 specialized in general surgery. Good training and hard work made him a success at this from the start. Almost without exception his operative patients did well and he became the pioneer surgeon of central South Carolina. He was a surgical philosopher who early observed that many cases of appendicitis seen by the surgeon after perforation and operated upon in the stage of diffuse peritonitis died, but that patients seen by the surgeon for the first time and operated upon three or four days after perforation had occurred and a localized abscess had formed recovered. Reasoning from this in patients first seen with diffuse peritonitis after perforation, he discontinued food and gave morphine to secure physiological rest of the intestinal tract until localization of the infection had taken place, when the abscess could be safely drained—and, as a rule, the appendix removed. This technique and this practice have been material factors in reducing the mortality rate of appendicitis in this section.

In appreciation of his lifetime support of the Columbia Hospital, the Board of Trustees have named in his honor a recently erected addition to the institution, the Guerry Building; and in commemoration of his services and outstanding ability his patients have presented the hospital with a suitably inscribed bust of him.

He has been president of the Tri-State Medical Association, of the Southern Surgical Association, of the South Carolina Medical Association and vice-president of the American Surgical Association. He was a founder of the American College of Surgeons. He was awarded the honorary D. C. L. degree by the University of the South in 1924 and was elected an honorary member of Phi Beta Kappa in 1925. The University of South Carolina conferred upon him the LL.D. degree in 1928, the University of Georgia the Sc.D. degree in 1931.

Surgical literature has been enriched by many notable contributions from him: on gunshot wounds of the abdomen, on reconstruction of the bile ducts after operation, on duodenal ulcer, on appendicitis and on primary closure of the ureter. In 1936 he contributed to the Surgical Clinics of North America.

The son of an Episcopal clergyman, the brother of a bishop and a senior warden of the Church of The Good Shepherd in Columbia, Dr. Guerry was a man of strong religious convictions as is shown in the preface to his will:

"Believing with absolute and unshakable faith that Jesus Christ is the Son of God Incarnate, born of one earthly parent, the Virgin Mary, and that we have salvation only through faith in His precious blood, which was shed for our redemption, I commit my soul into the hands of the everliving, altogether lovely, never-failing, all sufficient Jesus."

His wife, one son, three daughters and a number of grandchildren survive him.

DOCTOR JAMES CARLISLE McLEOD

DR. A. E. BAKER

JAMES McLEOD was graduated in letters from the University of North Carolina with the class of 1917, and from Cornell University in Medicine in 1922, then served two years on the Second Surgical Division at Bellevue Hospital before coming to Florence to become associated with his father, the late Dr. F. H. McLeod, in the practice of surgery at the McLeod Infirmary. In 1937, on the retirement of Dr. F. H. McLeod, James succeeded to the post of Chief Surgeon and Superintendent of the Infirmary, which position he held until his death. James was largely responsible for the development of the present fine physical plant of the McLeod Infirmary.

Dr. James McLeod has long been a Fellow of the American College of Surgeons, was a member of the Council of the S. C. Medical Association for several years and President of the organization in 1946. He was selected to present to the General Assembly the case for the expansion program of the S. C. Medical College in 1946. His plea for the appropriation was one of the dramatic incidents of that session of the Legislature and resulted in overwhelming approval of his request.

He served briefly in the Medical Corps of the U. S. Army during the last war with the rank of Major and had the opportunity to do much actual surgery and none of the paper work which he detested. His career in the army was cut short by recurrence of an old back injury, but this gave him an opportunity to try out another field where he thought he might be useful—politics. Long convinced that the medical profession represented a large reservoir of intelligent citizenry too little

heard in the affairs of the state and nation, James plunged in with all his vigor and made an astoundingly effective campaign as candidate for Governor in 1946.

I venture to say he had as many friends in and out of the medical profession as any citizen of South Carolina. He died of coronary occlusion on December 9th, 1947.

Doctor Frank Trumbo Harper

Dr. A. J. Ellington

On July 4th, 1947, while taking off at the Burlington Airport in a small cabin plane, Dr. Frank Trumbo Harper, aged 38, was instantly killed. The plane, piloted by a friend, went into a "power stall" and both occupants met death in the accident.

Dr. Harper, a native of Kinston, N. C., was graduated at the Medical College of Virginia in 1934. Having contracted tuberculosis himself, he became especially interested in that disease and spent several years at State Sanatorium under the tutelage of the late Dr. P. P. McCain and at the Jamestown Sanatorium with Dr. M. D. Bonner.

Locating in Burlington in 1941, Bo Harper, with his innate ability and thorough training in internal medicine and tuberculosis, with his versatile leadership, affable disposition and hard work, soon built up a large practice. Being a member of several medical associations, he contributed numerous original papers on the programs of these organizations. He was active in two civic clubs, Chamber of Commerce, Boy Scouts, Tuberculosis Association, Cancer Control Committee and for several years director of the Alamance County Tuberculosis Sanatorium. Largely through Dr. Harper's efforts a portable x-ray unit for county-wide chest examinations was purchased just before his untimely death. Over $25,000 has recently been donated to the Bo Harper Memorial Fund to further the work in tuberculosis for which he had given so freely of his time and energy.

Burlington and Alamance County and the State of North Carolina will continue to miss Dr. Harper, whose tragic end came in the prime of life when men of his type are so greatly needed. His widow and three daughters reside in Burlington and his mother, brother and sister in Kinston.

Dr. Julian Lamar Rawls

Dr. C. J. Andrews

The passing of Dr. Julian Lamar Rawls on January 18th, 1948, brings real sorrow to a large number of our people and marks the ending of the activities of a notable and distinguished career. It is obviously not possible for us at this time to adequately evaluate his work, accomplishments and admirable qualities, but we can and do pay tribute to him and honor him in unstinted degree.

He was born at Carrsville, Virginia, the son of Dr. Cavin Rawls, an honored physician who was typical of the cultured country doctor of his day. One ancestor was an officer in the Army of the Revolution. His grandfather served in the Confederate Army. It is this type of people, who give stability to the country, who develop it in good times and bring it through its bad times. Dr. Rawls married Elizabeth Carlos of Baltimore, and two daughters of this union, Mary Eleanor Rawls and Elizabeth Rawls Longula, survive him.

His education included study at the Franklin High School, the University of Richmond and the Medical College of Virginia where he was graduated in 1904. Following graduation he served his interneship and was house surgeon in the Hospital of St. Vincent de Paul, in Norfolk.

From the first, his interest and work was mostly surgery, and during recent years surgery occupied his entire time. This finally centered around cancer. He founded and contributed much effectual effort to the Norfolk Cancer Clinic. A few days before his final illness, he was given the J. Shelton Horsley Award for his accomplishments in warfare against cancer.

He was a member and past president of the Norfolk County Medical Society, the Seaboard Medical Society, the Medical Society of Virginia, the Southeastern Surgical Congress, the American Association for the Study of Neoplastic Diseases, the Norfolk Cancer Clinic, and the Norfolk Chapter of the Sons of the American Revolution. He was a Fellow of the American College of Surgeons, a member of the Tri-State Medical Association, and the American Medical Association. He was surgeon for the Seaboard Air Line Railroad, Surgeon U. S. P. H. S. Reserves, and Lt. Com., U. S. Navy Reserves, from 1934-40.

His activities in local and civic affairs were notabble. He was one of the founders and past presidents of the Tidewater Hospital Service Association and was president several times of the Norfolk Community Fund. He was a member of the staff of all the local hospitals and has served as president of all.

Since the deeds of men live after them, the results of the constant putting forth of the energies of Dr. Rawls in all good works are our perpetual heritage.

(In Memoriam continued in April issue)

Health Group Gives Watch to Dr. Vestal

Dr. Thomas F. Vestal, who has resigned as director of the N. C. Board of Health's division of tuberculosis control, has been presented with a gold wrist watch by the personnel of the Board of Health.

Dr. Vestal resigned to become superintendent of the Forsyth County Hospital. He is a native of Randolph County and obtained his medical degree at the University of Maryland.

NEWS

SEMINAR IN PSYCHIATRY IN RICHMOND
April 5th-April 16th

The Department of Mental Hygiene and Hospitals, the American Psychiatric Association, the Medical Society of Virginia, and the U. S. Public Health Service have planned a seminar in psychiatry in Richmond April 5th-April 16th inclusive. The various phases of mental disease and treatment will be covered by such widely known physicians as—

Dr. Franklin G. Ebaugh, Director of the Colorado Psychopathic Hospital

Dr. Thomas M. French, Chicago Institute of Psychoanalysis

Dr. Samuel W. Hamilton, Superintendent of Essex County Hospital, New Jersey

Dr. Gregory Zilboorg, New York City.

Dr. R. Finley Gayle, Dr. David C. Wilson and Dr. J. Asa Shield, of Virginia.

Dr. John Whitehorn and Dr. Leo Kanner, Johns Hopkins.

Dr. Winfred Overholser, Washington, President of the American Psychiatric Association.

Dr. Frederick H. Allen, Director of the Philadelphia Child Guidance Clinic

Dr. Robert H. Felix, U. S. Public Health Service.

Dr. C. C. Burlingame, of the Institute for Living, Hartford

Dr. Leland Hinsie, Professor of Psychiatry, Columbia

Dr. Abraham Myerson, Boston

Dr. Nolan D. C. Lewis, New York City

There will be no charge for attendance at this seminar and it will be open to all physicians, psychologists, and associated workers in the field of psychiatry.

Scholarships in Medical Science Announced by Markle Foundation

Sixteen young men have been appointed as the first group of Scholars in Medical Science, under the plan of the John and Mary R. Markle Foundation to support qualified young scientists who wish to make a career in academic medicine. The scholars were selected from candidates nominated by medical schools in the United States and Canda by regional committees appointed by the Foundation. Toward the support of the scholars and their research each school is to receive $25,000 payable at the rate of $5,000 annually for five years.

Following are two of the sixteen scholars whose appointments were made to medical schools in the South:

Ivan W. Brown, Jr.—B.S. and M.D., Duke University School of Medicine. Field of research: injury produced by transfusion. Grant to Duke University School of Medicine.

Preston B. Lowrance—B.S., University of Virginia; M. D., University of Virginia Department of Medicine. Field of research: cardiovascular disease. Grant to University of Virginia Department of Medicine, Charlottesville.

Doctor Honored for Sacrifice in Study of Bilharzia Disease

President Truman has awarded the Medal of Merit to Dr. Claude Barlow, who sacrificed his health to advance the study of bilharzia disease.

Dr. Barlow went to Egypt in 1929 at the request of the Rockefeller Foundation to do research on this bladder ailment caused by tiny parasites. Thousands of Egyptians are afflicted with the disease. It saps the strength and occasionally proves fatal.

For 10 years Dr. Barlow studied the snails which are hosts to the bilharzia parasite. During World War II he learned that American soldiers were returning home with the disease.

Twice the elderly doctor exposed himself to the parasites to make certain of infection. By Christmas, 1944, his condition had become grave. Because his value to science as a host to bilharzia was great he refused to accept treatment until the Spring of 1945.

Dr. Barlow was born in 1876, and is a graduate of the Medical School of Northwestern University in the class of 1906.

Josiah Kirby Lilly

Josiah Kirby Lilly, Chairman of the Board of Directors of Eli Lilly and Company, died on February 8th, 1948, at the age of 86.

Mr. Lilly was born in Greencastle, Indiana. His father, Colonel Eli Lilly, founded the company in 1876. Josiah Kirby delivered the first pound of a Lilly product to a nearby wholesale druggist. He was then 14 years old.

In 1880, he entered the Philadelphia College of Pharmacy and Science, from which he was graduated in 1882. Upon returning to Indianapolis he became superintendent of the plant, which position he held until his father's death in June, 1898, when the son was elected president of the company. After 34 years as president, Mr. Lilly became chairman of the board of directors in 1932. He retired from active service with the company on January 1st, 1945.

Under his management Eli Lilly and Company became one of the greatest organizations in the phramaceutical field, with international distribution.

In recognition of his services in civic, scientific, educational, and cultural organizations, eight colleges and universities conferred honorary degrees upon him.

University of Virginia School of Medicine

Dr. H. B. Mulholland, Professor of Practice of Medicine, has been appointed a member of the Council of the American Diabetes Association.

On January 19th, Dr. James L. Poppen of the Lahey Clinic gave a lecture on "Intracranial Aneurysms" in the series of lectures on the Post-graduate Program for House Officers.

Dr. Eugene B. Ferris, Associate Professor of Medicine at the University of Cincinnati, gave a lecture in this series on January 26th. Dr. Ferris spoke on the subject of "Clinical Evaluation and Management of Hypertension."

Dr. Samuel Vest, Professor of Urology, spoke on the subject of "Urinary Tract Infections" at the Academy of Medicine, which met in Raleigh, North Carolina, on January 30th.

At the Third Annual Conference on Rural Health, held in Chicago on February 7th, Dr. H. B. Mulholland spoke on the subject of "Health Councils."

The Regional Meeting of the Virginia Section of the American College of Physicians was held at the University of Virginia Hospital on February 12th. Members of the Medical School faculty and the University Hospital Staff participated in the program, which was presided over by Dr. Staige D. Blackford, President of the Virginia Section.

On February 13th, Dr. Oscar Swineford spoke on the subject of "Drug Allergy" at the meeting of the Danville and Pittsylvania Academy of Medicine in Danville, Virginia.

On February 20th, as guest speaker on the Postgraduate Program for House Officers, Dr. Reginald H. Smithwick of Harvard University spoke on the subject "Surgery of

the Autonomic Nervous System."

Dr. Charles L. Gemmill, Professor of Pharmacology, gave a lecture on "General Principles and Purposes of Tracer Studies" in the course in Medical Aspects of Radioactivity given at the Naval Hospital, Bethesda, Maryland, on February 23rd.

At the meeting of the North Carolina Conference on Rural Health, held at Chapel Hill on February 28th, Dr. H. B. Mulholland, Professor of Practice of Medicine, spoke on the subject "National Plan for Rural Health."

Dr. E. P. Lehman, Professor of Surgery, presented a paper entitled "Diagnosis of Infection Following Chemotherapy and Antibiotics" before the Chicago Clinical Conference on March 2nd.

On the recommendation of the Committee on Growth of the National Research Council, the grant of $9,500 from the American Cancer Society to Dr. C. L. Gemmill, Professor of Pharmacology, for the support of research in Effect of Drugs on Glycolysis, has been renewed.

On March 3rd, Dr. Preston B. Lowrance was selected as a Scholar in Medical Science by the Board of Directors of the John and Mary R. Markle Foundation. Dr. Lowrance was one of sixteen scholars selected from candidates nominated by accredited medical schools in the United States and Canada by regional committees, appointed by the Foundation. As a faculty member of the University of Virginia Medical School, Dr. Lowrance will devote the next five years to teaching and research in cardiovascular disease, in support of which he will receive from the Foundation $25,000—$5,000 annually for five years.

On March 16th, as guest speaker on the Postgraduate Program for House Officers, Dr. Paul B. Beeson, Professor of Medicine at Emory University, spoke on the subject, "Fever."

Duke University School of Medicine

A month's course in Medical Mycology, under the direction of Dr. Norman F. Conant, is to be offered at Duke University School of Medicine and Duke Hospital, Durham, June 28th-30th. The course will be offered every day in the week, except Sunday, and has been designed to insure a working knowledge of the human pathogenic fungi within the time allotted.

Emphasis will be placed on the laboratory as an aid in the diagnosis of fungus infection. Work with patients, clinical material, cultures and laboratory animals will serve as a basis for this course. Also, an opportunity to study pathological material, gross and microscopic, will be given those whose previous training would allow them to obtain the greatest benefit from a study of such material.

The number accepted for the course will be limited and applications will be considered in the order in which they are received. An attempt will be made, however, to select students on the basis of their previous training and their stated need for this type of work.

A fee of $50 will be charged for this course, upon completion of which a suitable certificate will be awarded. Please direct inquiries to Dr. Norman F. Conant, Duke University School of Medicine, Durham, N. C.

The Second District (N. C.) Medical Society met at New Bern on the night of February 18th as guest of the Craven County Medical Society. The meeting was called to order by Dr. William Willis of the Craven County Medical Society and, after a delicious turkey dinner, Dr. W. L. Thomas, Assistant Professor of Gynecology at Duke, read an excellent paper on Psychosomatic Gynecology. This paper was discussed by Dr. Leslie Lee of Kinston, Dr. John C. Tayloe of Washington, and Dr. Paul Whitaker of Kinston. Dr. R. D. McMillan, Secretary of the State Medical Society, made an address which was greatly enjoyed by all the members. It was decided to have the next year's meeting at Kinston, with Dr. Floyd Wooten as President and Dr. Leslie Lee as Secretary, after which the meeting adjourned.

John C. Tayloe, M.D., Councillor.

Mercy Hospital Staff Annual Meeting

Mercy Hospital, of Charlotte, held its annual meeting and banquet in the hospital cafeteria on January 20th. A year of great service was reported and of gratifying progress on the vast building program.

Officers elected for the next year:

President—Dr. C. H. Robertson.

Vice President—Dr. G. W. Black.

Secretary—Dr. Colin Munroe.

Edgewood to Move to Orangeburg

Dr. Orin R. Yost has purchased the Hawthorne Aeronautic Flying School at Orangeburg, S. C. The 115 acres with twelve permanent construction buildings will increase the capacity of Edgewood from 60 patients to 350.

It is expected that the removal to the new location will be made April 1st.

William Francis Martin, M.D., announces the association of R. Douglas Neal, M.D., in the practice of General Surgery, Suite 608, Professional Building, Charlotte, North Carolina.

Dr. R. B. C. Franklin has resigned the position of Health Officer of Surry County, N. C., to become head of the Wilson County Health Department and Tuberculosis Hospital.

Dr. Clarence B. Foster, Charlotte, announces the removal of his offices for the practice of Ophthalmology to 219 Travis Avenue.

Dr. J. F. McGimsey, Jr., of Morganton, N. C., has located at Andrews. His graduation in medicine from Harvard was followed by an interneship in Philadelphia, by three years' service in the Medical Corps of the United States Army, and by a year's special study in Erlanger Hospital, Chattanooga.

MARRIED

Mr. and Mrs. James Ralph McCauley, of Richmond, announce the marriage of their daughter, Helen Arnette, to Mr. George Byron Lacy, Saturday, the fourteenth of February, Mount Vernon Place Methodist Church, Washington.

Dr. Joseph L. Wilkerson, of Rutherfordton, N. C., and Miss Evelyn Estelle Isenhour, of Woodleaf, were married on January 24th.

Dr. William Edward Laupus, of Seymour, Indiana, and Miss Evelyn Estelle Fike, of Ahoskie, North Carolina, were married on March 6th.

Dr. Harvey Craig May, Jr., of New Orleans, and Miss Patricia Taylor Boren, of Gastonia, N. C., were married on March 6th.

Dr. William Dulaney Lewis, Jr., of Richmond, and Miss Ruby Louise Martin, of Roanoke, were married on March 6th.

Dr. Jack Thomas Gale and Miss Evon Fisher Harris, of Kinsale, Virginia, were married on February 17th. Dr. Gale will practice in Portsmouth.

DIED

Dr. Robert Sterling Montgomery, 37, South Hill, Va., physician and civic leader, died February 10th at his home. He had been ill for several years and retired from medical practice in 1946.

He was graduated from Randolph-Macon College in 1930. There he was president of the student body, the student council and the athletic association, and was a member of Sigma Chi Epsilon and Omicron Delta Kappa fraternities. He received his M.D. degree at the Medical College of Virginia in 1934, and while there was president of the athletic association and a member of Sigma Zeta, Chi Phi and Phi Chi fraternities.

Dr. Montgomery interned at St. Luke's Hospital in Richmond in 1934-35 and was a surgical interne at Medical College of Virginia in 1936.

The son of Dr. and Mrs. C. V. Montgomery, of South Hill, he had practiced medicine with his father since 1937. He was a past president of the South Hill Chamber of Commerce, a member of the board of the proposed memorial hospital and former scoutmaster of the South Hill Boy Scouts.

Dr. Guy Smith Kirby, of Marion, N. C., died February 15th in an Asheville hospital, where he had bbeen a patient for a number of weeks.

He was born in Charlotte in 1874 and graduated from Davidson College, later receiving his medical training at the Medical College of Virginia in Rchmond. He had practiced medicine at Marion for more than 50 years.

Dr. Kirby was serving his 30th year as surgeon for the Southern Railway and his 20th year as county physician of McDowell County.

He had served as chairman of the board of State Hospital at Morganton for 20 years, chairman of the board of trustees of the Marion General Hospital for most of the time since it was opened.

Dr. Reuben MacBrayer died at his home at Southern Pines on February 21st. He was born at Asheville in 1891, the son of Dr. Lewis B. MacBrayer and Lillie Cordelia MacBrayer. He received his A.B. degree from Wake Forest College in 1911. In 1916 he was graduated from the University of Pennsylvania Medical School and almost immediately thereafter entered the Army as a medical officer. He was on active duty in Mexico prior to World War I and later was on active duty in this country. After World War I he was on the staff of the N. C. Sanatorium for a time. He later practiced internal medicine in Shelby, N. C. From there he went to the Yale Medical School and Hospital, and later was associate pathologist of the post-graduate hospital of Columbia University. In 1937 he was appointed the Medical Director of the Ciba Pharmaceutical Products, Inc., Summit, N. J., and continued in that capacity for the next five years. During this period he was also consultant in endocrinology and associate in pathology for the Overlook Hospital in Summit, N. J. Dr. MacBrayer volunteered for medical duty in World War II on the day following Pearl Harbor and reported for active duty as a major in the Medical Corps in January, 1942. He continued on active duty throughout the period of the war, serving one and a half years in the E. T. O., first as commanding officer of the 110th Station Hospital and later as hospital inspector for the E. T. O., where he was in the office of the chief surgeon, E. T. O. Since his retirement, Colonel MacBrayer had been making his home at Southern Pines. He is survived by his widow, Mrs. Myrtle F. MacBrayer; a brother, Lewis MacBrayer; and a sister, Mrs. Sadie McCain. Dr. MacBrayer was a member of the American Medical Association, the N. C. State and Moore County Medical Societies. He was a Fellow in the American College of Physicians, a Fellow of the N. Y. Academy of Medicine, and a member of the Association of Military Surgeons of the U. S. A.

Dr. Richard B. Whitaker, 61, a practicing physician at Whiteville, N. C., for 36 years, died March 14th after a cerebral hemorrhage. He had appeared to be in normal health until 24 hours of his death.

A native of Trenton, N. C., Dr. Whitaker was a graduate of Trinity College (now Duke University) at Durham, and studied medicine at the Medical College of Virginia. He served in the Medical Corps of the Army during World War I.

Dr. Whitaker's survivors include a son, Dr. R. B. Whitaker, Jr., of New York City, and a brother, Dr. Paul F. Whitaker, of Kinston.

Dr. Tilman Carlisle Britt, 53, of Mt. Airy, N. C., died suddenly Feb. 20th, of a heart attack while vacationing in Sanford, Fla. He was born in Robeson County, received his pre-medical training at Wake Forest College, was graduated from Jefferson Medical College in Philadelphia, and did post-graduate work at Harvard.

He was health officer of Surry County for one year before entering private practice in Mount Airy in 1932.

Dr. Perry Watson Miles, 65, long chief-of-staff at Danville Memorial Hospital and a former vice-president of the Medical Society of Virginia, died Feb. 21st at Johns Hopkins Hospital.

Dr. Miles was graduated from the Medical College of Virginia in 1908, later took special work in internal medicine at Harvard. His first practice was at Milton, N. C., and he later practiced at Greensboro, removing to Danville in 1919 to engaged in general practice.

Dr. Miles served as a member and chairman of Danville's school board and organized the first playground project in the community.

Dr. R. E. Mitchell, 63, Richmond eye, ear, nose and throat specialist, died at his home Feb. 20. He was born in Johnson City, Tenn., and studied at the Medical College of Virginia, where he was graduated in 1913 with a pharmacy degree, as well as a degree in medicine.

Dr. Mitchell received his graduate training in hospitals at Brooklyn, Boston, and Philadelphia.

Dr. Harvie DeJarnette Coghill, 63, director-psychiatrist of Memorial Guidance Clinic, Richmond, died Feb. 6th at a Richmond hospital. He was a graduate of the University of Richmond, attended William and Mary College and Harvard University and received his medical degree at the Medical College of Virginia.

Recently Dr. Coghill had worked as coördinator of the National Congress of Mental Hygiene and helped to prepare for the meeting this Summer in London.

Dr. Ernest Mosby, 71, died at his home, "Hill Top," Waynesboro, Va., February 5th, following an extended illness. He was graduated from the Medical College of Virginia in the class of 1900, interning in the United States Marine Corps Hospital, Boston.

He had carried on a large practice, general and pediatric, at Waynesboro since 1904.

Dr. Alfred F. Hocker, 45, distinguished for his contribution to treatment of thyroid cancer with radioactive iodine, died of a heart attack at his home in New York City, February 12th. Dr. Hocker was a member of a thyroid cancer team developed between Memorial Hospital and the Massachusetts General Hospital, of Boston.

Dr. Joseph Henry Mitchell, 84, of Dillwyn, Va., died February 11th, at a Richmond hospital. He was graduated from Baltimore Medical College in 1895 and had practiced in Buckingham County for 40 years.

Dr. Irving S. Barksdale, 49, a widely known Greenville, S. C., physician who served 17 years as Greenville Health Commissioner, died February 10th, after a sudden illness.

Early in his professional career Dr. Barksdale taught physiology at the Medical College of the State of South Carolina. For the last three years he had engaged in private practice.

Dr. Barksdale was born in Richmond, Va., and attended the University of Richmond and the Medical College of Virginia. He obtained his degree in medicine at Yale University in 1923.

Dr. Benjamin A. Doggett, of Norfolk, died on February 27th at the age of 55. He was a graduate of the Medical College of Virginia in the class of 1915.

Dr. W. Dennis Kendig, of Kenbridge, Va., a member of the State Senate, died of a heart attack March 16th, at Farmville, Va., shortly after he had concluded a speech before the Farmville Rotary Club.

Dr. Kendig was 67 and had practiced his profession in Lunenburg and adjoining counties for more than 40 years. He was active in civic and commercial affairs in the Southside.

He was a member of the Board of Visitors of the Medical College of Virginia and a director of the Bank of Lunenburg. He was a former president of the Fourth District Medical Society, a former vice-president of the Medical Society of Virginia.

Dr. Kendig was serving his first term in the State Senate. He was a native of Spotsylvania County and was a graduate of the class of 1905 of the Medical College of Virginia.

Dr. Paul W. Fetzer, 59, died March 11th at his home at Reidsville, N. C., following a long illness. He received his early education in the local public schools. He was graduated from the University of North Carolina and from the Medical School of the University of Virginia and, later studied pediatrics at Columbia University, New York.

Dr. Fetzer served during World War I. in the United States and overseas, as a medical officer. He returned to practice at Mayodan, and later at Madison. In 1930 he moved to Louisville, Ky., where he served as a medical examiner with the Veterans Administration for more than three years. He returned to Reidsville in 1934. He retired from active practice in May, 1947.

Dr. Robert B. Miller, 70, Goldsboro, N. C., physician for 44 years, died of a heart attack March 6th at his home.

Dr. Miller was born in Goldsboro, where he received his early schooling, was graduated in letters from the University of North Carolina, and won his medical degree at the Medical College of Virginia in 1898. He took his interneship at St. Vincent's Hospital, Norfolk, Va., and did post-graduate work in New York.

Dr. Miller went with the Atlantic Coast Line Railroad in 1899, was superintendent of the ACL hospital at Rocky Mount, 1900 to 1904. He had been practicing in Goldsboro since 1904.

Dr. Memory Ford Boyles died in a Charlotte hospital, January 22nd, of arteriosclerotic heart disease, with recent myocardial infarction.

He was a graduate of the Medical College of Virginia, Richmond, class of 1917. A native of North Carolina he spent much time in the Northern and Western States. He was Resident Physician and First Assistant Surgeon in the County Hospital in El Paso, Texas. Dr. Boyles did general practice in northern Wisconsin and Pennsylvania and California, coming to Charlotte from the last-named State.

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PATCH TESTS should not be applied in the acute stage of the eruption; in the subacute stage the skin is much less liable to be hypersensitive. Ideal patch-testing material is that which can be used in the same state or concentration, as is the substance suspected of irritating the skin; e.g., nail polish is applied to the forearm undiluted and uncovered. A fabric or a powder should be moistened preferably with the patient's own perspiration, then covered with a larger patch of cellophane and held in position by adhesive, or scotch tape or bandaging if there is a history of previous reaction to adhesive.—C. W. Lane, St. Louis, in *Miss. Val. Med. Jl.*, March.

TURNBULL (*Amer. Jl. Dig. Dis.*, Jan.) says "I find that 93% of my cases are relieved of their headaches by avoiding foods to which they are sensitive."

OXYGEN THERAPY—The main indications are as follows: cardiac decompensation, pulmonary infections, coronary disease, asthma, shock, hemorrhage, respiratory depression, hyperpyrexia, thyrotoxicosis, gas poisoning and alcoholism. —J. F. Morris, in *W. Va. Med. Jl.*, Dec.

BOOKS

BRITISH SURGICAL PRACTICE: Under the General Editorship of Sir Ernest Rock Carling, F.R.C.S., F.R.C.P., Consulting Surgeon, Westminster Hospital, and J. Patterson Ross, M.S., F.R.C.S., Surgeon and Director of Surgical Clinical Unit, St. Bartholomew's Hospital, Professor of Surgery, University of London. In eight volumes with Index volume. Volume I. *The C. V. Mosby Company,* 3207 Washington Blvd., St. Louis 3. 1947. $15.00 per volume (and $5 for the 9th or index volume) or $125.00 for the set.

British Surgical Practice is being published to cover comprehensively and as concisely as is practicable every condition at all likely to be encountered in surgical practice. The entire field is covered by surgeons of the greatest eminence, which assures a work of the very highest standard.

Volume I, the only one now ready, subjects include: Abdominal Emergencies; Abortion; Abcess; Acidosis; Adhesions; Adiposity; Adrenal Glands; After-Care; Allergy; Amputations; Anesthesia; Anus, Artificial; Anxiety States; Appendicitis; Arteries; Arthritis; Artificial Limbs; Artificial Pneumothorax; Asepsis and Antisepsis; Asymmetry; Autonomic Nervous System.

It will be seen that a good many of these subjects are commonly considered medical rather than surgical. However, these are medical conditions which are prone to complicate conditions which bring the patient to a surgeon, and a work of such comprehensiveness undertakes to cover pretty nearly everything that is apt to be found wrong with a surgical patient and to influence the prognosis and treatment.

Surgeons on this side the Atlantic will wish to inform themselves thoroughly on surgical practice in Britain, to compare the methods which find approval there with those preferred here, and to see what each group can learn from the other.

Subsequent volumes will be noticed as they come from the press.

OPERATIVE GYNECOLOGY, by Harry Sturgeon Crossen, M.D., Professor Emeritus of Clinical Gynecology, Washington University School of Medicine; Consulting Gynecologist to The Barnes Hospital, St. Louis Maternity Hospital, etc.; and Robert James Crossen, M.D., Assistant Professor of Clinical Gynecology and Obstetrics, Washington University School of Medicine, Assistant Gynecologist and Obstetrician to The Barnes Hospital and The St. Louis Maternity Hospital, etc. Sixth edition, entirely revised and reset with 1334 illustrations, including 30 in color. *The C. V. Mosby Company,* 3207 Washington Blvd., St. Louis 3. 1948. $15.00.

For more than 30 years Crossen has been recognized as an authoritative work on gynecology. In this, the 6th, edition special emphasis is placed on two great advances in operative gynecology—the prevention of cancer in certain organs, and the development of successful palliative treatment of uterine myoma in cases of patients otherwise so afflicted as to make hysterectomy inadvisable.

The text of every chapter has been gone over for possible revision and additions have been made as necessary to make the whole include the most advanced knowledge of the day. No necessary detail has been omitted. The author writes at length under the headings: Is Operation Indicated? What Is the Preferable Time for Operation? Is More or Less Conservatism Advisable? The Technic of An Abdominal Operation is described minutely from incision to dressing, and After-Treatment has a whole chapter.

The subject of anesthesia is completely covered. There is a chapter on Medico-Legal Considerations which discusses consent to operation, foreign bodies left in the abdomen, persistence of symptoms after operation, and other pertinent points.

If anything of importance to Operative Gynecology has been left out it would be hard to imagine what it is.

THE EPITHELIA OF WOMAN'S REPRODUCTIVE ORGANS: A Correlative Study of Cyclic Changes, by George N. Papanicolaou, M.D., Ph.D., Professor of Clinical Anatomy, Cornell University Medical College; Herbert F. Traut, M.D., Professor of Obstetrics and Gynecology, University of California Medical School; and Andrew A. Marchetti, M.D., Associate Professor of Obstetrics and Gynecology, Cornell University Medical College. *The Commonwealth Fund,* 41 East 57th St., New York 22. 1948. $10.00.

For 30 years has Papanicolaou applied himself earnestly to cytologic studies related to sex physiology. For nearly 10 years he has been applying a special technic in the study of vaginal smears in the diagnosis of early cancer. From time to time different associates of this Cornell investigator have collaborated with him. This volume gives an instructive account of the conduct of this research which has now been brought to the triumph of having special laboratories for the application of this diagnostic measure set up in a tremendous proportion of the leading hospitals in this country and abroad.

Every doctor who has to do with women patients should learn at first hand the essential facts about the development and application of this important aid to life-saving by early diagnosis of uterine cancer.

TREATMENT IN GENERAL PRACTICE, by Harry Beckman, M.D., Professor of Pharmacology, Marquette University School of Medicine, Milwaukee, Wisconsin. Sixth edition. 1129 pages. *W. B. Saunders Company,* Philadelphia and London. 1948. $11.50.

Since the first edition appeared in 1930, subsequent editions have been necessitated at shorter and shorter intervals by medical advances being made more and more rapidly. Much of the book has been rewritten in entirety. Included for the

first time are a score of conditions whose increased prevalence or recognition demands that their treatment be described. Among these are a number of infestations with rare animalculae, Löffler's syndrome, penicillin reactions, management, newly differentiated anemias, Reiter's syndrome, thrombosis and embolism.

From edition to edition Beckman's "Treatment in General Practice" shows that its author has kept steadily in mind the objective expressed in the first edition, that of supplying the deficiencies of the instruction in therapeutics given in medical schools and hospitals generally. The author winnows the chaff from the sound grain of new therapeutic offerings and presents us with the worthwhile measures neatly arranged and plainly described.

TREATMENT BY DIET, by Clifford J. Barborka, B.S., M.S., M.D., D.Sc., F.A.C.P., Assistant Professor of Medicine, Northwestern University Medical School, Chicago. Fifth edition with 14 plates, including 13 in color. *J. B. Lippincott Company*, East Washington Square, Philadelphia 5, Pa. $10.00.

Part I is on Diet in Health, Part II on The Application of Diet Therapy, Part III on Diet in Disease, and Part IV deals with Routine Hospital Diet.

A proper introductory is a consideration of the evolution of our diet. Emphasis is placed on adequate protein and on various dietary elements entirely necessary but in minute quantities. The subject of vitamins is adequately covered without great waste of words. Considerable flexibility is counselled, based on individual needs as shown by appetite and other individual considerations. The reader will find reliable guides for prescribing basic diets in various disease conditions and adjusting them to the individual patient. The dealing with diet and dental caries is particularly well done.

It would be hard to find a more useful coverage of this subject.

THE Rh FACTOR IN THE CLINIC AND THE LABORATORY, Joseph M. Hill, M.D., and William Dameshek, M.D., Editors. *Grune & Stratton*, Inc., 381 Fourth Avenue, New York City. 1948. $4.25.

This little book on this important subject represents the collaboration of more than a dozen authorities. The whole contains all that is necessary to inform the inquiring doctor of why he should be interested in the subject, which of his patients to investigate as to the Rh factor, and how to safeguard his patient or patients.

Auscultation of the Abdomen Must Be Done Just So (Hamilton Bailey, London (Eng.), in *Clinical Medicine*, Nov.)

Auscultation of the abdomen is of cardinal importance in the diagnosis of paralytic ileus. It is essential to be seated, for the cup of the stethoscope must be kept still, perhaps for five full minutes. One often sees the stethoscope applied here and there to the surface of the abdomen, for a matter of seconds; this is useless.

Apply the sethoscope firmly to the skin just below and to the right of the umbilicus and keep it absolutely still. If there is a gurgle in any part of the abdomen it will be heard at this central "listening post." It must be understood we are not concerned here with tumultuous hissing, rumbling sounds associated with intestinal colic. What we are so anxious to know is—is the intestine paralyzed? By listening intently and long, it may be that the clinician will heart the faint and fleeting sweet music of a tinkling runnel—proof indeed that peristaltic action, though feeble, is not completely stayed.

Medical Aspects of Air Travel.—If the erythrocyte count is below 2,500,000 blood should be transfused when flying is necessary. Infected sinuses are often emptied during ascent but the ostia may close in the descent and cause pain. Constricting nose drops or inhalant should be used before descent. Babies tolerate flight very well. Formulas should be carried in iced bottles and warmed just before feeding.—*Shillito.*

OBSTETRICS

H. J. Langston, M.D., *Editor,* Danville, Va.

HEART DISEASE AND PREGNANCY

Most doctors are called upon to advise women with heart disease whether or not to bear children. Most doctors have the care of pregnant women with heart disease. Practical opinions on the subject offered by a St. Louis obstetrician[1] are passed on to our readers.

There are three distinct periods of pregnancy in which heart failure is likely to occur. The first of these, during which a small number of initial failures take place, is at the 16th to 20th week, the time at which the placental circulation is becoming established. From the 28th to the 36th week the load of pregnancy approaches its peak. It is then that the largest number of diseased hearts show the first signs of congestive failure. There is an easing of the load during the last month. With the advent of labor and directly after there comes an increased incidence of initial failure, usually secondary to blood loss, toxemia, anesthetic, etc.

The pregnant cardiac must be impressed that each day will represent a uniform expenditure of effort, with reasonable bed rest when symptoms of failure supervene. Occasional holidays, shopping expeditions, or house cleaning bouts must be abstained from. Weight is checked weekly; a gain beyond two pounds per month requires further restriction of diet and activity. Diet will be low in salt, fluids, carbohydrates and fats, high in vitamins and protein. Ferrous sulfate, 15-20 grains per day, will insure against anemia and its demand for greater cardiac output.

Under such a regimen the majority of cardiac cripples will do well. If, in spite of precautions, signs of congestive failure appear, the patient should be put to bed and kept there under close observation, preferably in hospital, until she is delivered. In that border-line group who may exhibit signs of circulatory and respiratory embarrassment such as are seen in normal pregnancy but without definite evidence of heart failure, immediate and drastic reduction in activity must be enforced.

So long as labor progresses normally and without signs of cardiac embarrassment, the usual routine may be followed. Adequate sedation should be given and forceps delivery is probably wise as soon as the cervix is fully dilated. If symptoms of failure present themselves digitalis is administered and the labor terminated by the quickest means compatible with safety of mother and child, usually forceps delivery; cesarean section is reserved for the occasional case of congestive failure occurring early in labor.

1. J. A. Hardy, Jr., St. Louis, in *Miss. Val. Med. Jl.*, Mar.

A woman known to have heart disease should be *advised* not to become pregnant. It is not the function of the physician to decide who shall and who shall not undertake the risks of pregnancy. It is his duty to present the facts clearly to the patient so that she may make an enlightened decision.

A Report on Ten Proved Cases of Histoplasmosis
(I. L. Bunnell *et al.*, in *Pub. Health Rep.*, Mar. 5th)

Histoplasmosis is a protean disease which may simulate acute or chronic disease of the lungs, heart, gastrointestinal tract or the blood-forming system. More than one case has been diagnosed and treated as tuberculosis.

Histoplasmosis has been considered a rare, uniformly fatal disease. The total number of cases reported is less than 100. It is suspected that a mild, nonfatal form may be widely prevalent.

All patients were skin-tested with tuberculin (PPD-S. 0.0001 mg.) and histoplasmin (H-15, 1:1000. Nine diagnoses were confirmed by the isolation of Histoplasma capsulatum from cultures, and one by the typical microscopic appearance of intracellular parasites. In each case the diagnosis was substantiated by more than one laboratory test. While the complement fixation and skin tests individually or jointly may not be diagnostic, their agreement in eight of the 10 cases is worthy of note.

Herpes Zoster Cured Promptly by Penicillin
(S. M. Casey, Huntington, Ind., in *Modern Medicine,* March)

In the last four cases of typical herpes zoster under my care, an intramuscular dose of 300,000 units of penicillin in wax and oil has promptly aborted the attack with prompt relief of the symptoms and disappearance of skin lesions.

Folic Acid No Substitute for Liver Extract
(R. L. Haden, Cleveland, in *Jl. A. M. A.*, Jan. 31st)

Liver extract is almost a perfect treatment for pernicious anemia. There is no evidence that the addition of folic acid to liver extract enhances its value in pernicous anemia. It only adds to the cost. In patients allergic to liver extract the cases can usually be handled by changing the brand of liver extract used. In our large series my colleagues and I have encountered no patient whom we could not treat with some liver extract.

Not All Tuberculosis Diagnosable by X-rays
(M. L. Furcolow *et al.*, in *Pub. Health Rep.*, Dec. 5th)

In regions where histoplasmin sensitivity is widespread, pulmonary infiltrations as well as calcifications are frequently nontubebrculous, and can be differentiated from tuberculosis only by skin tests at present.

Liver Extract.—If a particular brand of liver extract does not produce a therapeutic effect within two weeks, another should be used. Classification of the condition as refractory is justified only if the case is clearly anomalous or if all preparations of liver or desiccated stomach have first been thoroughly tried.—*The Lancet.*

Early ambulation after delivery returns the new mother to normal physical well-being much more rapidly than did the time-honored 10- to 14-days in bed after delivery. —*Warrenburg.*

Hypertension in a young person may be due to coarctation of the aorta. The blood pressure in the legs is usually lower than in the arms—valuable for diagnosing this condition.

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JAMES M. NORTHINGTON, M.D., Editor

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ADDRESS*

Contributions of Urology to Life Expectancy

Harold P. McDonald, M.D., Atlanta

THE very great honor you bestow upon me by inviting me to your meeting and giving me this place on your program this evening is deeply appreciated. I should like to make a few observations on life expectancy. Particularly I should like to point out some of the efforts of medical science toward increasing life expectancy. Being a urologist I naturally would be more familiar with some of urology's contributions. The efforts of all medical scientists are due credit and it is not for me to say to whom most of the credit is due. I should like also to say something about government control of medicine and of doctors. Especially I should like to show how government controls and government demands led to degrading of the medical profession in Nazi Germany and caused it to sink to hitherto unknown depths of professional immorality and depravity.

The question of how long a person may expect to live is of interest to everyone here. The span of normal life has increased remarkably with the progress of the science of medicine. Was it not Alexander the Great who wept at the age of 29 because there were no more worlds to conquer? According to inscriptions found on tombstones in Ancient Rome the average span of life of the Romans was somewhere between 20 and 30 years.

*Delivered by Invitation to the Meeting of the Tri-State Medical Association of the Carolinas and Virginia, held at Charleston, February 9th and 10th.

The next reliable information regarding length of life came to us through the English astronomer, Halley (of Halley's comet fame). Halley's investigation of the mortality in the City of Breslau during the period around 1690 indicated a span of life of about 33 years.

Life tables compiled from Swedish records indicated a mean span of life of 34 years in 1750. This had jumped to 41 years by 1850. In this country in 1850 the average span of life was 40 years. It was about this time that discoveries useful to the doctor began to appear.

Many hundreds of years ago surgery was done by barbers. The red-and-white striped pole is said to have been the symbol of the ancient barber surgeons and no doubt it was kept splattered with the blood of their unfortunate victims. The cutter for stone, so called because of his skill and proficiency in cutting for bladder stone, used to go about the country taking along with him several helpers, who held the patient while one of the cutters plunged the knife into the bladder through the perineum and inserted his fingers to remove the stone. You can well imagine the usual results.

Until the discovery of ether anesthesia, progress in surgery was slow. Ether anesthesia, first used in 1842 by Dr. Crawford W. Long in Jefferson, Georgia, gave great impetus to modern surgery. This was followed closely by the discovery by Pasteur

of the existence of microorganisms and their effects on wounds. Joseph Lister then gave to the world antisepsis and in 1867 wrote his paper on "A New Method of Treating' Compound Fracture, Abscess, etc." Lister was the father of modern surgery and antisepsis was followed by asepsis.

The application of knowledge gained from the continued scientific advances has increased the average life span to around 65 years at the present time. It is true that a great part of this gain in expectancy has been due to control of infant mortality and elimination of childhood diseases to a large extent. It is also true that expectancy of life has increased in the older group. It is in the older group, that is those in the 5th, 6th and 7th decades of life, that modern urology has helped to increase the expected span of life.

Urology was really born in 1886 when Nitze perfected the cystoscope. From that time until the present day there has been a steady march of progress toward the solution of genito-urinary disorders.

The year 1886 also marks the birth in New York of the American Association of Genito-Urinary Surgeons. In 1902 the American Urological Association was organized. These two organizations have served ever since to mold urology and give impetus to original thought and investigation. From its very beginning urology began to occupy a favored position in medical science. Every new discovery, every new drug, almost every newly discovered technique appeared to have a practical application in the field of urology. The roentgenray, by outlining renal stones, later by outlining ureteral and pelvic contours on pyelograms, has been of the greatest help in making more exact urological diagnoses.

The discovery of uroselectan by Von Lichtenberg for excretory visualization of the urinary tract, and its later refinements, was another major step forward. The urologist can now better evaluate the comparative function of each kidney and in many instances where surgery is necessary he is able to preserve half a kidney, removing only the diseased portion of the organ. The development of plastic repair operations for hydronephrosis has made feasible the saving of many good kidneys formerly sacrificed.

Prominent among the efforts of medical science, to increase life expectancy, has been the development of modern prostatic surgery. Surgery of the prostate was attempted as early as 1550 by Ambroise Paré, who devised an instrument for relief of prostatic obstruction. His results were poor and so were the results of countless other surgeons until modern surgery began.

Shortly before 1900 open prostatectomy, both by suprapubic and perineal route, was successfully done by several surgeons. Hemorrhage and lack of understanding of the factors of blood chemistry caused the mortality rate to be very high at first.

Foremost among the early surgeons who did notable work in surgery of the prostate gland were Keyes, Belfield, Fuller, Watson, Wishard and McGill of Leeds, and Freyer of London. A little later Hugh Young, A. J. Crowell and Edgar G. Ballenger made large contributions to progress in this field.

The discovery of the importance of blood chemistry determinations and drainage for those patients with elevated blood protein constituents greatly reduced the mortality following prostatic operations.

The development of modern transurethral surgery actually began with the Young punch for prostatic bars which was introduced in 1910. The Young punch instrument had no means of visualizing the tissue to be removed, nor had it any means of controlling hemorrhage, and so its use was limited.

The introduction by Collings in 1923 of the Collings knife electrode, made possible by advances in electrical spark gap machines, was soon followed by Caulk's prostatic punch. With this instrument sizable bits of obstructing prostate were removed and the hemorrhage completely controlled. Further development of electro-surgical units and the invention of the Stern resectoscope gave us the first prostatic resection in 1926. Bakelite sheaths were introduced by Thompson Walker and the modern resectoscope by McCarthy combining the bakelite sheath with the McCarthy foroblique lens system.

To a South Carolinian should go a lion's share of the credit for the development of the transurethral operation for prostatic resection. Dr. T. M. Davis of Greenville pioneered in this field and soon a wave of enthusiasm for the transurethral operation swept the country. Perfection of technique of transurethral prostatic resection has brought a lower mortality rate and has afforded relief to many patients on whom it would be unsafe to do open operation.

Transurethral prostatectomy has not replaced open prostatectomy nor is it likely to do so. The majority of operations for relief of prostatic obstruction for the past 15 years have been done by the transurethral route. It is likely to continue to be the most popular method.

Open surgery of the prostate has, likewise, made great advances. All the improvements in diagnosis, laboratory studies and chemotherapy discoveries have aided in open operations as well as in transurethral operations. Utilizing these advantages the modern suprapubic or perineal prostatectomy only faintly resembles that done in earlier days.

Recently there has been added another approach to the prostate gland. This is known as the retropubic prostatectomy, and while it is not expected

to supplant the other methods, retropubic prostatectomy is undoubtedly here to stay.

Renal surgery has made equal strides toward the goal of perfection as has prostatic surgery. It is here, too, that the use of chemotherapeutic agents in addition to the time-honored maxim of relief of obstruction has been so effective. Conservative renal surgery, that is, salvage of a part of a kidney when possible and repair of hydronephrosis when feasible instead of nephrectomy, has been a great forward step.

"Captain of the Men of Death" was the title given to pneumonia by Sir William Osler. In our time the captain has been deposed and cancer has assumed command.

In cancer of the genitourinary tract early and wide excision is the most effective cure. New developments in management of cancer of the prostate have been remarkable. Your president is going to speak on cancer of the prostate and I will not dwell on this subject except to say that the patient with cancer of the prostate today has a much greater life expectancy than he did ten years ago.

Chemotherapy has kept pace with other developments in the modern science of medicine. New chemicals deadly to harmful bacteria and relatively nontoxic to man have been produced, tested and made available to everybody. The cures effected by modern chemotherapeutic drugs, only a few years ago proclaimed as near-miraculous, are but commonplaces today. The sulfa drugs, penicillin and streptomycin are of immeasurable aid to us in controlling infections formerly difficult or impossible to control.

These forward steps, and many others, have been accomplished under a system of free medicine and free enterprise. The prolonging of life and the increasing of the life span is the aim and purpose of American scientists.

A great deal is being said today about government control of medicine. Proponents argue that under government control the health of the nation would be raised and life expectancy would be increased to a maximum. There are admittedly improvements needed in medical care, more doctors are needed but they must be properly selected and trained. Those of our political leaders who are advocating government control would do well to study the situation brought about in Nazi Germany.

Beginning with the insurance methods instituted by Bismarck there began to be bred into the minds of the German doctors a disregard for the underprivileged. The German scientists and doctors were among the world's leaders up to he time of the Kaiser and the first World War. The "master race" ideology and the desire for elimination of the weak led to the first of the Nazi atrocities, which was the practice of euthanasia started in 1936 by a secret edict of Hitler. Many thousands of the aged, the insane, the insurable and the deformed were put to death in gas chambers long before the war began. These gas chambers were to be the pattern for those set up in concentration camps and prisons for the mass killings where admittedly 25,000 or more persons per week were gassed to death during the first four years of the war. Records kept by the Nazis show that at least 4½ or 5 millions of persons were put to death in this manner.

Numerous atrocities brought out and admitted at the Nuremberg trials showed the depths to which medical science in Germany had sunken while under Nazi control.

"It can't happen here," we say, but it should be obvious that under political domination the doctor is forced to play politics and the true and proper relationship of the doctor to the patient is lost.

Continued efforts on the part of free medical scientists will continue to push the span of life upward. The processes of ageing are continuing to be studied and additional means of combatting and deferring old age are developing. Certain diseases that so far have resisted cure or solution will in time be eradicated. The problem of cancer will some day be solved. The goal is forever onward.

—57 Forsyth Street, N. W.

BLOOD TESTS FOR CANCER?

According to the March issue of *The Diplomate*[1] two blood tests for cancer announced at the recent International Cancer Congress promise to lead to a test for the diagnosis of cancer in its early stages. One of them is suggested as "a valuable screening agent." This test, devised by Dr. Maurice Black, of the Brooklyn Cancer Institute and New York Medical College, is made with two dyes, brilliant cresyl blue and methylene blue. The dye is added to blood plasma in a test tube and the tube put in boiling water. If the patient has cancer, the brilliant cresyl blue at the end of 10 minutes will have turned to lavender and the plasma and dye will form a clot. If the patient does not have cancer, this clot will be grayish-white. The methylene blue is completely decolorized in less than 10 minutes if the patient does not have cancer. If he has cancer, it takes his blood plasma more than 10 minutes to decolorize the dye. In 681 cases the test had an accuracy of 86 per cent.

The second blood test, devised by Dr. Louis Herly, of Columbia University, is made with ultraviolet light. Normal blood serum seen under filtered ultraviolet is turbid and glows with fluorescence. Blood from animals and human beings with cancer fails to glow and is clear. When the cancer has been removed by surgery, the blood serum is again turbid and glows under the ultraviolet light. When the cancer has been treated by x-rays, radium, or nitrogen mustard, the serum has a murky, bluish color under the ultraviolet light.

Comment.—It would be in order for everyone having charge of a diagnostic laboratory to inform himself fully as to these tests. Every doctor will eagerly await information of further developments.

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Unorthodox Treatment in Coronary Occlusion

Robert Wilson, Jr., M. D., Charleston, South Carolina

THE CARDINAL PRINCIPLE of treatment in acute coronary occlusion is rest. Physical rest is necessary to prevent any undue strain on the heart muscle while it is in a damaged condition, to minimize the possibility of the development of heart failure, and to allow the normal healing processes to proceed under optimal conditions. Mental rest is also essential to prevent any undue strain on the cardiovascular system. All other treatment, whether it be symptomatic relief, anti-coagulant therapy, drugs administered in the hope of vasodilatation, antibiotics to prevent infection, or any other method of treatment, is altogether secondary to the primary consideration of rest. For this prolonged period of physical inactivity there is sound pathologic basis. The usual case of coronary occlusion is kept in bed for from four to six weeks, for it has been shown that this much time is essential for the normal healing process to take place, and on the basis of experience it is usually found that those patients who do not accept these principles of treatment generally do not fare so well as those who do.

It is my purpose today to present the case histories of a number of patients who by accident or through failure of coöperation have not taken the orthodox rest treatment following an acute coronary occlusion. In some of these patients the correct diagnosis was not recognized immediately and it seemed rather foolish to put a patient to bed several weeks after the onset of his illness when he had been getting along very well indeed without this rest. In others failure to take medical advice was responsible for the unorthodoxy of their treatment, but the outcome of this group makes it a rather pertinent question to reconsider the advice which we are accustomed to give to our patients.

Case Reports

Case 1.—A 34-year-old white man was first examined September 13th, 1947. He gave a history of substernal pain on exertion for six months. An acute attack of pain had occurred two weeks before examination and although the pain had been definitely related to effort and relieved by rest, gastrointestinal symptoms were so prominent that x-ray examination of the stomach and duodenum was made. The radiologist reported a definite duodenitis was present and treatment had begun with this diagnosis in mind. However, failure to obtain relief on antispasmodics and diet, and a rather severe attack while hunting marsh hens in a small boat led the patient to seek further medical opinion.

On examination the heart sounds were normal but the ecg. showed a definite recent posterior occlusion. Sedimentation rate was 37 mm. The diagnosis of coronary occlusion, about a week old, was made. The patient was required to stay away from work, to avoid physical exertion and to rest most of the time but he was not put to bed. Complete relief was obtained on this regimen of limited activity and he was allowed to return to work October 13th, 1947. The blood pressure level showed very little change, systolic ranging from 140 to 150, diastolic 90 to 100. The sedimentation rate gradually fell to normal limits and he has been largely symptom-free since that time.

Case 2.—A 51-year-old white man consulted me December 3d, 1947, with a story of rather severe chest pain one week previously, after a hunting expedition and a very large supper. The pain lasted for about 36 hours after which he got up and went back to work, but slight precordial soreness and very slight dyspnea had persisted. On examination the blood pressure was 140, 80. The first heart sound at the apex was slightly shortened and more abrupt than usual. The heart was a little enlarged by examination and fluoroscopy but no other physical signs were noted. The ecg. showed a definite recent posterior occlusion. The sedimentation rate was 49 mm. but other laboratory examinations were negative. A diagnosis of posterior occlusion was made and bed rest was suggested but the patient was allowed the privilege of sitting up for meals and going to the bathroom. On reëxamination six weeks later there had been almost complete relief of symptoms, although complete bed rest had not been insisted upon when the diagnosis was first made.

Case 3.—A 50-year-old white man had a sudden attack of epigastric and substernal pain early on the morning of Decembebr 20th, 1946. Morphine was necessary for its relief and he was hospitalized for diagnostic studies. The blood pressure was 116/92, slight leukocytosis with 84 per cent polys. and a sedimentation rate of 12 mm. The ecg. showed no changes and after 48 hours he was discharged from the hospital. Eight months later following an automobile accident reëxamination was made and the blood pressure found to be 100, 70. An ecg. taken at this time showed typical changes of an old posterior occlusion. There had been no recurrence of chest pain during this time, no dyspnea nor evidence of heart failure had developed and he had been conscious of no cardiac disability whatsoever. At no time had he had any recurrence of pain after discharge from the hospital and he had maintained an active life until the accident led to further examination. It seemed evident that he had had a coronary occlusion on the previous occasion but it had not then nor has it since incapacitated him in any way.

Case 4.—A 52-year-old man of Greek extraction suffered an acute attack of chest pain on November 27th, 1945. A pericardial friction rub was audible and ecg. findings showed definite evidence of a posterior occlusion. This patient was hospitalized and routine treatment advised but he refused to remain in bed and was constantly helping the other patients in the large ward in which he was placed. He did more actual work than the usual hospital orderly in helping those whom he thought were more seriously ill than himself. After remaining in hospital for one month he was discharged and has since suffered no ill effects whatsoever. When last seen during the summer of 1947 he was swimming rather vigorously in the surf.

Case 5.—A 45-year-old man suffered a sudden attack of dyspnea and pulmonary edema in December, 1945. There had been no previous episode of vascular disease except

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for an attack of epistaxis, probably on a hypertensive basis, some seven months previously. Some substernal pain developed and the patient was admitted to the hospital for diagnosis. The sedimentation rate was 42 mm. The x-ray showed a small amount of fluid at the base of both lungs and slight enlargement of the heart and the ecg. showed a definite anterior occlusion. The patient returned to his home after one day and although he stayed on one floor he refused to go to bed at any time. Limited physical activity and digitalization relieved the mild degree of congestive heart failure and there were no further attacks of dyspnea. Pain persisted for some time but gradually disappeared. Nitrites were used with some relief and sedation was quite helpful but complete rest was never obtained. After three months the patient returned to work and has had no disability since that time. There are still episodes of mild anginal pain but there has been no recurrence of dyspnea or congestive heart failure. The sedimentation rate returned to normal three weeks after the onset of his illness and although there have been persistent electrocardiographic changes the patient has done moderately well by the usual standards.

Case 6.—This patient was a 65-year-old white man who had a typical anterior coronary occlusion in May, 1943. He was hospitalized and took the usual orthodox treatment for six weeks, after which time he was allowed out of bed. Two weeks later in his anxiety to "get back in condition," although it had been specifically forbidden, this man insisted on taking rather violent calisthenics which brought on a very severe attack of pulmonary edema. There was no secondary occlusion with this subsequent attack of acute heart failure, but the patient made a very slow recovery and has since been more or less of a chronic invalid.

Case 7.—This patient was a 54-year-old man who had previously had a posterior occlusion and who suffered from frequent severe anginal pains. These were relieved promptly by nitroglycerin although they were of such frequency that at times he took as many as 50 tablets a day. Because the usual medical treatment had offered him little relief this man consulted a naturopath who gave him fever therapy, raising his temperature to 106°, and sent him home where he was found dead in bed the next morning.

The last two cases presented are of no more than passing interest but they illustrate to what complications extremes in unorthodox treatment may lead. The first five cases, however, present a slightly different problem. All of the patients were men varying in age from 34 to 54, none of them went to bed, four of the five had posterior lesions, and all have made satisfactory recoveries. In the first three patients if the diagnosis had been made at the onset of the illness, standard treatment of bed rest would have been advised and I am sure followed to the letter. However, because the diagnosis of an occlusion was not made until several weeks after the onset of their illness it seemed rather foolish at that time to insist on complete and absolute bed rest. The subsequent course of the patients has shown that this was not essential, at least in their cases, to a satisfactory recovery; however, in none of them was there any clue at the onset that this would have occurred without orthodox treatment.

The problem here presented is somewhat analogous to that of early ambulation after surgical procedures, although not exactly the same. In the latter situation the patient is usually in generally good physical condition and has a physiologically adequate circulation, while after a coronary occlusion there may be a considerable degree of impairment of both heart and circulation. And it must be remembered that while any harm done to the patient as a result of early ambulation following a surgical operation is usually correctable, after a coronary occlusion further damage might lead to much more serious consequences.

However, in approaching the problem with an open mind, it would seem not unreasonable to allow certain selected cases a very limited degree of physical activity with relative safety. All patients should be given complete bed rest at first, until adequate evaluation of their case can be made. Then, if the initial shock has not been too great, if they have not had too pronounced a fall in blood pressure, if there have been no evidences of any impairment in circulatory efficiency, if the patient is completely symptom-free on stirring about in bed, and if the clinical evidence points to a small lesion rather than a large one, I believe it would be entirely safe for us to allow this type of patient a limited amount of physical activity. And because these criteria would be usually met in patients who have had a posterior lesion, perhaps it would be wise to insist on orthodox treatment in all cases with an anterior type of lesion.

Discussion

Dr. Paul D. Camp, Richmond: I enjoyed Dr. Wilson's paper. It is a very interesting viewpoint that he has brought out.

I'd like to ask him, first, what he means by "a short time" in bed. That can cover a great deal of latitude.

Secondly, in regard to anterior and posterior infarctions, I don't believe there is much statistical evidence to prove that the posterior ones are much less dangerous than the anterior ones. We used to think otherwise, but I don't believe lately that is definitely so. As we all know, at autopsy we often find evidence of two, three or maybe more previous coronary occlusions with definite myocardial infarctions, so certainly a lot of these cases have had coronary thrombosis or infarctions and gone along and not known anything about it, but I don't believe that means we should knowingly let these patients do so. I think a lot of patients have died of so-called "acute indigestion."

Another thing I think is important to remember is Paul White's work. You will remember he studied cases of coronary thrombosis who died from one day to several months or as long as six months or a year later, and he found, if my memory is correct, that cases of even mild infarction did not have a good, firm scar under six to eight weeks.

Then there was some other work, I believe by Tinsley Harrison, experimental work on rats. That, to me, was very inconclusive. They made entries by burning the rats' hearts and claimed that their recovery period was very short and all that, but I think one must take into consideration the biological difference in rats and men and it

would seem to me a rat's heart naturally would recover more quickly than a man's. We shouldn't draw too strict analogy between the two.

Another thing, I think the small group of cases which were exceedingly well presented and all that, yet I don't think one should draw too strict conclusions from such a small group of cases, and we have all had individual experiences numbers of times with a patient who didn't do what we told him and didn't know he had coronary occlusion and went on and did what he wanted to and got along fine, but that, to me, doesn't decide that we should emphasize too much that method of treatment.

I think we should watch out for too much or too complete bed rest, having patients stay flat in bed and not move a foot or an arm. They are more apt to get an embolus. I think they should be encouraged to move their feet and arms and unless there is absolute shock should turn in bed. I never will forget having as a patient a nice Jewish doctor who was having increasing angina and I told him to go home and go to bed. Then he had real coronary thrombosis. I think I told him not to lift his head off the pillow. When I saw him eight months later. He literally hadn't lifted his head off the pillow. He died later after an unpleasant procedure in court. I think certainly in cases of increased angina pectoris, that is, the attacks come more frequently and lasting longer—I think we should consider seriously bed rest in these patients, with the possible use of anti-coagulant treatment, such as dicumarol. So I think that one should pursue a course of moderation. I don't believe in letting a patient get up too early. I, personally, should prefer to stay in bed, no matter if I thought I had a very slight occlusion, more or less complete rest for two weeks before I would think about getting up and moving around in bed. I don't believe I'd like to get out of bed under four weeks' time.

While we are speaking of unorthodox methods of treatment, I would like to ask Dr. Wilson if he has had experience in using plasma in cases of low blood pressure and prerenal failure. I have often wanted to do it. Being conservative, I have not gotten up the nerve to give plasma to get the blood pressure up.

Dr. Wilson (closing): I appreciated the discussion very much and I brought up this matter because I myself do not know all the answers. I have not yet had sufficient courage to suggest to a patient that he get up immediately, but with this possibility in mind I have brought the matter for discussion.

Dr. Camp asked what I meant by a "short time in bed." And specifically I did not say how long because one has to judge by the individual patient and decide only after a sufficiently long time has elapsed to make a complete evaluation of the case. This, I think, should never take less than one week.

I have not been struck by the differences in posterior and anterior occlusions either. We see patients at times with electrocardiographic tracings which look like they have a considerable degree of damage and who are not particularly sick, and again we see patients with striking changes who have considerable initial shock. I do not know how to differentiate the two from the tracings alone and I do not think that this is ever possible. I believe that ultra-conservatism in treatment can lead to a good deal more psychic trouble in the end than a little bit of discretion and a reasonable amount of activity at first. I remember distinctly one patient who eventually came to see me with severe psychic trauma. He had had a great many other physicians and had been so frightened that a year after his coronary occlusion he was still in bed, would not turn himself, lay rigidly, and was actually afraid to move. The psychic shock to this man I think was such that he never recovered from it and spent the rest of his days in bed, consulting one physician after another, going from one sanatorium to another. For about three years after my examination I had letters from various places asking for his previous records.

So far as transfusions are concerned I have not used them in coronary occlusions at all and I hesitate to give anything intravenously, although I think injections of glucose in small amounts is useful in combatting shock. However, I think that we must remember when we use a solution of that nature that increases the blood volume in any way, we might run into an additional and unnecessary strain on the circulation which would lead to some additional cardiovascular damage. I think that the question is one which we should consider carefully in each case.

I have not yet advised a patient to get up and stir around before the usual time has elapsed, but I still wonder if in some cases we do not make a mistake in not insisting on a little more physical activity at the very start.

A FATAL CASE OF MALIGNANT SYPHILIS

(Robert Lees & Wm. Fowler, in *British Med. Jl., March* 6th)

A widower, aged 59, was seen on Sept. 18th, 1947, at the request of the patient's doctor. There was a history of exposure six to nine months previously. About the end of May a rash appeared on the trunk, limbs and genitals. His voice became hoarse, he started to lose weight, and there was increasing weakness.

He was extremely emaciated, his skin had a dull *café-au-lait* colour, the voice was hoarse, and he was so weak that he could scarcely move himself in bed. He had an extensive rupial eruption on the trunk and limbs. There were indurated impetiginous ulcers on the glans penis. Over the shaft of the penis and scrotum moist papules had coalesced to form moist and crusted patches. A few mucous patches were seen on the buccal mucosa, an indurated glossitis and ulcers on the margin of the tongue. In the midline of the palate there was gummatous ulceration, not deep. Ulceration was also present in both fauces. The inguinal and superficial cervical glands were enlarged. Red cells were 4,800,000, white cells 7,500 per cm. (diff. count normal); Wassermann reaction, positive; t. 98° F.; p. 90, r. 20.

Penicillin therapy was started on Sept. 18, 10,000 units in saline at three-hourly intervals for three days, then 40,000 units three-hourly. The total penicillin given was 2,680,000 units. With this treatment the moist patches on the penis and scrotum became smaller and drier, and the ulceration of the tongue improved. Penicillin had no effect on the general condition, and the patient gradually became weaker and his mind very confused. General medical measures failed to improve his condition. "Mapharside" 0.03 g., was also given, but the patient was *in extremis,* and died on Sept. 27.

At post-mortem examination a slight hypostatic congestion of the lungs was seen, but no other macroscopic abnormality, and death appeared to have been due to the luetic infection.

Every prostate operation should be preceded by bilateral vasectomy. This procedure takes four minutes and is done through small 1-cm. incisions in the scrotal skin. In no instances have these wounds failed to heal by first intention. In spite of this epididymitis of minor degree has been known to occur but is uncommon. An inflammatory thickening of the cord proximal to the site of vas resection has occurred in 10% of prostatectomy cases in which there was marked urinary infection, but has gradually disappeared after a few days.—W. W. Galbraith, in *Proc. Royal Soc. of Med.,* Feb.

DEPARTMENTS

HUMAN BEHAVIOUR

James K. Hall, M.D., *Editor*, Richmond, Va.

GRIEVOUS NEWS

The recently licensed young physician of today experiences neither difficulty nor delay in becoming professionally busy. It is no longer necessary for him to remain in semi-retirement for two or three weeks until a mustachio may be grown. His worshipping with the largest congregation in the small town does not have to be interrupted, as in other days, by an emergency call that takes him hurriedly but solemnly from the temple.

Once upon a time, and not so many years ago, there were so many medical doctors that all of them could not be kept busy in ministering to the sick. But the professional plethora was eventually relieved by the discovery that too many medical schools were graduating each year far too many young physicians. Then the medical schools were placed, one by one, under an educational microscope. Many of them were found to be unsound and infirm and utterly inadequate to continue to function, so we were told, as institutions of learning. A large percentage of the medical colleges in this country were closed. The nullification of such unfit schools was talked of loud and long as evidence of great improvement in medical education. There would be, of course, fewer graduates in medicine, but the licentiates would be much more erudite and infinitely more heavily endowed with scientific knowledge and skill.

Highway improvement finally came, and the rural dweller no longer found it necessary to travel through dust in summer and through bottomless mud in winter. The automobile made it possible for him to ride from his home into town within a few minutes, instead of a few hours. So easily and so quickly could the farmer, in his new gasoline-powered vehicle, pass over the roadway between his home and town that he probably came to think of himself almost as a suburbanite.

Years rolled quickly by. The extension into the country of telephone and electric lines was interpreted to mean that the rural dweller lived no longer in isolation and in thought-detachment from others. By pressing a button, light was released; by throwing a switch, boundless power was available. The instant the receiver was lifted, a voice of inquiry spoke. The telephone made possible inter-communication. The winged word, holding fast to the speaker's identifying qualities, would follow the wire to infinity.

But along with the conveniences and comforts brought by the mechanisms there came into country life also many other changes. And some of the changes constituted losses, even dreadful deprivations.

The country doctors finally disappeared, either through death or by removal into town. When there were only dirt roads and only horses and buggies, a doctor lived in every community. He would come quickly when he was sent for. But when doctors ceased to live in the country and it became necessary to telephone into town for a physician—often the doctor was long in coming, and he might not come at all.

And when many of the best doctors lived in the country it was equally as true that some of the best ministers, too, lived in the country, amongst their own parishioners. But the so-called improvements in country life have left the country people without resident preachers and without local physicians. Many old rural churches are without pastors; great areas in the country, perhaps an entire county, may have no physician.

The most populous and opulent city is but a vain and empty braggart. Were it suddenly walled off from the spacious, quiet, productive country region, from which comes the mightiest city's water, food, fuel, and raw material for fabrication, and the best additions to its population, the modern Babylon would perish within a month.

In my native county in North Carolina almost all the physicians now live in the three or four towns within the county; only one or two in the country. In the somewhat distant days of my childhood, most of the doctors lived in the country, amongst the people to whom they administered.

The press carried the news a few days ago that the members of the Iredell-Alexander County Medical Society in North Carolina had adopted a new fee scale. Heretofore the charge for a visit has been three dollars. Hereafter a call to the home, if made at night—between six o'clock in the evening and seven o'clock in the morning—will cost the sufferer five dollars. And the cost of the daylight call, if made on Sunday, or on a holiday, will be likewise increased to five dollars. But the members of the medical society insist that they are not interested in the additional two-dollar increase; the addendum to the cost of a call, if answered at night, on holidays, and on the Lord's Day, is made as a preventive of calls. The doctors prefer to spend their nights in unbroken sleep, their holidays in hunting and in fishing, and their Sundays in worshipping God.

I can hardly think of a more comfortable feeling experienced by a mortal than the belief that, wherever he may be, a competent doctor is near

by in readiness to come to him when called. Nor can I imagine a situation productive of more insidious apprehension and anxiety in the individual than the unavailability of medical help. Fear it is, rather than disease or pain, that causes the doctor to be called. If there is no response to the call, the fear increases. Medical ministration should be prompt, cheerful, and as efficient and skillful as possible.

We physicians object to so-called socialized medicine. I surmise that our objection would be more accurately stated by calling it federalized medicine. We dislike the idea of becoming federal physicians, paid a salary by the United States Government and doing our professional work entirely under federal instruction. But the people of this country are looking more and more to the United States Government to supply their needs. If we physicians will not go to see the sick when we are called to see them, we shall occupy a place of less and less esteem in popular thought. Eventually we may be succeeded as practitioners by employes of the federal government.

There are too few physicians and too few nurses, because the population is constantly increasing and the number of graduates in medicine and in nursing is not increasing. The medical and the nursing authorities have closed medical colleges and training schools, many of them. A controlling authority keeps to a minimum the number of matriculates in the medical schools each year. What is that authority? One has the feeling that the medical college has no controlling voice over the number of students it may admit to the entering class. Why? Under what authority do the medical schools of our country function? We should know because we are taxed to sustain them.

The nursing situation has become so desperate that a woman entirely untrained can masquerade almost as a graduate nurse.

Once certain activities were spoken of as high callings—the ministry, teaching, nursing, and practising medicine. Are there now any high callings? Has not the professional woman and the professional man become a business woman and a business man, engaged in making money?—and sometimes interested in working as little as possible for as much as possible.

Surely the people must be dissatisfied with present-day medical and nursing care, the quantity and the quality of it, the cost of it, and the spirit in which it is often proffered.

I am not speaking in criticism of my medical friends in my native Iredell County. The same spirit is motivating all of us—all of the American people. We are selfish, materialistic, mercenary and pleasure-loving. And we have the effrontery and the stupidity to complain of the people of other countries!

HOSPITALS

R. B. Davis, M.D., *Editor*, Greensboro, N. C.

CAN HOSPITAL FEES BE REDUCED?

When money is plentiful hospital operators share the general tendency to spend lavishly. The only way that they can pay for what they buy on the present-day market is to increase the fees. Then how can hospital fees be reduced?

The only way for any business to thrive is for it to give value received for the dollars charged. Therefore, it becomes absolutely necessary for hospital fees to be in keeping with the service rendered. We have heard so much today about the racket of this business or that profession, that there must be something to it. If there is a racket in the hospital business, we would make an honest and determined effort to do away with it. It is the writer's opinion that hospital owners and operators have allowed at least the simulance of a racket to creep in.

At the head of the list we should put *laboratory fees,* which for the most part are charged for as though the work were done by a doctor instead of a technician. One busy technician can, in the usual run of a day, make 35 to 50 dollars at least; and if there are many transfusions to give with typing and cross-matching of the blood, this might run up easily to 75 dollars per day.

Next, the *operating-room* and *delivery-room fees.* If these fees bring in two dollars for each dollar expended, that would be a good profit. It is believed that an examination of the books would show more than this, at least two-to-one.

In the *x-ray* department a good bit of the work is done by technicians. Practically all roentgenologists have a practice outside of the hospital as well as that referred from the hospital. There is no rime or reason to one 14 x 17 plate turning in a revenue of 12½ to 15 dollars.

In defense of any simulance of injustice on the part of these departments as directed by the hospital, we can say that room rent, including board and nursing, has not advanced in keeping with the cost of salaries of personnel and food. The fact, however, that certain cost in one department is charged for and hidden in another department has caused some of the public to classify hospital activities as a racket. It would be far better to put the high cost where the high cost belongs. The public would have a great deal more confidence if this were done. An example of how the lay public looks upon certain practice in the medical profession and its allied services, was brought out by the recent propaganda directed against the practice of the ophthalmologists and optometrists in accepting rebates from the manufacturers of glasses. Let us be entirely honest and charge for

the services rendered in the department wherein the cost is incurred.

Laboratory fees are according to those charged by the bacteriologists and pathologists operating a private laboratory where they do not have the volume of work to make it possible to reduce their fees. The hospital laboratory operates under a different set-up. The patients are all brought to the building, they are all spending the entire day and night in the hospital, and the emergency work can be easily separated from the routine work. The average technician can run efficiently any routine urinalysis in five minutes. The usual charge for this service is one dollar and every patient entering the hospital is charged that dollar. Again, an every hospital technician can leave her laboratory with the syringes and pipets, take blood for a Wassermann and a complete blood count, returning and completing those examinations within 20 minutes. The usual charge for these services is three dollars, each patient is also supposed to have this charge made upon each admission. These charges add up to 12 dollars for the urinalysis per hour, 9 dollars for the blood work per hour. While operating-room and delivery-room fees do not reach the profit of the clinical laboratory, yet the average appendectomy requiring a sterile and a circulating nurse for a period of one hour hardly warrants a charge of 12½ to 15 dollars per operation. Also a cesarean section, while it is a bloody, wet operation and requires considerable elbow grease on the part of the orderly to clean up after it, hardly warrants a delivery-room fee of 15 to 20 dollars. At the rates mentioned, the hospital operating room with five operations per day, will bring in 50 to 75 dollars per day. The personnel of such an operating room would consist of not more than three people, whose daily salary combined would not be more than 25 dollars.

The x-ray department should be able to examine the usual fracture in 20 minutes. The fee of 10 to 20 dollars is charged for this service and oftentimes the actual exposure work requiring the time is carried out by the technician. On this basis, one would be thinking in 30 to 50 dollars per hour for fracture work, including the services of all required. G. I. work and lung work require more of the time of the roentgenologist. Here his services begin when the patient is brought to the x-ray department, and end when he renders his report. In the case of a lung study, the fluoroscopic should be made within 10 minutes, the study of the dry plate should be made in another 10 minutes. This 20 minutes spent by the roentgenologist is hardly worth 15 to 20 dollars to the average patient. A G. I. study requires still more of the roentgenologist's time, but the usual charge here is 35 to 50 dollars, and 30 minutes is as long as it is necessary to make the usual study of this nature. However, if it takes 45 minutes, that means between 50 and 75 dollars per hour. A fair profit could be made if the x-ray fees were shaved.

The writer realizes that the pathologist and roentgenologist may say the surgeon's fees could bear reduction, but they must admit that they carry practically none of the responsibility, and their their service to the patient is completed within hours, while the surgeon's begins with the taking of the history of the patient, and is not considered satisfactory, in most cases, unless the patient recovers, all of which requires weeks or months of attendance by the surgeon himself.

Since the writer himself has for years done laboratory work, x-ray work and surgery, and operated a hospital, he is accepting his share of responsibility for a situation which has caused the public to feel that there is a racket in the medical profession and its allied services.

Only too well does the author realize the many difficulties daily imposed upon the hospital administrators and operators, and therefore is very sympathetic in analyzing the situation. But he does feel that closer supervision of every charge made would bring about some change in the mind of the lay public who are furnishing us the wherewithal to run our hospital.

Nothing has been said about the drug cost. There are too many instances of a terrific charge being made for very inexpensive drugs. Let us clean up our own backyard before we say too much about the plumbers, the painters and automobile mechanics.

SURGERY

WILLIAM H. PRIOLEAU, M.D., *Editor,* Charleston, S. C.

DISASTERS FOLLOWING LIGATION AND RETROGRADE INJECTION OF VARICOSE VEINS[1]

LIGATION and retrograde injection is a commonly used method of treatment for varicose veins. To the occasional operator it appears to be such a simple procedure that the hazards connected with it are not recognized. To attest to this Luke and Miller of Montreal have reported 21 cases of serious disasters that have come under their observation.

In several cases the femoral vein was injured and ligated in attempt to control bleeding from a torn varix in the region of the bulb. In one case there resulted persistent edema. One such case resulted fatally, apparently from shock. It is pointed out that in some cases the femoral vein lies superficially, and if mistaken for the saphenous a

serious result would follow its division and retrograde injection.

In some cases serious complications have been attributed to a reflex spasm of the femoral artery with resultant ischemia, thrombosis, and gangrene. In one case the femoral artery was ligated and injected with resultant mid-thigh amputation becoming necessary.

The occurrence of deep venous thrombosis is apparently quite common. It is impossible to prevent the sclerosing fluid from entering the deep veins. This is the most likely explanation of persistent edema which is present in a considerable group of patients who have had this form of treatment. Some cases of deep venous thrombosis were followed by pulmonary embolism, at times fatal.

In spite of the above report, the authors state that ligation and retrograde injection appears to be the best treatment of varicose veins yet evolved. To prevent such disasters they advise that the operation be performed under local anesthesia and that the patients walk immediately and at frequent intervals after operation. It is also suggested that not over 5 c.c. of sclerosing fluid be injected at one time.

Editor's Note: About two years ago the editor discontinued the injection of sclerosing fluids in the treatment of varicose veins, except for the occasional obliteration of small superficial unsightly varicosities. He advocates extensive excision under visual and palpable control.[2]

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PEDIATRICS

E. L. Kendig, Jr., M.D., *Editor*, Richmond, Va.

IMMUNIZATION PROCEDURES

All of us need to keep informed as to the best means of protecting our patients by the use of preventive injections. A Public Health official[1] covers the subject admirably, and his essay is abstracted for our readers.

Primary *smallpox* vaccination should be done in the first year, may be done in the first month. The period between 3 and 6 months is probably the best. Nothing less than yearly re-vaccination can be considered entirely safe; at the most, the interval should not exceed three years.

Repeated Schick test surveys have shown that 50 to 60 per cent of young adults are susceptible to *diphtheria*. The last few years have seen a shift of the incidence of the disease into older age groups. An increasing number of women are entering pregnancy without this immunity, so it is no longer possible to assume that infants are immune to diphtheria during the early months of life, as a consequence of passively acquired immunity from the mother. As a result of the reduced prevalence of diphtheria bacilli, artificially induced immunity is not as lasting as it once was. The chance contacts with cases and carriers are no longer available to stimulate immunity. We must immunize a wider age group and maintain immunity once it has been established. We must consider beginning primary immunization at an earlier age, and the more frequent use of stimulating injections of antigen.

1. J. J. Sievers, Springfield, in *Ill. Med. Jl.*, March.

In children the use of two doses of 1 c.c. each of alum-precipitated diphtheria toxoid, at intervals of at least four weeks, is still the procedure of choice. If the mother's Schick test is positive, either the mother should be immunized in the last trimester of pregnancy, or the infant should be immunized early, though it may be necessary to re-immunize later. Under no condition is it wise to postpone the beginning of diphtheria immunization beyond the sixth month. The toxoid may be combined with pertussis vaccine, tetanus toxoid, or both. A booster dose is indicated at entrance to school, earlier if the child attends a nursery school or has school-age siblings. In adults the problem is not so clear. Both alum-precipitated toxoid and fluid toxoid are likely to cause severe reactions in adolescents and adults when given in the usual dose. We are not yet ready to advise immunization of all adults. Further development of some of the materials still in the experimental stage may at some future date lead to a change in this thinking. We may have been using excessively large doses of toxoid. In England 0.1 to 0.3 c.c. doses of alum-precipitated toxoid have apparently been effective. It may be possible to satisfactorily immunize adults with much smaller doses of toxoid than have been commonly used.

It is desirable to perform the Moloney test* in adults for whom immunization is indicated, using 0.1 c.c. of toxoid, and to administer divided or diluted doses of toxoid to those who show a positive Moloney reaction. The usual initial dose of fluid toxoid is 0.1 c.c. and this may be substituted for the Moloney test. If no reaction follows, the immunization can then proceed with an increased dose.

Alum-precipitated vaccine produces immunity to *pertussis*, even when begun as early as the first month of life. It may be well to immunize the mother during pregnancy. Immunization during the early months of life may not persist. This can be solved by the use of a diphtheria-pertussis combination at 6-7 months. A stimulating dose of pertussis vaccine, either alone or in combination with diphtheria toxoid, is indicated at the time of en-

trance to school, earlier if the child is sent to a nursery school, or has school-age siblings.. Evidence is accumulating that in pertussis agglutinogen we may have the long-sought-for simple test for pertussis immunity.

The immunity produced in 10,000,000 Americans by the injections of *tetanus* toxoid while in service should not be allowed to lapse. Booster doses should be given at intervals of several years, oftener to those engaged in occupations where danger of tetanus is great. Booster doses should be given at the time of injury to any of those previously immunized.

Include tetanus toxoid with diphtheria toxoid when the latter is given during the first year, or administer it singly during the second or third year. A booster dose one or two years after the original immunization and at the time of any injury subject to contamination with tetanus spores. Also active immunization with tetanus toxoid should be started three weeks following any administration of tetanus *antitoxin*. Should another injury then occur, the use of tetanus antitoxin will not have to be considered and the risk of anaphylactic reaction will have been obviated. A plea is entered for the use of larger prophylactic doses of tetanus antitoxin, at least 5,000 units.

The use of *scarlet fever* toxin is not recommended as a mass immunization procedure, in view of the mildness of scarlet fever today. For nurses and residents of children's institutions it is perhaps desirable. The private physician may have patients in whom the need of some added protection, however little, is desirable.

Typhoid vaccination should be done on nurses and laboratory workers and those whose occupations or travels take them into areas where the water supply is suspected, also on institutional populations, especially in mental hospitals where personal hygiene is poor require this protection. Because of the low incidence of Para A and Para B infections in Illinois we do not recommend the general use of the triple vaccine. A single annual booster dose of ½ c.c. typhoid vaccine subcutaneously, or 0.1 c.c. intracutaneously, will keep the antibody level sufficiently high. The standard course of typhoid immunization is still ½, ½ and 1 c.c., subcutaneously at intervals of 7 to 10 days.

The use of combined A and B *influenza* virus vaccine provides a degree of protection against these types of influenza. It will probably continue to be used extensively among those working or living in closely organized groups.

Since the recognition in 1934 of the first case of *Rocky Mountain spotted fever* in Illinois 200 cases of the disease have been reported—fatality rate 15 per cent. It may be well for all persons exposed to the bite of ticks, to consider the use of Rocky Mountain spotted fever vaccine in the spring. The protection does not last beyond a year and the injections must be repeated annually.

*0.005 c.c. *ana*toxin in 0.1 c.c. saline injected *intra*dermally. A positive reaction (appears next day) is a patch at injection distinctive in color and texture, 2 cm. in diameter.

DERMATOLOGY

CRYOTHERAPY IN GENERAL PRACTICE*

For this issue, Victor R. Hirschmah, M.D., Durham, N. C.

Since its introduction to American dermatologists by Pusey in 1907, cryotherapy has been used extensively in the treatment of many superficial hypertrophies of the skin and other dermatological entities. However, this mode of therapy has not been widely adopted by the general practitioner in the management of dermatologic conditions which may be successfully treated with excellent cosmetic results.

Agents which have been used in cryotherapy are liquid oxygen, carbon dioxide snow ("dry ice"), carbon dioxide "slush," and ethyl chloride spray. Liquid oxygen is difficult to obtain in any other than large cities. In recent years carbon dioxide snow has been obtainable in any community of reasonable size from ice cream manufacturers, dairies, etc. It is common practice to have the patient procure his own "dry ice" when reporting for treatment. This agent can be obtained cheaply and employed satisfactorily in the treatment of molluscum contagiosum, verruca vulgaris, verruca senilis (seborrheic keratosis), larva migrans, nevus araneus (spider nevus), senile keratosis, and small hemangiomas (strawberry nevus). Cosmetic results are usually excellent in that the scar formed following destruction of these lesions is soft and elastic.

The technique generally employed is to cut a piece of carbon dioxide snow from the block and trim it by means of a scalpel or small file to a size equal to the lesion to be treated, care being taken that the operator be not "burned" by contact with the agent. Several thicknesses of gauze make an adequate insulator. A piece of suitable size is applied with firm pressure to the lesion for 5 to 20 seconds, depending upon its thickness; i.e., 5 seconds for a spider nevus to 20 seconds for a verruca vulgaris. In case of doubt one should err on the side of conservatism. Timing is best controlled by counting 1001, 1002, 1003, 1004, etc., each being equivalent to one second.

The immediate reaction is one of intense blanching and frosting of the area of contact. Within a few seconds the frost disappears and the tissue resumes an appearance not different from that of pretreatment except for a slight erythema. Within 24 hours a blister may form which should be left un-

*From the Division of Dermatology and Syphilology, Department of Medicine, Duke Hospital.

disturbed until it spontaneously ruptures, when the denuded area may be covered with boric acid ointment. Within 10 days the site of treatment usually heals, and if the therapy has been adequate the lesion will have been completely destroyed. There is no contraindication to repeated applications at 10-day intervals if necessary to completely eradicate the lesion.

In larva migrans treatment of the area just in advance of the progression of the burrow with moderate pressure for five seconds will generally result favorably. Application is more accurate than is that of the more popular ethyl chloride spray.

Carbon dioxide may be used in the form of "slush" for the treatment of acne of the deep cystic type, scarring resulting from acne, acne rosacea, and superficial telangiectasia as seen in acne rosacea.

"Slush" is prepared as follows: A moderate size piece of "dry ice" is placed in a towel and crushed by either a mallet or striking the enveloped mass against a hard object until it is completely puverized. The "snow" is then placed in a pyrex beaker and acetone added to produce a sherbet consistency. The "slush" is applied either by means of a cotton covered applicator stick or a gauze pledget with a sweeping motion. Minimal pressure is used. At each treatment applications are made to the affected areas three to four times. Treatments may be repeated at weekly intervals. An immediate blanching of the skin is produced, this followed by erythema, then desquamation.

In acne 10 per cent sulfur precipitate may be added to the slush. The sulfur residue exerts its beneficial effect as an antiseptic and mild keratolytic. Applications are made at weekly to 10-day intervals for five to ten treatments. Many dermatologists prefer this therapy to x-rays in the treatment of cystic acne. It is safe and should be given a trial before resort is made to x-radiation.

In scarring resulting from acne, treatment is followed as outlined above with the exception of the use of sulfur in the "slush" preparation. The beneficial effect is attributed to keratolysis and an edema of the tissue which seems to persist, making the scars less conspicuous.

Superficial telangiectasia as seen in rosacea is treated by applications of "slush" or solid "dry ice" at weekly to 10-day intervals for three to four times. Sclerosis of the fine vessels occurs if refrigeration has been adequate.

GENERAL PRACTICE

WILLIAM R. WALLACE, M.D., *Editor*, Chester, S. C.

GOUT: A REVIEW OF DIAGNOSIS AND MANAGEMENT

AMONG the various arthritides, gout is most frequently misdiagnosed. Gouty arthritis incidence is from 1 to 5% of joint complaints. Since the advent of modern chemotherapy, gouty arthritis outranks gonococcal and all other types of specific infectious arthritis combined. Ninety-five per cent of the cases are in males. It is not confined to the high-livers.

With these pointed statements as an introductory, Hagemann[1] goes on with a consideration of diagnosis and management.

Careful studies suggest that there is increased urate formation, and not decreased excretion, in people with the gouty diathesis. Contrary to popular opinion, excesses of food and drink are not apt to precipitate acute attacks. Trauma, minor injury or excessive exercise serve as a common localizing as well as a precipitating factor. Acute infections of any sort, likewise, seem to bring on acute attacks. Acute arthritis occurring from three to seven days postoperatively is often gouty. Certain drugs, such as liver extract, mercurial diuretics, ergotamine tartrate, gold salts and thiamine, seem to provoke attacks.

Plasma or serum uric acid levels above 6 mg. per cent, in the absence of kidney insufficiency, leukemia, polycythemia and other blood dyscrasies are diagnostic of the gouty diathesis. Such levels can be obtained on occasion prior to the development of the first attack of gouty arthritis and presumably have existed since childhood. Most normal individuals have serum uric acid levels below 4 mg. per cent but a small percentage will range up to 6 mg. per cent. It is the values between 4 and 6 mg. per cent which are difficult to interpret and in which repeated determinations must be made.

Demonstration of crystals of sodium urate is diagnostic of gout. Crystals may be obtained by scraping the white soft, gritty material from a tophus, aspiration of a bursa or joint or by biopsy, examined by direct smear without the use of stain or preparation of any sort. They are long needle-shaped crystals, occasional bundles having a blunt-ended bacillary appearance. The crystals can be further identified by the murexide test: Suspected material is heated in a porcelain dish with a few drops of dilute nitric acid. A red residue remains when all of the nitric acid is driven off. A few drops of ammonia solution are added after the dish is cool and a purplish red color develops due to the formation of murexide or purpurate of ammonia.

Tophi development may be many years after the first attack.

Roentgen-ray diagnosis is extremely unsatisfactory, as the punched-out areas considered suggestive of the gout are seen frequently in rheumatoid arthritis, to some extent in degenerative (hypertrophic) arthritis and in a number of unrelated

1. P. O. Hagemann, St. Louis, in *Jl. Mo. Med. Assn.*, Mar.

diseases. The most common site of punched-out areas is in the head of the first metatarsal bone; however, other bones of the foot and bones of the hand are often involved.

Colchicine is practically specific for relief of acute attacks, especially when taken early. Tablets of 1/100 to 1/120 gr. should be given every hour until relieved or until side effects develop. The usual attack will respond to from eight to 10 tablets. Colchicine, 1 100 gr. t.i.d., is then continued for several days until the attack has completely subsided. Principal unpleasant reactions to this medication are diarrhea, nausea and vomiting. With some experience the patient can adjust his own dosage so as to get optimum results and minimal side effects. The mode of action of colchicine is not known, but it does not lower plasma uric-acid levels or act as a urate diuretic.

To decrease the frequency and severity of attacks the value of dietary restriction is not established. Moderate limitation of animal protein and fats is probably worthwhile.

Moderate exercise of involved joints seems to be of value. Liberal intake of fluids is advised to urinary output of 1,500 to 2,000 c.c. Alcohol intake should be moderate. Aspirin and sodium bicarbonate, 30 to 60 gr. of each per day, given three days of each week, may be beneficial; also colchicine 0.5 to 0.6 mg. one to three tablets per day, three days of each week. This medication certainly should be taken if prodromata are recognized and can be discontinued if the attack does not materialize.

The plan of therapy in the chronic stage does not differ materially from that outlined. Urate deposits may require removal because of their size, position or ulceration. Cinchophen and neocinchophen are no longer widely used in the management of gout because of the danger of liver damage. These drugs act as urate diuretics just as aspirin does, and their use should be reserved for patients not responding to the more conservative regimen.

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

EMERGENCY TREATMENT OF APOPLEXY

For prognosis, and at times for treatment, it is needful to know whether a stroke is due to embolism, to thrombosis or hemorrhage of a cerebral artery.

Practical information on this point is offered by two eminent Chicagoans.[1]

For the study on which this paper is based 121 patients were used.

Cerebral embolism.—The diagnosis is made when a patient showing a sudden cerebrovascular insult has an obvious cardiac lesion for the source of the embolus, or has had previous embolic episodes involving the brain or other part of the body, and has clear spinal fluid with no elevation of pressure. The age of the patient is *usually* lower than that of a patient affected by thrombosis or by hemorrhage, because in many instances the embolus originates from a rheumatic heart. In the group of 15 patients with cerebral embolism the average age was 53 years; b. p. average 143/85. Their spinal fluid was clear; the pressure was normal.

Of the *six* patients who had cerebral embolism based on rheumatic heart disease, only *one* died; whereas, of the remaining *nine* who had cerebral embolism with postcoronary complications and hypertensive cardiovascular disease, *five* died.

Cerebral thrombosis.—A more appropriate name for this condition would be cerebral softening. In this group of *53* patients, *nine* died in the attack. A patient with cardiovascular-renal disease, and moderate hypertension, onset of unconsciousness is gradual and does not deepen, in half the cases does not persist, no increased intracranial pressure, spinal fluid clear—all these features favor the diagnosis of thrombosis. If the pressure is elevated, this is part of the hypertensive condition. No papilledema or engorgement of retinal veins; average age 60.8 years. The condition is diagnosed by eliminating embolism and hemorrhage from the causes of the stroke.

Cerebral hemorrhage.—This was diagnosed in 53 patients, 41 of whom died within the next few hours or days; average age 58.9 years; b. p. extremes of 300/120 and 120/70. Only in a few patients was the onset gradual, in these deepening coma. Onset fulminating in 49 of 53. Of the spinal fluid examined *two-thirds bloody* and *three-fourths bloody or under increased pressure* (over 160 mm. of water).

Sudden onset stiff neck, high white blood cell count, bloody spinal fluid under increased pressure and the deepening coma all suggest hemorrhage.

Therapeutic measures indicated in acute cerebrovascular accidents:

Cerebral embolism—an oxygen tent, showing of rapid fibrillation, stellate block and anticoagulants are ordered. Dicumarol may be administered for weeks and months.

Cerebral thrombosis—an oxygen tent, venesection in case of hypertension, stellate block and release of increased spinal fluid pressure.

Cerebral hemorrhage—an oxygen tent, slow spinal drainage; neurosurgical consultation concerning possible evacuation of clots may be considered. No sympathetic block.

In all three varieties of apoplexy, hypertonic sucrose solution or a concentrated solution of albu-

1. N. C. Gilbert & Geza deTakats, Chicago, in *Jl. A. M. A.*, Mar. 6th.

min with 5 to 7½ grains of aminophylline, given intravenously, should lessen cerebral edema. Aminophylline probably lowers spinal fluid pressure.

Postural drainage of the tracheobronchial tree is an important, though much neglected, measure for the unconscious patient. The patient is placed on his side, the foot of the bed slightly elevated. Mucus aspirated from the month and pharynx through a No. 14 French catheter. A metal airway inserted if necessary. Aminophylline and atropine if secretion is excessive.

If after 24 to 48 hours the patient is still unconscious, parenterally administered fluids are substituted by hourly feedings through a Levine tube, the patient's protein and vitamin requirements being kept in mind. An intake of 2,000 to 3,000 c.c. of liquids is maintained. A 25 per cent albumin solution injected intravenously gives excellent nourishment and serves more usefully against the wet brain than injected dextrose or sucrose solutions.

Urinary retention and incontinence should be treated according to urologic principles.

Restless patients may have phenobarbital 1 to 3 grains; chloral hydrate 20 to 30 grains; or paraldehyde 1 to 3 drachms per rectum.

HISTORIC MEDICINE

MATTERS OF INTEREST FROM TRANSACTIONS OF THE 1894 MEETING OF MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA

Paragraphs from the Presidential Address of Dr. W. H. H. Cobb, of Goldsboro.

I find upon the roll of members one female physician, Dr. Annie L. Alexander, of Charlotte, who passed a successful examination and was admitted to membebrship at our Durham meeting in 1885. Finding no record of her attendance since I made a personal appeal to Dr. Alexander to attend this meeting and present a paper on the Physical Education of the Southern Girl, which, I am happy to state, she has consented to do.

Specialists have so increased within the past few years that every part of the human anatomy is claimed by them, beginning with the alienist and ending with the chiropodist. While the general practitioner will remain a necessity in the towns and rural districts, his field has been so encroached upon in the large cities that his chief professional duties consist in diagnosing his cases and then witnessing the specialist appropriate both his patient and his pay.

It is a duty we owe ourselves and the profession to report through our home journals all cases of an [instructive] character. Be sure to report your unsuccessful cases, for we learn much by our unfortunate results, and reliable statistics cannot be obtained unless our failures as well as our successes are recorded.

From essay on Physical Development and Training of Girls, by Dr. Annie L. Alexander, Charlotte:

Many of the ills of women can be traced directly to faulty dress, neglect of hygienic principles and neglect of mothers and teachers in teaching girls what they should know of themselves. Little need be said about high-heeled shoes, as fashion has put them aside for the common-sense and spring-heeled.[1]

From the 12th to the 16th year is the most critical period of a girl's life. Nerve force is at a high tension and should be guided to the development of those organs which until now have been in an infantile state.

There should be a law forbidding children under 15 years of age to work in factories.

I am anxious to see the time come when physical culture will be considered as much a branch of education as history or mathematics, and it lies with physicians to make it so.

Dr. R. L. Gibbon, Charlotte, contributed an essay on "Hydrotherapy." Water, he said, is so common an object upon this planet of ours, that a great portion of the public, including not a few medical men, are disposed to look with a sort of contempt upon any effort to make use of it as an independent therapeutic agent, capable of producing precise physiological effects. In fact, many of our fellow-citizens show such marked neglect of its employment as a hygienic and sanitary agent, that it is not surprising they should be unappreciative of its medicinal effects.

Note that Dr. Gibbon, careful of his facts then as now, said "It has been stated that" Priessnitz, an uneducated peasant who was flourishing about the year 1840 had as many as 75,000 people come to him for [hydrotherapy] during a period of 20 years, and of this vast number *only 39 died.*

The essayist informed his hearers the cold bath is now the established mode of treatment in all, or nearly all, of our great hospitals in the North; it is being more and more introduced into private practice, though it is by no means generally used, even in our large cities; and he concluded with: "Whether this treatment will ever be universally adopted by the procession cannot be definitely answered now. Perhaps before that time a more simple cure will be placed in our hands, or the advances of sanitary science will have banished typhoid altogether, as some other diseases have been banished."

1. How we have relapsed.

The final conjecture has turned out to be a prophecy of remarkable fulfilment.

It so happened that Dr. Simon Baruch, the foremost hydrotherapist of all time in America, contributed a paper to this meeting. Dr. Baruch said a young Viennese doctor recently told him he knew nothing of therapeutics because his teachers were engrossed in the diagnosis of living patients and autopsies of the dead ones far more than in saving the former from the fate of the latter; and that Hippocrates laid down principles in hydrotherapy which are so sound and practical that it would be a blessing to suffering humanity were medical students indoctrinated in them today.

Dr. Chas. O'Hagan spoke of the utter futility of the recognized drug treatment laid down for fevers. Long before the water treatment for fevers was promulgated by Brand in Germany he had been in the habit of treating them with the cold bath. He believes that more good could be accomplished by the use of water for fevers and for diseases of the digestive organs than with the whole materia medica. He said that his scepticism increased when he saw the ruin produced by the reckless use of powerful drugs.

Dr. J. M. Flippin stated that typhoid fever treated by cold water (65°), with friction of the body with the flat surface of the hand, has a mortality of less than 4%, treated by the drug plan a mortality of 40%. He carries a rubber oilcloth which is placed upon a table, the patient laid upon it and water poured over the patient. Start with the water at 80° and come down to 65°. The patient is to be kept in the bath for 15 or 20 minutes, until his t. is brought down to 99° or 100°. When properly used cold water is no depressant, but a stimulant. If typhoid fever patients were given plenty of cold water and no food for the first three to 10 days of sickness; there would be no necessity for the cold baths.

Dr. Flippin wraps the little sufferer with cholera infantum up in a wet pack of 75° or 80°; repeated every hour until the t. is about normal. The child should have nothing to eat for 36 hours; all the cold water it wants with an occasional sip of hot water.

Dr. G. T. Sikes had no further experience in the cold water treatment than the application of cold cloths to the head. He had used the medical treatment and for the last four years his death-rate had been less than 4%. He did not doubt that others present who had used the medical treatment had had even a lower death rate.

Dr. E. G. Moore said that part of the procession living in the country could not carry out all the elements they regard as essential, and were made unhappy because they feel incapable of doing justice to their patients. He had read in Lawson's *History of North Carolina* (1700) that the manner of treatment of fever by the Indians was by plunges into cold water after being got into a profuse sweat.

Dr. Baruch, closing, said that he found in this discussion an acquaintance with the subject which he had never found in any of the medical societies of the State of New York. It is not necessary to have the Brand bath and the tub. That is the proper treatment, but when the best cannot be had, take the next best.

Dr. W. T. Pate made a thoughtful and well-documented presentation "strongly supporting the view that there is a peculiar cell life in some families transmissible from one generation to another that predisposes to hemorrhage in typhoid fever. Extracts from his paper:

The cases collected to support this subject occurred in my own practice and in the practice of the neighboring physicians—Drs. McNair, McLean, Smith, Prince and Hamer, to whom I am indebted for courtesies that have made it possible to report the cases together.

The family in question is that of Mr. O., a white farmer, living near Gibson's Station. The family history is good. No idiosyncrasy is shown toward any other disease so far as I have been able to ascertain. Mr. O's mother died at the age of 72 from pneumonia, his father died at 51 from intestinal hemorrhage in typhoid fever. Mrs. O's mother died at the age of 49 from typhoid fever, her father died at 74 from pneumonia. A paternal uncle, his three sons and one daughter all died from intestinal hemorrhage in typhoid fever in 1859. After these cases the family escaped this disease for many consecutive years.

The epidemic in which the cases occurred that are now to be reported began in October, 1884. At this time the family was called to the bedside of a married daughter in an adjoining county. This daughter had been delivered of twins, one living, one still-born child on October 1st. She died, it is stated, of puerperal fever, November 1st. Her infant was taken ill during the last week of October, and was carried by Mr. O's family to their home. With this case the report begins.

The individual case reports are summarized:

Of the 34 cases 15 were males and 19 were females. Intestinal hemorrhage occurred in 18 (53%). It was the immediate cause of death in 12 cases (33%). The percentage of hemorrhages was the same for both sexes. It occurred on the first day of the fourth week in two cases; during the third week in 14 cases, during the second week in 2 cases. There was no general hemorrhagic tendency in the family. In parturition, accidents and surgery there is no more tendency to bleeding than in other patients. Over this period of seven years

there occurred in my own practice 117 cases excluding this family, many of them the nearest residents to the farm home where the outbreak began, with 4.27% of hemorrhage and only one immediate death from this cause. The mortality in 117 cases was 8.73%, which would not indicate a virulent poison.

It was not the rule that the severest cases were the most liable to hemorrhage. Three very mild cases occurred in my own practice. I did not see these patients at any time prior to hemorrhage with the pulse over 100 nor the t. above 103° F. and nervous symptoms were slight.

All these had hemorrhage, one bleeding to death within an hour. Case 3 complaining of headache with t. slightly elevated, continued to assist in household work up to the time of hemorrhage, from which she died during the evening of the day on which the bleeding began.

Dr. Long attended a young man with typhoid fever who died of intestinal hemorrhage — the fourth death from hemorrhage in that family, two within three weeks of each other, those of the young man and his sister. These two were separated by 200 miles, therefore the hemorrhage could not have depended on the form or type of the fever.

Dr. Fox told of a family in his section in which every patient who had typhoid fever (5) died of hemorrhage.

(*More in May*)

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

TREATMENT OF SYPHILIS, WITH SPECIAL REFERENCE to PENICILLIN

Many over-rosy accounts are given of the results of treating syphilis with penicillin. A report[1] from the Mayo Clinic—not so rosy, but more reliable—is outlined.

Start treatment as soon as the diagnosis can be made by darkfield examination of material from the chancre, or the serologic test of the blood and darkfield examination of material from the secondary lesions.

Best results follow use of a dose of 3,500,000 units of penicillin given intramuscularly at the rate of 50,000 units every three hours. This requires 10 days in the hospital. In addition injections of mapharsen and bismuth are required. At the present time an injection of mapharsen 0.04 gm. is given on each of four successive days. On the 5th day administration of penicillin is started and when the afore-mentioned schedule is completed, an insoluble bismuth preparation is given at the rate of 1 c.c. every five days until 20 injections have been given.

The titer estimation of the blood, reported in units 3,600 to 0, gives a more graphic picture of the status of the infection than does a report of a strongly positive, positive or weakly positive test. In many cases of early syphilis the titer may be reported as 1,280, 640, 320, or 160 units; after treatment it may decrease gradually to 40, 20 or 10 and by the 6th or 8th month after treatment the titer has been reduced to 0 (negative).

In some cases the titer will be reduced to 10, remain there a few months, then increase to 40, 80, or more; this showing usually precedes by several months a clinical relapse. Titer estimations should be made monthly after treatment and when the titer remains stationary at 20 or 40 units for three months, or when it shows an increase in strength, a second course of treatment identical to the first one should be given, not waiting recurrence of lesions of the skin and mucous membrane. When evidence of failure is manifested or suggested a second and, occasionally, a third course of treatment with penicillin, mapharsen and bismuth.

Complications such as urticaria, painful hips after injections and vesicular eruptions of hands and feet are annoying but not serious. The possibility of a Herxheimer reaction, the activation of a syphilitic lesion, should be borne in mind in cases of both early and late syphilis.

The use of penicillin in beeswax and oil injections, one a day for a period of 10 to 14 days, gives results somewhat less satisfactory.

In syphilis of the central nervous system favorable changes in the spinal fluid have been the most noticeable effect, while improvement in the clinical manifestations of tabes and dorsalis and general paresis has been negligible. It has not been demonstrated that large doses of penicillin (20,000,000 units) have been more successful in the treatment of these clinical types of neurosyphilis. It is still advisable to give the patient who has clinical neurosyphilis the benefit of a course of fever therapy rather than continue to give repeated and protracted courses of penicillin, or mapharsen and bismuth.

At least five years of treatment of patients with aortic syphilis must elapse before it will be possible to estimate the results of penicillin therapy.

Probably the greatest value of penicillin is in its ability to prevent the transmission of syphilis from the pregnant mother to the offspring. The reports indicate that 95% or more of the mothers who have syphilis and receive penicillin during their pregnancy have normal children. It is recommended that women in the latent phase of the disease undergo a course of penicillin therapy during each pregnancy. The results from the treatment of the syphilitic new-born are not so satisfactory.

1. P. A. O'Leary, Rochester, Minn., in *Jl.-Lancet*, March.

The influence of penicillin on the retarded manifestations of congenital syphilis, such as interstitial keratitis, is not great enough to warrant its use. In such cases it is still advisable to use mapharsen and bismuth in conjunction with fever induced with typhoid vaccine, malaria or the fever machine.

Gumma of the skin and syphilitic osteitis melt out rapidly after a course of 3,000,000 units of penicillin; also in cases of surgical lesions of bone, secondarily infected, the results are highly satisfactory because the effect of the antibiotic on the spirochaete and on the streptococci.

The treatment of latent syphilis with penicillin has been discouraging, the same in the case of Wassermann-fast syphilis.

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

IMMEDIATE PROSTATECTOMY FOR RETENTION OF URINE

FOR a considerable time the belief has been gaining ground that gradual decompression is not necessary for treatment of cases of urinary retention. Ten years ago Creevy concluded that "gradual decompression should be abandoned." Three years ago D. K. Rose stated: "The patient is operated on from the street in better health than from the sulfa, catheter, anticipatory, lost appetite, and lessened physiological tone bed." Preliminary drainage by catheter or suprapubic tube carries a high mortality, mainly from the resulting infection.

Thus an English genitourinary surgeon[1] introduces a discussion of the case for immediate, rather than delayed, operation in such cases. And he goes on to elaborate.

In Britain Wilson Hey (1945) first used immediate operation for a large series of cases, and he showed a mortality rate of only 6 per cent. Later figures were even better—24 deaths in 565 consecutive cases—4.3 per cent. The method of "immediate prostatectomy" was adopted for all cases in Walters' next series irrespective of their condition, though a perurethral operation was still used where it appeared specially indicated, such as for dealing with small fibrous glands. In a high proportion of his cases the catheter had been used before admission. A few were referred after they had already been treated by either an indwelling catheter or a suprapubic tube, and, lastly, in some cases, in which the diagnosis was in doubt, cystoscopic examination was made immediately before operation.

More recently Walters has used Millin's retropubic operation, and found it to give better control of bleeding and less chance of leakage from the suture line. At the same time immediate operation was practiced wherever possible, cases of acute retention being done as emergencies, or else a suprapubic needle is inserted for a few hours until operation could be undertaken.

Of the four deaths out of 70 of Walters' cases of acute retention, two were not treated by immediate operation. One of these patients was admitted with severe bronchitis, and was not treated surgically till the chest was better. He had a relapse 12 days after operation and died on the 63rd day. The other was admitted with cardiac failure and auricular fibrillation. Attempt was made to tide him over with catheterization, but when this had failed to relieve him and the cardiac condition had improved operation was undertaken.

Among the cases of overflow retention there were three deaths out of 27 operations. In one case post-operative clot retention was a material factor contributing towards his death. The next case had had confinement to bed for five weeks before seen by the urologist. The next, in spite of an initial blood urea of 266 mg., made good but slow progress till the 19th day. At this stage it was decided to expedite his recovery with a blood transfusion. While this was in progress he had a rigor followed by facial paralysis, left, and died shortly afterwards. Necropsy showed a poor myocardium, and the pathologist ascribed death to transfusion reaction.

The benefits of immediate prostatectomy for the patient with retention of urine are very great, for he is spared prolonged and sometimes painful preoperative treatment and a long illness. Some notice must also be taken of the economic factors involved, as the rapid recovery of patients is most necessary at the present time, when there is such a shortage of hospital beds.

All patients get out of bed the day after operation, and to this may be attributed the low incidence of chest complications. The majority go home in good condition the 12th to 16th day.

From the record of a consecutive series of 141 cases of benign prostatic hypertrophy, 138 of which were submitted to radical operation, Walters draws the following conclusions:

Except on very rare occasions, drainage before operation whether by catheter or suprapubic tube, is not considered necessary or desirable. There were 97 cases of retention of urine which, wherever feasible, were treated by immediate prostatectomy: seven (7.2%) died; 70 were operated on for acute retention, with four (5.7%) deaths. As many cases were admitted in very poor condition, the results shown are considered satisfactory. It seems that the method of immediate prostatectomy is well worthy of an extended trial.

1. G. A. B. Walters, in *British Med. Jl.*, April 3rd.

It is rather surprising to learn from this article and those cited that gradual decompression of the bladder is losing favor in England. The Editor of this Department remains highly pleased with the results of delaying operation until the patient can be got into best general condition, a plan of treatment which, in his hands (and the hands of a number of others), is followed by a mortality of only 2 per cent.

PUBLIC HEALTH

N. Thomas Ennett, M.D., *Editor*, Greenville, N. C

RURAL HEALTH CONFERENCE

It is heartening to the local health officer to note the wide general interest now being manifested by the general medical profession in public health work.

For instance, the Medical Society of North Carolina, on February 27th, sponsored a Rural Health Conference at Chapel Hill on the theme, "Adequate Health and Medical Care for the People of Rural North Carolina."

This subject is broad enough to include all phases of health work. And from our viewpoint this meeting was an important milestone in the public health work of the State, the significant fact being that the State Medical Society has virtually assumed leadership in the health work of the State. Where the leadership belongs may be a question for debate. Some will say that it belongs to the State Health Department. Perhaps a better position to take would be that it belongs to these two organizations, jointly, for if we are to have adequate medical and health care (which, of course, includes preventive medicine) we can only have it at its optimum by close coördination of the efforts of the two organizations.

We are aware, of course, that the private practitioner through the years has done much health work, including immunizations, etc., but in so far as we know, the Chapel Hill meeting was the first health conference held in this State, sponsored by the North Carolina Medical Society.

Much of the recent interest in public health in North Carolina is unquestionably due to the activity of the North Carolina Good Health Association; its clarion call to the citizens of the State has aroused the whole people to the fact that the health needs of the people are not now being adequately met.

One of the hopeful recommendations made at the health conference by Dr. H. B. Mulholland of the University of Virginia, Regional Chairman of the Rural Health and Education Committee of the American Medical Association, was that each county organize a health council, this council to be composed of representatives from the local medical society, the local health department, the county commissioners, the farm bureau, the parent-teacher association, etc. These local health councils acting on the county level and backed by the North Carolina Medical Society and by the State Board of Health can, by studying local health problems, exert a powerful influence for better health upon every town, village and hamlet in this State.

It would seem that we are at the dawn of a new day!

Tick Repelents Found Satisfactory

(J. M. Brennan, in *Pub. Health Reports*, March 12th)

In the first series of tests, 20 men wearing treated and untreated uniforms were exposed to heavy tick infestations for four hours per day. Sixteen uniforms were treated in pairs, each pair with a different repellent, while four were left untreated as controls. Freshly laundered garments were impregnated, once only, from a solvent (acetone) with 2 ounces of repellent per uniform.

The second series of tests was, in substance, a repetition of the first, except that a comparison was made of dosages of 1 and 2 ounces per uniform and fewer materials were tested.

Butylacetanilide, 1 to 2 ounces, has shown excellent repellency against both nymphs and adults of Ambyomma americanum for 10 days. Its value for practical application as a tick repellent is strongly indicated, while observations have suggested that it affords complete protection against chiggers.

Benzyl cyclohexanol and phenyl cyclohexanol, while less persistent in effectiveness, gave evidence of adequate protection for five and three days, respectively.

Note.—Presumably this treatment would be effective against other ticks.

Temporal Arteritis Fairly Common

(G. H. Jennings, *in British Med. Jl.*, March 6th)

Temporal arteritis is usually, at least, part of a fairly generalized arteritis in old people. It only rarely occurs without declaring its nature by temporal-artery inflammation, but in all suspected cases other palpable pulses should be observed for changes.

The main cause for suspecting the illness is a protracted severe headache associated with some general malaise in old people, particularly women.

In such subjects the tendency to diagnose a functional cause of the pain should be firmly resisted, and a careful watch should be kept on the temporal arteries.

Adequate doses of the coal-tar analgesics give considerable relief. The condition, though lasting many months in most cases, tends toward recovery in the majority. By this fact and by the nature of the vascular reaction to the infection some distinction can be made between it and polyarteritis nodosa and thromboangiitis obliterans.

The cause of the infection remains unknown.

Skin Affections Recognized as Allergic Hundred Years Ago

(*Ohio State Med. Jl.*, March)

Noah Worcester, M.D., "The Forgotten Pioneer," wrote in 1845, in the first book on "Diseases of the Skin," by an American author:

"Instances in which some affection of the skin is excited by an article of diet which is wholesome to most individuals and very numerous, and indeed it is usually by this class of diseases that such idiosyncrasies are manifested."

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As is true of most Medical Journals, all costs of cuts, must be borne by the author.

SOCIALIZATION OF MEDICINE WOULD MEAN END OF ALL FREE ENTERPRISE

IN ITS issue for January 31st the *British Medical Journal* carried an article by a layman which deals with the threat of doing away with the private practice of medicine, in a highly intelligent fashion. Hear him.

There is now no doctor left who does not realize that the present offer of the Minister of Health is an invitation to take the first and irrevocable step towards a full-time, full-salaried State medical service. It is now equally clear that an overwhelming majority of doctors are opposed to the scheme. It is vital to their own interest and to the interest of the community at large that they should vote against the scheme in a majority overwhelmingly large.

The destruction of private practice would have a damaging effect on the standing of all doctors. Do doctors in public employment realize that all their professional standards, including the financial, are maintained by the outside pressure of independent practice? The "never-ending audacity of elected persons" is curbed, to some extent, by the fact that the employed doctor can walk out and set up for himself if the conditions of his employment should prove unbearable.

There is a wider aspect which vitally affects the whole public. For a full genneration we have watched a steady extension of State power. The necessities of war greatly assisted the development of the omniscient, omnipotent, and omnicompetent State, but the development has increased in rapidity since the end of the war, because it has the authority of a truly monstrous political philosophy.

The liberties of Britain were not won by majority decision, or by accepting the sovereignty of Parliment over all persons and in all causes. Liberty is won by the few, and is held by the many.

Indignant totalitarians, who cried "Havoc" and "Treason" because the doctors showed an inclination to disagree with Mr. Bevan, have kept a silent tongue over strikes conducted in open defiance of a law which they themselves had renewed, and they are fond of talking about what organized workers will or will not stand, without reference to Parliamentary sovereignty. The trade unionist may steal the horse, while the doctor may not look over the hedge. Is it posible that the sovereignty of Parliament is another name for the dictatorship of the proletariat?

The importance of the plebiscite to the general public is this, that it gives the first gleam of hope that we may all live to see liberty recapture lost ground. The advance of authoritarianism has been almost completely unchecked, for the resistance has

been individualistic and unorganized. Now for the first time, the authoritarians are meeting a well-armed enemy in prepared positions. If Mr. Bevan's offer is overwhelmingly rejected, even those who regard the rejection with grief and rage will admit, and even insist, that the fault was largely Mr. Bevan's. That will be easier than admitting that the scheme is profoundly wrong. A more plausible politician will take over negotiations, knowing that his own reputation is dependent on success. The doctors have nothing to fear, so long as they are true to themselves and to each other.

The nurses and doctors of Willesden told the Council that they would seek other employment rather than accept the forcible baptism of trade union membership. Finding that the closed shop carried the uncomfortable corollary of a closed hospital, the Council climbed down. Prominent Ministers and trade unionists vied with each other in disapproval. Willesden had really gone too far: doctors and nurses must not be interfered with.

It has fallen to the doctors to meet and break the authoritarian demand. Far more depends on this than the future of medical practice. The doctors can strike a blow that will not only free themselves but will give hope of freedom to us all.

Since this wise layman wrote the sentences quoted, British doctors have struck that manful blow. Some 86 per cent of them say they will not participate in the plan to destroy the private practice of medicine and make every physician and surgeon a hireling of the State.

They have shown us how to meet the situation, should by any chance the Truman-Wagner-Murray-Dingell bill be enacted.

HOW TO PROVIDE GENERAL PRACTITIONERS AND THEREBY SAVE THE PROFESSION

A MEMBER of the Council on Medical Education and Hospitals of the A. M. A. is one of the many who has awakened to the facts that the general practitioner is the main man in medicine and that over-specialization is the main cause of the threat of socialized medicine, and he suggests remedies which hold promise of alleviation if not cure.

Far too many hospitals, says Dr. Jensen,[1] have sought approval for residencies in the various special fields of medicine and surgery, and many have been turned down because they could not meet the minimum requirements of the Council. One of the main reasons for this has been a misconception on the part of hospital staffs of what it entails to train a specialist.

More and more of our young doctors are entering special fields of medicine and surgery, being motivated by a desire to receive due recognition in the profession and the general public, to obtain the privilege of treating patients in hospitals, and, as to many certainly, in order to get a larger income.

The belief is expressed that the real cause for so many young doctors wanting residencies is much more fundamental. In station and general hospitals these doctors saw medicine being practiced by those who were better trained, and uppermost in their minds came the desire to get more training, thereby becoming specialists themselves.

It is very heartening to read:

The very foundation of our profession is at stake —the general practitioner. We must return to the sound principle of training all students to become good doctors. Our medical schools must give the students a greater understanding of what is implied in becoming a physician, must assume leadership in stimulating students to enter general practice. The medical profession as a whole must assume leadership by showing young doctors that the specialist is the by-product of the general practitioner, that the specialist is the tail to be wagged and not the dog to do the wagging. Some hospitals can be of real service by placing the emphasis on training general practitioners.

Sixteen medical schools, we are told, have programs for the training of general practitioners. Following graduation, the young doctor may choose from three different plans: one is a rotating internship of one year's duration; another is a two-year rotating internship; and the third choice is a four-year program—the first year a rotating internship, then follow assignments of prescribed length to the laboratory, x-ray, medicine, surgery, psychiatry, pediatrics, obstetrics, and outpatient work. Affiliated with the program are several hospitals located over the state, some of which could not under ordinary circumstances support intern or residency training by themselves. During his residency, the general physician is assigned for certain lengths of the time to these hospitals. The last year he will assist in the instruction of other interns or residents, being compensated financially so that he can start private practice on firm footing the following year.

Dr. Jensen is convinced that the time has come when we must consider seriously a means of de-emphasizing and decelerating training for specialists. He advises most hospitals to improve their intern training, offer two-year programs wherever practicable, and develop residencies in general medicine, leaving to the larger metropolitan hospitals, university hospitals, and other hospitals that have the requisite special facilities the responsibility of training specialists.

This is a sensible article. Its recommendations

1. Frode Jensen, in *The Diplomate*, Mar.

are practical and should be practicable. It is a pity that those in high places in the A. M. A., and elsewhere in medicine, did not sooner realize what over-specialization and over-hospitalization was leading to, and put these remedial measures into effect 25 years ago. Let us all hope it is not now too late.

RECENT ADVANCES IN THE TREATMENT OF CARDIOVASCULAR DISEASES

Four of these advances of great importance are described by McCloud.[1]

Subacute bacterial endocarditis formerly had a mortality rate of practically 100 per cent. Penicillin, it has been established, will sterilize the blood stream and heart valves in the great majority of cases, a few dying, not of septicemia, but of congestive failure, embolic phenomena, or uremia. A daily dose of one-half million units of penicillin is given for at least 28 days. Relapses may occur, always within 30 days after cessation of treatment. Such patients will usually respond to larger doses given over a longer period. Intramuscular injection every three hours is the simplest method and has given very satisfactory results. There is no advantage in giving anticoagulants with the penicillin.

Recently published results of treating 50 patients with acute coronary thrombosis with anticoagulants give only two as having developed vascular complications, 4% in contrast to the 37% with vascular complications reported in a series of 100 cases not treated by anticoagulants. Heparin and dicumarol should not be used unless a reliable laborator yis available for determining daily prothrobin time nor in the presence of hepatic or renal insufficiency. Heparin is used for the first 48 hours until the dicumarol has had time to lower the prothrombin time. Then, with dicumarol, the prothrombin time should be kept below 30 per cent of normal for at least three weeks. If the prothrombin time drops too low, or if bleeding occurs, the action of the dicumarol may be counteracted by administering intravenously 60 mg. of vitamin K in the form of menadione bisulfite.

The ease and minimal toxic effects with which a patient can be digitalized with digitoxin are deserving of comment. Digitoxin is so completely absorbed from the gastrointestinal tract there is no advantage in giving it intravenously. Digitalization is accomplished in the average patient by giving 1.2 mg. of digitoxin orally in one dose. The full effect takes place in four to 10 hours. The maintenance dose is .1 to .2 mg. daily; only one patient in 50 had nausea as a result of the local action in the stomach, only one in 50 as a result of systemic action. An occasional patient may not be fully digitalized by the single dose of 1.2 mg., and requires .2 or .0 mg. additionally. The digitalizing dose should not be given if the patient has received digitalis of any kind in the previous two or three weeks..

Treatment of edema by the strict reduction of sodium intake is a great advance. In congestive heart failure, fluids may be given *ad lib.* White et al., in hospitalized patients, reduced to 1.5 gm. of sodium chloride daily. In their ambbulatory patients the regimen was less rigid—eliminating salt from the table and from the cooking, and requiring salt-free bread and butter. The reduction of the sodium is the important factor, the chloride having no effect on edema formation. Thus no sodium bicarbonate may be given and no medicines containing sodium may be used. Schemm, in addition to restricting the intake of sodium, tries to have the diet acid-ash in type. He thinks fluids should not only be given *ad lib.*, but should be forced.

1. C. N. McCloud, Jr., St. Paul, in *Minn. Med.*, Mar.

Wonderful New Non-narcotic Pain-reliever Reported on High Authority

A new drug, made available in our country since World War II, has been found effective in the relief of many kinds of pain, according to an article[1] in the April 3d issue of *The Journal of the A. M. A.*

Trial was made of this drug, called methadon, on 400 patients for relief of pain—postsurgical, primary and metastatic cancer, arthritis, neuritis, headache, leg ulcer, anginal pain, and gastric and duodenal ulcers. It was administered orally—in capsules, tablets and elixir—and by hypodermic and intravenous injection. Onset of action was "two minutes when given intravenously; 15 or 20 minutes when given hypodermically, or when given orally as the elixir; 30 minutes when given orally in capsules or tablets.

By any means of administration the average duration of relief was 3 to 4 hours, in many cases 8 to 12 hours. The effects on the nervous, circulatory and respiratory systems were reported as similar to those of morphine. Some investigators are reported as having found methadon more potent than either morphine or merperidine.

Another group found that morphine abstinence symptoms could be controlled with methadon, and when methadon was withdrawn abruptly after prolonged administration, the symptoms were so mild as to require no treatment.

Of the 400 patients, 81 per cent had complete or adequate relief of pain—86 per cent if the patients who received methadon for labor pains be excluded, since the drug has proved ineffective in labor. Methadon is reported to relieve muscular spasm and pain in cases of bulbar and spinal poliomyelitis

1. By Elizabeth B. Troxil, M.D., of the Department of Pharmacology of the University of Minnesota Medical School.

and headaches due to brain tumor, head injury and brain abscess.

A score of patients given the drug for two or three months had no withdrawal symptoms on abrupt discontinuation of treatment. Three patients were given the drug for one year and were able to stop treatment abruptly without ill effects.

This truly wonderful report, *Southern Medicine & Surgery* renders complete with the information that the drug is locally available, and at a reasonable price.

Let us all hope that our own experience with methadon will bear out these investigators, and thus bring near to complete success the long and earnest striving for a remedy that will do all the good of morphine and none of its harm.

A Welcome Return to Sane Baby Management

The increase in our knowledge of psychosomatic medicine has emphasized the importance of early impressions on the growing infant, comments an editor.[1] And he goes on:

Many of our current practices tend toward Spartan routine rather than loving care. The importance of emotional security for the baby is now recognized. Other features of the program are abandonment of the artificial practice of separating the newborn child from its parents, encouragement of the breast feeding of infants with opportunity to nurse whenever they are hungry or anxious, and postponement of the establishment of sphincter control until the baby can walk, verbalize its needs and learn to be clean and dry through imitation, curiosity and familiarity with the toilet.

These are radical departures from methods regarded as essential for the past quarter-century or more. The professional experience of recent years, supplemented by fundamental research, suggest, even demand, revolutionizing the management of infants. Welcome, thrice welcome!

1. Editorial in *Jl. A. M. A.*, March 27th.

Objective in Latent or Late Syphilis Treatment

We are reminded by Taggart[1] that the aim of treatment in late latent or late syphilis in general is not to obtain negative STS (serological test for syphilis) but to prevent further progress of the disease. Quantitative STS are valuable in the follow-up of such treated patients. If marked sustained rises in STS titers occur, further treatment is indicated. *Present knowledge indicates that patients who continue to have gradual drops in titers over years require no further treatment.* In syphilis of the central nervous system the spinal fluid findings are the only reliable guides to treatment. The presence of increased cells in the spinal fluid six months after treatment, or a definite rise in spinal fluid complement-fixation titers at any time following treatment, indicates the need for additional treatment.

1. S. R. Taggart, in *Med. An. D. C.*, Mar.

CONSTITUTION AND BY-LAWS OF THE TRI-STATE MEDICAL ASSOCIATION

Proposed Revision Submitted to Annual Meeting, 1948

CONSTITUTION

Article I

Title of the Association

The name and title of this Association shall be "The Tri-State Medical Association of the Carolinas and Virginia."

Article II

Objects of the Association

The objects of this Association shall be the advancement of medical science, the elevation of the profession, and the promotion of all means for the relief of suffering humanity.

Article III

Section 1. This Association shall consist of active and honorary members.

Section 2. Any member of the 1) Medical Society of the State of North Carolina, 2) South Carolina Medical Association, or 3) Medical Society of Virginia, in good and regular standing shall be eligible for membership.

Application for membership must be presented in writing, giving name in full, address, and college of graduation, with year, and be endorsed by two or more members of this Association.

Application for membership shall be referred to the Executive Council and election shall be by ballot.

Section 3. Honorary members: A physician proposed by two members of the Association from each State or one member of the Executive Council from each State, to the Executive Council, and receiving a two-thirds vote of the members present.

In compliance with a suggestion of President C. C. Orr at the 1936 meeting, honorary membership shall be granted to those members of the Association who have been members and paid their dues regularly for twenty-five years.

Article IV

Time and Place of Meeting

This Association shall hold an annual meeting, in one of the respective States alternately, at such time and place as the Association or the Executive Council may determine. It shall continue in session two days, unless otherwise ordered by the Association.

ARTICLE V

Officers

Section 1. The Officers of this Association shall consist of a President, a President-elect to be chosen from the State in which the next year's meeting will be held, three Vice-Presidents—one from each State—a Secretary and a Treasurer (or a Secretary-Treasurer) and nine Executive Councillors—three from each State.

Section 2. The Executive Council shall consist of the above elected officers of Section 1 and all living Past Presidents.

Section 3. The Executive Council shall elect at its annual meeting a Nominating Committee, consisting of five members—three of whom are to come from the State from which the President-elect is to be chosen. The duties of the Nominating Committee shall to be to nominate all officers except the Executive Councillors. This Committee is to report in writing at the Association's next business meeting in open session, but this shall not preclude the nomination of any officer by any member of the Association and election shall be by ballot. The officers shall enter upon their duties immediately before the adjournment of the meeting at which time they are elected and shall hold office for one year. Any vacancy occurring during the recess shall be filled py the Executive Council.

ARTICLE VI

Amendments

This Revision of the Constitution and By-Laws shall take effect immediately from the time of its adoption, and shall not be amended, except by written resolution, which shall lie over one year, and receive a vote of two-thirds of the members present.

BY-LAWS

Duties of the President

1. The President shall preside at the meeting, and perform the usual duties of his office; he shall make an annual address, and shall not be eligible for election for a second term. He shall be Ex-officio Chairman of the Executive Council and Co-Chairman of all Committees appointed by him.

2. The President shall appoint a Program Committee consisting of one member from each of the three States. The Chairman of this Committee must be from the vicinity of the next meeting. The President and President-elect and Secretary shall be ex-officio members of this Committee. The responsibility for proper preparation of the program rests entirely upon this Committee. Each essayist shall present his subject and a brief summation of his presentation to this committee and the committee is empowered to accept or reject any essay except in the case of invited speakers.

Duties of the Vice-Presidents

1. One Vice-President shall perform the duties of the President during his absence, or when so requested by him. A Vice-President shall not be eligible for re-election for any two terms in succession.

2. The Vice-Presidents shall constitute the Membership Committee whose duties it will be to create interest in the Association and solicit desirable members.

Secretary and Treasurer

The office of Secretary and that of Treasurer may be held individually or combined in the office of Secretary-Treasurer.

Duties of the Secretary

The Secretary shall attend and keep a record of all meetings of the Association and Executive Council, he being ex-officio a member of the Executive Council and entitled to vote. He shall conduct the correspondence of the Association, and shall be the custodian of all papers, seals, books and records of the Asociation. He shall keep a register of the members, with the dates of their admission and places of their residence and shall furnish such a copy to any other officer or committee upon request and shall perform all such other duties as pertain to his office. He shall receive such compensation for his services as the Association or the Executive Council may agree upon. In conjunction with the scientific program committee he shall see that a copy of the preliminary program is mailed to each member not less than twenty-one days prior to the meeting.

Duties of the Treasurer

The Treasurer shall collect all moneys due from the members and other sources and place it in a depository designated by the Executive Council. He shall keep the accounts of the Association and shall disburse the funds as directed by the Association, preserving vouchers for the same, and shall render an account annually at each meeting when an Auditing Committee shall be appointed to examine his accounts and vouchers. He shall receive such compensation as the Asociation or the Executive Council may agree upon. He shall be an ex-officio member of the Executive Council and entitled to vote.

Duties of the Executive Council

The Executive Council shall consist of nine members—three from each State. The Executive Council shall elect annually one from each State, to serve for a period of three years. The President, President-Elect, Secretary, Treasurer and the sur-

viving Past Presidents shall be ex-officio members of the Executive Council.

The duties of the Executive Council shall be to investigate applications for membership, and report to the Association those that are considered worthy. It shall have the management of the affairs of the Association during the interim as well as during the meeting. All motions and resolutions before the Association shall be referred to the Executive Council without debate, and the Executive Council shall report to the Association as soon as possible.

It shall carry out the provisions of the Constitution and take cognizance of all questions of an ethical, judicial, or personal nature, and upon these its decisions shall be final; except that an appeal may be taken from such decision of the Executive Council and upheld by a two-thirds vote of the Association.

No member of the Executive Council, holding two offices, shall have the privilege of voting more than one office.

Order of Business in Convened Session of the Association

1. Calling meeting to order
2. Divine Invocation
3. Announcements
4. Scientific Program
5. Past Presidents' Luncheon
6. Resuming Scientific Program
7. Banquet and Presidential Address
   (Details of arrangement to be left to the Local Committee)

Second Morning

1. Business Session
   a) Report of Secretary
   b) Report of Treasurer
   c) Report of Executive Council Meeting
   d) Committee Reports
2. Resume Scientific Program
3. Memorial Service to be held about Noon
4. Report of Nominating Committee, followed by Election of Officers.
5. Luncheon Recess
6. Resume Scientific Program
7. Adjournment.

How Committees Are Appointed

The President shall appoint the following Committees in addition to any other committees which he thinks desirable for the proper carrying out of the coming meeting; Arrangement, Auditing and Necrological.

Finance

Dues are five dollars per year, payable in advance; however, the amount of the annual dues may be changed by a majority vote of the Executive Council.

Any member neglecting to pay his annual dues for one year forfeits his membership, upon a vote of the Executive Council.

The Recommendation of the 1929 Executive Council is accepted and included as follows:

It was moved that at the end of one year the journal cease to go to a member in arrears, but that he be carried on the rolls for two years as a member, after which time his account will stand on the books of the Association: $5 dues for the first year, $3 per year dues for the second and third years—total $11. No membership shall be renewed until all arrears are paid in full.

Papers

The titles of all papers to be read at any meeting shall be furnished to the Secretary not later than four weeks before the annual meeting. No paper shall be read before the Association that has previously been read or published. Not more than twenty minutes shall be occupied in reading any paper except by a vote of the Association. In the discussion of the papers, resolutions or questions, no member shall speak longer than five minutes, or more than twice, except on special permission by a vote of the Association.

This limit of twenty minutes per paper does not apply to the Presidential Address, or the papers of the invited guests.

Every paper read before the Association immediately becomes the property of the Association. A copy of the paper must be left by the reader with the Secretary of the Association. Every paper presented at the annual meeting of the Association will be published in the Association's official organ, unless its publication should be thought by the President and the Secretary to be highly undesirable. No paper presented at the annual meetings of the Association shall be published first in any journal other than the official organ of the Association without the written approval of the President and the Secretary.

Parliamentary Rules

Robert's Rules of Order shall be accepted as a parliamentary guide in the deliberations of this Association.

Approved by the following:

Frank S. Johns
Francis B. Johnson
Russell Buxton
Paul V. Anderson
J. K. Hall
George H. Bunch
W. Lowndes Peple
C. J. Andrews
Stuart McGuire
Addison G. Brenizer
Charles C. Orr

NEWS

Bowman Gray School of Medicine

Dr. Angus Crawford Randolph, former resident psychiatrist at the Veterans Hospital, Perry Point, Md., has joined the staff of the department of neuropsychiatry as senior resident in psychiatry at Graylyn, the school's rehabilitation and convalescent center. Dr. Randolph is a graduate of Princeton University and the University of Virginia Medical School and has held a fellowship in preventive medicine at Johns Hopkins.

Recent grants made to the school include:

A $1,000 grant from the executive committee of the N. C. division of the American Cancer Society to pay for a refresher course in cancer for State physicians.

Two grants, totaling $31,000, from the National Cancer Institute to aid in cancer teaching under the direction of Dr. Robert P. Morehead of the department of pathology.

A grant of $5,950 from the National Advisory Health Council of the U. S. P. H. S. for study of the formation of phospholipids by the liver in cirrhosis of the liver. Radioactive materials from the atomic pile are being used in this study. Dr. Camillo Artom and Dr. W. E. Cornatzer of the department of biochemistry have been experimenting with animals in this research. Dr. David Cayer of the department of medicine will apply the study to humans in collaboration with Dr. Cornatzer.

A grant of $8,100 from the National Advisory Health Council in support of research already under way in the department of medicine on factors concerned with resistance built up by the human body to chemotherapy.

A grant of $8,400 to the department of physiology and pharmacology in support of research being conducted by Dr. Harold D. Green and Dr. J. Maxwell Little in the field of peripheral vascular circulation. The grant is from the Life Insurance Medical Research Fund.

Dr. Douglas M. Kelley, associate professor of psychiatry and director of Graylyn, will preside at meetings of the Rorschach Society at Vanderbilt University, Nashville, Tenn., April 10th-14th.

Dr. Cecil K. Drinker, professor of physiology and dean of the School of Public Health at Harvard, spoke on the "Function of the Peritoneum" at the meeting of the Bowman Gray Medical Society on March 22nd.

Dr. Frank Lock, head of the department of obstetrics and gynecology, discussed "Anesthetic Deaths in Obstetrics" at the meeting of the South Carolina Obstetric and Gynecologic Society at Camden, S. C., April 3d.

Dr. George T. Harrell, Jr., head of the department of internal medicine, has been elected a member of the Executive Medical Board to formulate the research policy and clinical program to be undertaken at the Oak Ridge Hospital, Oak Ridge, Tenn. The Atomic Energy Commission will take steps immediately to initiate a program of providing facilities at the hospital for research study in the treatment of leukemias and other malignant diseases using short-lived radioisotopes direct from the nuclear reactor there.

University of Virginia School of Medicine

The following papers by members of the faculty of the University of Virginia School of Medicine were reported at the meeting of the Federation of American Societies for Experimental Biology at Atlantic City March 15th-19th.

Pilot Metabolisms and Respiratory Activity During Varied Flight Tests—Dr. E. L. Corey.

Circulatory Reserves Shown by Animals Under Acceleratory Exposure—Drs. S .W. Britton and V. A. Pertzoff.

Effect of Some Central Nervous System Stimulants and Depressants on the Activity of Succinic Deyhydrogenose—Dr. D. T. Watts.

Inhibitory Effects of Naphthoquinone sand Related Compounds on Glycolysis—Dr. C. L. Gemmill.

Fractionation of Lymphoid Tissues—Dr. E. C. Gjessing.

Inhibitory Effects of Stilhamidine Guanidine and Arginine on Glycosuria—Dr. C. L. Gemmill.

Studies on the Agglutination of Human and Rat Red Cells by Castor Bean Extracts—Drs. S. Ludewig and Alfred Chanutin.

Dr. Oscar Swineford, Jr., Professor of Practice of Medicine, addressed the general assembly of the Dallas Southern Clinical Conference, held from March 15th-18th, on the subject of "The Management and Classification of Asthma." Dr. Swineford also addressed the medical section of the conference on the subjects, "The Treatment of Pollen Hay Fever" and "Use of Drugs in Allergy."

On March 19th, Dr. Oscar Swineford addressed the Medical Society of Augusta, Georgia, on the subject, "Drug Allergy."

Dr. Harry S. N. Greene, Professor of Pathology at the Yale University School of Medicine, was the guest speaker for the annual Phi Beta Pi Cancer Lectureship. Dr. Greene spoke on the subject of "Biological Assessment of Tissue Potentialities" on March 24th.

Dr. Bayard T. Horton of the Mayo Clinic spoke on the subject, "Headache, Differential Diagnosis and Treatment," in the Amphitheatre on Friday, April 3th, as guest speaker on the Postgraduate Program for House Officers.

The American Physiological Society, at its recent annual meeting, approved the formation of the new *Journal of Applied Physiology*, to start publication in July. Dr. C. L. Gemmill, Professor of Pharmacology, has been appointed as a member of the Editorial Board, to be composed of twelve physiologists from North America. He will represent particularly the field of Aviation Physiology.

Symposium Greensboro Academy of Medicine

At the Jefferson Country Club, on March 18th, the following program was given:

Dr. Robert A. Hingson, Professor of Anesthesiology, University of Tenn. Medical School, "Recent Advances in Control of Pain"

Discussion opened by Dr. R. L. Wall, Bowman Gray School of Medicine.

Dr. Emil Novak, Associate Professor of Gynecology, Johns Hopkins Medical School, Assistant Professor Obstetrics, University of Maryland Medical School, "Management of the Menopause."

Discussion opened by Dr. R. A. Ross, Duke University.

Dr. Tinsley Harrison, Professor Medicine, Southwestern Medical College, "The Tachycardias and Bradycardias"

Discussion opened by Dr. Edward S. Orgain, Duke University.

Dr. W. Emory Burnett, Professor Surgery, Temple University Medical School, "Surgical Infections of the Lungs"

Discussion opened by Dr. H. H. Bradshaw, Bowman Gray School of Medicine.

Dr. Edward Weiss, Professor Clinical Medicine, Temple University Medical School, "Psychotherapy in Medical Practice."

The Catawba Valley Medical Society held its regular dinner meeting Tuesday, April 20th, at the Recreation Center, Lincolnton, N. C.

Program:

1. Medical Aspects of Gastro-intestinal Hemorrhage, Dr. James F. Reinhardt.

2. Surgical Aspects of Gastro-intestinal Hemorrhage, Dr. W. G. Page.

3. Gastro-intestinal Hemorrhage in Children. Dr. John Hill Fitzgerald, Jr.
4. A Case Report by Dr. W. V. Costner.

MARRIED

Dr. John Calhoun Risher, of Charlottesville, and Miss Anne Hume Nash, of the University of Virginia, were married on April 10th.

Dr. Bruce Ensor Walls, of Bristol, Tennessee, and Miss Wilma Baker, of Winston-Salem, were married on April 10th.

DIED

Dr. Charles Hoover Phillips, 78, died April 9th at his home at Thomasville, N. C. He was a graduate of Baltimore University Medical College in 1892, and first practiced medicine in Randolph County. Since 1921 he had practiced at Thomasville.

Dr. Phillips was a nominee in last year's voting as the most representative family physician in the United States by the American Medical Association.

Dr. R. E. Harrill died at his home at Little Rock, Arkansas, on April 8th, aged 84. He was a native of Lincoln County, N. C., and he and he visited relatives in that county and in Catawba County several months ago.

Dr. Nelson F. McNorton, veteran Negro physician of York County, Va., died April 12th in a Newport News hospital after a brief illness. He was born at Yorktown in 1875, the son of Dr. Daniel McNorton. In 1897 he began practice in York County with his father, whose death, in 1913, ended 52 years of medical practice there. Dr. McNorton's services lacked one years of reaching his father's goal.

Tripelenamine ("pyrihenzamine") hydrochloride in a 2% concentration in water-soluble, or anhydrous-base ointments, applied locally, has been found to give relief to the majority of patients with itching dermatoses, particularly atopic dermatitis and pruritus ani.—S. M. Feinberg & T. B. Bernstein, Chicago, in *Jl. A. M. A.*, July 5th.

Multiple Primary Carcinoma.—A case is reported in which the tumors arose from the terminal alveoli in the right lung, the main stem bronchus of the left lung, and in the prostate gland. All three tumors were active and apparently would have resulted in death of the patient within a short period of time.—D .W. Melick & O. O. Williams, Phoenix, in *Arizona Med.*, Mar.

Scleroderma affects not only the skin, but also the heart, mouth, esophagus, intestines, kidney, and the pituitary and prostate glands. Diffuse scleroderma is almost invariably progressive.—A. N. Ries, Evanston, in *Wisc. Med. Jl.*, Mar.

In cases of *paroxysmal hemoglobinuria* the serologic test for syphilis is almost invariably positive; 95% of the persons with paroxysmal hemoglobinuria due to the cold hemolysins are syphilitic.

U. S. Vitamin Corporation introduces a new preparation, ViSyneral Injectable, which it believes will be of dramatic importance in many nutritionally deficient patients. For the first time in pharmaceutical history there is available an aqueous solution containing both the oil-soluble and water-soluble vitamins for intramuscular administration.

BOOKS

BRITISH SURGICAL PRACTICE: Under the General Editorship of Sir Ernest Rock Carling, F.R.C.S., F.R.C.P., Consulting Surgeon, Westminster Hospital, and J. Patterson Ross, M.S., F.R.C.S., Surgeon and Director of Surgical Clinical Unit, St. Bartholomew's Hospital, Professor of Surgery, University of London. In eight volumes with Index volume. Volume I. *The C. V. Mosby Company,* 3207 Washington Blvd., St. Louis 3. 1947. $15.00 per volume (and $5 for the 9th or index volume) or $125.00 for the set.

British Surgical Practice, Volume II, deals with such subjects as backache, bacteremia, basal metabolism, bladder infections and injuries, blood pressure, blood transfusion, bone infections, bone grafting, brain injuries, brain tumors, disease conditions of the breast, bronchiectasis, burns and scalds, and bursae. The practical nature of the work may be judged from a statement with regard to backache: "The first stage in diagnosis lies with the general practitioner. . . . . The dangers of too early reference to the specialist are two-fold. First, he is apt to overemphasize the part played by his own specialty in the etiology of the patient's complaint; and secondly, he tends to attribute the temporary improvement which may follow his specialized treatment to the particular maneuver he has used rather than, as is so often the case, to a non-specific beneficial response which may result from any novel form of treatment."

LABORATORY EXPERIMENTS IN PHYSIOLOGY, by W. D. Zoethout, Ph.D., Professor Emeritus of Physiology in the Chicago College of Dental Surgery (Loyola University). Fourth edition with 97 illustrations. *The C. V. Mosby Company,* 3207 Washington Blvd., St. Louis 3, Mo. 1948. $3.00.

Although designed for use with the Textbook of Physiology by Zoethout-Tuttle, the new fourth edition of Laboratory Experiments in Physiology may well be used with any textbook of physiology. Two hundred and sixty-two experiments of varying length and complexity are described. The large number of experiments permits adaptation of the manual to shorter courses. The exercises are clearly written and are provided with numerous stimulating questions.

INTRODUCTION TO HUMAN PHYSIOLOGY, by William D. Zoethout, Ph.D., Professor Emeritus in the Chicago College of Dental Surgery (Loyola University). With 138 text illustrations and four color plates. *The C. V. Mosby Company,* 3207 Washington Blvd., St. Louis 3. 1948. $4.00.

The author's objective has been to write a book for the reader desiring a fundamental knowledge knowledge of the operating of the human body but having no previous knowledge of physics and chemistry. Those phases having directly to do with the maintenance of health are stressed. It is designed largely for senior high school and freshmen or sophomore students who do not intend to take more advanced work in physiology, and for this purpose it is well adapted.

THE 1947 YEAR BOOK OF DERMATOLOGY AND SYPHILOLOGY, edited by Marion B. Sulzberger, M.D., Director, Department of Dermatology and Syphilology, New York Skin and Cancer Unit; Professor of Clinical Dermatology and Syphilology, New York Post-Graduate Medical School and Hospital; and Rudolf L. Baer, M.D., Associate Attending Physician, Department of Dermatology and Syphilology, New York Skin and Cancer Unit; Instructor in Dermatology and Syphilology, New York Post-Graduate Medical School and Hospital. *The Year Book Publishers, Inc.,* 304 S. Dearborn St., Chicago 4. $3.75.

The numerous advances in the field of dermatology and syphilology made in the year just past are chronicled and wisely assessed by the competent editors.

SYMPOSIUM ON MEDICOLEGAL PROBLEMS Under the Co-Sponsorship of the Institute of Medicine of Chicago and The Chicago Bar Association, edited by Samuel A. Levinson, M.D., Ph.D., University of Illinois College for The Committees of the Institute of Medicine and The Chicago Bar Association. *J. B. Lippincott Company,* E. Washington Square, Philadelphia 5. 1948. $5.00.

Among the subjects discussed are: the medical witness in court; medicolegal implications of artificial insemination; medicolegal problems in the practice of pathology; operations to produce sterility; trauma and tumors in industrial medicine; and scientific tests in evidence. Much of the book deals with problems to which doctors generally devote little thought, yet which, once they are broached, it becomes evident that they may be at sometime of immense practical concern. It would be the part of wisdom for any practitioner to purchase this volume and peruse it attentively.

TEACHING PSYCHOTHERAPEUTIC MEDICINE: An Experimental Course for General Physicians, edited by Helen Leland Witmer, Ph.D., Introductory Chapter by Geddes Smith. *The Commonwealth Fund,* 41 East 57th St., New York 22. 1947. $3.75.

This book is made up of lectures and discussions which constitute a course in psychotherapy and general practice given at the University of Minnesota. General practitioners may learn from these lectures and discussions much of importance in diagnosis and treatment of the conditions presented daily by their patients.

PROGRESS IN CLINICAL MEDICINE, by Various Authors. Edited by Raymond Daley, M.A., M.D. Camb., M.R.C.P., and Henry G. Miller, M.D., Durh., M.R.C.P., D.P.M. With 22 text-figures and 15 plates. *Grune & Stratton, Inc.,* 381 Fourth Ave., New York 16. 1948. $6.

The editors express the aim to select from the vast material at disposal and present as clearly as possible the parts of recent work already of proven value. The contributors are all prominent English

authorities. Among the subjects covered are infections, venereal diseases, tropical medicine, gastrointestinal disorders, metabolic disorders, cardiovascular-renal diseases, diseases of the blood, diseases of the chest, diseases of the nervous system, endocrine disorders, psychosomatic medicine and chronic rheumatic disease. It appears that critical judgment has been exercised on relative importance of recent advances in medicine and certainly the dealing with the subjects chosen is admirable.

THE PRACTICAL NURSE, by DOROTHY DEMING, R. N., Consultant in Public Health Nursing, Merit System Unit, American Public Health Association; Formerly Director, National Organization for Public Health Nursing. *The Commonwealth Fund,* 41 East 57th St., New York 22. 1947. $3.00.

This book is presented as the resultant of the thinking of hundreds of persons who have expressed themselves to the author on the need for and function of the practical nurse. The aim of the book is to review and size up factors in the situation especially in view of the shortage of professional nursing. It is represented as the responsibility of professional nurses to see that patients get the best possible care to be had from practical nurses, by seeing to it that these practical nurses are adequately taught. It is recognized that patients have always wanted and will always want practical nurses for certain types and stages of illness. It is to be hoped that publication of this and similar books will serve to make the services of practical nurses of more and more value and more and more available.

PSYCHOBIOLOGY AND PSYCHIATRY: A Textbook of Normal and Abnormal Human Behavior, by WENDELL MUNCIE, M.D., Practicing Psychiatrist; Chairman, Medical Advisory Board, Sexton Institute, etc. Second edition with 70 illustrations. *The C. V. Mosby Company,* 3207 Washington Blvd., St. Louis 3, Mo. 1948. $9.00.

The author is frank to say that there is still a lack of agreement among psychiatrists as to many elements of diagnosis and treatment. He recognizes his primary task to be the aiding of suffering humans. He has edited this second edition extensively in the light of recent years devoted largely to private practice, and relates what he has found useful in this practice.

Part I is a study of normal behavior; Part II of abnormal behavior; while Part III is devoted to treatment—nearly a hundred pages of it. The author says that it has been his constant effort to test theory and to strip from his service to patients the academic chaff of words, cliches and hallowed traditions. A study of the book will convince the student that this effort has been to a large degree successful.

CARCINOMA OF THE PROSTATE incidence compared with simple enlargement is 1:5 to 1:6.—Galbraith.

MEDICAL ASPECTS OF ESSENTIAL HYPERTENSION

A GOOD MANY doctors question whether symptoms are often, if ever, due to increased pressure alone. Rowland[1] is of the opinion that most symptoms attributed to hypertension are due to a neurosis, often engendered or amplified by suggestion of physicians. If hypertension occurs in a stable individual he is likely to be symptomless; an unstable or neurotic individual has symptoms which are attributable to hypertension.

It does little good to bring down the blood pressure for a short time then have it go up in spite of continued treatment—the usual experience with the medications we have present.

Far the largest factor in etiology is heredity; other factors usually blamed, such as the stress and strain of our mode of life, diet and obesity, are of secondary importance.

Kempner in 1944 introduced the rice diet. His results in a large series of cases have been marked to moderate benefit in 73 per cent. The diet contains 2,000 calories; only 5 gms. of fat, 20 gms. of protein, .2 gms. of chloride, and .15 gms. of sodium. Rowland is impressed with the low-sodium feature and believes that this is the basis for its virtue; also, the low-fat, low-cholesterol features may be productive of benefit.

A brief resumé of his experience of a very small series of cases recounts excellent results from salt reduction.

Most cases of hypertension are symptomless until cardiac, cerebral and/or renal complications occur. Further symptoms are most often not due to the increase in blood pressure.

There is no medicine at present that will consistently lower blood pressure and keep it at a low level. In a certain percentage of cases the low-sodium diet will lower the blood pressure.

1. Driver Rowland, Hot Springs National Park, in *Jl. of Ark. Med. Soc.,* April.

In a high percentage of cases barium enema will reveal *diverticula.* In some instances it will be necessary to repeat the enema several times before the diverticula will be demonstrated.

MODERN MIRACLE

The personnel man in a large organization insisted on keeping a large bowl of goldfish on his desk. When a friend asked why the harassed looking individual replied: "Well, frankly it's a novelty to have something around here that opens its mouth without asking for a pay increase."—*Christian Science Monitor.*

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JAMES M. NORTHINGTON, M.D., Editor

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Perforations of the Colon — Non-Traumatic

Furman T. Wallace, M.D., and E. M. Colvin, M.D., Spartanburg, South Carolina

From the Department of Surgery, Spartanburg General Hospital

NON-TRAUMATIC or spontaneous perforations of the colon are not infrequently seen in a general surgical practice and in many instances present a complex diagnostic problem. Perforation of an inflamed diverticulum of the colon, particularly of the sigmoid, is the most frequent type. Rupture of the bowel may also occur secondary to a malignant lesion. Several other disease conditions may in rare instances cause a perforation. Regional ileitis occasionally results in multiple fistulae that open into the colon or on to the abdominal wall. In these latter conditions, this complication usually appears late in the disease and frequently after the diagnosis has been made. The rupture of a diverticulum, however, may occur without previous warning. It is this type of condition that will be primarily discussed in this paper.

Diverticula of the large bowel are herniations of portions of mucosa and submucosa through weakened areas in the muscle coat. They frequently develop along the course of the bloodvessels penetrating the intestinal wall. Diverticula which protrude through a narrow opening in the bowel wall and balloon out the peritoneal covering are those most likely to cause trouble. Another type does not reach the external wall of the colon but lies buried in its layers where occasionally it becomes inflamed and perforates into the coats of the colonic wall. These are much more common in the sigmoid portion of the colon.

The etiology of the development of diverticula is not clearly established. Such factors as increased intracolonic pressure, as in constipation; atrophied musculature due to age, and various localized changes in the muscle wall have been mentioned. They are found much more commonly in obese people and after the age of forty years. The mechanism of the production of the inflammatory process is that fecal material gets into the diverticulum, and the neck of the sac becomes blocked, with subsequent irritation and impairment of the blood supply.

Diverticula may perforate in one of several ways as follows:

1. Perforation may be localized with abscess formation which is the most common occurrence. The abscess may rupture into the bowel or into the bladder, with the formation of a fistulous tract. Occasionally the local inflammation is so extensive that a partial or complete intestinal obstruction results.

2. Perforation may occur into the wall of the colon causing a diffuse inflammation of the bowel. This condition has been called acute sigmoiditis.

3. Free perforation into the peritoneal cavity occurs in some cases causing generalized peritonitis.

Presented to the Tri-State Medical Association of the Carolinas and Virginia, meeting at Charleston, February 9th and 10th.

We will present five cases of spontaneous perforation of the colon and will discuss the diagnosis and treatment. These cases are from our services at the Spartanburg General Hospital over a two-year period.

Case Summaries

I. Case 127,256: A 56-year-old white man admitted in very poor condition with temperature ranging up to 107° and severe cardiac decompensation. B. P. 80/60. X-ray and sigmoidoscopic examinations revealed an obstruction at the rectosigmoid junction. A colostomy with defunctionalization of the distal sigmoid and rectum was done, the proximal cut end brought out through a muscle splitting incision in the left flank, and the distal cut end through the lower part of the midline incision. A few days later a large abscess in the region of the rectum was drained *via* the transabdominal route. Two weeks later a large pelvic abscess was drained extraperitoneally after which the patient improved steadily. Subsequent biopsies and barium x-ray examinations were negative. Two years later the ends of the colon were sesected, and an end-to-end anastomosis done. Two ventral herniae at the colostomy sites were repaired at the same time. The patient is doing nicely now, having resumed his usual work.

II. Case 104,057: A 48-year-old white man weighing 250 pounds was admitted in diabetic coma and with a temperature of 104°. The abdomen was markedly distended. Flat x-ray films revealed partial obstruction of the sigmoid colon. Under spinal anesthesia an appendicostomy was done and a large rubber catheter inserted for decompression. The diabetic acidosis was controlled by the internist, and the patient was given large doses of sulfadiazine and penicillin. His response to therapy was very satisfactory, the infection and obstruction subsiding in eight to ten days. A barium enema revealed diverticula in the upper sigmoid. Sigmoidoscopy was done and a biopsy of the indurated area in the sigmoid was negative. The appendicostomy was closed on the fourteenth postoperative day. The patient has continued to improve and has resumed his normal work.

III. Case 136,011: A 30-year-old white man admitted with considerable vomiting and obstipation. Localized peritoneal signs were present in the left lower quadrant of the abdomen, and a hard, extremely tender mass was palpable on rectal examination. A conservative regimen with Wangensteen suction, fluids, penicillin and sulfonamides was started. The mass, which was an abscess, ruptured into tht colon two days later and rapid improvement followed. A biopsy of the rectal lesion revealed no evidence of carcinoma. A barium enema showed some narrowing of the lumen of the lower sigmoid and rectum for a distance of 10 cm.

IV. Case 61,632: A 49-year-old white woman admitted in severe shock and with the history of a recent coronary infarction. Generalized peritonitis was present with considerable tenderness, rigidity and distention of the abdomen. The patient was digitalized, and plasma and whole blood were given. At operation on the night of admission, a perforation of the rectum was found. After repairing the defect in the rectal wall, a double-barrel colostomy was done. Penicillin was given in doses of 100,000 units every two hours. The patient improved steadily and was discharged for three months. On her readmission, a sigmoidoscopic examination revealed the lumen of the bowel to be reëstablished. Subsequently, the colostomy was closed and normal bowel function restored.

V. Case 14,067: A 61-year-old white woman admitted in a comatose condition with Cheyne-Stokes type respiration and a temperature elevation to 104° Localized peritoneal signs were present on the left with considerable abdominal distension. A cecostomy was done for decompression. Penicillin was given in doses of 100,000 units intramuscularly every two hours. She improved gradually and was sent home for about one month. Subsequent sigmoidoscopic findings were essentially normal and a biopsy of the indurated area in the sigmoid revealed no evidence of carcinoma. Barium x-ray studies showed some irregularity of the lower sigmoid. The cecostomy was then closed and the patient discharged in good condition.

Discussion

The diagnosis of a ruptured diverticulum of the colon is based on clinical findings as follows:

1. Localized peritonitis is usual and more frequently on the left side. If the signs appear on the right, it is probable that a diagnosis of appendicitis with perforation will be made. Generalized peritonitis does occur in some cases, and in such instances the diagnosis of a ruptured diverticulum is made more difficult.

2. Sepsis in varying degrees is always a feature. In most cases, it is a fulminating type with very high temperatures and other toxic manifestations.

3. Intestinal obstruction, partial or complete, was present in four of our cases. The case with generalized peritonitis was the exception and in this instance there was considerable paralytic ileus.

The diagnosis is definite when the diverticula can be demonstrated either by direct or by x-ray examination. However, this is not always possible, and the exclusion of other conditions which produce perforations of the colon, particularly carcinoma, makes the presumptive diagnosis of a ruptured diverticulum.

The principles of treatment of this type of perforation of the colon are the following:

1. Adequate diversion of the fecal stream from the site of perforation, which may be accomplished by (a) intubation and the use of Wangensteen suction, as was done in one of our cases; (b) the use of a cecostomy or an appendicostomy, as was done in two of our cases; and (c) the use of a colostomy, as in the other two cases reported. The colostomy is usually the preferable procedure.

2. Closure or repair of the perforation must be done in cases where there is a free perforation with no walling-off and a resulting generalized peritonitis.

3. Chemotherapy must be used in adequate dosage. Penicillin is preferable to the sulfonamides and should be given in doses up to 100,000 units every two to three hours. In severe peritonitis, both drugs should be used. Streptomycin is reserved for those cases which do not show adequate response to the other chemotherapeutic agents.

4. Good supportive therapy consisting of adequate fluids and electrolytes, whole blood and plasma, as indicated; sufficient vitamin intake and good nursing care. All of these factors must be

very carefully considered and the indicated measures carried out properly.

Spinal anesthesia was used in most instances and proved very satisfactory. We have found that by using the continuous spinal set-up the operative procedures can be done with only a small amount of the anesthetic agent. In Case V the required dosage of novocaine was only 25 mgm. This provided adequate muscular relaxation, and there was less blood pressure fall than with the usual spinal. General anesthesia with curare would be an alternative.

Summary and Conclusions

1. Five cases of non-traumatic perforation of the colon have been presented.

2. The principles of diagnosis and treatment of perforations of the colon not due to penetrating wounds have been discussed.

Bibliography

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Discussion

Dr. Allan Tuggle, Charlotte: I have enjoyed Dr. Wallace's paper very much. It is timely and exceptionally well presented. I would like to discuss it because of recent interests that I have had in the same subject. At the North Carolina Medical Society's meeting last year Dr. Tom Murrah, of Union, South Carolina, and I presented several cases of pericolitis and pericolonic masses. These were cases in which the disease started within the colon and extended beyond its limits and others in which disease was primarily without the colon and involved it secondarily.

Before showing some slides I would like to discuss the question that was mentioned a few minutes ago, in which I believe it was stated carcinoma and diverticulitis of the colon occurred quite frequently together. I doubt whether there is any connection between the two other than pure coincidence. An actuary should be able to take the frequency of diverticulosis and the frequency of carcinoma of the colon and combine his figures and give you the frequency with which they will occur together. In the x-ray diagnosis and differential diagnosis of the two diseases, there is one finding which may be of help. The narrowing of the colon as it occurs in diverticulitis is that due to irritability which will expand and then contract again. Now when the colon wall is secondarily involved with inflammation, you may get a constant rigid narrowing but this will be generally found with narrowing in the middle, the lumen gradually becoming larger toward each end, whereas the narrowing in carcinoma is ofttimes quite angular, the lumen being narrowed at right angles to the bowel wall. In other words, the carcinoma may chop off sharply, whereas in inflammation resulting from diverticulitis there is no sharp zone of narrowing.

At this point the discussant showed slides of diverticulitis with fistulous formation and pericolitis and other slides revealing external mass pressure on the colon illustrating diseases on the colon but secondarily involving it.

Dr. J. M. Northington, Charlotte: Mr. President, I might mention, in connection with Dr. Tuggle's use of soapsuds enemas, that a member of this Association for some thirty years and formerly a regular attendant—Dr. E. H. Terrell of Richmond—is my authority for the statement that soapsuds enemas give the proctologists at least 50 per cent of their business.

Dr. W. A. Johns, Richmond: I want to thank the essayist for bringing this most important subject before our attention.

First, I should like to say that I think diverticulitis is a very common disease, more common than most of us realize. The diagnosis is sometimes rather difficult. The diagnosis of the complications is usually rather simple.

One point I should like to emphasize in making an early diagnosis of diverticulitis is that we usually see the patient during an attack when he has an inflammatory process in the colon, and this usually occurs at a higher point than can be seen with the sigmoidoscope. If we examine by x-ray just after or during the inflammatory process, the diverticuli will not fill because they are obliterated by the inflammation.

I should like to stress the fact that these patients should be x-rayed when they are free of symptoms, when there is no inflammatory process going on. The diverticula can then be filled with the barium and the diagnosis can be made.

So far as the treatment of this condition is concerned, I should like to make a plea for early surgical excision before the complications arise. I feel that the same applies as in the treatment of appendicitis before it perforates.

In the past the mortality from colon surgery was high. Today, with better anesthesia, blood transfusions and the antibiotics, it is relatively low. With good preparation, and the use of the aseptic type of anastomosis, a localized area of diverticulitis which persists can be resected with a very, very low mortality and the complications such as we have heard about this morning can be prevented. When such complications do occur and there is present a localized or generalized peritonitis, I believe the patient should be treated by colostomy above the lesion, preferably in the transverse colon. The patient should then be allowed to return home with this colostomy and when the inflammatory process recedes and the patient is afebrile the diseased portion of the bowel should be resected. If left in, sooner or later the same process will recur, *i.e.*, either obstruction or abscess formation.

I believe this condition should be treated radically. By that, I mean surgical removal of the diseased portion of the bowel. We have had a number of cases in the last few years and the more we see of them the more we feel that this portion of the bowel should be resected.

One other point I should like to emphasize, and that is, carcinoma does occur at the site of these diverticula Whether the diverticulitis has anything to do with the carcinoma or whether it is coincidental, I am unable to say, except I strongly feel this portion of the bowel should be resected.

Dr. Wallace (closing): I wish to thank everyone for the discussion, and although we hesitate to resect the portion of the bowel involved, if all x-ray signs by intensive study were negative after a period of time and if the patient appeared to be completely well by all methods that can be determined, I do agree with Dr. Johns that after colostomy is done and over a period of time if there is

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Anemia in The South

Karl Schaffle, M.D., Asheville, North Carolina

AMONG the diseases which are characterized by anemia and found in greater numbers in the Southern States than elsewhere are malaria, tuberculosis, uncinariasis, pellagra and sprue. I do not believe that pernicious anemia or cancer is as prevalent in this section as in the North and I know that rheumatic fever is not.

According to the reports collected by the U. S. Public Health Service for 1946, there were 47,916 cases of malaria in the United States, Mississippi having 17,387, Texas 6,799, Alabama 1,541, South Carolina 5,933 and North Carolina 369.

Tuberculosis, all forms, numbered 115,299 for the country at large and 44,303 for the South, with a higher proportion to the population in Kentucky and Tennessee than in any other States (except for the imported cases in the resorts of the Southwest).

For pellagra there were 3,838 cases reported, 2,065 of which were in Mississippi, 893 in Texas, 707 in South Carolina and none in North Carolina (although one should observe the characters to be seen on the sunny side of Pack Square in Asheville on any Saturday afternoon!) The high point for this disease was in 1928 when, according to Stiebling, there were 7,673 deaths, of which 96 per cent were in 13 Southern States, amounting to 22.4 per hundred thousand population of these States. By 1940, according to DeKleine, this rate had fallen to 5.1, a decrease of 77 per cent, which is greater than in any other endemic disease in a similar period, due to education and the use of yeast and nicotinic acid.

There were no figures for sprue, which has been classified among the tropical diseases but has been found here and there and not always in the South, in persons who have never been in the tropics. The cases I have seen had hemoglobin in the 40's and red cells as low as 1,750,000, even after frequently repeated transfusions, as well as plenty of liver extract, iron and folic acid.

As to hookworm disease, in writing a paper on its relation to tuberculosis in 1930, I inquired of Prof. Charles Wardell Stiles, who discovered the American form in 1902, as to its incidence at that time, and received a reply to the effect that, while severe cases of infestation had been greatly reduced by the activity of the Federal and State Governments and the Rockefeller Institute, moderate and light cases and carriers were still very common and would remain so for several generations. The report for 1946 is 15,236, of which 4,928 were in Georgia, 3,742 in Florida, 4,951 in Mississippi, 925 in South Carolina, 495 in Louisiana and none in North Carolina, where it is not reportable. At the time mentioned there were 68 cases in the current files of the William L. Dunn Clinic in Asheville, representing all classes of society and a variety of occupations, both sexes and ages ranging from 8 to 54.

Anemia due to the diseases mentioned is easily accounted for but the condition which should arouse our curiosity and sustain our interest is the anemia which is generally prevalent throughout this section, for which there appears to be no definite pathological cause. This has been noted by several physicians and particularly by my associate, Max Riesenberg, registered technologist, who has examined blood of several thousand individuals, both well and ill, over a period of 25 years. The average for these was 70 per cent hemoglobin and between three and four million red cells. Such findings in the course of periodic health examinations or in the routine checking of several members of a patient's family, are the cause of considerable surprise and questioning. Why if a person feels fairly well, with no loss of time from work, should he or she be below the standard in the quality of the blood? Are our standards too high? This may be true to a certain extent as most of our instruments are derived from German sources. Inasmuch as blood is formed from the assimilation of food, the failure of Americans to reach a 100 per cent hemoglobin may be explained by the fact that prior to the first world war Germans habitually indulged in five meals a day, in which sausage, liverwurst and other rich food played a major part, while the dietary program of the majority of Americans consists of a "scanty" breakfast, a light lunch and but only one "square meal" a day. This is particularly true of the present generation, the feminine portion of which, in response to the reducing craze, limits breakfast to toast and coffee—while the typical business man's lunch is a piece of pie and a glass of milk—sometimes served on the office desk!

In the matter of our regional nutrition the following questions arise: Do Southern people get enough to eat? Is our food properly selected? Does the food itself, if sufficient in quantity and variety,

Read by Title to the Tri-State Medical Association of the Carolinas and Virginia, meeting at Charleston, February 9th and 10th.

contain the elements which we should expect to find in its constituents? Steibling, in 1937, reported that 40 per cent of the people in the South were receiving inadequate nutrition and Youmans, White and Patton found, in a survey of middle Tennessee, that food value depended on income, with deficiency in calories as compared with the recommended allowance of the Food and Nutrition Board of the National Research Council. It was at this time that Roosevelt referred to the South as "the nation's number one economic problem." This may have been true to a lesser degree in other sections at that time, as it was toward the end of the period of the great depression.

From the improvement in the pellagra situation and in the general economic condition since then, we may infer that there has been a marked reduction in this percentage. However, several surveys have been made as late as 1944 (some in North Carolina) which showed a low caloric intake, such as an average of 1,950 calories per day for whites and 1,750 for Negroes, with less than 1,500 for 21 per cent of white adults and 37 per cent of Negro adults. There were also marked deficiencies of over 50 per cent of all groups in iron, calcium, thiamin and riboflavin.[1]

In the selection of foods very few of us are scientific, allowing our family traditions and personal cravings or dislikes to govern our choice. Some of us never eat the cellular viscera containing the nutritious substances such as lecithin and cholesterin, as advocated by McCollum. (I was once assistant to a pathologist who could not bear the thought of eating kidney, liver, sweetbreads or brains, because of their association!) You may remember the cartoon in the *New Yorker* magazine of the spoiled rich child's reaction to broccoli: "I say it's spinach and I say the hell with it!" In the South, although a largely agricultural region, there is often a narrow selection of food, with even among the well-to-do, a monotonous repetition of such items as fried chicken, yams, and the inevitable grits, while the classical diet of the pellagrous is "fatback," cornbread and molasses. (I quite insulted an old lady of wealth by suggesting that her condition indicated that she was on the verge of pellagra. She bristled up, saying, "I can get all the food I want!" But her problem happened to be the matter of proper choice as to quality and variety.) Social workers in the deep South have frequently reported instances of children subsisting largely on what is known as "coffee soup."

As to eating habits, the importance of thorough mastication and the enjoyment of the meal for its own sake can well be emphasized. The French, Italians and Germans get real pleasure from their meals and even in England, where the food may not be so exciting, business discussions and political arguments at the table are considered "bad form." In all classes of society and with both sexes, in our country, the ubiquitous cigarette is smoked during as well as between meals and even before breakfast, to the impairment of the appetite. Insufficient water drinking between meals with resultant constipation is another factor in poor assimilation.

In addition to dietetic habits, the manner in which food is prepared is important. Too great heat may impair protein, which may explain why foods processed in factories are not as acceptable to the palate as the fresh varieties. Witness the soldiers' reaction to corned beef in the first world war and to "spam" in the second. The much advertised explosive cereals are robbed of their value by the high temperature to which they are subjected.[2] In Southern hotels and restaurants it has been the rule to overcook the meats—transferring a naturally juicy steak into something resembling leather. In the home, frying is the most common form of preparation with its more or less indigestible grease. Hot breads with doughy centers provide little nourishment (especially when made from white flour robbed of its vitamins in milling), and often complicate the digestive process.

Of course, the best food may not be properly assimilated if our personal processing equipment is inadequate—missing teeth or poor plates, a lack of hydrochloric acid in the gastric secretion, or a poorly functioning liver.

We now come to the matter of the basic source of all nutrition—"Old Mother Earth." From the soil is derived the vegetation which nourishes both animals and man, the latter, in addition, consuming the former. Accordingly, it is highly essential that the soil contain an abundance of all the necessary elements, if we are to be well fed. These are found more prevalent in the gray soil of the North or black soil of the Middle West, while the red clay of the South is deficient in nutrient substances due to the physical properties of poor absorption and retention.[3] The most important constituents are calcium, potassium, phosphorous, nitrogen and iron. Their extraction through the growth of crops may be partially replaced by means of commercial fertilizer, but usually not to a sufficient degree, with the result that the grasses, grains and vegetables from wornout soil are lacking in these vital sources of nourishment. An impoverished grazing range or pasture results in poorly developed cattle, with an inferior quality of both beef and milk. Calf's liver may not contain the iron and copper required to increase hemoglobin and red blood cells. In addition to the inadequacy of commercial fertilizers which are often insufficiently applied, another factor is the recent absence of the natural replacement, particularly of

potassium, by the manure of horses and mules, since the adoption of the tractor.

The robbing of a soil which originally contained much organic matter, by repeated cropping, particularly of the one-crop type, is in the Southeastern United States, abetted by an excessive rainfall. This breaks down and washes out the nutritive components, leaving an inorganic residue.

There are families in my section who are very fond of good food and who get plenty of it—people of the gregarious type who are always having parties and seldom go to bed without a final snack—who are apparently quite well and yet persistently anemic. Their teeth and digestive organs are sound and the only explanation I have been able to reach is that the source of their subsistence is our depleted soil.

To summarize, our regional anemia may be explained by the prevalence of certain specific chronic diseases, long recognized as causative but in addition there is a large number of persons who have no other pathological condition to which their anemia might be secondary but whose choice and preparation of foods are inadequate, whose eating habits are faulty, whose physical equipment for digestion is insufficient and even when their diet is comprehensive and well balanced, is derived from a soil which is lacking in the essential elements to supply the proper quality.

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Treatment of Hyperidrosis

(H. A. Haxton, in *British Med. Jl.,* April 3rd)

Essential hyperidrosis affects the palms, the soles, the digits, and to a smaller extent the head and face. In degrees of severity from a slight excess of normal to a condition in which sweat drips from the skin continuously during waking hours. The milder types may be controlled by formalin foot and hand baths, with some risk of a dermatitis developing, or by painting with a solution of alum, but such treatment is of no avail in the severe degrees. X-ray treatment must be pushed to a dangerous limit in order to affect the secreting glands in the skin, and there is grave danger of a chronic dermatitis, or even skin necrosis, resulting. On the other hand, section of the sympathetic pathway to the affected part provides a safe and certain cure. For hyperidrosis of the face and neck section of the sympathetic chain has been carried out above the middle cervical ganglion, with dislocation of the upper end by drawing it through the sternomastoid muscle. For hyperridrosis in the hands thoracic sympathotomy below the third thoracic ganglion, with dislocation of the upper cut end after section of the rami to the second and third thoracic ganglia.

Lumbar sympathectomy done through separate oblique muscle cutting or splitting incisions in the flanks with extraperitoneal approach to the sympathetic chains. From three to six cm. of each chain, centered on the third lumbar vertebra, are removed. Both sides are done at one session, under spinal analgesia, and convalescence has been uneventful.

The immediate result has been a complete anidrosis in the zone of sympathetic denervation, the extremity being quite dry. The inevitable vasodilation does not appear to have caused any trouble. For practical purposes the cure seems to be permanent, since in no case has hyperdrosis returned.

Syringomyelia may be a cause of excessive sweating of the face. Pressure on the fasciculus of the sympathetic fibres in the lower trunk of the brachial plexus by a cervical rib is an uncommon cause of hyperidrosis, usually affecting one hand only. In hyperidrosis of the hands a radiograph should be taken to exclude this possible cause. This type is cured at once by removal of the cervical rib, or in some cases by division of a tense fibrous band in the scalenus medius muscle. For most of the cases no definite cause can be found, and the explanation remains obscure.

More Protein Required to Meet Body Needs When Given by Vein

(I. S. Ravdin, Philadelphia, in *Jl. A. M. A.,* April 17th)

While intravenous injections are often necessary as the whole source of dietary intake, it should be remembered that, when the oral, orogastric or jejunal method of feeding can be used, it is extravagant and wasteful to use the intravenous route. Riegel and her associates, working in our laboratories, have found that a positive nitrogen balance can be achieved in patients who have undergone a major operation when 0.3 Gm. of nitrogen and 30 calorics per kilogram of body weight are given by any oral method but that nearly twice as much nitrogen is required with the same caloric intake when the intravenous route is used. The data of Madden are essentially in agreement with those of Riegel. The aim of any feeding program must be to achieve a positive nutritional balance. This is most easily and least expensively obtained by one of the direct alimentary methods. Dr. Stewart's work substantiates this statement. While it is possible to achieve a positive nitrogen balance in intravenous therapy if this is carefully controlled it frequently is not achieved. To the extent to which a positive nutritional balance is achieved in patients, a corresponding decrease will be observed in the complications of anesthesia and operation.

Immunizing the Preschool Child

(J. A. Gilmartin, Pittsburgh, in *Penn. Med. Jl.,* Feb.)

The following schedule of immunization is suggested for use in private practice:

5	months—	H. pertussis vaccine
7	"	—Diphtheria and tetanus toxoids with H. pertussis vaccine
8	"	—Diphtheria and tetanus toxoids with H. pertussis vaccine
10	"	—Smallpox vaccination
12	"	—Schick test
24	"	—H. pertussis vaccine
30	"	—Tetanus toxoid
6	years—	Smallpox vaccination, tetanus toxoid, H. pertussis vaccine, and Schick test.

COLON PERFORATIONS—From P. 137

any suspicion at all of carcinoma or if for any reason you are unable to rule out carcinoma, that a resection should be done and also in the cases that are diffuse if inflammatory processes of the walls of the colon persist to some degree or if there is some degree of obstruction of the colon persisting, that resection of the area should be done.

I wish to thank Dr. Tuggle for his very illuminating discussion and excellent illustrations.

DEPARTMENTS

HUMAN BEHAVIOUR

James K. Hall, M.D., *Editor*, Richmond, Va.

VANDALISM OR ALCOHOLISM?

At the instant moment a lad is incarcerated in one of the jails of Richmond awaiting trial in a higher court by reference of the Police Court. Long before the break of day on a night not many nights ago the lad, bleeding freely, was taken in charge by a member of the city's police force as the lad stood and stumbled, bleeding and dishevelled and confounded in front of St. Paul's Episcopal Church near to the Capitol of Virginia and of the late Southern Confederacy. The lad's bleeding cuts were given medical attention, he was taken to a place of detention and then he was questioned. He was in the dress of a sailor of the United States Navy. He was eventually able to tell that he belonged to the crew of a destroyer, at anchor at Norfolk, and that he was on leave in Richmond.

But the naval lad is still unable to tell of his visit within St. Paul's Church during the pitchy darkness of the night, or of the damage to valuable and sacred memorials within the church he is charged with having wrought.

St. Paul's Episcopal Church in Richmond may be thought of historically as the state church of the late Confederacy. In that church Jefferson Davis, President of the Confederacy, worshipped; in a near-by pew, Robert E. Lee, the Confederacy's most resourceful warrior, worshipped the God to whose favour he attributed his great victories.

I write these lines at an early hour on the Memorial Day of Oakwood Cemetery. Late in today's afternoon a procession will proceed to that cemetery from St. John's Episcopal Church, in which the immortal eloquence of Patrick Henry, then an obscure young country lawyer, released the might of the Colonies in the Revolutionary War. In Oakwood Cemetery the graves of those soldiers who gave their lives in wars fought in defense of our country from 1812 until 1945 will be visited and decorated. Today is, I recall, also the third anniversary of VJ day of the world's last and greatest war.

Throughout her history Richmond has been perturbed, glorified, assaulted and battered by recurrent warfare. But between those wars there have been periods, sometimes of considerable length, of peace and sometimes of prosperity. But always, perhaps, there is the unspoken dread of another war, from the East, from the West, or from the South.

But within the city of Richmond, throughout the ancient Commonwealth of Virginia, throughout the many states of the Union and perhaps throughout the civilized world, man is engaged in constant warfare. And in that unceasing warfare there is no glory, no mighty deed of valour; only misery and wretchedness and suffering and sorrow and humiliation and embarrassment and ultimate loss of capacity and of hope and of liberty—and of life. The unceasing struggle is between man and beverage alcohol. In industry, man makes helpful use of alcohol in almost myriad ways. The use of alcohol as a beverage is hurtful to man; in no way helpful to him.

The naval lad, it is reported, stated that he did not know he had been in St. Paul's Church. He professed not to know where he had been nor what he had been doing when the police officer took him from in front of the church in the dead of night to have his bleeding wounds dressed. If he had broken the Robert E. Lee memorial window, if he had damaged the portraits of several former rectors of St. Paul's, if he had torn books and had left trails of his own blood throughout the historic church, he had no recollection of it; he was dazed, humiliated and sorry beyond measure for such conduct, if he were guilty of it.

He did remember that even before he left Norfolk, and that after he had reached Richmond he, with some other lads, had repeatedly indulged himself in countless bottles of beer—but in beer only.

Does the mind of the medical man, yea, even of the layman, experience difficulty in believing that the naval lad was speaking forth the words of truth and not of soberness, but of drunkenness? So long have I ministered to those who have indulged that I feel no surprise when the man looks up at me in his troubled thinking and asks who I am, where he is, when he came and how, and if it be possible for him to continue to live.

Even beer, though the National Congress once declared it to be non-intoxicating, when imbibed freely, may rob the individual entirely of understanding of who he is, where he is, of what he does; and forever afterwards of all recollection of his toxic behaviour. Unless the naval lad obtained his beverage alcohol of a bootlegger, he purchased it legitimately. If so, the United States government, in whose service he is; the government of Virginia, the government of Norfolk and the government of the city of Richmond participated in the sale of the alcohol to him. Each government was a participant in his senseless destructive behaviour within the historic church, if he is guilty as charged. The place in history of Robert E. Lee could not be affected even by the complett destruction of a memorial window.

The rector of St. Paul's has spoken no word of

criticism of the naval lad's behaviour. He has asked the members of his church to pray for the lad. An officer of the United States Navy has expressed to the rector and the members of the church his sympathy.

Has the so-called Alcohol Control Board of Virginia opened its official mouth in speech? In what manner and to what degree does the Board exercise control over the personal consumption of alcoholic beverages in the State of Virginia.

The press of Richmond has recently stated that during the month of March, 1948, the number of those placed in jails in Virginia was 8,682 persons. In March of 1947 the total number jailed was 7,915.

Does any one doubt that alcoholic intoxication was a factor in at least half the incarcerations? The Virginia Alcohol Control Board! Is it to laugh or to weep? Weep.

O mores! O tempora!

NEUROLOGICAL SURGERY

THE VALUE AND ABUSES OF LUMBAR PUNCTURE TODAY

J. M. Meredith, M.D., *Editor,* Richmond, Va.
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No physician today disputes the value of lumbar puncture in properly selected cases. As a means of diagnosis and treatment in suspected cases of meningitis and of subarachnoid hemorrhage, it is invaluable. No fluid should ever be withdrawn, however, without first carefully measuring the spinal fluid pressure with a water (Ayer) type of manometer. Attempting to estimate the approximate spinal fluid pressure by the rate of flow from the needle is often entirely untrustworthy. In certain brain tumor suspects with chronic headache, perhaps haziness of the optic discs, or slight elevation of temperature, a careful spinal puncture without the Queckenstedt test is permissible from the standpoint of differential diagnosis. However, if the pressure is elevated to more than 160 to 175 mm. of water, only the fluid in the manometer should be removed for cell count, Wassermann or protein determination. The use of spinal puncture in acute head injuries is rather limited; if an extra or subdural clot is suspected, cranial burr openings are to be preferred to a spinal puncture. *Under no circumstances in such cases is the Queckenstedt test justifiable.*

The Quecktenstedt test (first proposed in 1916) is indicated and warranted only if a *spinal* lesion is suspected, such as a tumor, extradural abscess, or fracture-dislocation of a vertebra. It is rarely, if ever, of any value and may be dangerous in the investigation of *intracranial* lesions. The first spinal puncture was done in 1885 by Corning[1] but it remained for Quincke[2] in 1895 to simplify the procedure so that it became practical for diagnosis. Practically since that time, a friendly controversy has existed between internists and neurosurgeons as to the value of the Queckenstedt test in routine lumbar punctures, the former, as a group, advocating it, the latter vigorously opposing it. Very recently this difference of opinion has been so clearly outlined by Merwarth[3] that the present writer earnestly desires to quote him on the subject:

"Often the individual performing spinal puncture includes the compression of the jugular veins as a rite, without knowledge of what information the procedure may yield and with no consideration of the serious ill effects it may produce. Queckenstedt orignially devised the test to *demonstrate compression of the spinal cord,* and nothing more. It is well known to neurosurgeons (who are called upon to treat patients in extremis after an ill-advised lumbar puncture and—adding fuel to the fire—the Queckenstedt test) that the mere withdrawal of spinal fluid (even without jugular compression) in the presence of tumors or other intracranial mass lesions may cause herniation of the cerebellum into the foramen magnum with resultant respiratory failure or herniation of the tip of the temporal lobe beneath the tentorium. Adding the factor of digital compression of the jugular veins elevates the intracranial pressure and thus increases the risk of such a disaster. Even if the intracranial pressure is normal, the Queckenstedt test yields no information of value in the investigation of intracranial lesions, and its employment in such cases is evidence only that the individual using it has no knowledge of the essential reason for which the test was devised by its originator (see above).

"A plea is made for the avoidance of the Queckenstedt test when spinal puncture is done in the investigation of intracranial lesions on the grounds that it is not only useless but may be very dangerous. Coupled with this plea, we would also urge the removal of no fluid in any intracranial case—not frankly meningitic or hemorrhagic—in which the spinal fluid pressure is in excess of 175 mm. of water.

"The one exception to the edict against routine jugular compression during spinal puncture is the patient with suspected tumor or other compressive lesion of the spinal cord. It is then that a careful recording of precisely performed tests of patency of the subarachnoid space utilizing bilateral jugular pressure is indicated. Only in the presence of disease processes affecting the *spinal cord* do such manometric readings yield worthwhile evidence."

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TUBERCULOSIS

PRESENT STATUS OF BCG VACCINE IN THE PREVENTION OF TUBERCULOSIS

Studies of Calmette and his associates, at the Pasteur Institute, Paris, convinced them that acquired immunity to tuberculosis is dependent upon the dosage and the length of the interval between repeated exposures to viable virulent tubercle bacilli; and upon the establishment of a nidus of viable tubercle bacilli.

They succeeded in modifying a virulent bovine strain of tubercle bacillus so that it no longer produced progressive and generalized tuberculosis in laboratory animals. Despite its loss of virulence, this culture, designated BCG (Bacillus Calmette-Guerin), retained its ability to produce local tubercles and to induce sensitivity to tuberculin. Calmette and Guerin attributed the attenuation of virulence to the successive transfer of the original culture to a culture medium containing beef bile.

Although BCG vaccine has been in use throughout the world for a quarter-century, there exists a certain amount of opposition to its universal use. This opposition is based primarily on the supposition that the culture might revert to its original virulent state and cause tuberculosis, and, second, to the view that the protective value of the vaccine has not, thus far, been firmly established. In the 25 years in which this vaccine has been used in man, says Aronson,[1] during which time millions of persons of all ages have received the vaccine, no case of progressive tuberculosis has been reported which could unequivocally be attributed to BCG vaccine. Aronson reports on a study among Indians under conditions propitious for affording instructive results. The incidence of tuberculous infection on the reservations included in this study, as indicated by the tuberculin test, was approximately 100 per cent of the age group of 25 years and higher. The mortality from tuberculosis ranged from 400 to 600 per 100,000.

A total of 3,007 Indians, from less than one year to 20 years of age, who failed to react to the intracutaneous injection of 0.00002 and 0.005 mg. of PPD tuberculin were included in this study. Of this group of 3,007 persons, 1,550 received a single intracutaneous injection of 0.1 or 0.15 mg. of freshly prepared BCG vaccine suspended in physiologic salt solution. The remaining 1,457 persons received an intracutaneous injection of 0.1 c.c. physiologic salt solution and served as controls. Neither the vaccinated nor the control groups were isolated before or after injection and their living conditions during the course of the study were the same as those of their families and neighbors.

The BCG vaccine was prepared at each reservation from 7- to 30-day-old cultures grown on Sauton's synthetic medium. In practically all cases the vaccine was used within eight hours and vaccine older than three days was never used. The site of the injection in both vaccinated and control cases was examined after 48 hours for evidence of a Koch phenomenon. Subsequent examinations of the site were made at weekly intervals for several months, conditions permitting. The annual retesting was done with freshly diluted, standardized tuberculin PPD.

Of the six deaths among the vaccinated, two were of children who had manifested a Koch phenomenon at the time of vaccination, indicating that the negative tuberculin reaction had occurred, probably during the pre-allergic period. These two children died from miliary tuberclosis, one two months, the other nine years, after vaccination. A third death was that of a child who had failed to react to tuberculin one year after vaccination. No untoward reaction, local or general, was observed following vaccination, and in no instance was surgical intervention necessary.

Both vaccinated and controls were followed over periods of nine to 11 years by means of annual tuberculin tests and roentgenograms of the chest. During this period 55 of the 1,550 *vaccinated persons* died from all causes, including *six who died from tuberculosis*. Among the 1,457 *controls*, 108 died from all causes, including *52 deaths from tuberculosis*. Positive tuberculin reactions occurred in 93.7 per cent of the BCG cases one year after vaccination. This percentage has persisted, with slight variations, for the 11 years of observation. In the control group only 12.7 per cent had a positive tuberculin reaction one year after the initial negative tuberculin test and the annual increment for this group has been gradual.

The present controlled study covering a period of nine to 11 years shows, the investigator modestly says, that "the use of BCG vaccine does materially reduce the morbidity and mortality from tuberculosis."

No possibility of accusation of radicalism is incurred by the conclusions:

It is debatable whether it is advisable to use BCG vaccine in a general population which has a very low tuberculosis rate, which is falling.

1. J. D. Aronson, Philadelphia, in *Penn. Med. Jl.*, Feb.

It is highly desirable to vaccinate military personnel who are tuberculin-negative, especially when they serve as occupying forces in areas where the tuberculosis rate is high.

Newborn infants should be inoculated when there is danger of contact with infectious patients.

It seems highly probable that the next great offensive against what was not long ago the Great White Plague will be along this line, and one need not be oversanguine to confidently expect the result to be a reduction by at least half in the already decimated tuberculosis incidence rate.

PEDIATRICS

E. L. Kendig, Jr., M.D., *Editor*, Richmond, Va.

THE PRESENT STATUS OF POLIOMYELITIS

So many sensational statements regarding new developments which appear in the lay press have no basis in fact that it is little wonder that the laity and the general run of doctors have a perverted view of the problem.

An article in one of our oldest and best-balanced journals[1] points out important facts and makes pertinent comment.

The disease is variable from no paralysis to total paralysis; the completeness of recovery depends to a great extent on the original degree of involvement. In the acute preparalytic stage, one cannot foretell the amount of paralysis or disability that will occur. Many of these patients will recover completely without any treatment.

We are still not sure about the method of spread of the disease. Most people have probably had the disease in the subclinical form. We do know that the incidence of bulbar poliomyelitis is increased in patients shortly after a tonsillectomy. Thus, tonsillectomy should not be done when poliomyelitis is known to exist in the community. We are still without a method of increasing either passive or active immunity to the virus.

The main destructive action is on the anterior horn cells of the spinal cord, producing a flaccid paralysis. This action may vary in all degrees up to total destruction of the cells. If the involvement is severe, the recovery of muscular power has got to its utmost in 16 months. The greater the initial paralysis, the less likely is complete recovery of the muscle.

The Kenny method served to stimulate a reevaluation of techniques. As a means of treatment it has lost much of its popularity. Curare and prostigmine are of no particular value.

In the acute stage the treatment is mainly symptomatic. Bed rest is essential. If in epidemic periods a patient has a minor illness of nonspecific character, that might be the first stage of the diphasic type of onset, his activities should be curtailed for a period after his temperature returns to normal to establish that his disease is not poliomyelitis.

With the onset of sensitivity and spasm, intermittent hot packs may be applied to sensitive areas. Prolonged packs are debilitating. When paralysis occurs, attention must be directed to positioning of parts which should be supported. Fixed positions for considerable periods are to be avoided. Sedatives, while permissible, are no substitute for good care.

If there are signs of *spinal respiratory paralysis* or *bulbar paralysis*, constant nursing is essential. These two types must be carefully differentiated since confusion may spell a fatal outcome. Bulbar paralysis calls for dependent position of the head to permit drainage, pharyngeal suction, parenteral feeding and manual aid to respiration. The respirator may be lifesaving in the *spinal* type. Tracheotomy may become necessary. Continuous, locally applied hot packs are beneficial in subjects with a fixed, elevated chest.

When the temperature returns to normal, efforts are directed toward maintaining the desired anatomical position. Gentle passive exercise is given to carry the position out of deformity and increase the range of motion; the feet are maintained at a right angle. Bivalved plaster splints may be necessary, used only part of the day and at night.

An estimate of muscle function is made, recording the degree of involvement at regular intervals to chart the progress of recovery. Under-water therapy is valuable in the sensitive stage. As sensitivity decreases, exercises in a tub, and later in a pool are of benefit.

In the insensitive phase stretching of the contracted parts is frequently necessary and active exercises are increased as tolerated. Part-time support for the affected parts is sometimes required. Sitting and standing are later instituted, the patient's balance being maintained without increasing the deformity. Crutches may offer aid when starting to walk. Walking braces may be used during the latter part of the convalescent stage if necessary for effective locomotion.

Functional and gait training are helpful for those who have had a severe involvement or insufficient early supervision. If muscle substitution is necessary, it is both cultivated and supervised to produce the best functional result. Some cases require regular stretching of certain parts. Muscles of fair strength may need exercises designed to produce hypertrophy. Operative intervention may be indicated such as tendon transplantation, arthrodesis, or other correction of deformities.

After the sensitive period of the convalescent stage, treatment can usually be carried out at home.

1. *New England Jl. of Medicine*, 238-73-78, 1948.

SURGERY

WILLIAM H. PRIOLEAU, M.D., *Editor,* Charleston, S. C.

HOMOGRAFTS UNSATISFACTORY

IN CASES of extensive burns there commonly arises the problem of obtaining sufficient skin from the patient for grafting. Also there is the natural hesitancy of adding to the already extensive raw surface by denuding the remaining intact surface for the purpose of obtaining grafts. In such cases the temptation is to use homografts. The knowledge of the subject is sufficiently cloudy to offer some justification for using this procedure. An occasional apparently successful case is reported while the many failures are not heard of.

That homografts cannot be expected to result in a satisfactory take seems to be the best opinion. This is substantiated in two recent articles in the *Journal of Plastic & Reconstructive Surgery.* Rabinovici tried to influence the fate of skin homografts in rats by previous irradiation of the recipient animal upon the theory that lymphocytes played an important role in the elimination of foreign-tissue transplants. Contrary to his expectations the experiments proved negative. Grafts of foreign skin on irradiated animals failed to take just as they did on non-irradiated controls.

Longmire and his associates report clinical experiences with homografts. They cite evidence obtained by others that the mechanism of destruction of homografts is based upon the presence of an active immunity which develops in the host as the result of the antigen action of the foreign tissue. In an attempt to find a donor whose unaltered tissues are compatible with those of the recipient, they transferred skin from 71 different honors to a single recipient. Although all grafts "took," none was permanent. They conclude that if skin transplantation groups exist, it is unlikely that they are less than 23 in number. Also that the blood group of recipient and donor do not influence skin homografting. By histological studies they demonstrated that what appears to be a permanent survival of a homograft is actually an overgrowth of the area by the tissue of the host.

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1. RABINOVICI, N.: The Fate of Skin Homotransplants Performed on Previously X-rayed Rats. *Plastic & Reconstructive Surgery,* 2, 413-418, Sept., 1947.
2. LONGMIRE, W. P., JR., STONE, H. B., DANIEL, A. S., and GOON, C. D.: Report of Clinical Experiences with Homografts. *Plastic & Reconstructive Surgery,* 2, 419-426, Sept., 1947.

FREQUENT SMALL MEALS IN ANGINA PECTORIS

(R. J. Main, *Synopsis of Physiology*)

During digestion the velocity of the blood flow throughout all arteries is increased, especially after a protein meal. The cause is unknown. It is accompanied by the other effects of the specific dynamic action of food, as increased metabolism, pulse rate and pulse pressure. Hence patients with angina pectoris of effort are benefited by frequent small meals rather than a few large ones daily.

DERMATOLOGY

For this issue, ARTHUR H. FLOWER, JR., M.D., *Editor,* Durham, N. C.

ULTRAVIOLET RADIATION THERAPY

THIS physical agent is widely used therapeutically and cosmetically. The source of such radiation is almost universally available to both physicians and lay persons. Many millions of lay persons worship at the shrine of the Sun God Ra all summer and many physicians have an ultraviolet light machine in their office. Recently, one of the large electrical equipment houses has made it possible for anyone to have ultraviolet radiation in the home by purchasing, for $9.95, an ultraviolet light bulb which can be used in the ordinary light socket.

With such a wide availability of ultraviolet radiation it seems desirable to review some of the basic facts concerning this modality.

The principal source of ultraviolet radiation is the sun. Ultraviolet radiation constitutes less than 1 per cent of the total solar radiation on a clear day in the latitude of Washington, D. C. Skyshine contributes a considerable percentage of ultraviolet radiation since solar radiation is diffused by minute particles in the air. This latter fact indicates caution during exposure on a hazy day. Since much of the sun's heat is not present, the quantity of ultraviolet radiation is not appreciated, and burns may occur.

The artificial sources of ultraviolet radiation also give off visible and infrared radiation. The relative proportions vary with the instrument. The Quartz mercury vapor lamps in common use give off approximately 28 per cent ultraviolet light, 20 per cent luminous and 25 per cent infra-red radiation. Most of these lamps are good for 3,000 hours usage. It is necessary to check and clean them periodically so the quantity of radiation emanating from them remain constant.

The lamps or bulbs developed for home radiation are so filtered that they give radiation with no shorter wave length than 2800 A, 10-15 times longer exposure is required to obtain results comparable to the effect of the office machines.

There are a number of physiologic changes that occur after ultraviolet radiation. Following radiation there is an increase in red and white blood cells and platelets in the circulating blood. The blood sugar is lowered, and there is an increase in sugar tolerance. There is an increase in the absorption of calcium which raises the blood calcium.

There is a temporary increase in cardiac output and a decrease in systolic and diastolic blood pressure. Unfortunately, this is transitory. The most commonly known benefit is from the effect of ultraviolet radiation on the skin in changing a provitamin to Vitamin D. This results in beneficial effects in rickets and tetany.

It is important to know that certain characteristics vary the results of radiation in individuals. (A) Blondes are 40-170 per cent more sensitive than brunettes; (B) men are 20 per cent more sensitive than women; (C) infants and older persons are more sensitive than others; (D) sensitivity increases during the menstrual period, and between the 2nd and 7th months of pregnancy; (E) sensitivity is increased in greater thyroid activity, hypertension, and active pulmonary tuberculosis.

The number of medical and dermatological entities for which ultraviolet radiation has been used are legion, some of these wisely and others unwisely. In the list below wherein the use of ultraviolet radiation has proved beneficial those entities where there is universal agreement on its efficacy are marked by a number (1). Those entities where its use is considered to be helpful by the majority of therapists are marked with a number (2).

Diseases in Which Ultraviolet Radiation May Be Beneficial

1. Rickets, osteomalacia, infantile tetany (1)
2. Various types of systemic tuberculosis (1)
3. General tonic—stimulation
4. Arthritides
5. Painful conditions: lumbago, sciatica.
6. Pernicious anemia
7. Hypertension
8. Blepharitis, corneal ulcers
9. Dermatological disorders
   - (a) (2) Acne conglobata or cachecticorum A & B
   - (b) (2) Acne varioliformis C
   - (c) (2) Adenoma sebaceum D
   - (d) (2) Acne vulgaris A & C
   - (e) Alopecia areata C & D
   - (f) Alopecia prematura C
   - (g) Angioma serpiginosum C
   - (h) Cicatrix, pitted scars D
   - (i) Dermatitis herpetiformis A, B, C
   - (j) Dermatophytide B
   - (k) Dermatophytosis B
   - (l) Eczema, various types B
   - (m) (1) Erysipelas B C
   - (n) (1) Erythema induratum A, B, C
   - (o) Folliculitis, pustular A
   - (p) Furunculosis A D
   - (q) Herpes zoster B
   - (r) Leukoderma C
   - (s) Livido reticularis A, B, D
   - (t) (1) Lupus vulgaris A D
   - (u) Neurodermatitis disseminata A B
   - (v) Nevus flammeus (Port-wine mark) D
   - (w) 2) Parapsoriasis C
   - (x) Pernio B
   - (y) (2) Pityriasis rosea C
   - (z) Pruritus, essential A B
   - (aa) Pruritus, secondary
   - (ab) (2) Psoriasis A D
   - (ac) Scleroderma A
   - (ad) Sycosis vulgaris A, B, C
   - (ae) (2) Telangiectasis (x-ray and radium sequelae) D
   - (af) (2) Ulcers and wounds, indolent B C

Key to Alphabetical Designations Indicating Intensity and Extent of Ultraviolet Light Radiation:

A. Frequent general irradition of the entire body or of large areas of normal skin with doses too small to evoke erythema for the purpose of influencing the disease through possible systemic action of radiation.

B. Frequent irradition of generalized or fairly extensive eruptions with small or at least sub-erythema doses.

C. Irradiation of fairly extensive eruptions with erythema doses—single or multiple treatments depending on the results or tolerance.

D. Irradiation of circumscribed eruptions or lesions with erythema and blistering doses—not repeated until all reaction has disappeared.

Diseases in Which Ultraviolet Light Radiation is Contraindicated

1. Active pulmonary tuberculosis
2. Hyperthyroidism, diabetes, decompensated heart disease, nephritis, renal tuberculosis
3. Dermatological disorders
   - (a) Acute eczemas
   - (b) Acute psoriasis
   - (c) Lupus erythematosus
   - (d) Erythema ab igne
   - (e) Senile, sailor's and farmer's skin
   - (f) Freckles
   - (g) X-ray and radium sequelae
   - (h) Herpes simplex
   - (i) Xeroderma pigmentosum
   - (j) Hydroa vacciniforme
   - (k) Summer prurigo
   - (l) Melanoses
   - (m) Chloasma
   - (n) Substances which sensitize the skin to light, e. g., oil of bergamot, the sulfonamides
   - (o) Pellagra
   - (p) Erythema solare, actinic dermatitis.

Agents Helpful in Protecting Persons With the Above Disorders From the Actinic Rays

1. Veils, hats, gloves, long sleeves
2. Quinine sulfate
3. Walnut stain
4. Glycerite of tannin
5. Cremes with burnt sugar or ichthyol
6. Salol
7. Tannic acid
8. Red petrolatum
9. Para-aminobenzoic acid

Under proper guidance ultraviolet radiation is an effective therapeutic agent, but abused or improperly employed it can produce serious damage particularly in certain skin diseases.

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Thumb- and Finger-sucking in Children

(*Jl. Pediatrics*, 32:99, 1948)

Thumb-sucking may displace the teeth, but otherwise is not harmful. Teeth so displaced readily resume their original position when the pressures are released. It does not cause deformity of the palate; and air-swallowing, oral infection, and gastrointestinal disturbances are no more frequent in thumb-sucking children than in others.

Thumb-sucking during infancy requires no treatment. During early infancy a pacifier will supply diversion. This harmless device can be removed toward the end of the first year. When indulged in during the waking hours after

the first year of life, treatment should be directed toward correcting the underlying cause which is usually overfatigue, boredom or unhappiness. Rest and ample play outlets should receive attention.

In older children, promise of a reward, appeal to the child's vanity or will power, or wearing a glove as a reminder is usually successful.

DENTISTRY

J. H. Guion, D.D.S., *Editor*, Charlotte, N. C.

EVALUATION OF CONTROL OF DENTAL CARIES

The causation of dental caries is a problem which remains to a large degree unsolved. A report of the Proceedings of a Training Course given last year[1] is a report of progress.

Toothbrushing, it has been decided, must be done thoroughly immediately after eating to be very effective. It is a time-consuming, tedious task to brush all surfaces of all teeth. There is general acceptance that washing teeth before retiring is very desirable, and that rinsing the teeth after each meal is just as expedient as washing the hands before a meal. Even after thorough brushing of teeth there are still millions of bacteria remaining. A nonmedicated mouth rinse is useful as a mechanical cleansing agent, particularly following toothbrushing, immediately after eating. Toothpicks, dental tape or floss, and gadgets for interproximal polishing of teeth should be of value where food impaction occurs, but no reports so far as known prove that the incidence of caries is reduced by their use.

A number have found that after eating there was a reduction of as much as 78 per cent in the numbers of bacteria in the mouth. This suggests that mastication of food is the best way to reduce the bacterial count. Howitt *et al.* fed a prisoner several diets and concluded that artificial cleansing with a toothbrush is many times more effective in reducing the numbers of mouth organisms than the supposed cleansing accomplished by a diet containing detergent foods. However, the fact that areas of teeth exposed to food excursion are so-called areas of immunity, suggests that mechanical cleansing by detergent foods has some value in caries control.

Certain tests indicate that while the common dentrifrices can wear away cementum and dentin, the amount of enamel lost by toothbrushing is probably not an important factor in dental caries.

Mechanical cleansing of the mouth carelessly done may result in gingival recession, exposing cementum which is probably more susceptible to attack by dental caries than is enamel.

In discussion it was said that there is only one type of caries that is positively amenable to cleansing with a toothbrush, and that is the typical cervical caries which can be stopped by proper toothbrushing.

Chewing-gum consists primarily of gum base, flavors, and 60 per cent sugar. It has been found by many investigators that the lactobacillus count of individuals under dietary control cannot be substantially reduced unless the chewing of gum is discontinued. Thus, individuals who are prohibited from ingesting carbohydrates show little or no improvement unles they abstain from chewing gum.

The sugar of prewar chewing gum furnished an excellent substrate for the action of enzymes. If no other complications were present, it could be assumed that this should increase caries activity. However, chewing of gum produces a copious supply of saliva and the act of chewing will force this saliva into all the occluded spaces of the mouth. Since it was found that calcium carbonate in chewing-gum decreased the caries activity of a group, 98 per cent of gum now contains calcium carbonate, and should be harmless, even beneficial, to most individuals. Even with the calcium carbonate certain cases of caries may be harmed by the chewing of gum, particularly those cases in which no stimulation of saliva is possible, a condition which may be brought about by atrophy of the salivary glands or by constant stimulation by excessive gumchewing.

In another experiment, 5 per cent dibasic ammonium phosphate was the active ingredient in the first formula, which was used as a dentifrice on a group of 55 individuals who had, with a few exceptions, at least 10 cavities filled in the two years prior to the study and had lactobacilli counts of 50,000 or more per c.c. on four successive days prior to the use of the dentifrice. Ten of these 55, as controls, used a dentifrice identical with the experimental dentifrice, except that the dibasic ammonia was omitted. Counts for the control group before and after five months' use of the dentifrice showed no significant change in the number of lactobacilli. Of the 45 using the dentifrice with the bibasic ammonium phosphate, only 33 completed the year. Of these 33, thirteen had their lactobacilli count reduced to zero; the others a reduction on an average of more than 95 per cent.

Some agent was then sought to combine with dibasic ammonium phosphate which would prevent acid formation, and which might have a greater inhibiting effect on lactobacilli. A combination of 3 per cent urea and 5 per cent dibasic ammonium phosphate prevented lactic acid formation in the saliva of 35 individuals. Therefore, with this new formula the original group of 33 individuals was studied, using the ammonia-urea preparation, for another year, the dentifrice and the rinse at least

twice a day. Nineteen of the 33 had no new caries develop during the two-year experimental period. The 14 that developed caries had 20 new lesions among them. This fall it is hoped to institute an oral hygiene study on 2,000 school children to determine the effectiveness of the toothbrush and dentifrices of various compositions, including the new formula, in preventing or reducing caries activity.

1. Proceedings Univ. of Mich. School of P. H. and School of Dentistry Training Course, Sept. 8-13, 1947, in *Jl. Dental Research*, Apr.

HISTORIC MEDICINE

MATTERS OF INTEREST FROM TRANSACTIONS OF THE 1894 MEETING OF MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA

(*Continued from issue for March*)

Dr. Thomas Hill, of Goldsboro, presented an essay on "Our Indigenous Materia Medica," from which these paragraphs:

Ambrosia artemisiafolia (Rag weed). Useful in all passive hemorrhages, and particularly in purpura hemorrhagica; also applied locally to bleeding surfaces; in haematemesis, the dried leaves chewed and swallowed the juice will arrest the bleeding almost instantly; in epistaxis, apply locally in form of plugs to nostrils.

Phytolaccae baccae (Poke-berries). A valuable remedy in acute articular rheumatism is a saturated tincture of the berries in whiskey, taken in teaspoonful doses, every three or four hours. A tincture of the root is almost a specific in conjunctivitis and in mastitis.

Urtica urens (Stinging nettle). Valuable in menorrhagia. On one occasion, called to such a case, as I came into the field on my way to the patient's house I had seen some of the nettle growing. I got a hoe, dug some of the roots, washed them and gave them to the woman to eat, in the meantime preparing an infusion; before I got this ready my patient was safe, and I used nothing else. This remedy is highly spoken of by Dr. Porcher in the "Resources of Southern Field and Forest."

Vaccinia crassifolium (Running huckleberry). Often in the fall of the year we have patients, children particularly, in our swampy eastern country, after having chills and fever all summer, with enlarged spleen, swelled bellies and limbs, tallow-faced, anaemic. Quinine has no effect; iron and arsenic do no good; they go on from bad to worse, and you think they must die. Now, order for them the running huckleberry made into a strong tea, Let them drink this *ad libitum;* the secretions, before locked, seem to open by magic; appetite improves and spirits revive. Now give a drop of tr. ferri muriat in plenty of water, or one of Fowler's solutions of arsenic, three times a day, and see how soon your little patient will look rosy and healthy.

In cases of persistent diarrhea, I am satisfied that I have saved more than one life by having used syrup of half-ripe persimmons.

If you are ever stung by a bee, wasp or yellow-jacket, saturate your handkerchief with fresh urine and apply to the spot, and see how quickly you will be relieved.

Dr. Kent had had favorable experience in the use of rag-weed in arrest of hemorrhage.

Dr. R. H. Stancell, Jr., Margaretsville, is recorded as having said:

Dr. Chisholm, of Baltimore, whom we are glad to see present, has used chloroform over 30,000 times without a fatal result. I have several times given chloroform in my office and had the patient ride to his home in two hours or so afterwards. Porter, of New York, says that ether causes as many deaths as chloroform, if not more, but the fatal issue is delayed till the patient is removed from the table.

Dr. J. E. Ashcraft, Monroe:

Specific treatment of syphilis embraces the use of mercury and the iodide of potassium; and the chlorides of gold and platinum for the relief of certain symptoms pertaining to the latter periods of the disease. Mercury removes the cause that produces the various symptoms. Iodide relieves certain symptoms with rapidity, but does not eradicate their cause.

An eminent German specialist says syphilis does as well without treatment as with it.

Dr. D. A. Stanton, High Point:

On December 26th, 1893, I asked Prof. J. W. Long,* of Richmond, Va., to see a case with me that Dr. J. J. Cox and I had diagnosed fibroid tumor of the uterus, and if found correct to perform abdominal hysterectomy. Professor Long not only confirmed our diagnosis, but pronounced a three-months pregnancy present also, which complication increased the necessity for immediate operation.

The patient lived in an old house, the floor and walls of which water and brush had not touched for years. No time to secure better quarters for the operation. The asistants were all required to render their aseptic by the usual methods. The patient's abdomen was washed and shaved by Dr. Cox, who gave the chloroform, and afterwards kept covered, except a small space, large enough for the incision, with towels rung out of a bichl. sol. The patient was laid on a plain operating table, up-

holstered with oil cloth; this was also scrubbed with bichl. sol. The operation lasted one hour. The womb, ovaries, tubes and tumor were removed intact. The patient was dressed in a clean gown and put to bed. I saw her three times a day for several days, then once or twice a day, till she was well, and at no time did I find her with a t. above normal, and after the first 24 hours there was no increase in the pulse. On the 10th day every other stitch was removed, and on the 15th day the remaining ones were taken out. A good abdominal bandage was fitted and the patient got up and was dismissed. There was no pus in the line of incision, no stitch-hole abscess.

*Dr. John Wesley Long, who spent much of his professional life at Greensboro.

Dr. R. H. Lewis, of Raleigh:

On March 7th, a patient was sent to me by my friend, Dr. T. L. Booth, of Stem, for failure of sight in the right eye. An ophthalmoscopic examination revealed apoplexy of the retina. An unfavorable prognosis was given. Three or four weeks later I received a letter from the Doctor saying she was suffering greatly with the eye and head. I replied that glaucoma was a very common sequel to apoplexy of the retina; to look for it and report. He soon replied that the day he wrote he had made the diagnosis of glaucoma and detailed the very intelligent and proper treatment he had been using, including pilocarpine, and asked for further suggestions; to which I replied that he might try eserine sulphate, 1 grain to 1 ounce of a 4 per cent solution of cocaine, every hour, but that in my opinion, nothing short of enucleation would give her relief.

On the 18th of April I was summoned to perform the operation. On the following morning the enucleation was performed without incident under ether administered by Dr. Booth.

Letter received May 3rd said Mrs. S. was doing perfectly well, going where she pleased.

Whenever an eye is affected in a case of what appears to be disease of a general character, especially when pain in the head and nausea are present, the eye should be carefully examined and treated for the cure of the general and remote symptoms.

Dr. E. C. Laird, of Haw River:

The surgical treatment of pulmonary phthisis by resection of lung is a new departure that will be watched with much interest. Dr. Laird quotes from the latest annual report of the Adirondacks Sanitarium, by Dr. Trudeau:

"Although this form of treatment (tuberculin) has been almost universally condemned as useless and dangerous, the results obtained during the past two years at the sanitarium by the careful use of a modified tuberculin, when applied in conjunction with the usual climatic and open-air methods, have been on the whole encouraging, and indicate that such specific medication may with care be safely administered, and is probably to have a place in the future treatment of incipient consumption."

Extracts from Report of the Secretary of the State Board of Health, Dr. R. H. Lewis:

In the *Wilmington Messenger* of September 6th there appeared a communication signed J. H. Sikes, dated September 5th, stating that he had been informed by a gentleman from Bladen County, that a woman coming from Brunswick, Ga., between two and three weeks previously had just died, after an illness of 48 hours of what was pronounced by Dr. Lucas, the attending physician, to be yellow fever. A statement from Dr. Lucas: the person referred to "did not die of yellow fever." After a sickness of nearly two weeks "she died of typhoid fever. It is currently reported that she had yellow fever, but it is false."

On November 1st I received a letter from Dr. R. L. Payne, Jr., Superintendent of Health Davidson County, asking should the Superintendent be paid for his services in quarantining and disinfecting by the householder, or by the public authorities, municipal or county. Attorney General Osborne gave the opinion "The county pays for the services of the Superintendent of Health." The County Commissioners, after reading this opinion, said it was not worth any more than the opinion of any other lawyer, and that they would rely upon that of their own attorney.

Dr. I. W. Faison, discussing the Report, said that the water of Charlotte was decidedly foul and full of germs and he wanted to know if there was any arrangement or any money by which the Board might help the city.

The Board of Medical Examiners met at Greensboro, May 14th, 1894.

Notes with regard to this meeting:

The examinations in Materia Medica and Therapeutics are supplemented by the identification of drugs.

The highest average was made by Dr. Hubert A. Royster—98 plus.

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

MANY SHOULD HAVE URETERO-INTESTINAL ANASTOMOSIS

THE ERRONEOUS general impression among doctors that implantation of the ureters into the sigmoid is nearly always a failure because of ascending infection deprives a great many unfortunate

persons of the best means of meeting their situation. Following this operation most patients have good urinary control, defecation and urination occur separately, and few patients have to void more than once during the night. The operative mortality is no greater than that for other major operations required in cases of cancer, since we have had the benefit of the sulpha drugs and antibiotics and improved methods of preparation including vitamins, intravenous fluids, plasma and blood.

In all cases the techniques employed in this operation are modifications of those devised by Coffey, having as their basis the fashioning of a trough in the wall of the sigmoid for each ureter, and carried out so that no constriction will result at the point of entrance of the ureter into the sigmoid. Such constriction will cause damming back of the flow of urine and in this stagnant urine infections will inevitably develop. Any surgeon who performs this operation must be on the alert and prepared to undo the anastomosis in case of irremediable stricture at the point of entrance of the ureter into the sigmoid, and do a cutaneo-ureterostomy, before the renal damage has become severe.

Most of these points are made by Oliker,[1] who concludes that uretero-sigmoidostomy is the best means available for the treatment of most cases of cancer of the bladder, both as to cure and making it possible for the patient to continue to lead a practically normal life. In this I agree, and with his further statement that the chances for success are in the neighborhood of 50 per cent.

Under present improved conditions, with the operative techniques and pre- and post-operative measures available, patients with bladder cancer are best served by having an evaluation as to what this line of treatment offers in each individual case. In a great fraction of such cases cure is effected. In practically all life is much prolonged and in comfort.

1. A. J. Oliker, Elkins, in *W. Va. Med. Jl.*, May.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

A GREAT OPPORTUNITY FOR THE FAMILY DOCTOR

Many, probably most, doctors and parents will be startled to learn that accidents are the leading cause of death among children of more than one year of age, the death rate from this cause far surpassing that from any other cause. For example, in 1946, according to the experience of the Metropolitan Life Insurance Company, the accident death rate among children from one to four was 48.1 per 100,000, as compared with a rate of 28.2 per 100,000 for pneumonia, the next leading cause of death. It is significant, too, that in this age group there has been little improvement in the past 15 years, although the death rate from disease has been cut two-thirds.

In the age group five to nine, the death rate for accidents was 25.7 per 100,000 as compared with a rate of 4.6 for rheumatic fever and organic heart disease, the next cause. In the age group 10 to 14, the death rate for accidents was 20.8, and that for rheumatic fever and organic heart disease, 7.2.

These figures are convincing that sustained efforts should be put forth to bring about great reduction in the number of child accidents. A program is planned to encourage public health, medical, safety, and other organizations, and the general public, to give greater attention to the accident-prevention phase of the child health program.

As part of the campaign the Metropolitan has prepared a 12-page illustrated booklet, "Help Your Child to Safety." While the booklet is addressed to parents and stresses the necessity for coöperation on the part of all members of the family in this effort, it also describes ways of removing physical hazards and discouraging practices prone to result in child injuries.

Supplies of the booklet and copies of statistical charts, prepared talks, suggested press releases, and other material will be available upon request[1] by September 1st for use in local organized child safety programs.

No one need expect that more than 25 per cent of parents and children will pay any attention to doctors' recommendations of ready means of preventing more than half these child-slayings. But that 25 per cent will be those most worth saving.

Doctors need not confine their accidents-prevention efforts to children. Adults and adolescents need to be warned perennially against the dangers of kindling fires with kerosene or gasoline, of touching an electrical fixture while standing in a bathtub or on wet ground, of seeking shelter under a lone tree during a rain-storm, of putting a gun where a child can get at it or pointing an "empty" gun at anybody, of even owning a pistol or revolver, of getting into a row-boat with any one having no more than average sense, of diving into any body of water *not known by investigation on that very day* to be of ample depth and free from obstruction, of putting anything on stairs other than your feet, of neglecting to promptly nail tight a loose stair tread.

Doctors will do well to quote often to their families the warning carried on signs along a certain mountain road: "Drive carefully, you might meet another fool;" and particularly to urge against backing out of driveways without *knowing* there are no small children in the way.

1. Metropolitan Information Service, 1 Madison Avenue, New York City.

HOSPITALS

R. B. Davis, M.D., *Editor,* Greensboro, N. C.

MEDICAL EDUCATION AND ITS FOLLY

When a specialist specializes, he becomes a super-specialist; a super-specialist is seldom needed and when needed is often too highly specialized to see the sick man as a whole. Therefore, any medical educational program which emphasizes the production of the super- specialist to the detriment and exclusion of the ordinary doctor with ordinary horse sense, is committing a grave folly.

To obtain a medical education today, one must become a bookworm, a mimic, and a good memorizer—first, during his four years of high school; second, during his four years of pre-medical work; and third, during the four years of medical school. The makers of our present medical educational program seem not to take into account an applicant being the son of a doctor or nurse, or both; his having manifested a continued desire to become a doctor; his being of a sympathetic, gentle disposition, and of the highest integrity.

Let us see just what there is of actual value to the future M.D. in the program of medical education and what is of no use. In his high school days, there are hours spent in physics, in history, higher mathematics, that could much better be spent by the premedical student in biology, chemistry, English and public speaking. A student desiring to study medicine should have the qualities requisite for a leader in his community, and among these qualities are a fair mastery of the English language, and a reasonable ability to present his ideas on his feet. He should be well grounded in biology and chemistry. There is little actual use for the knowledge obtained in other courses. Give any doctor an examination on the subjects he studied in high school, and see what has been retained; or ask ten successful practitioners of medicine what subjects studied in high school have been of value to them in the practice of their profession. The old argument adduced by medical educators that a student must have training for his mind years before he enters medicine ignores the fact that one's mind may become just as strong, just as active, and just as scientific in studying medical subjects as in studying trigonometry, poetry, Greek, French or Spanish.

The four-year period spent in premedical schools obtaining a B.S. or A.B. degree is supposed, according to the educators, first, to screen out those students who are not classified by them as brilliant, who have not the ability to memorize lectures and pages in textbooks; second, to familiarize the student with the anatomy and physiology of the earthworm, the fish, the cat and the dog, as well as to somewhat acquaint him with the biology from the unicellular organism up. Educators over-emphasize the "background" of a student. The writer will agree that puzzling for long hours over the non-essential, yet required, in courses in pre-medicine, does create mental stamina and accustoms the individual to accept long hours of boring, useless lectures because he knows he has to in order to pass his courses. It might also give the student confidence in his bility to pass examinations, but the study of medical subjects will do the same thing. In a pre-medical curriculum, the main thing to be kept in mind is that the student is not now preparing to be a specialist, but to qualify for admission to a medical school. All of the chemistry—inorganic, organic, quantitative and qualitative—that is taught in a pre-medical course is not actually worth one dollar to the physician or his patients.

A four-year medical course was once designed to turn out doctors to treat the ordinary ills of mankind. In those days the curriculum was capable of being mastered by the average student with ordinary horse sense. And what is more important, this knowledge was retained, not only through the years of medical college, but on out into the years of practical application of this knowledge. Each professor, as a specialist, feels morally obligated to inject every bit of new knowledge—or what is put out as new knowledge—concerning his specialty into the curriculum; although this "new knowledge" has come to his colleagues years after they have graduated, and much of it is of little use to those not specializing in that particular branch of medicine. And further, it is a human impossibility for this student, in a four-year medical course, to grasp and retain half the subject material offered during that time. Therefore, he becomes a spotter of the professor for examination questions, or a memorizer, or he is tempted to cheat his way through. This type of education is not education.

Any doctor could make such a criticism but criticism alone never remedied any situation. It is my earnest hope that some medical schools, somewhere, will launch out upon a practical medical educational program, which will take the boys from the high school and enter them into a medical curriculum of six years, teaching English, public speaking, anatomy, physiology, pathology and pharmacology, and including within these six years sufficient actual practical experience so that any man who is willing to work and who has a determination to be a good doctor, can obtain his M.D. degree and his license to practice general medicine at the age of 24. It can be done; it should be done; it must be done—if socialized medicine is not to overtake this country as it has nearly all the other countries of the world. Will you not join me in

preaching and praying, that the high esteem once enjoyed by the medical profession may continue to be our high privilege and heritage?

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

ABOUT MERCURIAL DIURETICS

Advice up to date[1] on these useful agents:

All three of the commonly used mercurial diuretics in this country contain theophylline. In mercurophylline injection ("mercuzanthin") the theophylline is in molar equivalent amounts with the mercurial compound. In mersalyl and theophylline ("salyrgan-theophylline") and in meralluride sodium solution ("mercuhydrin) the theophylline is in excess. The presence of theophylline prevents the necrosis of tissues at the site of injection, increases the rate of absorption from the site of an intramuscular injection, prevents the storage of mercury and increases the concentration of the mercurial within the kidney, thus contributing to a greater diuretic response.

All three mercurials have about the same effectiveness. When they are given intravenously diuresis begins in about half an hour and reaches its peak within four hours. The amount of diuresis varies considerably from patient to patient and in the same patient from time to time. If there is any edema fluid at all, one can anticipate some diuresis in well over 90 per cent of patients when the drug is given either intravenously or intramuscularly. When the patient has dehydration symptoms from rapid diuresis, give small doses more frequently rather than one large dose, such as 2 c.c. once a week. Larger doses should never be given. The intramuscular route is probably safer than the intravenous.

Morphine, meperidine hydrochloride and possibly other hypnotics or sedatives can exert an antidiuretic effect. If an adequate diuresis is not obtained with a mercurial diuretic be sure that the patient is not receiving one of these drugs at the time.

Ammonium chloride, 3 Gm. a day for two or three days before the diuretic is given, may increase diuresis as much as 20 per cent.

The xanthines alone are rarely used as diuretics except when mercurial diuretics are contraindicated. Theobromine and sodium salicylate, theophylline, theophylline ethylenediamine and "theocalcin" are all of about equal effectiveness.

Sensitization to mercurials may be manifested as urticaria, rash, chills, and fever, tightness of the chest. If any signs of sensitization appear, one of the other mercurials should be substituted. All three diuretics have been reported as causing reactions. Spontaneous redigitalization to the point of toxicity by the digitalis from edema fluid may occur. This may be avoided by giving the diuretic in smaller amounts or having the patient initially on a smaller digitalis maintenance dose. Depletion of sodium may produce muscle cramps, abdominal colic, nausea and vomiting, especially in patients on a low-sodium diet. Sudden death is rare. Care should be taken not to give a diuretic that has caused a reaction previously and to avoid giving this medication to patients with advanced renal or hepatic disease.

1. A. C. DeGraff, New York, in *Jl. A. M. A.*, April 17th.

QUINIDINE

All of us want to know the latest on quinidine. Here is what a Chicago internist[1] offers:

Quinidine may be administered orally, intramuscularly or intravenously. The oral route is the most satisfactory in most cases. In every instance a test dose of 0.2 Gm. should be given and the patient followed closely for reaction for several hours before proceeding further, although unpleasant side actions are rare. For therapeutic effect, 0.4 Gm. should be given every two hours until the arrhythmia is broken or until five doses have been given. This may be repeated for two or three days, the dose being increased each day by 0.2 Gm. Administration of quinidine should be stopped when toxic symptoms appear. In all cases the patient should be under close observation.

When the arrhythmia is broken, 0.2 Gm. should be given three times a day for one week. If the arrhythmia is recurrent maintenance therapy, 0.2 Gm. two or three times a day, should be employed. It is probably safe to give up to 4 Gm. a day. Whenever intensive quinidine therapy is employed the patient should be in the hospital under constant observation, the apical heart rate determined before each dose, therapeutic and toxic effects being watched for.

The drug should be discontinued: 1) when the rhythm has been returned to normal; 2) when a significant increase in heart rate occurs (thus in auricular fibrillation when the rate goes over 140 per minute), or 3) when intraventricular block occurs.

Intramuscular therapy is indicated when action is needed in one-half to one and one-half hours, or when oral administration is not feasible. Sulfate or hydrochloride may be used. The dosage schedule is similar to that outlined in the oral method. Intramuscular quinidine should be given under close observation in the hospital.

The intravenous route is rarely necessary and is dangerous. The criteria for its use:

1. Ventricular tachycardia diagnosed electrocardiographically.

1. L. N. Katz, Chicago, in *Jl. A. M. A.*, April 17th.

2. Congestive heart failure which has been precipitated by the sudden onset of auricular fibrillation (if not adequately controlled by digitalis).

3. Persistent premature ventricular contractions in patients who have had acute coronary artery occlusion.

4. Chronic disease of the heart with paroxysmal auricular fibrillation, paroxysmal auricular tachycardia or auricular flutter.

5. A history of systemic embolization in a case of paroxysmal or established auricular fibrillation.

DIGITOXIN PREFERABLE TO DIGITALIS LEAF

Gold[1] makes out a good case for the active principle.

Where one would use 1.2 Gm. of digitalis, the same effect may be had by using 1.2 mg. of digitoxin. The full digitalizing dose given at one time to patients with heart failure who have not recently had digitalis produces the full effects in six to 10 hours, instead of the 36 to 72 hours as in the case of the divided dose method using digitalis leaf, reducing the apex rate in the cases of auricular fibrillation to 60-85 in three fourths of the cases. Some do with less, some require more.

The daily maintenance dose is usually 0.2 mg. In a few reduced to 0.1 mg., and some require 0.3 mg. or more daily.

Gold advocates it as the material of choice for routine oral digitalization and maintenance. It seems likely that it will not be long before the crude digitalis leaf or the tincture will be a cardiac medication of historical interest chiefly, and that digitoxin will take its place.

Aminophylline is said to have no value in the routine treatment of the angina of effort by oral administration. An intravenous injection of 0.24 Gm. will dilate the coronary vessels, and it may be of some use in acute coronary thrombosis. Some use it routinely after coronary thrombosis with a view to making patients less susceptible to ventricular fibrillation and reducing the size of the final scar, but Gold is not impressed with the evidence that it produces those results. In case he finds it necessary to use a coronary vasodilator in coronary thrombosis, he gives glyceryl trinitrate under the tongue at frequent intervals. In cases of pulmonary edema with bronchospastic symptoms developing in coronary thrombosis, he finds an intravenous dose of aminophylline helpful.

1. Harry Gold, New York, in *Jl. A. M. A.*, April 17th.

Medicone Suppositories Relieved Pain and Tenesmus

(J. A. Bargen, Rochester, in *Minn. Med.*, April)

A suppository containing a soothing mixture of benzocaine, oxyquinole sulfate, balsam of Peru and ephedrine hydrochloride in cocoa butter* particularly helped patients with the anal type tenesmus and rectalgia of the irritable bowel syndromes, those with the misery of severe anal infection and those with the diarrhea of infectious intestinal disease. In a group afflicted with chronic ulcerative colitis and who had rather severe diarrhea, decrease in the number of stools occurred in half the cases after use of this type of suppository. This suppository has been of striking help in allaying anal discomfort.

*Material used in this study was rectal medicone, supplied by The Medicone Company, 225 Varick Street, New York City.

OBSTETRICS

H. J. Langston, M.D., *Editor*, Danville, Va.

URINE VS. BLOOD SERUM IN TEST FOR PREGNANCY

Of tests for the early diagnosis of pregnancy to date none has proved as valuable as the Friedman modification of the Ascheim-Zondek test. When all steps are properly carried out, this test is reported as 98 per cent accurate. This includes obtaining a fresh, clean, first morning, fasting specimen of urine which is injected intravenously into a virgin female rabbit, of not less than four pounds weight, after adjusting the reaction of the urine to a pH 6.8-7.4.

Frequent causes of error are: 1) The patient drinks water after midnight and in the specimen the hormone is too greatly diluted; 2) delay, allowing dissipation of the hormone present and excessive bacterial growth in the urine; 3) use of containers that had held anything from hair tonic to nail polish remover, result—a dead rabbit and test must be repeated.

Recently Hoffman has suggested the use of blood serum rather than urine for the test. The advantages of this method are obvious. The blood may be drawn at any time of day as blood is little subject to dilution by the intake of fluids. The laboratory taking the blood knows that it is fresh, whereas the urine specimens frequently are old. Also it obviates having the patient place the specimen in an unsuitable container and frequently saves the patient an extra trip to the laboratory.

During the last year Dr. Kent's laboratory has performed 156 Friedman tests with the following results:

	No. Positive	No. Negative	% Positive
81 urine tests	33	48	40.7
75 blood serum tests	41	34	54.6

False positive tests are rarely a problem; it is the false negative tests that cause disrepute for the laboratory and trouble all around.

It must be evident that the blood serum test is somewhat more accurate than the urine test as performed in the average laboratory. Certainly it is more convenient.

An additional reason for preferring the blood serum test is the *certainty as to whose body fluid is being used.*

1. C. F. Kent, Kansas City, Mo., in *Jl. Mo. Med. Assn.*, April.

GENERAL PRACTICE

WILLIAM R. WALLACE, M.D., *Editor*, Chester, S. C.

PROPHYLAXIS AND CURE OF HOOKWORM ANEMIA-DEFICIENCY DISEASE

TWO BRAZILIAN doctors,[1], with practical ideas on the desirable and the achievable, have shown how millions of the people of their country can be cheaply returned to and kept in health by the administration of iron.

A heavily infested patient was treated for more than a year and certain conclusions were arrived at.

Contrary to what might be expected, with the exception of intestinal hemorrhages and eosinophilia, all other pathologic changes disappeared as the blood became normal. So great is the importance of these symptoms and signs that yield with the treatment by iron, and so insignificant are those that remain, that we should, in this case, consider the anemia not as a syndrome connected with the signs, but as the disease itself.

These hard-headed doctors took note of the fact that up to the present time, prophylaxis of *hookworm anemia* has been considered as the prophylaxis of a *hookworm infestation*—methods difficult and costly, amounting to radical changes in the established habits of a population (use of shoes) or sanitary engineering measures amounting to sudden civilization of backward zones (construction of privies, etc.); and that these methods of prophylaxis, consisting in avoiding the infestation of man by hookworms have been of no practical effect in reducing the incidence of the anemia.

The application of iron they found not sufficient to eliminate completely hookworm anemia from a community, also that it requires periodic application. On the other hand, this method, consisting in adding an iron salt to the foods habitually eaten by the lower social classes, is one of the easiest to apply.

With various experimental mixtures used, it was attempted to fulfill the requirements of taste, stability, appearance, hematologic efficiency, and low cost. Only two were found satisfactory: ferrous sulfate mixed with manioc flour, and ferric ammonium citrate added to bean gravy.

According to present knowledge, the contribution of the helminths to the formation of anemia appears to be exclusively through their blood-sucking activities. The organism reacts in various ways according to the loss of hematic constituents. It seems to possess an unlimited quantity of protein for reconstitution of the red blood cell strome, of globin, and of amino radicals. The helminths, in withdrawing blood from the body, withdraw essentially the iron metal.

The minimum dose necessary to maintain the blood at normal in an individual weighing 45 kilograms, with heavy infestation, was 0.2 Gm. daily of ferous sulfate. The patient observed became clinically normal two weeks after the beginning of blood regeneration up to the end of the trial period one year later.

At the end of the trial period, five vermifuges (carbon tetrachloride 1.8 ml. plus chenopodium oil 0.6 ml.) were administered at weekly intervals. The worms eliminated showed this to be one of the most heavily infested cases.

In individuals severely infested with *Ancylostoma* or *Necator*, it is possible to maintain the normality of blood value by the administration of a sufficient dose of an iron salt.

1. W. O. Cruz and R. Pimenta de Mello, Rio de Janerio, Brazil, in *Blood*, April..

SNORING

AN ENGLISH SURGEON[1] makes a plea for the more serious consideration of a physical and mental handicap, which, he says, may ruin a happy marriage, and in some parts of the U. S. A. is considered justification for divorce. Read on and learn how to be of help to snorers.

Snoring is a term limited to sounds made by vibrations in the soft palate and posterior faucial pillars during sleep; excluded are sounds made by laryngeal structures including the epiglottis, by the tongue, cheeks, lips or nostrils. Snoring is usually produced during inspiration through the mouth. It has been shown by means of a pharyngoscope that the vibrating part in a snore is the thin edge of the posterior faucial pillars. It is not only position that influences the vibrating parts, it is also the texture of the velum, and this depends on the tone of the musculature of the glossopharyngeal arch, and the thickness of the tissues.

Sleeping on one's back is a common cause of snoring, because the tongue falls back more readily. There seems to be no influence from the presence or absence of teeth or dentures. Mouth breathers do not all snore. It is often the minor degrees of obstruction which leads to enough mouth breathing to initiate snoring.

The majority of children are cured by removal of their adenoids and tonsils. Exceptions are persistent mouth-breathers with infective or allergic rhinosinusitis. The adult who starts snoring usually does so from some organic cause. Women snorers appear to be as numerous as men. The largest group consists of elderly men and women. Lack of tone seems to be the fundamental cause.

Amputation of the uvula, which used to be a popular practice, very rarely gives relief, but it may modify the degree and pitch of the snore. In some instances simple decongestive nasal drops be-

1. I. G. Robin, in *Proc. Royal Soc. of Med.* (Lond.), Mar.

fore retiring will allow a peaceful night. In others various nasal operations may have to be performed. Benadryl is useful in some cases.

Many persons snore only when on their backs, and in such cases a solid substance sewn into the back of the pajamas is efficacious. Altering the position of tongue, soft palate and/or jaws, by breathing, swallowing and phonetic exercises, or by orthodontic "splints" has been beneficial.

Keeping the mouth closed during sleep by wearing an "Andresen" splint (well tolerated by most children, less so by an adult), or by a strip of adhesive plaster across the corner of the mouth, solves the problem in some cases. An adequate nasal airway is of course essential.

Altering the texture of soft palate and faucial pillars by injection of a sclerosing solution into the pillars is advocated by an enthusiastic surgeon, though he has not been able to claim a high percentage of cures.

Surgeons may have helped many potential snorers by the early removal of their tonsils and adenoids—leaving them with a fixed fibrous band instead of nice, mobile, soft palate and faucial pillars!

OFFICE TREATMENT OF SYPHILIS WITH PENICILLIN

A PLAN of treatment for ambulatory patients, employing 300,000 units of penicillin in oil and wax, giving one injection each day for a period of 14 days, a total dosage of 4,300,000 units; also during this period, four injections of mapharsen (total 0.160 Gm.) and three injections of bismuth subsalicylate in oil (total 0.36 Gm.) is recommended.[1] Following completion of this treatment schedule, blood tests are to be made one month, six months, nine months, and one year later.

Sixteen cases received treatment as outlined: early syphilis, 6; latent syphilis, 8; serologic relapse, 2. Spinal fluid examination was performed on all patients except three who were in various stages of pregnancy. No cases of neurosyphilis were included in this group. The duration of the infections treated were from 19 years in one latent case to six weeks in one early case. Six patients had either a primary lesion or a secondary eruption. No patient was treated without positive blood Wassermann or darkfield.

All of the latent cases had received previous chemotherapy in varied amounts and forms. Thirteen of the patients had positive blood tests, the Kahn titre varying from 1:40 to 1:1. Three patients were in the negative phase of primary syphilis. All the primary and secondary lesions healed promptly. The three early cases with positive blood Kahn tests became negative six months after treatment. Five of the eight latent cases demonstrated changes in the titre of the Kahn reaction but remained in the positive phase. The other three latent cases had negative blood tests six months following completion of treatment. There were no substantial changes in serologic results nine months after treatment although slight changes in titre were noted. The two cases termed "serologic relapse" and the three early cases with negative bloods had negative blood tests six months following termination of treatment.

All of the cases of early syphilis responded with the disappearance of lesions and the development and maintenance of negative blood tests. No relapse had occurred at the end of six months.

Three of the patients were pregnant at the beginning of treatment. Clinically, none of the newborns presented any stigma of congenital syphilis. Of the three infants, a blood test was taken on only one and this was negative.

It would appear that treatment with penicillin in oil and wax is effective and can be done readily in the office; and 4,200,000 units in daily doses of 300.000 units each is satisfactory.

1. D. V. Hatton, Huntington, W. Va., in *W. Va. Med. Jl.*, April.

ORAL TEMPERATURE IN PRACTICE

(*Permonente Foundation Bulletin*)

It is better to speak of a normal range of temperature. Orally, this range is from 98.0 to 99.0 F., while the rectal range is from 99.0 to 100.0 F.

Many clinicians are concerned over oral temperatures of 99.0 to 99.6, considering this to be a low-grade fever. Many patients have been suspected of having tuberculosis, rheumatic fever, or chronic brucellosis on the basis of oral temperature determinations. Not uncommonly one comes across a patient being treated for chronic undulant fever, the fever being a few observations of oral temperatures 99.0 to 99.6 F.

The purpose of this report is to demonstrate that oral temperatures of 99.0 to 99.6 F. in adults do not necessarily mean fever. This is by no means a new idea. It is only surprising that one can quote very few, if any, authorities to substantiate this statement.

CURARE IN SPASTICITY OF SPINAL-CORD INJURIES

(R. A. Kuhn & D. S. Bickers, Framingham, Mass., in *New Eng. Jl. of Med.*, April 29th)

Thirty-four patients with traumatic lesions of the spinal cord were studied in an attempt to evaluate the use of curare in spasticity due to such injuries. Seventeen received intramuscular injections of 175 mg. of d-tubobcurarine chloride in oil and white wax every 48 hours for 10 doses, and 17 were given a physiologic saline solution for the same period.

No beneficial effects relating to the relief of spasms in paraplegic or paraparetic patients were obtained from the d-tubocurarine. The observers were unable to say which were receiving the d-tubocurarine and which the saline solution. The role played by suggestibility in therapy of this type of patient was clearly demonstrated.

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As is true of most Medical Journals, all costs of cuts, must be borne by the author.

STATE HEALTH OFFICER NORTON

NORTH CAROLINA has been peculiarly fortunate in its State Health Officers. All the way from Dr. Thomas F. Wood the office has been filled by doctors of great zeal and great ability. Not one of them was better fitted by native endowment, by specialized training or by temperament than is Dr. John William Roy Norton.

From his graduation in 1928 to the time of the entrance of our country into World War II, Dr. Norton had been engaged, in various capacities, in public health work. At the time of our entrance into that war he was Professor of Public Health Administration in the School of Public Health of the University of North Carolina.

For the war period his services were requisitioned by the Federal Government, his most noted accomplishment being the organization and conduct of the public health activities at Oak Ridge, Tennessee, a masterly performance which brought him great renown.

All his labours in health preservation and disease prevention, which have extended over a period of twenty years, have demonstrated abilities of the highest order. His native State is fortunate in being able to obtain his services for this, the most important office in the Commonwealth.

TINTED LENSES IN MOST INSTANCES USELESS OR WORSE THAN USELESS

COWAN[1] deplores the fact that the vogue of tinted lenses has reached such an extent that most laymen and many ophthalmologists even, believe that the eyes need protection not only against daylight but against any light, even night light. Informed ophthalmologists disapprove the widespread and indiscriminate use of tinted lenses and object seriously to the methods of the advertisers of these glasses.

The only legitimate purpose of light-filtering glasses is to protect the eyes against painful or harmful light. Unless the eyes are abnormally sensitive, dark glasses are indicated only in the presence of extraordinary, excessive or misdirected light. Healthy, properly corrected eyes are well able to tolerate bright sunlight unless it is reflected directly into the eyes by water, snow or white sand. The sole purpose of so-called sun glasses is to reduce considerably the amount of direct or reflected sunlight on those occasions when the amount is so great that it interferes with vision. Whenever protection of this kind is necessary the glasses should be dark enough to absorb 60 to 75 per cent of the light, and they should be colorless—*smoke or gray*. Any persons with normally healthy eyes should be comfortable without any

1. Alfred Cowan, Philadelphia, in *Jl. A. M. A.*, April 24th.

kind of glasses under exposures other than direct to bright sunlight.

Tinted lenses should not be worn indoors under properly placed artificial light and never outdoors at night. They are dangerous for night-driving; the glare of an automobile headlight is due to the contrast with the surrounding darkness, and no type of tinted glass can change that. The sense of ocular fatigue after day-driving is more often due to uncorrected or improperly corrected errors of refraction or muscle balance than to the bright light.

This Philadelphia ophthalmologist concludes:

Despite the fantastic, absurd and untrue claims of the manufacturers of certain tinted glasses, the lighter shades of colored glass—tints that are hardly perceptible—offer little more protection against glare than clear glass. Promoters assert that through their miracle glasses the light is soft, cool and restful, as in a cathedral; work, they claim, is done more efficiently and with greater comfort. These miracle-working lenses are said to match the complexion; to be inconspicuous yet improve the appearance; even to increase the visual acuity somehow or other; to protect the eyes against the ultraviolet and infrared in daylight, against amounts of energy which no one except the exploiters of these glasses would ever consider harmful; to keep out most of the light which seems to be bad light and let in only the good light. Through these glasses, they claim, there are no annoying color disturbances; the makers have produced the impossible, a colored glass without selectivity.

What this authority says about tinted glasses is passed on to the readers of *Southern Medicine & Surgery,* not as information—for they already know the truth of the statements—but to give them the backing of high authority to help in convincing their patients of the wasteful folly, and even danger, of accepting treatment at the hands of a glib group with something to sell.

SCHIZOPHRENIA IN MILD FORM NOT UNCOMMON; EVEN OF SEVERE FORM MANY RECOVER

A LARGE PROPORTION of persons with schizophrenia do not become seriously ill and a large number of them recover even after they have become seriously ill. A large number go through every doctor's office and are mis-diagnosed cardiac disease, appendicitis, malingering and neurosis when they are actually early incipient schizophrenia. Some of them get better; some get worse. If they get worse, the schizophrenia becomes obvious. Most of the schizophrenia patients in every psychiatric hospital have been previously treated outside by doctors who thought they had a physical disease or a neurosis.

All the foregoing is on the authority of one of our most eminent psychiatrists,[1] and there is more that is not common knowledge.

A great many cases that we used to call neuroses, neurasthenia, alcoholism, chronic invalidism, and many other things are actually cases of schizophrenia.

Schizophrenic patients often recover under the right treatment in the right environment, one in which they are relieved of their fears of their own aggressiveness and resentment. It is not by any means always that this treatment requires institutionalization; "perhaps more often it requires the finding of an environment outside of an institution (but often outside of the home) where the patient can successfully adjust himself." Such patients must not be allowed to get into situations which they cannot stand, and if they are already in situations that they cannot stand they should be gotten into situations which require less of them.

The vast majority of schizophenrics, we are told, get no treatment, but many of them would be much helped if they were recognized for what they are, and given protective, supportive treatment "which their family physician could give them," and a good many others could be improved, if not cured, by the proper type of special psychiatric treatment.

All this is in agreement with the teaching of Strecker, whose textbook of *Psychiatry,* in its several editions, has been given enthusiastic review in this journal. With the endorsement of Strecker and Menninger, and their instruction as to ways and means, practitioners can go forward confidently with the diagnosis and management in home and office of much of the psychiatry developing among their patients.

1. Karl Menninger, in *Bul. Menninger Clinic,* May.

ENURESIS, A COMMON-SENSE TREATMENT

NOT ONLY A common-sense treatment, but *the most* common-sense consideration of the whole subject, of bed-wetting, is that given by a West Coast teacher.[1]

Enuresis, he says, is nearly always a symptom of a psychologic disturbance, in over 95 per cent of his cases. Bed-wetters are usually nervous children. Their parents are usually of the same type, and hand on to them their instability. Other components of this behavior pattern are usually associated with enuresis such as anorexia, disturbed sleep, irregular toilet hygiene and temper tantrums. All patients should have the benefit of a thorough physical examination, especially of the urogenital tract, but in only a few cases will anything causative be found.

1. N. W. Clein, Seattle, in *Northwest Med.,* April.

The five suggestions found of greatest value in controlling enuresis are:

Do not talk about bed-wetting at any time in the child's presence. Many, if not most, of them secretly enjoy the discussion and the turmoil that they produce. They do not greatly care whether they are kissed, spanked, complimented or scolded, just so they are attracting attention, in the center of the stage.

Do not awaken the child at night. He must learn to control the bladder and learn that no one can control it but himself.

Do not change the bed linen or pajamas, except when making the routine changes of linens for the rest of the family, once or twice weekly. Dry the wet linens and clothes and replace them. The child will tire of the smelly odors and rough clothes when he discovers that he is the only one that is suffering from his bed-wetting.

Limit the 24-hour intake of all fluids. Give only a small glass of milk with each meal and none between. No juices. Never refuse water if he asks for it, but give him only half as much as usual. Never say "Now you cannot have a drink because you wet the bed." Do not discuss bed-wetting with him or in his presence at any time.

Medication is of questionable value. It is pprobable that belladonna may reduce urinary secretions. One tablet belladenal (Sandoz) taken at bedtime is worth a trial period of two weeks. If the child still wets, it is useless to continue the drug.

Parents must be instructed in and brought to accept the elementary fact that the voluntary control of the act of urination during sleep arrives at a later age than during waking hours. Their failure to act in terms of this single bit of knowledge causes them to heap shame, their resentment, physical punishment, and disagreeable dietary and medical and surgical treatment on many a normal child.

It is the duty of the physician to restore the child's confidence in himself. His coöperation is usually assured by convincing him that he is big enough, strong enough, bright enough and willing and eager to be dry. A sympathetic mutual understanding must be arrived at that you and he are friends.

Cost of Hospital Care a Threat—Remedy Suggested

(Jl. Omaha Mid-West Clin. Soc., 9:37, 1948)

With ward beds at $7 to $8 per day, the rising cost of hospital care probably constitutes the greatest threat of governmental influence on existing medical practice.

Perhaps what is needed is a more flexible unit which might combine the best features of a hotel type of service for visiting ambulatory patients, with facilities of the best type of hospital service for sick patients who need to be cared for inside a hospital. Unless hospital care can be provided at a reasonable cost, there will be further demands for governmental subsidy. The problem is a challenge; there is need for exploration and study; and when the course is charted there must be strong hands on the oars.

NEWS

Baptist Hospital and Bowman Gray School of Medicine of Wake Forest College

Dr. Henry Shepard Fuller, assistant professor of preventive medicine, has been awarded a fellowship in medical research by the Guggenheim Foundation. Dr. Fuller will pursue under the fellowship studies of the trombiculidae in relation to transmission of disease.

Dr. Lloyd J. Thompson, head of the department of neuropsychiatry, on April 16th, spoke in the final session of the Virginia Institute Seminar in Psychiatry and Neurology, on "Organic Reactions."

On April 23rd, Dr. Thompson and Dr. Richard Masland, also of the department of neuropsychiatry, went to the VA hospital at Fayetteville to give lectures and clinics—Dr. Thompson on "War Neuroses," Dr. Masland on "Intracranial Arterial Aneurysms."

Dr. Harold D. Green, head of the department of physiology and pharmacology, attended sessions of the Scientific Council of the American Foundation for High Blood Pressure, held at Cleveland, April 30th-May 1st.

Dr. Green, Dr. Manson Meads, Dr. Helen Belding, and Dr. George T. Harrell attended sessions of the American Society of Clinical Investigation at Atlantic City on May 3rd. Dr. Harrell is on the editorial board of the Society's journal.

Dr. Frank R. Lock, head of the department of obstetrics and gynecology, was guest speaker for the section on obstetrics and gynecology of the Louisiana State Medical Society at its meeting at Monroe, April 12th-19th. His subject was "Recent Advances in Maternity Care."

Dr. W. E. Cornatzer and Dr. Camillo Artom of the department of biochemistry, presented a paper for the section on biochemistry and physiology at the 45th Annual Meeting of the North Carolina Academy of Science, May 7th-8th at Davidson College. Subject of the paper was "The Relation of Chemical Structure to the Stimulation of Lipide Phosphorylation."

The latest issue of the *American Journal of the Medical Sciences* carries an article by Dr. David Cayer, assistant professor of medicine, on "Urinary Excretion of Niacin and Riboflavin in Patients with Acute Infections and Various Chronic Diseases."

Dr. Robert B. Lawson of the department of pediatrics, spoke on "Present Concepts Regarding the Spread and Treatment of Poliomyelitis" at the meeting of the Georgia Medical Society at Atlanta, April 28th.

Dr. Wingate M. Johnson, professor of clinical medicine, was guest speaker for one of the general sessions of the State Medical Society of Texas at Houston, April 26th-29th, and for two meetings of the section on general practice.

Dr. MacDonald Fulton, professor of bacteriology, was re-elected secretary of the North Carolina Society of Bacteriologists at a meeting held at Duke Hospital, Durham, on May 1st.

THE AMERICAN CONGRESS OF PHYSICAL MEDICINE

Will hold its twenty-sixth annual scientific and clinical session Sept. 7th-11th, at the Hotel Statler, Washington. All sessions will be open to members in good standing in the A. M. A. In addition to the scientific sessions, the annual instruction courses will be held Sept. 7th-10th, in two groups—one set of ten lectures based on physics and physiology, attendance limited to physicians; one set of ten lectures more general in character open to physicians and physical therapists registered with the American Registry of Physical Therapy Technicians. For full information write American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2.

BROAD STREET SANITARIUM, Richmond, Va., "Exclusively for Alcoholism," announces the appointment of Charles G. Young, M.D., as Medical Director.

BUILDING AND GREATEST MEDICAL X-RAY MACHINE DEDICATED

Housing the largest x-ray machine in the world for medical purposes and a vast array of radium and x-ray equipment, the James Harvey Gravell Supervoltage Building has been dedicated. The building, a part of the American Oncologic Hospital, Philadelphia, the nation's oldest cancer institution, was presented to the hospital by Leon R. Cherksey, president of the American Chemical Paint Company, Ambler, Pa., in memory of the late James Harvey Gravell, company founder and its first president. It is a memorial from Mr. Gravell's former associates.

The giant x-ray machine of 2,000,000 volts, capable of being stepped up to 5,000,000 volts through use of special tubes, was presented at the same time by L. D. Cassett, retired Philadelphia businessman, in memory of his mother.

The CARTERET COUNTY MEDICAL SOCIETY held its April dinner meeting at the Morehead City Hospital, the hospital being host.

Dr. Theodore Salter, Beaufort, reported a case, probable diagnosis subacute bacterial endocarditis (postmortem not permitted).

The matter of organizing a County Health Council was postponed until after the Pinehurst meeting, in order that we might be guided by whatever action the House of Delegates may take in the matter.

Dr. J. W. Morris reported for the committee from the Society which appeared before the Board of County Commissioners on April 5th, requesting more funds for the County Welfare Department to be used for hospitalization of indigents, attending physicians to contribute their services. The request was favorably received.

Dr. Louis Hyman, Cherry Point, was received as a new member of the hospital staff and the Society.

At the March meeting of the Society the matter of rebates and fee-splitting was strongly condemned and the delegate to the State Medical Society was instructed to carry this sentiment before the House of Delegates in a very positive manner.

The officers of the Society are: Dr. J. W. Morris, President, Morehead City; Dr. Frank E. Hyde, Secretary, Beaufort.

Reported by N. Thomas Ennett, M.D.,
County Health Officer, Beaufort.

MARRIED

Dr. Gordon Townsend, of Fair Bluff, North Carolina, and Miss Mary Sorrell, of Dunn, were married on May 2nd.

Dr. Fred M. Dula and Miss Laura Pulliam, both of Lenoir, North Carolina, were married on April 27th.

Dr. John M. Gouldin, III, of Tappahannock, Virginia, and Miss Hilda Barnes, of Elm City, North Carolina, were married on April 24th.

DIED

Dr. Edward P. Beverley, 72, of Broad Run, Fauquier County, Va., retired Army doctor, died April 3d at Walter Reed Hospital, Washington. Interment was in Arlington National Cemetery.

Dr. Beverley was graduated from the University of the South, in 1899, was one of the first physicians to go to Panama for the building of the anal, and while there, played an important part in the fight against yellow fever. He later entered the Army and was retired in 1938 as a lieutenant-colonel.

Dr. Eugene Hartwell Luck, 62, Roanoke, Va., physician for more than 30 years, died May 10th in Lewis-Gale Hospital after a cerebral hemorrhage, which he suffered a few hours before.

Born in Halifax County, Dr. Luck was educated at the University of Richmond and the Medical College of Virginia.

Dr. Marshall P. Gordon, Jr., 43, Richmond urologist, died at his home May 10th. He was a graduate of the University of Virginia, academic 1924, medicine 1927, served his internship at the University Hospital, and a residency at the Brady Urological Institute, Baltimore.

Dr. Gordon entered practice in Richmond in 1932 and at the time of his death was attending urologist at Stuart Circle, Retreat for the Sick, St. Elizabeth and Sheltering Arms hospitals.

He was an assistant professor of urology at the Medical College of Virginia and urologist for the hospital division of the college.

During World War II, he served with the Navy in the South Pacific and was discharged with the rank of commander.

Dr. William E. Hicks of Sardis, S. C., died in a Florence Hospital on February 8th, after an illness of several months. He was born in South Carolina and graduated from the Medical College of the State in 1881. He had membership and took an active part in the affairs of his county medical society, and of the South Carolina and Tri-State Medical Associations. His two score years of skilled, faithful service to a large area of Florence County had endeared him to his community to a degree attainable by none other than the good family doctor.

Additional Schering Research Grants

The Schering Fellowship for continued studies on the enzyme hyaluronidase has been renewed at the Cornell University, Department of Zoölogy, Ithaca, New York. The studies are under the supervision of Dr. Samuel L. Leonard.

A new Schering Fellowship in the endocrinology of geriatrics was established at the Western Reserve University Hospitals of Cleveland under the direction of Dr. Reginald A. Shipley. The third grant was to the Philadelphia General Hospital Arthritic Fund for continued study of gold therapy supplemented by androgens and estrogens in the treatment of arthritis.

New antispasmodics developed by Schering will be studied at Jefferson Medical College under the direction of Dr. Richard T. Smith. Their use in the treatment of rheumatoid arthritis and other rheumatic diseases will be stressed in this study. Similar grants in other fields of research are made from time to time to leading institutions as part of the Schering program for the advancement of medicine.

BOOKS

TEXTBOOK OF GYNECOLOGY, by Emil Novak, M.D., F.A.C.S., Assistant Professor of Gynecology, The Johns Hopkins Medical School. Third edition. *The Williams & Wilkius Company,* Mt. Royal and Guilford Aves, Baltimore 2. 1948. $8.

The author disclaims having made any radical change in this edition, but every effort has been made to incorporate every advance worthy of incorporation which has been made in the three years which have elapsed since the previous edition was offered the profession. A number of new illustrations, some of them in color, will serve to supplement the text.

The subject of gynecologic practice is admirably covered in a book of reasonable size by the simple expedient of leaving out all unnecessary matter.

CLINICAL DIAGNOSIS BY LABORATORY METHODS—A Working Manual of Clinical Pathology, by James Campbell Todd, Ph.B., M.D., Late Professor of Clinical Pathology, University of Colorado School of Medicine; and Arthur Hawley Sanford, A.M., M.D., Professor of Clinical Pathology, Mayo Foundation, University of Minnesota; Senior Consultant, Division of Clinical Laboratories, The Mayo Clinic; with the Collaboration of George Giles Stilwell, A.B., M.D., Division of Clinical Laboratories, The Mayo Clinic. Eleventh Edition. 954 pages, with 397 figures. *W. B. Saunders Company,* Philadelphia and London. 1948. $7.50.

This old reliable and popular work, now come to its 11th edition, and to the age of 40 years, has kept in the front of medical progress and remains an authority and guide second to none in the field of laboratory help to diagnosis. Much of the material has been expanded, the illustrations have been reviewed and rearranged, new plates have been added and a number of the drawings have been remade. This edition will sustain the record and retain the popularity built up over the last four decades.

PHARMACOLOGY, THERAPEUTICS AND PRESCRIPTION WRITING FOR STUDENTS AND PRACTITIONERS, by Walter Arthur Bastedo, Ph.G., Ph.M. (Hon.), M.D., Sc.D. (Hon.), F.A.C.P., Consulting Physician, St. Luke's Hospital, New York, St. Vincent's Hospital, Staten Island, and the Staten Island Hospital. President, U. S. P. Convention, 1930-1940; Member of Revision Committee, U. S. Pharmacopoeia. Fifth Edition. *W. B. Saunders Company,* W. Washington Square, Philadelphia. 1947. $8.50.

Advances in the field of chemistry and biology as to their drug productions continue to be made with so great rapidity as to necessitate the complete rewriting of the present edition. New remedies described for the first time, or at much greater length, include the amino acids, heparin, dicumarol, curare, snake venoms, antihistamines, folic acid, rutin, thiouracil and its derivatives, metapon, the mercury diuretics and the BAL treatment of poisoning by arsenic, gold and other substances. Alcohol, tobacco and mariahuana are discussed because of their toxicity and habit-forming qualities. Carbon monoxide and a number of other substances are discussed because of their importance as poisons.

The quality of the book has been kept at so high a level that it remains of immense value to every physician who treats patients with drugs.

PHYSIOLOGY OF EXERCISE, by Laurence E. Morehouse, Ph.D., Associate Professor of Physical Education, University of Southern California; and Augustus T. Miller, Jr., Ph.D., Associate Professor of Physiology, University of North Carolina Medical School. Illustrated. *The C. V. Mosby Company,* St. Louis. 1948. $4.75.

The authors tell us that in presenting this book they have assumed only an elementary knowledge of some of the basic principles of chemistry and physics on the part of the reader, and have attempted to provide the necessary physiologic background for an understanding of the response of the body to exercise. Technical terms used are defined at their first appearance in the text, and a glossary is appended.

There are chapters on the anatomy, the physiology, the nervous control, and the metabolism of muscles; on the heart and its rate in exercise, on the circulatory adjustments in exercise; on pulmonary ventilation, regulation of breathing, medical aspects of exercise, endurance, physical fitness, training and diet.

The fact that one of the authors is a teacher in the University of North Carolina Medical School is only one of the many considerations to recommend the book.

THE 1947 YEAR BOOK OF NEUROLOGY, PSYCHIATRY AND NEUROSURGERY—

Neurology, edited by Hans H. Reese, M.D., Professor of Neurology and Psychiatry, University of Wisconsin Medical School; and Mabel G. Masten, M.D., Associate Professor of Neurophychiatry, University of Wisconsin Medical School.

Psychiatry, edited by Noland D. C. Lewis, M.D., Director, N. Y. State Psychiatric Institute and Hospital, Professor of Psychiatry, Columbia University.

Neurosurgery, edited by Percival Bailey, M.D., Professor of Neurology and Neurological Surgery, University of Illinois.

The Year Book Publishers, Inc., 304 S. Dearborn St., Chicago 4. $3.75.

The editors have searched the 1947 world literature in the fields of neurology, psychiatry and neurosurgery, and have chosen only the best to put into this volume. The editors' discriminating comments here and there constitute a feature of great value.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES, by Charles Franklin Craig, M.D., M.A. (Hon.), D.Sc. (Hon.), F.A.C.S., F.A.C.P., Colonel, United States Army Medical Corps, Retired. D. S. M. Emeritus Professor

of Tropical Medicine, Medical School, Tulane University. Second edition, with 56 illustrations and seven colored plates. *Lea and Febiger,* 600 W. Washington Sq., Philadelphia. 1948. $6.50.

Cognizance is taken of the fact that a great many of our soldiers became infected with parasitic protozoa in the recent war and will manifest symptoms due to these infections over a considerable time in the future. Improved diagnostic methods worked out during this war make up a valuable part of this book. Part I describes laboratory diagnosis of amebiasis and flagellate infection; Part II, laboratory diagnosis of the leishmaniases, kalaazar, oriental sore and espundia; Part III, laboratory diagnosis of the trypanosomiases; Part IV, laboratory diagnosis of cocidiasis; Part V, laboratory diagnosis of the malaria plasmodia, and Part IV, laboratory diagnosis of balantidiasis.

It behooves us all to acquaint ourselves with the symptoms suggestive of these disease conditions and to be on the lookout for their appearance, especially in discharged soldiers. A knowledge of the teachings of this textbook will enable the physician to render adequate service in this regard.

SYNOPSIS OF PEDIATRICS, by JOHN ZAHORSKY, A.B., M.D., F.A.C.P., Professor of Pediatrics and Director of the Department of Pediatrics, St. Louis University School of Medicine, and Pediatrician-in-Chief to the St. Mary's Group of Hospitals; assisted by T. S. ZAHORSKY, B.S., M.D., Senior Instructor in Pediatrics, St. Louis University School of Medicine. Fifth edition with 158 text illustrations and nine color plates. *The C. V. Mosby Company,* 3207 Washington Blvd., St. Louis 3. 1948. $5.50.

The author was one of the pioneer pediatricians of the country and he has done perhaps as much as any other to develop the science and art of the care of the health of infants and children. He says that in the present edition he has continued to adhere to the plan of selecting those facts of practical usefulness to the practitioner and which give the medical student a solid basis in general practice. The use of newer drugs and other means of therapy are recognized and adequately described. The feeding of the infant and child in health and disease and the prevention and cure of constitutional and local diseases of early life are admirably covered.

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JAMES M. NORTHINGTON, M.D., Editor

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Lymphosarcoma of the Intestinal Tract

Case Report With Review of Literature

Edward R. Hipp, M.D., and John A. Brabson, M.D.
Charlotte, North Carolina
The Nalle Clinic

"LYMPHOSARCOMA, one of the rarest forms of 'lymphoma,' was described originally by Kundrat." A research of the literature on lymphosarcoma of the gastrointestinal tract serves only to add to the confusion regarding its etiology, morphology, histology and classification. Lymphosarcoma of the intestine has been discussed under many different names, some of which are: sarcoma of either small or large round-cell type, lymphocytoma, lymphoblastoma, intestinal Hodgkin's disease, chronic inflammatory tumor, lymphoid granulation tumor, and granulomatous pseudoleukemia.

Ewing has classified lymphoid tumors from the standpoint of histogenesis and structure. He states there are three cellular elements of lymphoid tissue that may give rise to tumors: (1) lymphocytes, (2) reticulum cells of the follicles and pulp, and (3) endothelial cells of the pulp and cavernous sinuses. Therefore, he states, there are two types of lymphosarcoma which may arise from lymphoid tissue: (1) malignant lymphocytoma, and (2) reticulum-cell sarcoma, i.e., large round-cell lymphosarcoma. Although there are some differences in these two types, most authorities consider them under one heading because of the indefinite relationship of lymphocytes to the reticulum cell.

As in most tumors, the etiology of lymphosarcoma of the intestine is obscure. Traumatic insults have been considered of importance in the development of sarcoma in general and definite cases of sarcoma of the intestine are referred to which have followed a specific injury. Direct trauma to the bowel from blows to the abdomen have been reported. The association of lymphosarcoma and tuberculosis has been considered for many years by numerous writers. Antecedent or intercurrent disease has also received its share of the blame.

Lymphosarcoma in general shows a predilection for lymph nodes, spleen, tonsil, thymus and its remains, mediastinal nodes, and the lymph folicles of the gastrointestinal tract. Lymphosarcoma of the gastrointestinal tract is not a common tumor and its occurrence in the cecum is quite rare.

I will show a slide made up of five different groups of cases. The first three groups are confined to children, while the fourth group from the New York Hospital is of all admissions for a nine-year period. This shows only two cases in children during a period which totalled 149,469 admissions. The fifth group is taken from the Army Institute of Pathology and consists of 813 tumors of the gastrointestinal tract arising in Army personnel between the ages of 18 and 38 years. According to Craver, at Memorial Hospital in New York City, between 1918 and 1940 there were 196 cases of histologically proved lymphosarcoma of which only 5.5 per cent were in the gastrointestinal tract. During the seven-year period since the opening of the Charlotte Memorial Hospital there have been only

Presented to the Tri-State Medical Association of the Carolinas and Virginia, meeting at Charleston, February 9th and 10th.

three cases of lymphosarcoma of the gastrointestinal tract in 63,962 admissions: two in the proximal jejunum which were inoperable, and our one case in the cecum reported today.

Table 1

GASTROINTESTINAL LYMPHOSARCOMA

Children's Hosp., Boston	5 cases in	10 yrs.
Babies' Hosp., N. Y. C.	1 " "	15 "
Roosevelt Hosp., N. Y. C.	1 " "	20 "
New York Hosp.	20 " "	9 "
	(2 " "	Children)
Army Inst., Washington	20 " "	813 G-I Tumors
	(4 " "	Colon)

In the literature, lymphosarcoma is more frequent in the small intestine than in the large, the most frequent site being the terminal ileum. It is most common in the first, third and fourth decades of life, and its frequency in childhood is striking. Stern has reported one case present at birth causing intestinal obstruction and subsequent death. In practically all series males predominate.

Symptomatically, there is no characteristic picture of this intestinal tumor. The onset may be insidious or the tumor may be first manifested as an acute abdominal catastrophe. The symptoms depend on the duration of the growth and the degree of obstruction produced. Abdominal pain is present in almost every case, and there is always some disturbance of bowel habit, usually constipation. If the tumor is of long duration, the patient will be thin, cachectic and anemic. Nausea and vomiting are commonly present. Abdominal tenderness is not usually reported. A tumor mass which varies in size, is usually found, often in a lower quadrant.

The pathological findings of this particular tumor have been the source of most of the confusion, and many pathologists believe that lymphatic leukemia, aleukemic lymphatic leukemia, lymphoblastoma, lymphocytoma, and lymphosarcoma are all varieties of the same fundamental neoplasm. It is not the purpose, or within the scope, of this paper to enter into a prolonged dissertation on the morphological classification of this group of tumors. Those who are interested are referred to the excellent recent book by Parker and Jackson, "Hodgkin's Disease and Allied Disorders." Regardless of the histopathological classification, it is accepted that lymphosarcoma of the intestine arises in the lymph follicles of the submucosal layer of the bowel and infiltrates the remaining layers, although tending to remain intramural. The subserosal extension, longitudinally and around the circumference of the segment involved, causes diffuse thickening and dilatation of the bowel, the "garden-hose" type of enlargement. The absence of a well-developed fibrous stroma, as in carcinoma, accounts for the rarity of the "napkin-ring" deformity. Since the mucosa is not primarily involved, large fungating masess may completely envelop the bowel before obstruction takes place. Aneurysmal dilatation, probably due to destruction of the muscularis, is more common than stenosis. As the tumor grows, ulceration of the mucous membrane occurs which may continue on to destruction and excavation. Early metastasis to the regional nodes is the rule in these cases.

Ewing states that the structure of lymphosarcoma is somewhat specific in that the tumor presents a diffuse growth of lymphoid cells which tend to obliterate the structure of the affected node or folicle. The cells may vary in size from small to large, and occasionally large multinucleated cells are seen. The stroma shows no regular form but is irregular in distribution being deficient in some areas, while in others it may be diffuse with a tendency to fibrosis.

As to differential diagnosis, a definite diagnosis of lymphosarcoma of the gastrointestinal tract is seldom made before operation and histologic section, because there are few clinical findings that are different from other neoplasms of the intestinal tract. Moreton states that roentgenologic findings are not sufficiently characteristic to allow a specific diagnosis of lymphosarcoma. McSwain and Beal offer some helpful points in the diagnosis, by noting: (1) the large size of the lesion in relation to the short duration of the symptoms, and (2) the presence of whorl-like defects in the barium outline.

Treatment of lymphosarcoma of the gastrointestinal tract consists of surgery and or x-ray therapy. The surgical approach includes resection of the primary growth and the regional lymph nodes, followed by intestinal anastomosis. In some reported cases, x-ray therapy alone was used after the diagnosis was confirmed by exploratory laparotomy and biopsy of the mass. The best treatment seems to be radical resection of the primary lesion and regional nodes followed by x-ray therapy, as advocated by Ullman and Abeshouse of Baltimore, Usher at the Mayo Clinic, and Scott and his group in Boston. Usher stated that postoperative irradiation is just as important as the surgery and helps in two ways: (1) it prolongs life in a certain percentage of cases, and (2) it relieves pain, pressure, distention, constipation, etc. Also, it seems to us that irradiation may reach some of the involved glands that could not be removed surgically.

Case Report

A four-year-old girl was first admitted to Charlotte Memorial Hospital on June 21st, 1947, with a chief complaint of loss of weight and abdominal pain of two months' duration. The history as given by the father:

She had always been a very poor eater but for the two months before admission she had vomited after each meal. Whether she had ever regurgitated bloody or tarry material was not known. Occasional constipation was thought to be present but never any diarrhea. The stools had been black and at times foul and frothy, but never large and bulky. She had lost considerable weight, and for the past few days had appeared short of breath when she would sit up. For the four days before admission she had vomited every bite eaten.

She was undernourished, emaciated, had a temperature of 98, pulse of 120, and respirations of 20. Important findings were distended hyperresonant abdomen with visible peristaltic waves but no palpable masses, no definitely tender area. The white blood count was 15,600, polymorphonuclears 83 per cent, and the hemoglobin was mildly reduced. A chest plate was negative. Stool examination showed 4-plus benzidine and fat globules, but no ova, parasites, or starch. The admitting impression of the resident on the pediatric service was: (1) celiac disease, (2) chronic cystic fibrosis of the pancreas, (3) Hirschsprung's disease.

The patient received transfusions, concentrated vitamins and general supportive care and was discharged home on the 16th hospital day much improved. Her appetite was excellent, and her stools were normal at this time. It was the impression of the pediatric service that they had been dealing with emaciation and starvation. In view of her excellent appetite and rapid return to normal bowel habits, it was felt that she could be sent home and return for observation and periodic follow-up.

She was not seen again until her second admission on August 18th—57 days after first admission, 41 days after discharge. She had done fairly well until a week prior to this admission, when abdominal pain, anorexia, and loss of weight recurred. Her appetite became very poor, and she had gone rapidly downhill during the previous week.

Her temperature was 100, pulse 180, respirations 22. In the abdomen there could be felt a large ovoid, fixed, semifirm mass in the right lower quadrant about 4 by 4 cm. in size. There was no tenderness on palpation of this mass or of the abdomen elsewhere. Benzidine test was again 4-plus. Impression at this admission was: (1) appendiceal abscess, (2) question of Wilm's tumor, and (3) question of unknown tumor. Barium enema on August 20th reported a tumor involving the cecum. Intravenous pyelogram on August 29th was reported negative.

On September 4th, at exploration carried out under drop-ether anesthesia a large, lobulated, soft tumor was found in the right side of the abdomen involving the cecum and ascending colon, to which were adherent several loops of small bowel as well as omentum and mesentery. This mass of tumor and adherent bowel could be delivered into the incision without difficulty. It was felt that the tumor mass arose from the cecum. Several large soft glands were identified in the transverse mesocolon as well as in the mesentery of the ileum. To untangle the mass and identify the different components would have been a waste of time, as it was obvious that an ileocolostomy, with or without resection, had to be done. Accordingly, the entire mass with a few inches of terminal ileum was resected and a side-to-side anastomosis done. Due to the cyanosis, shock, and poor general condition of the patient, closure was done in one layer of through-and-through sutures of silk. During the closure, the patient vomited and seemed to aspirate some of the vomitus, which increased the cyanosis and added to the already poor prognosis. In spite of all this, she had a remarkably good course and was discharged from the hospital on the 15th postoperative day.

The specimen consisted of a portion of terminal ileum, cecum, and ascending colon, including the hepatic flexure. The tumor primarily involved the cecum and on the surface appeared nodular and soft; the part within the cecum was a large fungating mass measuring 10 cm. by 9 cm., the mucosal surface largely necrotic and gangrenous with many areas of gelatinous softening and disintegration. The tumor mass appeared as a polypoid protrusion into the lumen of the cecum and diffusedly infiltrated the entire wall of the organ, all differentiation into layers being completely obscured. The serosa was intact except for the adhesions.

Histological sections through the main tumor mass showed the architeture of a lymph node, the histological structure replaced by a fine reticular network, the meshes of which were filled with rather uniform round cells, similar to lymphocytes or lymphoblasts. Occasional mitotic figures were seen; and some of the cells were larger with a pale, grayish margin of cytoplasm. Sections through one of the adjacent lymph nodes showed the follicular architecture to be "essentially preserved," a finding which would not permit the pathologist to make the diagnosis of lymphosarcoma of the involved node.

The patient was seen in our office for two follow-up visits, and at the time of her last visit on October 20th, she had a temperature of 100 by axilla, and the entire right side of the abdomen was filled with a soft, lobulated mass considerably larger than the mass noted prior to operation. Her bowel habits were normal at this time. Due to the patient's living outside of Charlotte and to the lack of cooperation of the parents, x-ray therapy was delayed. On November 4th, she was taken to a roentgenologist, Dr. L. W. Oehlback, of Morganton, N. C., who was dubious about starting x-ray therapy because her condition was so far advanced. However, he gave her two treatments, two days apart, each of 100 *r*, at 200 K. V. P., with a 70 cm. target-skin distance and a 0.5 mm. copper filtration. The patient continued downhill and succumbed without further treatment on November 16th, ten weeks after the operation.

In making this presentation, it seems logical to compare this case with a group of similar cases, namely, lymphosarcoma of the gastrointestinal tract in children.

In a ten-year survey, Farber reported a series of 375 cases of histologically verified tumors operated on at the Children's Hospital in Boston. Of the ten-year series, only five cases (1.3%) of the total verified tumors were in the gastrointestinal tract. It is to this gastrointestinal group that we wish to add our case and to compare our findings.

Table 2

CHILDREN'S HOSP., BOSTON TEN-YEAR SERIES

	Cases
Total verified tumors	375
Leukemia-lymphoma group	75
Acute leukemia	47
Hodgkin's	14
Lymphosarcoma	14
Gastrointestinal	5 (1.3%)

Table 3

SUMMARY CHILDREN'S HOSP. GROUP AND ADDED CASE

No.	*Yrs.*	*Sex.*	*Clinical Picture*	*Site*	*Operation*	*X-Ray*	*Term. Leuk.*	*Course*
1.	6½	M	Fecal Imp. Chronic Intussus.	Asc. Colon	Ileotrans. Colostomy (Biopsy)	600*r*	?	Died
2.	7	M	Abdom. Mass	Asc. Colon	Laparotomy (Biopsy)	None	No	Died
3.	4/12	M	Acute Intussus.	Term. Ileum	Reduction Resection	None	Yes	Died
4.	2	M	Melena Rect. Mass	Rectum	Abdom.—Per Resect.	3000*r*	No	No Recurr. Well 15 Mos.
5.	6½	M	Fecal Imp. Acute Intussus.	Term. Ileum	Mikulicz Resect.	1350*r*	Yes	Died
6.	4½	F	?Celiac ?Append. Abscess	Cecum	Ileotrans. Colostomy Resection	Yes	?	Died

Discussion of Table 3

First five cases from Children's Hospital, and sixth case ours.

Ages ranged from four months to seven years.

Our case the only one in which the patient was a female.

Clinical findings:
- in 3 cases a palpable mass
- in 3 cases evidence of intestinal obstruction

Site:
- in 2 cases the terminal ileum
- in 2 cases the ascending colon
- in 1 case the rectum
- in 1 case the cecum

Operation:
- in 1 case biopsy of tumor and side-tracking operation
- in 1 case laparotomy (no biopsy—no int. surg.)
- in 4 cases resection and anastomosis

X-rays:
- in 4 cases irradiation
- in 2 cases no irradiation

Terminal leukemia:
- in 2 cases developed
- in 2 cases did not develop
- in 2 cases no report

Course:
- 5 of the 6 cases resulted fatally—mortality of 83 1/3%.

Summary and Conclusions

A case of lymphosarcoma of the cecum in a four-year-old girl, with operation and subsequent death, has been presented. The literature was briefly reviewed and the authors' case compared with a group of similar cases from the Children's Hospital in Boston.

The mortality for six cases in childhood was 83 1/3 per cent.

The treatment of choice is surgical removal of the tumor and involved nodes, followed by irradiation therapy.

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Discussion

Dr. Karl Morgan Lippert, Columbia: Mr. Chairman, I am sorry I did not know in advance that Dr. Brabson would present his interesting case. I would have tried to discuss it in a more intelligent manner. About a year ago a situation arose which gave me the opportunity to study lesions of the lower ileum and colon and review the more recent literature on the subject. I've learned that the roentgenologists are trying to find a method of differential diagnosis of intestinal lesions occurring in the right lower quadrant. Inflammatory lesions of this area have been grouped and known as regional enteritis or regional enterocolitis. This group has been subdivided into descriptive cicatrizing and non-cicatrizing types of disease of the terminal ileum and colon. These have again been qualified by the terms acute and chronic. Little is now mentioned about the etiology of these inflammatory conditions after one has ruled out tuberculosis and the mycotic infections. The point is, that from time to time a malignant lesion occurs in these parts of the intestinal tract that is almost indistinguishable, clinically, from the aforementioned inflammatory diseases. Who can tell that malignancy here is not the result of chronic inflammation or that inflammatory reaction has not occurred as a result of degenerative changes in an active, malignant lesion? People may have died of a malignant lesion which has been wrongly treated because of the associated inflammatory reaction. I made that statement because the consensus expressed by the group from Mt. Sinai, working under Dr. Colp, is that in the more acute, inflammatory cases, conservative treatment is all that is required; however, in the extensive and obstructing types, a by-passing operation of the character of an enterocolostomy is all that is necessary.

I'd like to relate a story of a case of a young soldier who had a long history of abdominal pain, anemia and fatigability. He was discharged from the Army for a "nervous stomach." Briefly, on opening his abdomen, after adequate preparation, we found a mass composed of the terminal 18 inches of the ileum and the first portion of the ascending colon. The mass was very friable and acutely inflamed. We attempted to determine its pathologic character, even considering the so-called right-sided-colitis in addition to the various forms of entero-colitis. Not satisfied with a conservative procedure, the terminal ileum and colon up to the midtransverse colon was removed and an end-to-side anastomosis made. You can imagine our gratification at the radical treatment we had used when the pathologist demonstrated a grade-3 (Broder's) carcinoma of the terminal ileum. We admit this is a rare finding but it proves the rule that a lesion of the bowel such as Dr. Brabson has described deserves thorough and complete investigation.

Dr. Allen Tuggle, Charlotte: My one statement is purely for the correction of the record and for future scientific evaluation of roentgen therapy. On the chart the patient is said to have had x-ray therapy, that the patient had two treatments, two days apart, each treatment being 100 *r* at 200 K. V. P. with a 70 cm. target skin distance and a one-half mm. copper filtration. That should be eliminated. The patient did not have x-ray treatment.

Dr. Brabson (closing): I appreciate the remarks by Dr. Lippert and Dr. Tuggle. I would like to say that one of my references from Dr. Moreton, *Texas State Journal of Medicine*, stated that roentgenologic findings are not sufficiently characteristic to justify a diagnosis. It points out two ways by which you might be helped to make a diagnosis—one by considering the large size of the lesion in relation to the short duration of the symptoms, the other, the whorl-like defects of barium in the intestines involved.

I do agree with Dr. Lippert. I think more radical operations should be done instead of passing them up.

Susceptibility of Involuting Organs to Cancer
(R. J. Crossen, St. Louis, in *Neb. Med. Jl.*, Jan.)

Susceptibility of involuting organs to malignancy has not been emphasized. Removal of uterus and ovaries is advisable when a patient of menopausal age requires an abdominal operation for abnormality of either organ.

Irregularities in uterine or endometrial involution often produce delayed menopause or abnormal bleeding. Primary ovarian carcinoma is frequently symptomless until an incurable stage is reached.

Radiation is effective in the treatment of uterine myoma and reduces by two-thirds the cancer risk in involuting organs. Radiation may be life-saving for the handicapped patient who is a high operative risk.

The insidious character of the ovarian malignancy makes even small difference in risk a factor in choosing between surgical removal of myoma and irradiation. If operation is decided upon, possibility of future malignancy is eliminated by hysterectomy plus double oophorectomy. Operative risk under normal conditions is one or two per cent.

Benzedrine for Obesity in Childhood and Adolescence
(N. W. Clein, Seattle, in *Modern Med.*, Mar.)

Benzedrine, in doses of 10 to 20 mg. daily, is effective in reducing the weight, or maintaining a stationary weight in obese children. This has proven a very safe drug under all circumstances. It acts by cutting down the appetite. Instead of eating more food because it looks, smells, or tastes good, the child eats only what his body needs, and then stops. Thyroid is given children who show a lowered metabolic rate, frequently in conjunction with benzedrine. We have found the use of benzedrine more successful, and we use less thyroid than formerly.

They may eat anything on the general diet list but much less of the sweets, starches, and fatty foods.

When a child is approached as a reasonable being, who must help us to help him, he will coöperate a great deal more than if he is told he must not do this and must not do that.

If other members of the child's family overeat, it is difficult to control the child.

Emotional and behavior factors often play a part. The child may overeat as a defense mechanism against an unpleasant situation.

Some Thoughts On Geriatrics

James Adams Hayne, M.D., Columbia, South Carolina

My subject is one which has not engaged the attention of the medical profession in the way that it should. We have devoted a great deal of time and attention to the child. Pediatrics has made tremendous strides in the last 25 years and has accomplished so much that we have lost sight of the fact that as we preserve the life of a child and it grows to maturity and then to old age, we are thereby changing the status of the human race.

We are so increasing the number of people between 50 and 75 years of age as to cause many economic problems to arise. Unless we can take care of the health of the persons over 50 years of age so that they may live *happily* and be able to take advantage of the years of experience which they have had, they become a burden on society and have to be supported by those under 50. This is especially true in South Carolina at the present time, where it is estimated that 25 per cent of the population is over 50 years of age.

Geriatrics is the treatment of old age. This is what is usually implied by the term, but it has much more significance than the medical care of the senile. Geriatrics is that part of medical science and practice concerned with the health of the aging and the aged. Geriatrics deals with the medical problems of normal aging and aged people, as well as their illnesses, both mental and physical.

Senescence is measured by the number of years one has lived; it is chronological therefore. *Senility* is measured by the decline and decay of normal physical characteristics. A person who is chronologically old may be mentally alert, physically fit, able to do much mental work and a considerable amount of physical labor. A senile person can do nothing, or very little, first, because the brain cells have degenerated through lack of blood, the blood supply being obstructed by the occlusion of the vessels supplying the cells from the disease or condition known as arteriosclerosis. Most such persons are charges upon the State and have to be taken care of in homes for the aged. If they are taken care of in their own homes they are burdens upon their families and prevent the full enjoyment by the family of normal living.

Some people believe that the natural span of useful life is 50 years; they base their conclusions on the fact that the eyesight fails at that time, and in primitive times man could not survive without being able to see. Others give the life span of a man as 100 years, basing their conclusions on the time it takes for animals to reach maturity, assuming that the life of an animal should be five times the time it takes to reach maturity. Heredity has a tremendous part in whether a man lives to be 100 or not.

Alexander Graham Bell, inventor of the telephone, established the tremendous influence of heredity on the duration of life. He interviewed a large number of people over 100 years of age. His hope was that he could discover something in the habits of these aged people which could be imitated by all those who wish to live long. He was sadly disappointed. Many of the centenarians had violated almost every rule of hygiene and good conduct. Many of them had used alcohol and tobacco to excess. All of them, however, came from long-lived families. This investigation showed that longevity is an inherited characteristic, and that environments and habits of living have far less to do with it than is commonly supposed.

We cannot by any improvement in environmental conditions or in medical care prolong the life of the average man of today to 100 years. Life is like the flight of a bullet—its possible length depends on the force which sets it in motion. By good care of a man we may be able to keep him alive until the vital force he inherited is expended, but nothing we can do for him will keep him alive longer than that. This fatalistic view, however, should not make us think that whatever we do for people over 50 is of little value. It is of immense value because it can keep most of them alive, reasonably happy, and very useful to society for many years.

At the age of 50 man enters the most critical period of life. Heretofore he has regarded himself as immortal. He is shocked when his far-sightedness and diminished physical vitality make him know that his fond belief in immortality is wrong. Men resent what nature has done to them; pride forces them to show everybody that they can still "take it" as well as ever. That is why many do physical exercise and indulge in dissipation dangerous to their hearts; also, why husbands at this age are apt to stray.

We are confronted with the fact that if we are to live happily as we grow older we must be able to take care of the diseases which are characteristic of old age. The best prevention against senile decay is an active interest in human affairs. A Hebrew proverb says when a man is young he writes songs, when he grows up he speaks in proverbs, and when old he preaches pessimism. We all hear how the present generation, our boys and girls, are growing

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worse, and we heard from our fathers how our generation was growing worse, and so on *ad infinitum*. This has been so from the beginning of the years, and yet man is gradually improving in every way. The world is better than it was 100 years ago. There is less poverty, less sickness, less dying, and less inhumanity to man than there was 100 years ago.

The diseases to which old age is especially prone will be considered individually.

Arteriosclerosis. There are 25 million people over 50 years of age in the United States. Of that number, 25 million suffer from arteriosclerosis. Arteriosclerosis is primarily a disease of old age; in fact, it is the old age of the arteries. Males are more frequently affected than females. Nutrition seems to have a great deal to do with the causation of arteriosclerosis. Another factor that plays an important part is microörganisms, such as those causing common infectious diseases. Worry, overexercise, and hard work seem to promote arteriosclerosis. The study of this disease is in its infancy and much research has to be done. This is a field of endeavor for gerontology and geriatrics.

Arthritis. Arthritis is a chronic disease of many joints occurring mainly after the age of 40 years and characterized particularly by an overgrowth of bone at the articular surfaces. We do not know the cause. Certain metabolic changes of age have evidently important influence. Long usage, common every-day wear and tear, play an important part in its causation. Short, stocky individuals are more susceptible to the disease. They are usually obese, or at least overweight. They are likely to be active individuals and fatigue may play some part in the production of the disease. The disease occurs slightly more frequently in the male than the female, and heredity is a definite factor in arthritis. Any joint in the body may be affected, but particularly large joints such as the knee or hip. Sometimes both knees are involved, and sometimes both hands and knees become swollen. The onset is so gradual that one does not realize it. The earliest symptom is usually stiffness after long sitting. There is fairly early tenderness to pressure along the joint margins, especially along the middle of the knee.

There are no general symptoms of the disease. Blood cell counts, blood chemistry, and temperature are unaffected. Deformities develop very slowly but the progress of the disease seems to be inexorable. Treatment may be palliative but does but little good. Arthritis is a disease of old age. and it is more than that—it is a part of old age, To prevent or lessen it, we must study its preventive treatment specifically; we must study the cause of degenerative old age.

Research into the cause of arthritis is one of the most important subjects engaging the medical profession at the present time. There are seven million people in the United States who have arthritis in some form or other, and their number is increasing. To give you some idea of how little is spent to study the disease, I will give some figures:

Six dollars per person is spent on research into infectious diseases; that is, for every such death that occurs $6.00 is spent in research. For every death due to cancer $2.00 is spent in research. For every death due to infantile paralysis $500 is spent in research. And for every death due to cardiovascular disease 17 cents is spent on research. There never were more than 5,000 or 6,000 cases of poliomyelitis at one time in all the United States. In epidemics the number sometimes increased to 20,000. This number compared with seven million will show the real importance of research into the cause of arthritis.

Cancer. One out of every six individuals in every group over 40 years of age will die of cancer. What is cancer? It is living tissue. It is an abnormal living tissue; it is perverted flesh, in the human, perverted human flesh. It continues to live, sapping vitality, until it exhausts and kills the very life which sustains it. At present we are beginning to hope that one out of every three persons attacked by cancer can be saved. Cancer danger signals are:

Any sore that does not heal
A painless lump
Irregular bleeding or discharge from a natural body opening
Change in wart, mole or birthmark
Persistent indigestion
Persistent hoarseness or cough
Change in bowel habit.

Eye changes. We all know that, as one gets on to middle life and older, he can see things better at a distance than close by. This can be easily corrected by glasses. Cataract, or the clouding of the crystalline lens of the eye, is one of the commonest causes of loss of sight in advancing years. Then we have obstruction of the central retinal artery which causes complete loss of sight. Frequently this occurs in one eye and not in the other. I have known people who were shocked when they visited a physician to learn that they were blind in one eye.

Senility is a pathological condition not so much due to age as to changes in the blood supply in the brain. It may occur at an early age, say, at 50, or it may occur later on, and it is not necessarily a symptom of old age.

Bogomolets, a Russian scientist who developed an anti-age serum, had made great progress toward the perfection of the serum when he dies in the fall of 1946. His death was a great loss to geria-

trics. He studied 30,000 Russians over 100 years of age and came to the conclusion that man's normal life span is 140 years. His serum appears to be a brake against degenerative processes that begin past middle age. This serum, made from the reticular cells of the body, does retard the degenerative processes so characteristic of old age. This serum is being prepared in the United States by various chemical houses and will probably be on the market next year. Much good may be expected from it in some of the diseases which I have mentioned.

I don't know of anything more important at the present time than the study of geriatrics. Just take one factor: The retirement age in this State of teachers is 65 years. They are going to live to be 75 or 80, and if 30 per cent of the population is over 50 or 60, somebody has got to pay retirement salaries to nearly a third of the whole. It is all going to be nice for those who are retired, and it is going to be hard on those who have to pay for the retirement; and as the years go by and the numbers increase there will be fewer and fewer to pay the retirement pensions and more and more to be paid them. Also, more and more voters will be pensioners, until it is conceivable that those over 50 or 60 years of age, plus those these oldsers will influence will be a majority. Then they are liable to pass bills that will make the people under 50 years of age pay all but a small fraction of the taxes. Of course they will see to it that the "retirement pay" is not taxed in any way.

I hope that some of the facts which I have given you may cause you to think and to wonder whether you are taking proper care of yourself. You should go to a first-class physician annually and have a birthday examination. Such examinations are usually so superficial that they do not do much good, but if you will go to a conscientious physician, the beginning of the diseases which I have mentioned may be found and further progress of the disease conditions found prevented or retarded.

Geriatric medicine is so young and undeveloped a field of medical practice that it is impossible to precisely formulate its principles. These will develop as the science of gerontology and the practice of geriatrics advance. This is an attempt merely to outline and to suggest the more obvious limitations, methods, and principles of thinking along which geriatrics may be expected to develop, realizing full well the tentative nature of the discussion. The peculiarities of geriatric medicine arise from the fact that aging brings change.

Certain fundamental principles, however, are obvious even today. Basic is the concept that much more can be accomplished for or with the aging than for the truly aged. An attitude of prophylaxis and constant attention to constructive medicine during the critical years from 40 to 60 can but improve the health and add to the length and usefulness of life after maturity. The consequences of senescence are terminal, but the processes responsible for senility start far earlier than most of us realize. Equally important is the idea that with aging there occurs an increasing divergence between individuals. The periodic health inventory is the foundation for health in later years.

The future growth of geriatric medicine is assured. There are huge gaps in our knowledge and there is urgent need for both clinical and biologic research into the problems of aging and the aged. Base-line data of normality in relation to age are needed especially. Clinical investigation into the etiologic factors of the major degenerative diseases must precede any great advance in preventive or curative therapy, for both prophylaxis and cure are predicated upon eradication of etiologic influences. There is great need for improvements of methods of clinical mensuration of functional reserve capacities. To discuss what we do not know but need to know would require far more time than we have. In the meantime, the aging and the aged are here in ever increasing numbers. By our bringing together the not inconsiderable existing geriatric knowledge and by applying it, we may be certain to advance both the science and the art of geriatric medicine.

Discussion

Dr. W. R. Wallace, Chester: Mr. President, we feel that we are somewhat pioneers in the field of geriatrics in South Carolina. When Dr. Hayne retired as State Health Officer, he was retained by the State Board of Health for special work in geriatrics. He is really state representative in that field of medicine.

We have heard a lot about the natural span of life. In olden days, so an old tale goes, the life span for man and animals was the same. Man was having a pretty good time in his 20s so he became somewhat depressed at the idea of passing out at 30. The ox was tired from plodding along for 20 years, so he said to man, "I will give you ten years of my life." The horse was tired of galloping around, so he said, "I will give you ten years of my life." The dog was so tired of being kicked around, that he joined in with, "I will give you ten years of my life." The monkey was somewhat tired of hanging on the trees by his tail, so he said, "I will give you ten years of my life." So, since that time man has been plodding through the 30s, galloping through the 40s, kicked around through the 50s, and after that he just monkeys around.

Dr. J. M. Northington, Charlotte: Mr. President, along about 50 or 60 years ago a distinguished member of the Medical Society of the State of North Carolina, Dr. Ivey, of Lenoir, read a very learned essay on man's life span before the State Medical Society in which he dealt largely with the scriptural record as to Methuselah and a number of other patriarches. Dr. Ivey worked it out so very ingeniously, and I think conclusively, that what is put down in those ancient records as a year is what we now call a calendar month, which made it work out neatly. Anyhow, early in the biblical records we find the statement that the days of man's years are three score

years and ten and, if by reason of strength they be fourscore years, then is their strength labour and sorrow. I imagine much of the labour and sorrow was from conditions of which Dr. Thompson's specialty now relieves a man. It must be true that of the number of persons who at that time got past 70 and went to 80, a tremendous proportion of them lived in labour and sorrow from a prostatic obstruction which could not be relieved. It is possible that somebody even then used a goose quill or used some sort of tube for relieving obstruction for a certain length of time, and of course he was obliged to get cystitis, and certainly that life would be but labour and sorrow.

A good many biologists contend that the natural course of man's life is 100 years and up. It is natural for any living thing to mature and to go along at a certain level and then have a stage of decline. Everything that is born, that comes into life, is destined to go out of life and I know of no reason to believe that there will ever be brought about any material change from "the days of a man's years are threescore years and ten and if by reason of strength they be fourscore years, then is his strength labour and sorrow."

Dr. H. R. Masters, Richmond: I believe everything Dr. Hayne says, but I want to remind him that sometimes there are other reasons for longevity. Up in Richmond a very young newspaper reporter, sent out to get a human interest story from a gentleman who was 95 years old, asked him the reason for his longevity. The old gentleman said, "I can't tell you." The reporter was rather insistent. "You know," the aged one said, "I have never even told my wife." The reporter plead it was his first assignment, said he would never be successful as a reporter if he failed then. This brought the reason, "I attribute my longevity to running like hell from Bull Run."

Another man attributed his long life to the fact that he had never taken any exercise.

In the management of our older people, we must recognize that they must be physically and mentally occupied. People who retire from their regular occupation tend to develop diseases, perhaps especially nervous and mental illnesses, more readily, and not only that, they affect very injuriously those people with whom they live. The Geriatrics Society should make every attempt to keep people occupied, if possible, in remunerative positions. I have under care a half dozen or more elderly gentlemen, gentlemen of ability who could do a half day's work at business, but businesses do not wish to employ them. If we can work with industry and business and convince them of the value of utilizing the abilities of many of the old people, we will prolong their lives and make them much happier.

Dr. J. K. Hall, Richmond: This hotel bears the name of a Virginian who was born two years after George Washington and lived almost until the Mexican War. He almost forgot to die. Sumter was born in Hanover County, five miles north of Richmond, and he lived to be 98 years old, although even in boyhood he was fighting Indians. Somebody had him put in jail in Staunton for non-payment of a debt. When the sun rose, he was not in jail and they found him in South Carolina. After that came the Gamecocks' revolution, which he fought through, and he lived in the swamps of the Santee, where probably he was too much for the malaria parasites. Not much is known of his background. Heredity might be the principal factor in his longevity.

Patrick Henry was born two or three years later than Thomas Sumter, four or five miles away in the same county. Patrick Henry died with appendicitis when he was sixty odd.

Henry Clay's boyhood was passed in Hanover. I think there is evidence that Henry indulged himself fairly freely, yet he lived to be pretty old, 75 or so.

The short life of the Romans was spoken of. I recall reading that when Cicero was 80, he took up the study of Greek and mastered it.

I have had the painful experience of discovering generally that when one of my opinions was about to become fixed about anything, it became unfixed. It had to be corrected.

Dr. Hayne spoke about folks who have to work in the middle three or four decades of life, in order to make it possible for young people to prepare themselves for life and to keep another large group of people in life in the last several decades. We have been living—I hope we are emerging from it—in an era of poliomyelitis. I wonder if that is going to be supplanted by a civilization of senescence. I have no doubt at all that Franklin Roosevelt's overcompensation for his poliomyelitic condition was the principal factor in determining the political philosophies of this country and of the world for the last ten or twenty years. He over-did getting well.

Dr. K. B. Pace, Greenville, N. C.: Nothing helps old people to go along through life and reach mature years like independence. Your elderly patients, people 65, 75 and 85, if they have a good financial nest egg so they are not dependent on any of their relatives, that is the greatest tonic or booster they can have to carry them along and make them want to live. If they have to depend on their relatives, they lose interest. A successful man told me recently the worst thing an elderly person could do was to give everything to his children. A friend who is a farmer and very successful in other business had a tenant who was always complaining of pain here and pain there. He had never accumulated anything. The farmer told him the best thing he could do for his belly-ache was to get a good fat bank account, and "If you stay with me, you will have one." Old people who are independent do not have a feeling of uselessness, of not being wanted or consulted, that makes so many of the old unhappy.

Dr. Hayne (closing): I never like to quote scripture because I always get it wrong, but I do know that it said Moses died at the age of 120 and his eyes were not dim nor his natural force abated, and that is all a man could expect. We are not doing research in arthritis and arteriosclerosis and we are not making the proper medical examinations of people of 50 years of age. That isn't taking them into our offices and thumping them over; it is making blood tests and all other tests—kidneys, heart, liver—to see whether they are functioning and whether they have any reserve power.When you get through you have a picture of that man, where he is beginning to fail, just like if you went over an automobile you would see the parts that were beginning to wear out, and then you do something to repair the damages, and this can be done and the man will live much longer and not only will he live, but live happily.

I saw the birth of pediatrics. I can remember when there wasn't a pediatrician in the State of South Carolina. I can remember when a doctor hung out his sign, "Physician and Surgeon," and did his work as physician and surgeon. I did that myself. I treated everybody that came to me—eye, nose, throat, broken arm or leg, brought babies into the world, kept them from having diarrhea. Then came the pediatrician and the obstetrician, and all the rest of the specialists, and the fellow that had his shingle out, "Physician and Surgeon," took the shingle down and went into some sort of specialty himself.

Dr. Northington: I would remind Dr. Hayne that the book in which Moses made these remarks about himself is said to have been written by Moses, so he was just bragging.

Further Consideration of Postoperative Ambulation

Irwin Grier Linton, M.D., Charleston, South Carolina

IN THIS presentation early postoperative ambulation will be considered as motion, both passive and active, as early after operation as is consistent with the reaction from the anesthetic used. The practice of deep breathing and frequent turning of the patient is rather universally adopted However, early ambulation of the postoperative patient is just coming into general use.

Probably all of us at some time during our intern years have been called frantically to a postoperative patient who had gotten out of bed. As the frightened nurses looked on we peeked under the dressing, expecting anything, but certain that there would be a bloody mass of intestines. My first episode of this kind took place during the impressionable period of a junior internship in 1932. As I reported the "accident" to the attending surgeon I was wondering why this man had been so blessed as not to burst assunder as I had supposed he would do. After being called to more of these "catastrophes" in the years that followed, involving various operations in wide age groups, I became more curious. Furthermore, I could never find any evidence of the episode having caused any complication.

I would have been astonished if I had searched the literature, for I would have found an article in the *Journal of the A. M. A.* of 1899, by Dr. E. J. Ries, who wrote that "the period for which it is advisable to keep such cases in bed should be counted by hours instead of days."[1] His temerity was originally limited to patients who had been subjected to "vaginal celiotomy" but was soon extended to the operation of "ventral celiotomy," the rationale being that since it is impossible to keep other parts of the body, as the tongue, the chest or veins, at absolute rest after a surgical operation, there is no reason why the abdominal wall should be kept at rest either. Ries declared himself thoroughly satisfied with the results of early ambulation which included a striking absence of ileus and of loss of muscle tone, as well as improvement of the happiness of the patient.

It was three years later that Rhen[2] opened the discussion of this question in Europe with the statement "immobilization after an operation, regardless of its desirability from the standpoint of healing of the wound, is detrimental to the patient as a unit." In reviewing the European writings, accounts are found of only four fatal emboli developing in 15,000 cases subjected to early rising and one of these was questionable. On the Continent many surgeons reported large series of cases. It has often been the custom there to have the patient walk from the operating table—a practice which has not been often followed in this country.

One surgeon in Krakow reported 3,150 cases, including the most impressive operations, and concluded with the account of his assistant who arose from the operating table following the removal of his own appendix under local anesthesia, and assisted with the next operation.

Boldt, in 1907, supplemented an apparently informal report on the subject two years earlier with a statistical study of 384 personal cases, including "complicated" operations on the intestinal tract. Many of these patients had been permitted out of bed within 12 hours after operation. The only complications in the series were two cases of mild phlebitis of the lesser saphenous vein, although during the period of observation there had been four instances of postoperative thrombosis in other patients who for various reasons had been kept in bed. Boldt found many advantages and no disadvantages inherent in the plan in properly selected cases.

The American literature is practically devoid of articles on the subject from Boldt's communication in 1907 until 1941, when Leithauser and Bergo published a report of 436 operative cases which were ambulated early. This report included 370 appendectomies, 18 cholecystectomies, two splenectomies, and one gastrectomy. Dehiscence of the wound, pneumonitis, thrombophlebitis and other serious complications were notably lacking, with the single exception of an instance of continued hemorrhage following gastro-jejunostomy for peptic ulcer. In 1943 Leithauser[3] increased the number of operations in the series to 900. In recent years there have been many reports on this practice and, so far as I have been able to find, they have all been favorable. These very few historical facts have been given to dispel any impression that the procedure is new and, also, to correct much misinformation which has been written and heard on the radio. If there be any merit then we can be proud of the courage of an American physician, Dr. Reis, who published the first medical treatise on the subject in 1899 in the *Journal of the A. M. A.*

Regardless of how many case reports we might hear, when it comes to permitting that first postoperative patient out of bed the day of or after operation we will do so with fear and trembling.

Presented to the Tri-State Medical Association of the Carolinas and Virginia, meeting at Charleston, February 9th and 10th.

To additionally reassure ourselves, however, we might remember that experiments show that the abdominal wounds of early-ambulated animals are stronger than those of the immobilized, as there is greater fibroblastic growth.[4] Observation of the wounds of early-ambulated patients will quiet any fears which we might have of wound disruption or delayed healing.

In the postoperative care of hernias there remained in my mind a greater hesitancy to accept the logic of early ambulation, possibly because the weakness which existed would predispose to recurrence. However, in many hundreds of herniorraphies that I have observed and performed since 1941 in the Navy and in private practice, there has been no appreciable increase of recurrence. This has been observed by others, both in private patients and in reviews of service personnel operated upon.[5]

With few exceptions we may ambulate patients soon after abdominal operations, with safety and advantage to the patient, and it is a logical step in the progress of surgery and offers an excellent prospect.[6] Physiologically these advantages include increased vital capacity, improved circulation with increase of nitrogen content, and better muscle tone.

These factors make for softer, more comfortable abdomens, enemas being usually unnecessary. Catheterization is rarely needed. Appetite and good digestion return promptly. The full expansion of the lungs decreases pulmonary congestion. Expansion is not possible with deep breathing alone, as it is necessary for the diaphragm to drop as it does when standing. The muscular contractions in change of position to the upright guarantees better circulation and the vascular complications are greatly reduced.

Psychologically the patient is benefited. Preoperative discussion of the contemplated early rising is of value. I learned this again after taking out a suppurating appendix from a patient from the country. He had been operated on in the afternoon, and the next morning I suggested that I help him to get out of bed. The look of consternation should have warned me before he said, "Doc, are you crazy?", and he wasn't fooling.

Twelve years ago when I started getting patients out of bed on the third day after celiotomy it was first necessary to convince the nurses you weren't out of your head, then the patient. Even in those days of skepticism I never had a patient who practiced early rising who wasn't pleased with the method, or a nurse or intern who observed it who wasn't enthusiastic. However, in recent months there have been articles in *The Readers Digest* and ladies' magazines so that now the public knows that this is an accepted maneuver, which saves us a great deal of explanation.

As to the type of closure, it would seem that any correct incision repair in which the tenets of Halsted, as to careful handling of tissue, complete hemostasis and correct approximation of supporting planes, are adhered to, is satisfactory for early ambulation. My preference for cotton suture does not blind me to the merits of other suture material. Careful studies have been made in catgut closures with early rising with no reported bad results.[7]

In my last series of 145 consecutive abdominal operations there has been a striking absence of postoperative complications. Catheterization is rarely necessary for the patient is allowed to use a commode beside the bed. Increased intestinal tone keeps distention at a minimum, and the first evacuation is usually spontaneous for the patient is earlier able to tolerate a full diet and is allowed to go to the bathroom. The anticipation of going home soon with early return to normal activities makes a happy patient anxious to get well quickly.

In a letter from Dr. Charles S. White last week expressing his regret at not being able to attend this meeting, he stated that he had practiced early postoperative rising for the past three years without a single postoperative thrombus or embolus requiring ligation.

The method of getting the patients up is simple. They are helped to a sitting position or the bed is elevated, the feet are brought over the edge of the bed, then they are allowed to stand upright. It is well to advise that there will be some pain and pulling which will disappear after they have arisen a few times.

Proper tissue nutrition, a sufficiency of ascorbic acid, and meticulous wound-closure—not as a necessary evil attendant on, but as a most important part of, an operation—will insure sound healing regardless of when mobilized. This will allow the safe early rising of the patient with the advantages which it is felt are gained by it.

The preliminary presentation of this paper was made a year ago. To illustrate the alert, comfortable appearance of an early ambulated patient I asked a very attractive young woman, upon whom it had been my good fortune to do a laparotomy two days before, if she would mind appearing before the local medical society. She was very willing and apparently thought she was adding greatly to the progress of surgery in view of my enthusiasm. My slight embarrassment at presenting an apparently healthy patient to such an august body was greatly increased when I motioned to the nurse to wheel the patient in. Before the nurse could move, the young lady got out of the wheel chair and walked into the hall in fetching satin pajamas, and smiled at the audience as though they were

judges in a beauty contest which she expected to win. Seeing was believing.

It is concluded that early rising after operation does not endanger the security of the property nourished and closed abdominal wound. Postoperative complications are greatly reduced. Therefore, it is recommended that the patient be given the physiologic, psychologic and economic advantages of early postoperative ambulation. This practice has been used since 1936 without any complication which could in any way be connected with the early ambulation, and it is felt that the patients so ambulated made safer and more rapid recoveries.

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Discussion

Dr. R. B. Davis, Greensboro: I appreciate Dr. Linton's paper, especially because I was asked when I told a patient, on whom I had performed a herniotomy a few days before, that I was going to leave town for a day or two when he could get up, I told him it would depend on what school the doctor attended and what he believed in, that he might get up now or he might stay in bed three weeks, but since I was an old man, having practiced for many years, he might stay in bed until I got back.

I was interested to know that in 1899 this treatment had been advocated, and had been forgotten. It seems that somebody thought about most everything and started to do it, and that much of it has been forgotten, to be rediscovered from time to time. A few weeks ago I performed a big operation of circumcision on a man 45 years old. I think it was the longest prepuce I ever saw on a white man. Anyway, it was a considerable operation. The man had come in and made arrangements for the operation several weeks before; for some reason he failed to show up and I promptly forgot him. Later, he came back and said he was ready for his circumcision. I said, "Well, go and tell the secretary to make arrangements for you in the hospital." He came in on Thursday night for his operation. I gave him pentothal sodium and did the circumcision. About 3:30 p. m. I walked by to see how he was getting along and he was sitting up in bed, ready to go home. I said, "You are old enough to know whether you want to go or not." He said, "I want to go." His wife said she would take good care of him. She looked pleased. I told him to go home. Saturday morning he got up and drove 50 miles and saw his customers Saturday morning and on Saturday afternoon came by the office and I said, "Well, you got along all right?" He said, "Yes, I knew I was going to get along all right." I thought he thought that I thought he had that much confidence in me, but it wasn't so. He said, "I have been down to Burlington and seen all my customers." I said, "You mean you have been to work?" He said, "Yes, I haven't had any trouble." Monday morning he came by the office and said he was going to be out of town all week and thought he'd come by and report that he was getting along all right. Friday following that, one week from the time of operation, he came in the hospital. I said, "You are still living?" He said, "Yes, I haven't had a minute's trouble." I said, "You put me to studying—what kind of individual are you?" He said, "It is simple. If I was to tell you, you wouldn't believe it." I said, "For the Lord's sake, tell me, and give me a chance of deciding." He said, "The signs were right, doctor, the signs were right. I knew I was going to get along all right. The blood was in the feet and the moon was on the rise."

I sometimes think that the reason our patients have to stay in bed so long and have all these complications is because the moon is in the wrong place. At any rate, we do know that we older surgeons have had to change considerably since this last war. I was taught that if you didn't keep a hernia patient in bed three weeks, expect a large percentage to recur. It is not true because there are thousands of cases reported now, as Dr. Linton told us, that do not have recurrence of hernia or any other opening of wounds. I think probably if we would use a little more psychology we might let them get off of the operating table and take a bus and go home.

A patient of mine, that I had sweated blood over and carved on unmercifully, finally came and wanted an operation for goiter. Her BMR was normal, pulse normal and I couldn't feel or see any goiter, so I turned her down. She went to see a colleague who is a better psychologist, and collector, all of which helps to get your patients well. He took her to the operating room, took his scalpel and went from the lobe of her right ear straight across and touched the skin enough to make it bleed. He got methylate and rubbed it until it was almost raw and bleeding and burning good and let her wake up. So far as any of us know she has gotten completely well and hasn't pestered any of us with her goiter.

This matter of psychology may be worth a lot in ambulatory advancement. I am of the opinion that if we will tell our patients before we operate on them that there is no reason for them to consider themselves invalids, with the opinion that they must not put off surgery so long, their recoveries will be hastened.

I appreciate the doctor's paper. I am one old man that has become converted to the newer ways of doing things.

Dr. W. C. Cantey, Columbia: I also enjoyed the paper and rise to add one thing. A small group of Columbia physicians decided to try a technic reported in *S. G. & O.*—elevating the head of the bed 18 inches as soon as the patient reacts from operation and leave it until the patient gets out of bed. We aren't able to get all the patients out of bed immediately. Some older men and women won't get out of bed as soon as we would like them to and we let them out when they will.

Dr. W. H. Prioleau, Charleston: I enjoyed Dr. Linton's paper and the discussion and I am a strong advocate of early ambulation, so what I say should not be taken in any other light. I think the pendulum might swing too far and judging from some things we see in writing or hear said, one may draw the conclusion that the wound is perfectly strong almost from the start and that to a greater extent than we have any right to believe might increase in strength out of proportion due to the early ambulation. We know that fibroplasia goes along regularly or fairly regularly, increasing no doubt as there is improvement in the general tone of the body, but that doesn't mean that there isn't necessity for a certain period of fibroplasia so the wound is perfectly strong. To push the argument to a logical conclusion, all we have to do is see a few patients who have vomiting, and patients bronchoscoped with disruption of the wound. So there is a limitation. We should bear in mind some incident and some condition in

which early ambulation is not so desirable.

I might also state that a transverse abdominal incision is ever so much stronger than a vertical one and with transverse incisions early ambulation is particularly indicated.

I agree with Dr. Linton that the patients should be active while they are up. If they want to sit up only a little while, well and good, but don't leave them in a chair. That should increase the tendency to thrombosis of the deep veins.

Dr. S. E. Kredel, Charleston: One difficulty we have had with early ambulation is some patients won't avail themselves of the privilege, because the incision hurts too much. In cases of upper abdominal incisions, I think we can do a great deal to obviate this by blocking the nerve, making the wound relatively painless for several days. We do have a number of patients who say the wound hurts so much they won't get up on the first post-operative day.

Dr. Russell Buxton, Newport News: For the past two years it has been possible for us to get patients out of bed early and the hospital generally accepts that it be done now. However, I think the warnings we have heard in this paper and also by the discussers are well taken. Transverse incisions should be stressed more. They are stronger, particularly in the upper abdomen. We had two cases of disruption which may or may not have been attributed to early ambulation, but it certainly coincided with it.

In going back a little bit in the history or rather in the theory behind this, I think we ought to recognize that children, particularly, should be allowed out of bed earlier. If restrained, there is more pressure on the abdominal wound than if allowed free motion. I think we can make that point by reminding of postoperative dressing of pyloric stenosis cases—bandages put on as tight as possible, that wouldn't let the patient breathe, or allowing for something to eat. I think of the ten cases done over a period of about a year, not by me but other surgeons, three opened up. Since then, we apply the lightest possible dressing, which happens to be in our hospital.

I would like to ask Dr. Linton what he has noticed concerning cardiac response of these patients? I was struck in going over temperature graphs that every one that had gotten up early had a pulse rate of about 140. We haven't seen ill effects other than transitory fainting, but I would like to know if that has been his experience, too?

Dr. J. M. Northington, Charlotte: I would like to remind, as to getting the patient up early being no new thing, that according to the record, when Ephriam McDowell removed Mrs. Crawford's large ovarian cyst, she had ridden 90 miles and rubbed off an area of skin at the point of contact with the horn of the side saddle; he reported that three days after the operation, when he went to dress the wound, Mrs. Crawford was up and had made her bed, and that in two weeks she got up on the horse and rode back the 90 miles to her home.

Dr. Linton (closing): That is quite true but it wasn't recorded under the heading of early ambulation.

Dr. Buxton, in regard to the patients' cardiac response, that is something I didn't emphasize, because the practice is so widely used now and I feel sure anyone is going to be cautions about getting a patient up that doesn't have adequate cardiac function. They do have increase of pulse, also fainting. Telling them before the operation so they can anticipate what to expect reassures on that score and probably helps to prevent some of the psychic effects. I haven't noticed a pulse of 140, but I have noticed that temperature rise is a little less in those early ambulated, other things taken into consideration.

Dr. Kredel's suggestion of local anesthesia is excellent. Early ambulation was used by me first after muscle-splitting operations. I thought lines of force had a tendency to close the incision. It was quite a while before I had the courage to get patients up early after any upper midline, or non-muscle-splitting incisions.

Dr. Prioleau mentioned wounds ruptured by excessive coughing. That should be considered, also excessive strain on the wound from any source. The paper might have seemed to suggest everyone operated on should immediately be pushed out of bed. That, of course, is not the case. Some doctors elevate the bed so the patients get exercise by pushing themselves up.

Dr. Davis, I shall certainly try to ambulate circumcision cases early.

PERFORATION OF THE POSTERIOR FORNIX AND POUCH OF DOUGLAS DURING COITUS

(British Medicol Journal)

A woman, 57, eight children—the eldest 37, the youngest 15. She had travelled to the hospital by bus, and was seen at the receiving room. Whilst having intercourse one hour previously she experienced a sharp pain in the vagina and had since been bleeding slightly per vaginam. At the same time she felt a dull ache in the lower abdomen and this had persisted. Sine the birth of her last child she had not menstruated. Intercourse had last been indulged in 12 months previously.

The patient was pale and apprehensive but not shocked, p. 86; t. 97.4°; b.p. 110/80. The lower abdomen was resistant but not rigid. There was some tenderness over the hypogastrium. There was a transverse tear in the posterior fornix 1½ in. in length, and a loop of intestine felt lying in the wound. There was a trickle of blood from the vagina. She was placed in the left lateral position and a Sims speculum inserted. The vault of the vagina was inspected, and a loop of small intestine was seen to be prolapsed through the tear.

During the examination the patient suddenly became grey, the pulse was almost imperceptible and the b.p. fell to 50/0. The examination was discontinued, and within a few minutes she recovered and the b.p. rose to its former level.

The abdomen was opened by a midline incision; 3 to 4 oz. of blood was found in the pouch of Douglas, but there was no bleeding point. The intestines were undamaged. The tear in the pouch of Douglas was not visible but was easily found with the finger. The uterus was small and anteverted, and both ovaries were healthy.

A drainage-tube was inserted through the rent in the pouch of Douglas into the vagina secured to the posterior wall of the uterus by one No. 0 catgut. The abdomen was then closed. A course of penicillin and sulphonamide was started and apart from a slight elevation on the second night the t. remained normal. Nothing drained from the drainage tube, and it was removed on the third day. Vaginal examination on the 18th day revealed a transverse scar in the posterior fornix. The patient was discharged from the hospital on the 23rd day.

A few days after operation she gave further details of the mishap. Her partner was not her husband, but a man aged 30. She insisted that normal coitus had taken place in the dorsal decubitus position, and that no bizarre or unusual practices had been indulged in. She stated that her partner had been very excited, and she thought he had used too much force.

Procaine.—One c.c. of 2% is four times as toxic as 1 c.c. of 1%. The safe maximum dose of 2% procaine is 30 to 40 c.c., whereas the safe dose of 1% is approximately 125 c.c.

DEPARTMENTS

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

PRACTICAL CONSIDERATIONS IN THE MANAGEMENT OF ARTHRITIS

The great number of those disabled by chronic joint diseases and the need for prompt diagnosis and vigorous treatment of the conditions manifesting acute joint symptoms make this subject one of absorbing interest to all doctors. An article by a Cornell authority,[1] which lives up to its claim of presenting practical considerations is reviewed and commented on.

Most of the specific infectious arthritides are of several joints and develop in the course of systemic infections. Successful treatment depends upon the early identification by direct means or by culture of the microbes responsible and by immediate institution of the appropriate antimicrobial therapy. When arthritis complicates gonorrhea larger doses of penicillin are indicated and for a longer period. Specific infectious arthritis should be suspected in all cases of acute joint disease, and a search for organisms in the joint fluid should always be made if diagnosis is suspected but not proven, culture always supplementing direct bacteriologic examination. If acute specific infectious arthritis is strongly suspected, but not proven even by bacteriological means, treatment with generous doses of penicillin should be employed, for delay in the treatment of purulent infectious arthritis may result in irreparable damage.

A little-known syndrome which it is of the utmost importance to bear in mind is Reiter's disease, manifested often by joint synovitis, urethritis with mucopurulent discharge and conjunctivitis, sometimes preceded by diarrhea. This syndrome occurs in young males; its cause is unknown; it is self-limited to only a few weeks, but may recur. There is no specific treatment The disastrous consequences of making a diagnosis of gonorrhea in certain cases of this simulating disease need only to be suggested.

Atypical rheumatic fever, especially without detectable cardiac involvement, may be difficult of differentiation from other rheumatic diseases, especially from early rheumatoid arthritis. Later developments may reveal the nature of the disease. In the absence of fever, this diagnosis should not be made unless there are typical signs of heart affection. Moderation in salicylate therapy is counseled. The present author uses doses or four to six grams daily in adults (smaller amounts for children), and gives the drug orally, or orally and rectally, rather than by vein.

The diagnosis can usually be made by the typical history, excess of uric acid in the blood (not invariable), roentgenograms showing cartilage and/or bone tophi, and by response to colchicine, 0.5 mg. q. 1 or 2 hr. until abdominal cramp or diarrhea result, or joint pains are relieved. The toe joints may not be affected until late in gout and in 10 to 20 per cent of cases are never involved.

Rheumatoid arthritis is a disease of connective tissue, chiefly that of the joints. Most cases are easy of recognition. Cases of rapid onset with fever may resemble rheumatic fever, and require the developments of time. Treatment requires a broad program of balanced rest and exercises, pain relief, physical therapy, good nutrition. Underwater exercises are of great value. Simple measures, such as warm baths, entire or of extremities, are effective, inexpensive means of home therapy. Infrared lamp, bakers and sunshine should be utilized freely, muscle massage until active exercises are possible.

Removal of any localized infection is recommended for the good of the general health, not with the hope of improving the joint condition. In some cases nicotinic acid is of value against pain and paresthesia.

Gold therapy may, in six months, effect as much as other measures will in years. Fifty per cent or more are entirely or greatly relieved. Recent reports favor the intravenous injection of a new copper salt. Too little study has been made of this form of therapy to evaluate it confidently. Copper therapy may become useful, especially in persons who cannot tolerate gold.

Pregnancy commonly benefits rheumatoid arthritis, and reports have been made that transfusion of blood from pregnant women into patients with arthritis was beneficial.

Rheumatoid (ankylosing) spondylitis is much more common than is generally believed. It usually begins as sacro-iliitis, with pain and stiffness in the lower back and legs, back muscle spasm, usually an elevated sedimentation rate and roentgenographic changes in the sacro-iliac joints. Later ligaments along the spine usually become calcified. Treatment with gold helps few cases of spondylitis. The greatest single aid is roentgen irradition over the back. Results are very gratifying early in the disease.

It is said that everyone beyond middle age has some degree of osteo-arthritis; some are uncomfortable from it and few are disabled. It is a local condition of degenerative changes in cartilage and bone, Heberden's nodes, "creaky knees." Prolonged rest is *inadvisable;* reduction of excess weight, physical therapy with exercise and analgesia should

1. R. H. Freyberg, New York, in *Penn. Med. Jl.*, April.

be the backbone of therapy. Denervation operations are sometimes helpful in severely painful osteo-arthritic hips. Back braces help many patients with spinal osteo-arthritis. It should be explained to the patient that it commonly is only a "nuisance disease."

—Cornell University Medical School

Write the author for a reprint.

PEDIATRICS

E. L. Kendig, Jr., M.D., *Editor,* Richmond, Va.

BIRTHMARKS AND THEIR TREATMENT

Most doctors have occasion to advise whether a birthmark should be treated or concealed. Grace[1] gives sensible discussion of the problem.

Three-quarters of the total number of hemangiomas are present at birth, 85 per cent develop before the end of the first year. Females are more frequently affected in the ratio of 2 or 3 to 1. The anatomical distribution is head, 52 per cent; neck, 4; trunk, 23; extremities, 19; and genitalia, 2. The three types are—the port-wine stain, spider hemangioma and capillary hemangioma.

Port-wine stain. There is no treatment for this lesion. It is best concealed by the application of a pasty cosmetic such as "covermark"—an easy matter as the lesion is neither elevated above nor depressed beneath the skin.

Spider hemangioma. A fine needle attached to the negative pole of a circuit carrying galvanic electricity is inserted into the central capillary and a current of 1 milliampere is passed for 30 to 60 seconds.

Capillary hemangioma. The best time to treat this lesion is from three months to two years. Early treatment is necessary not only because it will prevent most lesions from getting larger, but also for the reason that the endothelial cells lining the vascular spaces of the tumor are more radio-sensitive during their early life. Two useful methods of treatment are radium by application and sclerosing solutions by injection. The former is the first choice and produces spectacular results with small doses in many lesions — particularly those which are bright red and thin or only moderately thick. Radium must not be used in the treatment of hemangiomas about the breasts, genitals, long bones, or the eyes.

Sclerosing solutions are employed for the treatment of hemangiomas occurring in the sites in which the use of radium is contraindicated. Lesions more than one cm. thick are best treated by the use of both radium and sclerosing solutions. Varisol (Abbott) is a solution containing 30 per cent of invert sugar and 10 per cent of sodium chloride; 1 per cent of benzyl carbinol is added as a local anesthetic. Treatment should be commenced at three months, when child is stronger and less liable to intercurrent infection from exposure. The first injection 0.05 to 0.05 c.c., depending on the size of the lesion and the response to each dose. A 24-needle and a 2 c.c. Luer-Lok syringe is used. As much as 10 c.c. has been given in 10 different areas to the same lesion during a single treatment. The interval between treatments should be three or four weeks. Place deeply enough to avoid necrosis of the skin. An increase in firmness of the lesion means partial or complete obliteration; treat until color has almost completely faded. Results are equally good as those yielded by radium plaques. The latter are more suitable for superficial lesions.

Scarring is not an unlikely sequel of carbon dioxide treatment. Grace is of the opinion that there is no longer any valid reason for the use of carbon dioxide in the treatment of hemangiomas.

[1] L. A. W. Grace, Brooklyn, in *Medical Times,* May.

HOSPITALS

R. B. Davis, M.D., *Editor,* Greensboro, N. C.

PARALLEL OF NURSES EDUCATION OF YESTERDAY WITH THE MEDICAL EDUCATION OF TODAY

Anyone closely allied with educators in any profession for the last two decades cannot help but be disturbed. Let us cite first the injustices heaped upon those who dedicate their lives to teaching. In years gone by, their noble spirits anticipated a reform from the old way of ignorance, narrow-mindedness and bigotry to wisdom, tolerance and refinement. It was those of us outside of the teaching profession who failed to recognize and appreciate their aspirations and zeal. So we allowed the teaching professional personnel to be imposed upon. Their hours were too long; their load was too heavy; the requirements too stiff; and the coöperation of the parents too little.

At first one who had attended college a year or two could teach the lower grades in school, and a good job they did in most cases. Later the powers that be took control of the teaching profession entirely with very few exceptions from the first grade through high school. The teacher bore her burdens patiently, and while in every other walk of life new opportunities were opened for those participating. Teachers were required to teach according to the ideas of those who have not seen inside a school in many years. The politicians simply said that you must send your child to school between the ages of six and fourteen; and said to the teacher, through the principal and superintendent, you must teach every child that comes to school. The result was that many teachers had 40 to 50 chil-

dren assigned them. Parents would find fault with the best effort in teaching and discipling the worst children. The teacher was too frequently criticized, reported to the principal, even discharged, as a result of unjust incrimination by parents who could not discipline their own few children. The teacher was expected to be a saint, to take part in all civic functions, religious and otherwise, that might in some way help to mold the lives of the children. And for this extra work, which in many cases occupied all the week-ends, few of us parents ever felt that she should have even a word of praise.

Then the salary paid a teacher has been totally inadequate for her standing in the community, to say nothing of making a return on the investment in her education. In North Carolina and perhaps other states, janitors in some schools were paid more than the teachers, and the janitors had no work but that at school.

The straw which broke the camel's back was the summer school requirements. A teacher needs a long and restful and diversified vacation, but the powers that be decided, that unless she went to school many summers, her teaching ability would decrease although she had been teaching nine months out of each year. And to add insult to injury, the poor teachers were required to pay someone else to teach them. In many cases the class-room teacher was so far superior to the summer-school professor that it was a joke—a sad and costly joke.

As a result of all these injustices, there has developed in certain educational groups a tendency for themselves to become dictators. I should like to point out the fallacies that have crept into the nursing and medical professions as a result of these abuses.

Let us take the nursing profession first. In the beginning, nurses were taught by other nurses to nurse sick individuals. There were no professional educators in the nursing profession. The superintendent of the hospital was also superintendent of the training school. She was required to see that the nursing in the hospital was properly done and, since it had to be done by student nurses, she was required to demonstrate the actual nursing before them, and then they could learn further by doing.

As time went on, some "super-minds" conceived the idea that the nursing profession should consist of young women who professed to want to dedicate their lives to the nursing of the sick, but who actually were pitted against other brains for the ability to memorize lectures and textbooks. So scholastic ratings became the watchword rather than skillful and sympathetic nursing and now we see, instead of the students, parents and politicians imposing on the teachers, the teachers have become the dictators. The poor student or would-be student has become the goat. The time was not long ago when a student who had a high-school diploma, unless she was in the "upper one-third," was just as far from entering a training school as if she could not read and write. And her knowledge of chemistry, biology and physics must have been derived from a teacher who had a degree in those subjects. In those days it was not unusual for four out of five girls to be denied admission to a training school, and this figure was even worse in the case of the large training schools. This process continued until the State Director of Nursing Education—one person if you please—had the final word whether or not a young woman should dedicate her life to the nursing profession. This unrestrained and dangerous power stimulated its possessors to demand higher scholastic ratings in high school, then college training, with the arrow pointing strongly to a degree, before a girl could be accepted in a training school. Well, they standardized themselves out of existence, and the public woke up to find out that they had been double-crossed and that we did not have more than one-fourth the good nurses needed to take care of the sick. So the RN has lessened her usefulness, and is being replaced all over the United States by the one-year practical nurse. It is a matter of record. Anyone desiring the evidence is invited to write the author for concrete laws recently put on the statute books.

Now about the medical profession. Those in charge of medical education have the same course in increasing requirements, lengthening the pre-medical college years and, worst of all, adopting the damnable scholastic rating entrance criterion. They have made no provision for increase of population demanding an increase in medical doctors, so today, the medical profession has the opportunity for selfish expression and practice, afforded the doctor by the scarcity of his like. Competition has been pretty nearly wiped off the map so far as the M.D. is concerned. It is the opinion of the writer that all doctors are partly responsible, even though in a very small way. Great responsibility lies upon the medical educators. Some of them, naturally egotistic, have become intoxicated with power, and just as certain as the sun will rise tomorrow, unless these egotistic, selfish, narrow-minded, super-educators (so-called) are brought down to earth, then the medical profession is doomed and socialized medicine will prevail in this country.

A plea is here made for the reasonable, practical-minded, self-sacrificing, unselfish, far-sighted doctors to join the writer in a campaign of propaganda for a more liberal, a more practical, and a more satisfying medical educational program.

It has already happened in one large institution that the applications to enter medicine in a 1948

class were accepted at the rate of one to twenty, whereas in the same school, only 50 per cent as many girls applied to the nursing school as the school needed and required. And yet the authorities in that school have eyes to see, and see not; have ears to hear, and hear not.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

PROPYL THIOURACIL IN HYPERTHYROIDISM

Hyperthyroidism, regardless of type, can be brought under control by propyl thiouracil. This drug is of great value in preparing patients with severe hyperthyroidism for thyroidectomy, since it abolishes the need for multiple-stage operations, reduces postoperative reaction, and the high morbidity and mortality; and in long-continued maintenance therapy with or without operation. The mode of action is by inhibiting the formation of thyroid hormone. There is no refractory period as with iodine.

This is on the authority of Crist,[1] substantiated by the experience of many others.

Crile has stated "propyl thiouracil has proved to have so little toxicity that I have abandoned the practice of repeating the leucocyte count." In case of a large gland, as in toxic nodular goitre, or toxic adenoma, response may be delayed. Previous treatment with iodine has often resulted in a latent period of several weeks or months before improvement was noted. The reason is believed to be accumulation in the gland of large stores of thyroid hormone which must be exhausted before clinical improvement can begin.

The dosage of propyl thiouracil varies with toxicity of the thyroid and must be adjusted according to response; 200 milligrams a day is rarely exceeded. The recommended daily dosage is: for 7 days, 0.250 gram; for 14 days, 0.200 gram; from 14 days to control of symptoms, 0.200 gram; for maintenance, 0.025 to .073 gram.

After maintenance dosage for three or more months the dose is decreased by 25 mgms. daily each succeeding month until the patient has been maintained on 25 mgms. daily for one month; then for an additional month, 25 mgms. every other day. If there is no recurrence of symptoms the drug is then discontinued. If at any time signs of thyroid toxicity recur, the dosage is stepped up.

If properly controlled, the long-standing remissions are many, and residual symptoms no more frequent than in those controlled by thyroidectomy. In a group of 20 cases, ages 27 to 64 years (females 17, males 3), symptoms varied from one month to five years. Two cases were of exophthalmic goitre and 18 were diffuse toxic goitres. Ten were treated by propyl thiouracil alone; 10 were operated upon after propyl thiouracil therapy. The basal rates in the group not operated on, prior to therapy, varied from plus 18 to plus 41; after propyl thiouracil from plus 12 to minus 10. Five have been off their maintenance dose for five to seven months without recurrence. Of ten patients who had surgery, six were completely controlled by propyl thiouracil, followed by iodine. One had been treated by iodine, thiouracil, and x-ray, only to return six months later with metabolic rate of plus 87; after five weeks of medical treatment the rate was plus 9. Four not completely controlled had metabolic rates of plus 28 or more. The pathologic reports on these three cases were all toxic hyperplasia.

It is believed that if the drug had been continued longer, better control would have been obtained, and that when surgeons become more familiar with the results of this drug, they will be more willing to delay operation until complete clinical control has been reached.

When hyperthyroidism develops on long-standing adenoma, removal of the tumor is followed by recurrence in only a few cases.

In diffuse goitre with hyperthyroidism propyl thiouracil gives results quite similar to those of thyroidectomy. If remissions occur maintenance doses are indicated for an indefinite period. It seems that propyl thiouracil will replace surgery in a large proportion of diffuse goitre cases with hyperthyroidism.

In adenomatous goitre with one or more tumors in the thyroid, these tumors tend to enlarge, may produce symptoms, and may become malignant. These, therefore ,should be removed surgically, first being controlled completely by propyl thiouracil, followed by iodine, thus reducing the surgical risk. If there are contraindications to surgery this group can be treated by propyl thiouracil alone.

The possible toxicity of this drug must be remembered; also, in administering it to the gravid, the possibility of cretinism in the offspring.

1. W. A. Crist, Camden, in *Jl. Med. Soc. N. J.*, May.

Treatment of Tetanus

(H .C. Robertson, Jr., Charleston, in *Jl. S. C. Med. Assn.*, Mar.)

Effective treatment consisted of antitoxin intramuscularly, 150,000 units in the first 60 hours; adequate sedation; general supportive measures; routine use of penicillin for prevention of pneumonia.

Intrathecal antitoxin is of no apparent value and may be harmful.

Surgical intervention at the wound of entry is not indicated in treatment of tetanus *per se*.

A significant number of cases (16.6%) of this series was seen by a physician at the time of injury, and no prophylaxis against tetanus was given. This finding should serve as a warning to all who practice medicine not to neglect this important part of the treatment of traumatic injuries.

The records of Roper Hospital 1936-1946 show 76 cases of tetanus, of which 43 proved fatal. All 10 of the cases of tetanus neonatorum were fatal. General spasms early in the disease meant high mortality. Twenty-seven of the fatal cases resulted from puncture wounds.

TUBERCULOSIS

STREPTOMYCIN IN TUBERCULOSIS

For the first time in the long history of tuberculosis there is a drug which, if used in certain forms of tuberculosis at the proper time and in suitable dosage, will favorably influence the course of the disease. In streptomycin physicians have not a specific but a new weapon to be added to those they are already using so effectively.

This opening paragraph of an announcement[1] on the authority of the National Tuberculosis Association is borne out by what is to follow.

The clinical use of streptomycin for tuberculosis was begun in December, 1944, and has been used by one group in more than 100 cases of tuberculosis of various types. At present more than 500 additional patients are being treated with streptomycin at selected institutions under the auspices of the American Trudeau Society, and a large number elsewhere.

The ability of streptomycin to suppress the disease is unique, in some cases remarkable. Because of its toxic potentialities, its inadequacy in some clinical situations, and the expense of prolonged treatment, the indiscriminate use of streptomycin in the treatment of tuberculosis must be discouraged.

The use of streptomycin is indicated in all forms of *hematogenic* tuberculosis, including generalized miliary tuberculosis and meningitis—hitherto regarded as hopeless. Of 12 patients who had disease of this type and were treated with streptomycin at the Mayo Clinic, four are living after six to 12 months. In treating tuberculous meningitis streptomycin must be given both parenterally and intrathecally and as early as possible in the course of the disease.

Pulmonary tuberculosis suitable for treatment with streptomycin includes recent lesions of bronchiogenic dissemination, exudative lesions, and all recent but rapidly progressive tuberculosis which is not likely to be controlled by the usual methods. Cases have been treated satisfactorily by daily doses of from one to three Gm., administered parenterally, for two to six months. Clinical improvement is noted early and can usually be demonstrated roentgenographically within one to two months. Cavities, especially if thick-walled, are apt to remain patent. Sputum findings are changed from positive to negative in half of the cases of far-advanced pulmonary tuberculosis.

The patient whose pulmonary tuberculosis has improved during treatment with streptomycin usually continues to improve after this treatment is discontinued.

The use of streptomycin in pulmonary tuberculosis may serve as an adjunct to surgical procedures. It has been used with success in tuberculosis of the hypopharynx, larynx and tracheobronchial tree. Tuberculous draining sinuses have responded well, even those of long duration, as have cases of tuberculosis of the alimentary tract and peritoneum, of bones and joints. Of cases of tuberculosis of the genitourinary tract, symptomatic improvement occurs in more than 50 per cent, t. b. being usually reduced. It is not a substitute for surgery in unilateral renal tuberculosis.

Streptomycin is not indicated in cases in which satisfactory progress is made on the usual regimen. Chronic fibrocaseous cases are not suitable except in combination with surgery, nor is tuberculous empyema.

Streptomycin's place in the treatment of some types of tuberculosis will be determined only after further investigation.

1. *Tuberculosis Abstracts*, June, 1948.

GENERAL PRACTICE

William R. Wallace, M.D., *Editor*, Chester, S. C.

PRESENT STATUS OF THE PEPTIC ULCER PROBLEM

Diagnosis of peptic ulcer is usually made on hunger pain, x-ray demonstration of a typical filling defect, and free hydrochloric acid in the stomach. A complete absence of this acid is essential to rule out the possibility of peptic ulcer. Differentiation is mostly between ulcer and gastric carcinoma. Usually benign are multiple ulcers, ulcers high on the lesser curvature, and gastric and duodenal ulcers, coexisting. Frequently malignant are ulcers on the greater curvature and prepyloric ulcers.

Green[1] is positive that the best available means of differentiation, short of biopsy or exploratory laparotomy, lies in the response of the lesions to strict medical management. If the ulcer is benign, occult blood should disappear promptly and permanently from the stools and the filling defect be rectified by the end of six weeks. Any gastric lesion which persists despite strict medical management for a longer interval, as indicated by its radiographic appearance or by the presence of occult blood in the stools, he considers malignant until proven otherwise by microscopic examination.

Oral or parenteral administration of concentrates of enterogastrone, a substance derived from the intestinal mucosa and extracted both from this

1. D. M. Green, Seattle, in *Northwest Med.*, April.

source and from urine, the amphoteric antacids, such as the aluminum hydroxide and silicate gels, appears to produce healing of active ulcers and to protect against recurrences for long periods.

The main indications for surgical treatment of ulcer is failure of medical management, indicated usually by persistence of symptoms, a radiographic defect for six weeks or more, or recurrence within one month after allowing a more liberal diet. Frequent resurrences should raise the question of the good to be derived from a medical regimen, and suggest the advisability of an operative procedure as promising better results.

PHENOBARBITAL POISONING

THE ENORMOUS consumption of barbiturates could not fail to make poisoning from overdosage, deliberate and accidental, common enough to enlist the practical interest of all physicians.

A case is reported[1] which teaches that huge doses of a barbiturate may be ingested, huge doses of the agent most in use as an antidote given over a long period of continuous coma, then under huge doses of another remedy the patient recover her senses and normal health in a remarkably short time.

The main lesson is emphasis that a doctor should never give up a patient until he is dead.

A white woman, 24, admitted 18 hours after becoming unconscious, thought first to be under the influence of alcohol. In her purse were two empty bottles, the labels indicated they contained 175 grains of phenobarbital.

The patient was comatose, eyeballs fixed, pupils widely dilated, but reacted to light; no evidence of trauma. Cyanosis promptly cleared by O; p. 20, b. p. 90/50, rectal t. 102.8.

After aspiration of secretions, from upper respiratory tract, a Guedel rubber oral airway was inserted and O given by nasal catheter. Intravenous glucose, saline, and plasma as indicated. A daily dose of 100,000 units of penicillin was added to the infusion for the first three days, and this amount continued intramuscularly until the 12th day.

Following the initial 6 mg. of picrotoxin intravenously which produced no response, this drug was infused intermittently at the rate of 1.5 mg. per min. On the second day after a total of 770 mg. of picrotoxin, there occurred a general convulsion lasting 40 sec. The analeptic was discontinued for half an hour, then resumed at the previous rate. Three hours later, after an additional 270 mg., a second convulsion of 25 sec. A third seizure following another 700 mg. At this time the interval of metrazol therapy was interjected and a total dosage of 2925 mg. was infused at the rate of 0.5 c.c. per min. On the fifth day the last dose of picrotoxin was given, raising the total dosage to 3080 mg. There was no evidence of lessening of the coma other than change in respiration from abdominal to thoracic, still no reflexes; b. p. 110/70 and 120/80; p. 80 to 100. Though color was excellent, O was continued. The eyelids had been closed by suturing because of conjunctival edema.

Because of lack of response to both picrotoxin and metrazol, and fear of toxic effects all analeptics were discontinued for a time. During three days the condition remained the same.

On the eighth day d-Desoxyephedrine hyd., 20 mgm. intravenously, produced an immediate momentary movement of the arms and legs; repeated q. 1 h., similar response each time and gradual lightening of the narcosis. Within 4 hrs. the patient coughed occasionally, swallowed, moaned, wrinkled her forehead. After 20 hours and 380 mg., she answered questions slowly but correctly. Dose reduced to 10 mg. per hour. The last dose, bringing the total to 520 mg., was administered 30 hours after the initiation of this therapy. The patient was then able to take sips of water.

Hematuria was noted, in a single catheter specimen on the fourth day, at which time 1849 mg. of picrotoxin had been given. Aside from this, urinalysis was negative during the hospital stay.

Barbiturate level in the urine: 3d day, 3.8 mg./100 c.c.; 4th day, 3.8; 7th day, 3.2; 9th day, 2.8; 11th day, 1.9; 12th day, 1.5.

Prothrombin level on the third day was 27 seconds. Ecg. tracings normal; npn., total serum proteins, albumin and globulin fractions all in normal range, as were r.b.c. counts and hgbn. On admission the w.b.c. was 27,900—92% pmn. On the third day w.b.c. 8650.

Therapy during the remainder of the course was supportive. Emergence from the long coma was unattended by hallucinations, delirium or restlessness. The lethargy gradually diminished. On the 10th day the patient could count fingers accurately. Her appetite returned rapidly. On the 15th day she walked unsteadily and complained of numbness of her feet, tongue and the roof of the mouth. Discharged on the 21st day completely recovered.

Four months later no evidence of sequelae.

d-Desoxyephedrine is a vasoconstricting agent with a more gradual and sustained action than ephedrine. It stimulates the central nervous system. The pressor effect occurs in 5½ minutes after subcutaneous injection and lasts 20 minutes to several hours.

During a coma of 10 days, 3080 mg. of picrotoxin, 2925 mg. of metrazol, and 520 mg. of d-Desoxyephedrine hyd. were administered.

d-Desoxyephedrine hyd. appears to produce a specific type of stimulation in counteracting the narcosis due to central depressants.

1. Mary F. Poe & Mary Karp, Chicago, in *Anes. & Analg.*, May-June.

DERMATOLOGY

SOME NEWER METHODS IN THE TREATMENT OF SKIN DISEASES

A KENTUCKY dermatologist[1] reports on his experiences with some of the newer remedies.

Impetigo, erysipelas, cellulitis; and staphylococcic infections, such as folliculitis, furunculosis, carbuncles, ecthyma, and even the more severe pustular form of acne, have been found to respond promptly to penicillin.

Most forms of syphilis are more curable by penicillin than any other drug, but the test of time is needed to learn the optimum dosages and intervals. Most cases of gonorrhea are promptly arrested and cured by one or two injections in the proper dosage.

We need oft to be reminded of the masking effect of penicillin on syphilis in those who contract both syphilis and gonorrhea at the same exposure. It is wise to follow up patients cured of gonorrhea by a few doses of penicillin with periodic physical and serologic tests for at least a year. Hydradenitis, Duhring's disease and actinomycosis may be cured, or at least arrested, by penicillin.

Most streptococcic and staphylococcic infections are cured as promptly with sulfonamides as with penicillin. Gonorrhea succumbs readily, in most cases, to their use, while in the treatment of those other venereal infections—chancroids and lymphopathia venereum — sulfadiazine is the drug of choice. Actinomycosis, blastomycosis and sporotrichosis, which resist most forms of treatment, have been cured in many instances by the long-continued use of this same drug.

Duhring's disease, the recalcitrant pustular eruption of the palms and soles and extensive infections of molluscum contagiosum often respond favorably to sulfapyridine when other medications fail.

Because of the high potential of sensitization of all sulfonamides the indiscriminate topical use of these drugs is to be condemned, when any other preparation can be used with comparable effectiveness, for once skin sensitization has been produced, the use of these ddrugs in the treatment of more severe systemic infections is forever contraindicated.

Effective for symptomatic relief of urticaria and pruritus from varying causes are benadryl, pyribenzamine and antergen, and their prolonged use will bring about a cure in many cases. Possible untoward effects are nausea, vertigo and even syncope. The soporific effects of benadryl have been blamed for an automobile accident, and granulocytopenia has been attributed to pyribenzamine.

Benzyl benzoate is a far more rapid and efficient scabicide than sulphur and produces few, if any, of the sulphur side effects. Another effective scabicide is dichlorodiphenyl trichloroethane, "D. D. T." Used alone as a weak aqueous emulsion or combined with benzyl benzoate one application of this mixture usually cures. As a dusting powder in 10 per cent strength it is the most effective lousicide.

Undecylenic, propionic and caprylic acids and their zinc and sodium salts stand at the top of the list of agents for use against cutaneous fungus infections.

BAL, (British Anti-Lewisite), first developed to counteract the toxic effects of the poison gas, lewisite, used in the proper dosage in the early stages, has been found effective in combatting the toxic effects of arsenic, mercury and gold. In this country this drug is now available for general use.

One of the discussants still prefers sulfur ointment for itch and gets fewer irritations from it. His experience of chloresium solution and ointment in old ulcerated conditions has been gratifying. Another finds penicillin of little value in acne, and streptomycin, 1 gm. a day for five to 10 days, almost specific for granuloma inguinale; and cites the fact that benzyl-benzoate is a derivative of balsam Peru which has been used for the treatment of scabies for perhaps a century.

1. W. U. Rutledge, Louisville, in *Ky. Med. Jl.*, May.

KNEW CENTURIES AGO WHOLESOME FOODS WOULD MAKE SOME SKINS ERUPT

(W. L. Marmezat, in *Ohio State Medical Journal*, Mch.)

In the first American *Diseases of the Skin* (1845) Noah Worcester, M.D., Professor of Physical Diagnosis and Pathology in the Medical School of Cleveland, wrote:

"Instances in which some affection of the skin is excited by an article of diet which is wholesome to most individuals are very numerous, and indeed it is usually by this class of diseases that such idiosyncrasies are manifested."

PROBLEMS OF MONGOLISM

(C. A. Aldrich, Rochester, Minn., in *Amer. Jl. Ment. Def.*, 52:127-129, 1947)

Mongolian idiots should be committed to an institution as soon after birth as possible. Immediate separation before emotional ties are formed is the best solution for family and child.

Occurring in one out of 500 deliveries, mongolism can be diagnosed on the day of birth in 90% of cases. When the diagnosis is made, the mother is told that the newborn baby is not strong enough to be brought to her and must remain in the nursery for a few days.

A conference is then arranged between the physician, the father, and close relatives. The physician explains that mongolism is an accident of development for which no one is to blame, that future babies will be normal, and that immediate placement of the infant outside the family is the only hope of preventing serious domestic and social difficulties.

HUMAN BEHAVIOUR

James K. Hall, M.D., *Editor*, Richmond, Va.

The thing that hath been — shall be

And Samuel said unto Jesse, Are here all thy children? And he said, There remaineth yet the youngest, and, behold, he keepeth the sheep. And Samuel said unto Jesse, Send and fetch him: for we will not sit down till he come hither.

And he sent, and brought him in. Now he was ruddy, and withal of a beautiful countenance; and goodly to look to. And the Lord said, Arise and anoint him, for this is he.

Was a commander-in-chief ever before or since in human history selected so suddenly, so surprisingly, so simply, so majestically, so dramatically, to meet a national emergency?

And Saul armed David with his armour, and he put an helmet of brass upon his head: also he armed him with a coat of mail.

And David said unto Saul, I cannot go with these; for I have not proved them. And David put them off him.

And he took his staff in his hand, and chose him five smooth stones out of the brook, and put them in a shepherd's bag which he had, even in a scrip; and his sling was in his hand; and he drew near to the Philistine.

And the Philistine cursed David by his gods.

And David put his hand in his bag, and took thence a stone and slang it, and smote the Philistine in his forehead, that the stone sunk into his forehead; and he fell upon his face to the earth.

Think of it, the unknown ruddy shepherd, utterly without military eperience and training, discarded, even in the king's presence, all his military equipment! He went forth with his bare hands and his home-made weapons to deal with the atomic bomb of his day.

And the king said, Enquire thou whose son the stripling is.

Abner took him and brought him before Saul, with the head of the Philistine in his hand.

And Saul said to him, Whose son art thou, young man? And David answered, I am the son of thy servant Jesse, the Bethlehemite.

And the conqueror of Goliath the giant became king of Israel. And he remains throughout the centuries the most appealing king of all time.

Marvel not that I have invited you to give attention to the keen observations of a psychiatrist of three thousand and more years ago. How much better we of today could carry on our efforts to understand the motivations and the objectives of human conduct if we should keep always within easiest reach as our most helpful text-book on Human Behaviour, The Bible. The Sermon on the Mount, spoken 1000 years later by a descendant of David, affords all the instruction in the art of living a mortal needs.

Not many years before the episode referred to above, the same prophet Samuel was called upon to select a king for the new nation in the place of his own sons who had turned out to be inadequate as governors of Israel. On that occasion, the prophet's choice was Saul, who stood in physique and in attainments head and shoulders above the multitude around him. But Samuel, even though the prophet of the God of Abraham, of Isaac and of Jacob, was sometimes victimized by poor personal judgment. He apparently did not realize that Saul was a manic-depressive, who would eventually lose his throne and finally deprive himself of his own life.

The two most difficult features of life are living it and understanding it in others and in one's own self. I wonder more and more if even we who talk so much about human behaviour realize how important it is, how interesting it is, how incomprehensible it often is; and the spacious domain it occupies in all that man says, all that man writes about and all that man does. Were we to cease to be apprehensively concerned about the probable behaviour of our fellow-mortals of today, the armies and the navies of the world would melt away and most of the noisy mechanical birds of the air would come to earth and rest upon it.

This Sabbath day begets historic spiritual ruminations. My thought about Moses takes me back to a time five hundred years before Saul and David came upon the scene. Moses, reared as a member of the royal family of Egypt, was undoubtedly one of the most learned men of his time, indeed of all time. Suddenly, perhaps in early mid-life, he was called upon to hearken to the voice of God. Moses knew that he had behaved criminally, cowardly, and that in fleeing from Egypt he had left his own brethren in bondage there. Although Moses was probably in the Wilderness when God spoke to him, he was told that the ground on which he stood was holy ground. Instantly his better parts reasserted themselves and he returned to Egypt and to the presence of the mighty Pharaoh. How obedient he was to The Voice! What faith and courage he exhibited! Eventually Moses led his people out of Egypt, into the Wilderness, from which they passed on into the Promised Land and into everlasting history. What a mighty people they became and are!

Remarks, prepared but not spoken because of a crowded program, as President of the National Association of Private Psychiatric Hospitals at the annual meeting, Hotel Statler, Washington, Sunday afternoon, May 16th, 1948.

May not we who are engaged in private psychiatric practice believe that each of us stands upon holy ground in our ministrations to those who suffer in body and in mind? Whatever duties we may be called upon to perform, may we not remember, as a sustaining inspiration, the decision made by Moses to go back again into Egypt at the risk of his life to perform that high historic duty.

I am personally troubled more and more by the ever-increasing demands made upon us as physicians to make repeated obeisances to this and to that group of organized professional authority. The young man and the young woman, aspiring to become physicians, encounter one authority after another to whom genuflections must be made. The Deans of the Schools of Medicine, each, display with pride the hundreds of applications for matriculation. But only half a hundred or more of students can be ushered into the first-year class of each school. What will eventually become of those who have been rejected, and whose preparations for the study of medicine have been of no avail? Will they, too, develop psychoneurotic frustration manifestations?

And the complaints still come in from all over the land that doctors are needed and nurses are needed. Are the constituted professional authorities in medicine and in nursing not making it more and more difficult for young people to be trained in these much needed disciplines? The colleges and the universities are admitting more and more academic students. Why are not more and more students being admitted into the medical schools?

And must the young medical graduate who has run the gauntlet on the way to his diploma be subjected to prolonged residences and to repeated examinations, even though he may aspire to be a family physician? Are we in medicine becoming super-organized and overwhelmingly mechanized? Must each individual be passed through a National Mint and emerge therefrom impressed by a brand such as all others are wearing? Every effort, it would seem, is being made to prevent the passage through the sieve of hard personal experience into active life of such individuals as George Washington and Patrick Henry and Thomas Sumter and Daniel Boone and Sam Houston and Andrew Jackson and Abraham Lincoln and Nathan B. Forrest and John C. Fremont and William H. McGuffey and Cyrus H. McCormick and Thomas A. Edison and Henry Ford.

Group is in conflict with group and each group is insistent that the individual member be submerged into mutism and depersonalization. Our national democracy would seem to me to be in danger of becoming extinct.

No other physician has a better opportunity to come to know intimately the lives of those to whom he ministers than the private psychiatrist. Let us prepare ourselves by the fullest possible development of our individual mental capacities for our high calling. Every educated person is self-educated. The best biography is the living mortal; the most informative treatise on psychiatry is the patient. Let us be so willing to live with our patients that the bridges between them and us will always be in good repair. And let us hear our patients patiently and as understandingly as possible; and let us pray that we may be given the grace to enable us to speak to them simply, honestly and helpfully. And whenever we speak and whenever we write may we bear in mind the voice of God that came out of the whirlwind to Job and said: Who is this that darkeneth counsel with words without knowledge?

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

HEMATURIA

BLOOD IN THE URINE is one of the most common findings in the urological field. Physicians should recognize hematuria as a serious, even alarming symptom, and see that the patient has a complete examination during the first attack of bleeding. Five per cent of all patients admitted to hospital show red blood cells in the urine; 25% of all with urological disease, excluding venereal disease. The fact that urinary bleeding is frequently intermittent, painless and of short duration prompts the patient to discount the seriousness of the trouble.

A Kentucky urologist[1] lays down lessons for us all.

Every case of hematuria presents two important questions: 1st, what part of the urinary tract is bleeding coming from?; 2nd, what is the nature of the disorder responsible for the bleeding? Blood in the urine may be due to some systemic disease, to urogenital lesions and local causes within the urinary tract, to invasion of disease from adjacent structures and to trauma, including that from foreign bodies.

Among the systemic conditions are: leukemia, hemophilia, Hodgkin's disease, etc.; the acute fevers as scarlet fever, measles, septicemia; chemical agents as sulfonamides and mercury, turpentine and lead poisonings; and vitamin deficiencies in vitamin K; as a result of disease of adjacent organs or parts; inflammatory or neoplastic diseases of the cervix, uterus, sigmoid, or rectum are the most common. Granuloma inguinale from the anus and rectum invades the bladder resulting in hematuria and fistula formation. Appendiceal abscess or

1. H. E. Martin, Ashland, in *Ky. Med. Jl.*, Jan.

retrocecal appendicitis not infrequently causes hematuria.

Urogenital lesions, the most frequent cause of serious bleeding, may be grouped under five principal headings in the order of relative frequency: infections, neoplasms, tuberculosis, trauma from stone or other causes, nephritis. History should cover amount of blood passed—whether initially or terminally or throughout the act of voiding—pain, dysuria, or urinary frequency accompanying; loss of weight, chills and fever, and the presence of a mass; renal colic may mean a stone or blood clot passing down the ureter; pain in the back or loin usually signifies a kidney lesion; retention of urine, frequency, burning, and smarting, point to the bladder as the source of hematuria; acute vesical distress with terminal drops of blood and marked frequency, along with a febrile course might signify acute cystitis, trigonitis, or pyelonephritis.

Prostatic bleeding is very common, and to the surprise of many, the benign prostatic enlargement bleeds more often than the cancerous growth. Renal or ureteral calculi usually give colic-like pain, and blood in the urine. A bloody urine which appears initially during the voiding act usually originates from the posterior urethra, prostate, or bladder. Blood which occurs at the beginning or end of urination is usually from the bladder or prostatic urethra. When the entire urine is bloody the hemorrhage may be either renal or vesical.

Early diagnosis and prompt treatment offer the only chance of cure in malignant disease of the urinary tract. Family history may reveal that kidney disease "runs in the family," or that some member has tuberculosis.

Before one is justified in assuming the bleeding is idiopathic, one must learn by repeated examinations that there is no evidence of infection and that the pyeloureterograms and renal function are normal.

Cystoscopic examination made after a preliminary flat film and intravenous pyelograpy is usually the best way of ascertaining the cause of hematuria. In the diagnosis of tuberculosis, neoplasms, hydronephrosis and obstruction, retrograde pyelography is necessary. After cystoscopic examination, ureteral catheterization, bacteriological and sediment examination is to be made of urine from each kidney. Guinea pig inoculation is necessary if tuberculosis is suspected.

Cystoscopy should be carried out during the bleeding phase if possible. If a lesion is found in the bladder, lesions may be present also in the upper urinary tract.

Bloody urine is due to a broken or ruptured blood vessel somewhere in the urinary tract. Endeavor to locate that vessel by following a definite pattern of diagnosis and then treat the disease. Don't give penicillin, sulfa drugs, mandelic acid or some other urinary antiseptic until a diagnosis has been established.

PROCTOLOGY

Russell Buxton, M.D., *Editor,* Newport News, Va.

BENIGN POLYPS OF THE COLON AND RECTUM

Polyps in the colon and rectum arising from the mucous membrane may be pedunculated or sessile. Polypi are usually adenomatous in character and should not be confused with anal papillae, fibrosed hemorrhoids or other types of fibrous tumors which arise in the lower rectum. As reported by Swinton,[1] the incidence of polypi in the rectum and colon is 7 per cent of all persons coming to autopsy. In another series of autopsies an incidence of 9.5 per cent has been reported. The lesions are almost evenly divided between multiple and single lesions and, of more importance, 25 per cent of the patients with carcinoma of the colon or rectum had associated benign polyps.

The diagnosis of polypi presents many difficulties as there are often no symptoms referable to the tumors. Not all of the patients complain of bleeding nor do many of them complain of change in bowel habits. Many of these polypi can be detected by the use of proctoscope but those above the reach of this instrument almost defy detection as x-ray diagnosis is quite uncertain.

It is important to recognize polypi chiefly because of the fact that they can be classed as pre-malignant lesions and also because if one polypi is found in one-half the patients there are usually more. The treatment of polypi consists of destroying the polyp. If the lesion is low in the bowel it may be cauterized through the proctoscope or sigmoidoscope. Higher in the bowel, single lesions may be removed by colotomy but multiple lesions necessitate partial or complete colectomy.

1. Swinton, N. W.: Benign Polyps of the Colon and Rectum. *American Practitioner.*

Best Treatment in Cases of Acute Alcoholism

(R. V. Seliger, Baltimore, in *Geriatrics,* May-June)

The safest and quickest, almost miraculous, cure for acute alcoholism and delirium tremens is the administering of 1-2,000 c.c., by vein, of 10% dextrose in normal salt solution with 100-300,000 units of thiamin hydrochloride (Vitamin B_1) and 25 units of insulin. Phenobarbital, gr. 1, and sodium dilantin, gr. 3, are given every 2-3 hours for a period of 24-36 hours, and the intravenous injection may have to be administered three times within a 24-hour period. Heavily sugared orange juice and candy should be available in the event of mild insulin shock reactions. With acutely alcoholic patients who do not have delirium tremens, but are excited and trembly, administration of Vitamin B_1, insulin and medication as above, with bed rest and heavily sugared orange juice is usually successful.

THE DEPRESSIONS AND THEIR TREATMENT

A PAPER has been written[1] based on the theory that the basic symptoms of the depressive mental states, whether neuroses or psychoses, are largely dependent upon the impairment of either the sleep-producing organization of the body, or the waking organization. That there is a sleep-producing mechanism with a sleep center has long been established. While a waking mechanism's existence has not been demonstrated, that there are drugs which produce wakefulness, just as there are those which produce sleep, seems to indicate that there is such a center.

The sleep mechanism is greatly impaired in most neuroses and depressive states, and this is usually accompanied by somatic and mental disturbances, so that there are some individuals who are afflicted with a constant or episodic sleepiness which no amount of sleep reduces, and who improve greatly when they receive amphetamine sulfate. The main disturbances are the offspring of inability to sleep, to rest, and consequently to recuperate. The sufferer feels sleepy at bedtime, but is unable to shut off his reactions to inner and outer stimuli and wakes in a recurring cycle during the night and thinks that he has not slept at all. The final degree of dyssomnia is reached when the patient feels no sleepiness and lies awake, restless and disturbed throughout the night; some are tormented by paresthesiae until toward dawn they fall asleep for a few hours to awaken unrefreshed and deeply disturbed.

The symptoms of many of the mental disturbances are at their very worst in the morning. In the very mildest form which this dyswaking takes there is merely no ardor for anything in the morning, no appetite and a listless apathy. These slow starters do not get going until the afternoon, and by night they are at their best, often full of sparkle and zest and feeling neither sleepiness nor desire to go to bed. In the depressive mental states dreariness and zestlessness are replaced by aching limbs and a dry mouth and even nausea, vomiting and diarrhea, as well as a variety of paresthesiae, a gloom which encompasses everything, and an anxiety which finds no solace in the thought of the day to come. It is this syndrome which Myerson believes to be due in part to failure of the waking mechanism, which may be secondary to the disturbance of the sleep-producing mechanism, but which at any rate appears relevant, isolatable and treatable as a critical prt of the illness. *It is of great interest and importance that even in the normal man, this morning melancholia can be reproduced.* For many people a light nap in the middle

[1] Abraham Myerson, Boston, in *The Journal of Nervous and Mental Disease*, June, 1947.

of the day restores the feeling of energy. On the other hand, if some indulge in a long heavy afternoon sleep, they wake with energy very low. There is a sense of partial unreality. It is hard to become interested in anything or to think with concentration. There is no desire for food, and there is a tingly feeling to the limbs. Sometimes it takes hours for this state to disappear.

Such a person becomes preoccupied with the idea of sleep, fears the night because it portends the dyssomnia which will afflict him. No matter what drug he takes *at this time,* it is usually ineffective in producing refreshing and restful sleep. His life becomes centered around two periods of physical and mental disturbance, in one of which he cannot go to sleep and in the other he cannot normally awaken.

Whatever treatment is to be successful must bring tranquillity at night and energy in the morning. Consequently, the treatment of these conditions, Myerson has carried out in the past few years, has aimed first to produce adequate sleep without hangover, and second to arouse the energies of the body in the morning. For producing sleep, Myerson relies almost exclusively and with no apology on drugs. He has found the commonly used newer barbiturates of little value in these severe nervous states, "whatever value they may have in the minor disturbances, as in the case of the semi-normal population which makes up the larger part of this country at this time, and perhaps at any time."

His favorite prescription is:

Natr. bromid., oz. ½ to 1
Natr. barbital, drachms 3 to 5
Syr. auranti, oz. 1
Aq. q.s. ad, oz. 8

The amount of barbiturate will vary according to the results observed. It should be given at least one or two hours before bedtime. The ensuing sleep is profound, usually lasts through the night and there is less hangover than with any other combination, and this is easily dissipated. If the patient readily falls asleep, but awakes too early and is deeply depressed, the drugs are administered at bedtime to insure his staying asleep and to improve the quality of rest. In the severe depressive states an excessive amount of drugs at bedtime may not produce sleep, whereas in the same individual, when he has passed the peak of his disorder, a much smaller dosage will succeed.

Importance is attached to the fact that it is natural for mankind to go to sleep when darkness supervenes, and to partake of the excitements and pleasures which the electric light favors is regarded as unwholesome. In the treatment of dyssomnia, it is esential to forbid excitement and stimulation at night. The patient is to perform all toilet procedures shortly after the evening meal, to get into the night clothes early, so that when the first sleepiness comes, it is not dissipated by the activities preparatory to going to bed.

The waking process is secondary, though still important. To awaken energy, to dissipate any hangover, and to bring about appetite for food are the chief goals aimed at. Dexedrine and benzedrine are the best of these awakening drugs, in amounts as individual as the amounts of bromide and barbital necessary to produce sleep. Five milligrams suffices for some, is too much for others, too little for most. In some of these cases, it is better to give a good jolting dose in the morning and none the rest of the day; in others 2.5 to 5 mg. on arising, and repeated two or three hours later. In combination with sodium amytal, 0.5 to 1 grain doses, these drugs produce the desired *morning tranquillity.*

Greatly overvalued is the cold shower bath, and the rub-down. For appetite advise the ingestion of water on arising to awaken peristalsis and juice secretion, the morning meal being delayed one to two hours. In some cases combinations of wine, neurophosphates and strychnia have a good effect on the appetite. Occasionally of value is a short walk.

A gradual increase in exertion and reorganization of activity is advised. Myerson does not probe deeply into the patient's past, "just as an automobile mechnic is not fundmentally concerned in the way an automobile is injured, but gives his real attention to the kind and extent of the damage." There is a psychologic power to the firm and dogmatic approach and the brushing aside of doubt and fear.

Whenever confronted with a severe depression in which this sleeplessness at night is linked with the failure to awake until late in the day, or even where the waking up, so to speak, does not take place at all, and where there is not the immediate threat of suicide, it is his present practice to utilize this simple technique for at least a month before resorting to the more drastic electric shock treatment. Family and patient are given instructions that for a month they are to consult nobody and to do nothing much beyond what he has indicated, though, secretly, the family is told that if a change for the worse takes place to get into immediate contact.

Psychotherapy has seemed unavailing in these cases in so far as the cure of the illness itself is concerned, except that psychotherapy which flows from the authority and the personal power of the physician. Later on, when recovery is taking place, seek to unearth whatever factors may be the sources of strain and conflict in the individual's life or within himself. This Myerson calls *the search for the ordeal.* This quest is mainly for the

purpose of preventing future attacks, though there is no proof that any psychotherapeutics avails to bring about this highly prized prophylactic goal.

CUTTER LABORATORIES ACTS PROMPTLY AND IN A HIGH-MINDED MANNER

In the first few days of May Cutter Laboratories, of Berkeley, California, learned that a certain lot of that firm's Dextrose in Saline Solution had been discovered to be contaminated. Immediately Cutter Laboratories requested all hospitals to return all Cutter 5 per cent Dextrose in Saline Solution which they might have on hand, regardless of serial number; and sent to all medical publications, for immediate release, an airmail message from which we quote:

"The history of contaminated Lot CM-8164 Cutter's 5 per cent Dextrose in Saline Solution is as follows: Before release it had passed chemical, bacteriological, and physiological tests. When the question of possible contamination arose, samples of this lot retained as a standard procedure were again tested and again passed, as did flasks retested from cases still unshipped from the Laboratories' Berkeley warehouse. However, some of the flasks from this lot returned from hospitals proved heavily contaminated although others were clear and proved safe on retest."

On May 6th, a telegram, quoted in part:

"Statement from Dr. R. K. Cutter, President Cutter Laboratories: 'Contamination has been found in another and entirely different glucose solution, Dextrose 10 per cent in Ringers. The company is coöperating with the Food and Drug Administration, and is requesting the assistance of health departments throughout the country, in immediately recalling from hospitals Cutter's entire line of Dextrose and other solutions for mass intravenous injection.'"

"The reason for this contamination is still unknown, and until they have the positive answer, Cutter feels this is the only step that can be taken in the interest of public safety. In the meantime, arrangements are being made to supply hospitals with solutions of other manufacturers."

By prompt and vigorous action this old, reliable firm kept at a minimum the injuries from this unfortunate occurrence, for which, so far as is known, no blame is attached to Cutter.

The firm of Cutter Laboratories was started by a pharmacist whose father and grandfather before him were physicians; and it is still headed by a physician. In a half-century of production of biologicals and other preparations for parenteral therapy, an enviable record for skill and reliability has been built up and maintained.

The manner of meeting the situation created by this development can not fail to make new friends for Cutter Laboratories.

Lung Cancer Nearly as Common as Stomach Cancer

Persons having cancer of the lung have a good chance of recovering if the malady is diagnosed early and promptly treated by surgery.[1]

The article under consideration goes on to say that cancer of the lung is of almost as frequent occurrence as cancer of the stomach, and we all know that cancer of the stomach causes more deaths than does cancer of any other organ.

No evidence is adduced to show that the use of tobacco is a factor in the causation. We are cautioned that the early signs of lung cancer may be so commonplace as not to cause serious interest on the part of either the patient or his physician. A cough comes on and hangs on. This is the first symptom in over half of all the cases, and is manifested sooner or later in 90 per cent of all cases. Blood is shown in the sputum in half the cases. Loss of weight, pain in the chest, wheezing and swelling of the fingers and toes are other frequent symptoms.

X-ray screening is considered the only practical way to detect lung cancer in the apparently well.

Certainly few doctors think of cancer of the lung as a disease condition of common occurrence. It behooves us to be more on the lookout for it.

1. E. D. Churchill, Boston, in *Jour. A. M. A.*, May 29th.

THE SPAN OF LIFE OF THE RED BLOOD CELL

(Winifred Ashby, Washington, in *Blood*, May)

The question of the life span of the red blood cell has been an open one for the past 100 years. The evidence derived from three separate approaches leads to the conclusion that the life span of the red cell is 110 to 130 days under favorable conditions.

This does not mean, however, that for practical purposes a transfusion last for that length of time. The blood transfused consists of cells of all ages up to the full span of four months, so half of them have passed half their life span when they are transfused.

In 16 cases of pernicious anemia the average life of the red cell was 110 days; on the other hand in 10 cases of malignant tumor the average was 52 days. In seven cases of jaundice the average was 46 days. In a case of aplastic anemia with smallpox studied for 26 days the curve of the count of transfused corpuscles would have come to base in 41 days, while a case of splenic anemia in an infant by this method showed exhaustion of benefit of a first transfusion in 44 days, and of a second in 55 days. In a total of 24 cases, in which hyperthyroidism and severe chronic infection were included, the average of the apparent length of life of the transfused blood was 52 days. In five instances in which death was imminent the life of the transfused cell was shorter.

It would seem, then, that we will have to regard the erythrocyte not as an entity, but as an integral part of the organism. The red cell, both the compatible transfused cell and that produced in the body, probably is capable of undergoing repair; and it is by virtue of its capacity to

repair itself that it survives the buffeting of the circulation. In a body in which the anabolic processes are going on in great excess of the catabolic, as in the terminal stages of disease, or a malignant tumor, one would expect the red cell to suffer with other body tissues and its life in the blood stream to be shortened.

NEWS

Medical College of Virginia

Eighty-six seniors were graduated from the school of medicine of the Medical College of Virginia, Richmond, in its 111th Commencement program on June 8th. In addition, 112 students received their degrees from the college in dentistry, pharmacy, and nursing. For the time time graduates in the school of physical therapy participated in the regular Commencement exercises. There were forty students from this school who were awarded their diplomas.

The total number of 238 graduates from the Medical College of Virginia represented sixteen states, the District of Columbia, and forty-two of the one hundred counties in Virginia.

The Medical College of Virginia also conferred upon Dr. Edward Jerald Van Liere, dean of the school of medicine, University of West Virginia, the degree of Doctor of Letters. Honorable Millard F. Caldwell, Governor of Florida, delivered the Commencement address.

A total of $352,000 has been received in gifts by the College during the current fiscal year, President Sanger reports to the annual meeting of the Board of Visitors.

Robert T. Barton, Jr., was elected to represent the Board on the Richmond Area University Center Council, succeeding Dr. Douglas VanderHoof.

Officers of the Board re-elected are: Dr. Stuart McGuire, chairman; Mr. Barton, vice-chairman, and J. R. McCauley, secretary-treasurer.

Named to the executive committee were Dr. VanderHoof, chairman, and Mr. Barton, Samuel M. Bemiss, Eppa Hunton, IV, Lewis Larus, Hugh Leach, Dr. Stuart McGuire, William H. Schwarzschild and Dr. John Bell Williams.

Dr. Robert J. Wilkinson, of Huntington, W. Va., was named president of the Alumni Association, succeeding Dr. Harry Lee Claud, of Washington. Dr. Alan J. Chencry, of Washington, was chosen president-elect for next year. Other officers elected were: Dr. Powell G. Fox, of Raleigh, N. C., who succeeds Dr. Donald S. Daniel, of Richmond, as first vice-president; Dr. G. A. C. Jennings, of Richmond, who succeeds Dr. Fred G. Hale, of Raleigh, as second vice-president, and H. G. Whitehead, of Richmond, who succeeds Roland T. Scott, of Richmond, as third vice-president.

Re-elected were Mrs. Sabra S. Sadler, fourth vice-president; Dr. W. Henry Street, secretary, and Dr. Harvey B. Haag, treasurer—all of Richmond.

New members of the board of trustees are Dr. Waverly R. Payne, Newport News; Dr. Donald S. David, Richmond; Dr. Alan F. Kreglow, Washington. Dr. James H. Smith, Richmond, was re-elected.

University of Virginia Medical School

On April 22nd, the Postgraduate program for House Officers presented as guest speaker Mr. George Fairlamb of the General Hospital Service, New York City. Mr. Fairlamb's subject was "Demonstration on Oxygen Therapy Equipment."

The tenth biennial award of the John Horsley Memorial Prize in Medicine was made on April 28th. The award consists of a certificate and a prize of $600. The prize was founded in 1927 by Dr. J. Shelton Horsley of Richmond in memory of his father. The winner of this year's award was Dr. James Workman Culbertson, class of 1940, for his research on the Effect of Various Types of Sympathectomy Upon Vasopressor Responses in Hypertensive Patients.

The Annual Meeting of the Westchester Surgical Society was held April 25th-27th. Members of the Surgical Staff presided over a series of presentations by members of the University Hospital and Medical School Staff.

Dr. Otto Loewi, Research Professor of Pharmacology at New York University College of Medicine, gave a series of lectures here May 17th-19th. Among his subjects were The Transmission of Nervous Impulses, The Control of Internal Secretions, and the Relation of Value and Effect of Works of Fine Art.

Dr. John Riddervold, Chief of Surgery at the hospital at Sauda, Norway, visited the University on May 17th-18th. Dr. Riddervold came to this country recently for a study visit to various medical schools in the country.

On May 27th, Alpha Omega Alpha, National Honorary Medical Fraternity, presented as guest speaker Dr. Austin M. Brues of the Argonne National Laboratory. Dr. Brues spoke to the faculty and student body on The Toxicity and Medical Usefulness of Radioactive Materials.

Dr. S. A. Vest, Professor of Urology, was a guest speaker at a meeting of the American Urological Association at Boston on May 17th. He spoke on The Use of Caronamide.

Dr. Andrew Hart spoke to the Norfolk County Medical Society on Psychosomatic Disease, at a meeting held May 26th.

On June 3d, Dr. Oscar Swineford addressed the Guilford County (N. C.) Medical Society on The Use of Drugs in Allergy.

Dr. Samuel Doswald Sturkie (Univ. of Ga., 1932) has been appointed Associate Professor of Preventive Medicine, to fill the vacancy created by the resignation of Dr. Thomas Shepherd Englar. This appointment will be effective July 1st.

Duke University School of Medicine

Dr. Ivan Brown, of the Duke School of Medicine, has been appointed temporary assistant National Medical and Technical Director of the National Blood Bank program of the American Red Cross. Dr. Brown is one of 16 young doctors in America recently chosen to receive a $25,000 cash award from the Markle Foundation, the purpose of the grant being to foster training and research in cancer, heart disease, infantile paralysis and other diseases.

The Carteret County Medical Society held its regular monthly dinner meeting at the Morehead City Hospital, Monday night, May 10th, with the hospital as host, Dr. J. W. Morris, President of the Society, presiding.

The meeting was given over largely to a discussion of the Blue Cross Hospital Saving Plan. The plan met the general approval of the society with the exception that there is no allowance for medical care of hospital patients, while surgical care is covered. Dr. Morris explained that an effort is now being made to include medical fee coverage in the membership contract. It was also the sentiment of the society that there should be no such thing as two degrees of coverage; that there should be a single policy which would include complete coverage. Some of the medical men mildly suggested that perhaps the Board of Trustees of the Hospital Savings Association was weighted too heavily with surgeons.—Reported by: N. Thomas Ennett, M.D.

Dr. Isaac M. Taylor has been awarded a National Research Council fellowship in the Medical Sciences for a period of one year beginning July 1st. This research work is concerned with bio-chemistry under the direction of Dr. A. Baird Hastings at Harvard Medical School.

Dr. Taylor, who is now in residence at Harvard, is a grandson of the late Dr. Isaac M. Taylor, founder of Broadoaks Sanitarium, Morganton, N. C. He is also the nephew of Dr. and Mrs. J. W. Vernon, of Morganton, in whose home he was reared.

Dr. Lester A. Crowell, Sr., of Lincolnton, N. C., attended in Baltimore on June 4th the commencement of the Medical School of the University of Maryland, from which he was graduated in the class of 1892.

Dr. R. E. Fox, until recently with the State Board of Health in Raleigh, has accepted the position of health officer for Stanly County, effective July 1st.

MARRIED

Miss Anna Doris Shore, of Winston-Salem, and Dr. William Henry Boyce, Jr., of Ansonville, were married June 5th, at Calvary Moravian Church, Winston-Salem.

The bride, a graduate of Salem College and Katharine Gibbs School of New York, has been a secretary at Bowman Gray School of Medicine.

The bridegroom, a graduate of Davidson College and Vanderbilt University School of Medicine, served in the Army Medical Corps and is now an interne at New York Hospital in New York City.

Miss Jane Carolyn Blalock, of Emporia, Va., and Dr. Thomas Stacy Lloyd, Jr., of Richmond, were married June 9th.

Dr. Roy A. Edwards, Jr., of Huntington, W. Va., was best man. The ushers were Dr. John N. Gordon, of Richmond, Dr. Arthur K. Black, of Bowman, S. C., Dr. John L. Pitts, Jr., of Roanoke, and Dr. William A. Niermann, of Huntington, W. Va.

After a trip Dr. and Mrs. Lloyd will make their home in New Orleans.

Dr. Lillian Irene McCain, of Southern Pines, and Daniel Miles MacFarland, of Brevard, were married on June 9th. The bride is the daughter of Mrs. Sadie McBrayer McCain and the late Dr. Paul P. McCain, for many years Medical Director of North Carolina's tuberculosis hospitals.

Dr. William Harrison Higgins, Jr., and Miss Emily Armistead Peyton, both of Richmond, were married on May 29th.

DIED

Dr. Andrew Blair, a prominent Charlotte physician for 23 years, died suddenly at the Presbyterian Hospital the afternoon of June 3d, after a heart attack. He had left his office a short time before to visit a patient in the hospital and suffered the attack shortly after his arrival there.

Dr. Blair had been active in Charlotte's medical profession since he came to this city in 1925 directly after completing his interneship in Cleveland, Ohio. He was one of the city's busiest doctors and had a tremendous practice. He was chief of staff of the Presbyterian Hospital and had held this position in various other years. He had also been president of the Mecklenburg County Medical Society, was a member of the American Board of Internal Medicine, a member of the Mecklenburg County and North Carolina Medical Societies, a member of the American Medical Association, of the American College of Physicians, of the Tri-State Medical Association, and of the Southern Medical Association.

He was active a few years ago in setting up the plan whereby students of the Presbyterian Hospital's School of Nursing might study at Queens College under a co-operative plan and at the end of five years of training in the two institutions receive a Bachelor of Science degree as well as the degree of Registered Nurse. He had been greatly interested in the hospital's School of Nursing and served as an instructor in the school.

He was born at Carlisle, Pa., and graduated from Dickinson College and the University of Pennsylvania Medical School with honors. He was a veteran of the first World War and was active in organizing Mecklenburg County's Selective Service Board in the recent war, giving his services to this and other work without consideration of himself or the time involved.

Dr. Charles Frederick Williams died suddenly at his home in Columbia, S. C., on June 3d. At work in his garden, he complained of feeling unwell; within a few moments after he entered his home and had lain down he was dead. Because of impaired health Dr. Williams retired a few years ago from the superintendency of the State Hospital at Columbia in which he rendered splendid service as a medical administrator for many years. And prior to that service he had been a state health official in South Carolina. In his early medical career he had service in the Medical Corps of the United States Army.

Dr. Williams, 72, was a graduate in medicine of the University of Maryland in the class of 1899. A native of York County, S. C., he was known and appreciated throughout his state and beyond for his modernizing activities in the State Hospital, one of the oldest mental hospitals in the United States.

Dr. Williams served as President of the American Psychiatric Association in 1935.

Dr. Zenobia G. Gilpin, 44, a widely known Richmond physician and secretary of the St. Philip Postgraduate Clinic since its beginning in 1936, died early June 11th at her home after an illness of several weeks.

Dr. Gilpin was graduated from Howard University in 1924 and then interned at the Freedman's Hospital in Washington. She also did postgraduate work at the Long Island General Hospital, New York. Since 1926 she had practiced her profession in Richmond.

She was chief of obstetrical service of the Richmond Community Hospital and served on the City Lunacy Commission. She was a member of the board of directors of the Memorial Guidance Clinic, a physician at the Gilpin Court Clinic and the City Home.

Dr. W. T. Sanger, president of the Medical College of Virginia, commented: "Richmond and Virginia have lost a truly great citizen. No one has done more for race relationships than has Dr. Gilpin."

Dr. Wm. A. Ruark, 50, a graduate of Jefferson in 1924, died suddenly June 1st, at his home at Myrtle Beach, S. C.

BOOKS

MODERN TRENDS IN DERMATOLOGY, edited by R. M. B. MacKenna, M.A., M.D. (Camb.), F.R.C.P. (Lond.), Physician in Charge, Dermatological Department, and Lecturer in Dermatology, St. Bartholomew's Hospital; Physician to St. John's Hospital for Diseases of the Skin, London. *Paul B. Hoeber, Inc.*, 49 East 33rd St., New York City. 1948. $8.50.

The plan of the book is based on the trend whereby the clinician, while keeping abreast of advances in his own province endeavors to assimilate knowledge relating to dermatology obtained by investigations of workers in other branches of science and of medicine, and to apply these new discoveries in his practice. Necessarily, then, in this book are chapters written by men whose interest was not primarily dermatological. Two of the most important of these trends are considered to be those concerning the prevention of skin diseases and the rehabilitation of those who have suffered from these diseases. Emphasis is placed on the disease conditions commonly encountered rather than on the great rarities of dermatologic practice.

Striking chapter heads include the dermatology of yesterday, today and tomorrow; dermatology and nutrition; biochemistry of the skin; the influence of the sex hormone; the autogenous disinfection of the skin; and psychological aspects of dermatology.

Of the score and more authors all are British with the exception of Dr. John H. Stokes and Dr. Herman Beerman, and Dr. Louis Schwartz. These eminent specialists have compiled a book of unique interest and usefulness which will prove of tremendous interest and value to all who have much to do with the treatment of disease conditions of the skin.

SURGICAL APPLIED ANATOMY, by Sir Frederick Treves. Bart.. Eleventh edition, revised by Lambert Rogers, M.Sc., F.R.C.S., F.A.C.S., Professor of Surgery, University of Wales; Honorary Surgeon and Director of the Surgical Unit, Cardiff Royal Infirmary; Member of the Court of Examiners, Royal College of Surgeons of England. Illustrated with 192 figures, including 66 in colour. *Lea and Febiger*, 600 W. Washington Sq., Philadelphia. 1947. $6.00.

Most likely this is the oldest book on surgical anatomy now in use. The first edition came out in 1883 and subsequent editions have faithfully recorded the advances made in the intervals. A valuable feature is the giving of reasons wherever possible. The illustrations are well conceived and well executed to supplement the teaching of the text.

ATLAS OF PLASTIC SURGERY, by Morton I. Berson, M.D., Formerly Director of the Department of Plastic and Reconstruction Surgery, The Downtown Hospital and Pan-American Clinic, New York City. *Grune & Strat-*

ton, Inc., 381 Fourth Ave., New York 16. 1948. $15.00.

The two world wars and the enormous increase in the use of automobiles and other machines have in the past three or four decades multiplied the needs for plastic surgery many fold. Surgery has met this need remarkably efficiently. This volume covers the field in an admirable way. The text is lucid and the illustrations supplement the text in a way to convey the taching as satisfactorily as it could possibly be done by a textbook. Every doctor of medicine called upon to advise or to treat deformities, congenital or traumatic, should have a copy of of this book.

A HISTORY OF THE HEART AND THE CIRCULATION, by Frederick A. Willius, M.D., M.S., in Med., Senior Consultant in Cardiology, Mayo Clinic; Professor of Medicine, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; and Thomas J. Dry, M.A., M.B., CH.B., M.S. in Med., Consultant, Section on Cardiology, Mayo Clinic; Associate Professor of Medicine, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. 456 pages, illustrated. *W. B. Saunders Company*, Philadelphia and London. 1948. $8.

The first section makes a chronologic presentation of knowledge of the heart and circulation from 5,000 B. C. to our own year of 1925. The second section is devoted to special biographies—of Hippocrates, of Servetus, of Harvey, of Auenbrugger, of Withering, of Röntgen, of Einthoven, of MacKenzie, of Osler, of Lewis—and of a great many others, some not so generally known. In section three we have a presentation of data chronologically according to subjects.

A wealth of photographs are reproduced.

The authors have taken cognizance of the greater interest in recent years in the cultural aspects of medicine. In undertaking this work they were mindful of the responsibility they were assuming, and so they were all through the performance of the task. The result is such as to delight the more critical and requiring reader and to please those whose tastes ordinarily are rather limited to the utilitarian aspects.

TREATMENT OF HEART DISEASE, by William A. Brams, M.S., M.D., Ph.D., Associate Professor of Medicine, Northwestern University Medical School, and Attending Physician, Michael Reese Hospital, Chicago. New, first edition. 195 pages, with 11 figures. *W. B. Saunders Company*, Philadelphia and London. 1948. $3.50.

The author has been convinced by his experience over many years of clinical teaching, private practice and consultation work that the practitioner and the medical student experience a great need for a practical guide in the treatment of heart disease. This book is put out to prvoide such a guide. The author realizes that some may call the book dogmatic. This reviewer does not consider it so, but regards the setting down of the one method that the author has found most reliable as far preferable to the general habit of stating that a half dozen or so methods "may be tried," and far

less confusing. The book meets the purpose of the author in a very praiseworthy manner and is heartily endorsed.

MODERN CLINICAL PSYCHIATRY, by Arthur P. Noyes, M.D., Superintendent, Norristown State Hospital, Norristown, Pa. Third edition. 525 pages. *W. B. Saunders Company,* Philadelphia and London. 1948. $6.00.

This volume is made up of a series of lectures delivered to senior medical students somewhat modified for appearance on the printed page for more varied consumption. In order to make the approach to the psychobiological concept of human behavior a broad one a summary of its basis and evolution has been included.

In chapter one the author deals with the development and purpose of the mind and this chapter is the basis of the whole work. Especially attractive headings are: Psychic Energy in the Dynamics of Behavior, Mental Mechanisms and Motives, Alcoholic Psychoses, Traumatic Mental Disorder, Psychoses With Disturbances of Circulation, Senile Psychoses, Psychiatry and General Medicine, Child Psychiatry.

Up to a dozen years ago there was little attempt to enlist the active interest of physicians generally in matters psychiatric. Within the last four or five years we have been offered a multitude of such works, most of them of a very high order. Noyes' book is one of the best.

CLINICAL OBSERVATIONS ON THE USE OF E. C. 110, A NEW AGENT FOR THE TREATMENT OF HEADACHE

(B. T. Horton & J. L. Reynolds, Rochester, in *Proc. Mayo Clinic,* Mar. 3rd)

E. C. 110 contains one part ergotamine tartrate and 100 parts caffeine; it is manufactured by the Sandoz Chemical Company. Enteric-coated tablets contained one mg. of ergotamine tartrate and 100 mg. of caffeine. Fifty-five patients who came because of headache were treated with E. C. 110, average dose two tablets at the onset of headache. Toxic symptoms were noted in only three of the cases, and in these two to four tablets were administered. These symptoms consisted of slight giddiness, nausea and abdominal distress. One man took six tablets daily for 20 days, had severe gastroenteritis, muscle cramps and urinary retention.

By migraine we mean periodic headache, usually hemicranial, with nausea, vomiting, scotomata and a family history of similar headaches; by histaminic cephalgia, unilateral headache which usually begins late, lasts less than an hour, commences and often terminates suddenly, tends to awaken the patient one to two hours after he has gone to sleep and is frequently eased by the patient sitting up or standing erect. It is associated with profuse watering and congestion of the eye, rhinorrhea or stuffiness of the nostril, increased surface temperature and, often, swelling of the temporal vessels of the involved side of the head.

In tension headache, nervous tension is an important component of the syndrome. Headache is not caused by nervous tension, *per se,* which gives rise to a state of hypertonicity but by the hypotonicity which follows the hypertonicity. It may be localized or generalized. The same principles apply as in the migraine problem.

Arteriosclerotic headache is continuous dull pain in the head, or occasionally a stabbing, sharply localized headache.

Various types of atypical face pain not characteristic of a major neuralgia usually occur daily and most of these patients have tried every possible type of medical treatment.

Of the 55 patients who were treated with E. C. 110, 31 (56%) obtained excellent results, 13 (24%) obtained some relief and 11 (20%) did not obtain any relief at all. In one case, serious toxic symptoms developed after the prolonged use of large doses.

Practically all of the patients in this series had previously used ergotamine tartrate to abort or relieve headache and all of them stated that E. C. 110 was more effective than ergotamine used alone.

Other combinations of ergotamine tartrate and caffeine are being investigated. The results of this investigation will be reported at a later date.

Styes: The Role of Nutrition in Etiology and Treatment

(Wm. M. Cockrum *et al.,* Evansville, in *Jl. Indiana Med. Assn.,*

The following dietary regimen is suggested:

1. No food between meals, except fruit.
2. Limit milk intake to one pint daily.
3. A child should not be expected to take three large meals daily. The main course of two meals should consist of adequate protein—meat, eggs or cheese. Cereals should be prohibited or given only after the consumption of an egg or portion of meat.
4. Desserts are to be prohibited, so that the child will not "save room" for them.

The first approach to the therapy of styes and kindred lid infections is proper protein intake. Mineral and vitamin administration are adjunctive measures in therapy and prophylaxis.

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JAMES M. NORTHINGTON, M.D., Editor

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Modern Psychiatric Therapy

Orin R. Yost, M.D., Orangeburg, South Carolina

PSYCHIATRY, in the minds of many physicians, is still a mystery. It has many misconceptions. I presume no branch of medicine has run so high and wide as psychiatry, and the resultant confusion regarding it has been great.

"Before medicine there was magic. Ancient man had an easy explanation for everything, including mental illness and mental deficiency. If the gods hadn't done it, the demons had. The treatment was to drive out the demon."

"A medical view of mental illness was first expressed by Hippocrates about 400 B. C. He used diet control, masage, baths and exercise for treatment, with blood-letting and purging. But during the Middle Ages we saw a retreat to the old demon-view of mental illness which led to the famous witchcraft mania of the Sixteenth and Seventeenth Centuries. During this time over 100,000 persons—many of them mentally ill—were executed as witches. Through the whole period up to the late seventeen hundreds, the mentally ill were hanged, imprisoned, tortured and persecuted as agents of satan; they were chained in kennels and cages like wild beasts; they were jailed and flogged like criminals; they were left to wander about naked and starved. But just before the end of the Eighteenth Century men in all walks of life were beginning to break the chains that bound them. Humanity was ready to rise again. Special institutions for mental cases were established. In 1752 Pennsylvania Hospital was founded in Philadelphia. Occupational therapy was provided. The first exclusive hospital for mentally ill in America was opened by the Colony of Virginia, at Williamsburg, in 1773. There were mental hospitals in nine States before 1825.

Dorothea Dix, conducting a Sunday School class in a Massachusetts jail in 1841, observed that persons with mental disease were confined there, beaten and neglected. Her experience led to the founding or enlarging of 32 mental hospitals before her death in 1847.

The American Psychiatric Association was founded in 1844. James Braid used hypnotism as a therapy in the 1850s.

Medical discoveries in neurology, endocrinology and related fields continued to shed new light on the nature of mental disorders. Emil Kraepelin presented the first organized system of psychiatry in 1896.

In 1900, when Clifford Beers was forced to spend three years in a mental hospital, he found conditions such and was so mistreated that he wrote on the walls of his room: "God bless our home, which is hell." He let the world know his experience in a book, *A Mind That Found Itself,* and then went on and founded the National Committee for Mental Hygiene.

Since 1900 many advances in therapy have been made—*e.g.*: fever therapy in 1917; insulin shock and metrazol treatment in 1933; and electric shock treatment in 1937. Yet mental disorders constitute far the biggest medical problem in all America today. Each year mental illness sends a quarter of a million patients to our hospitals. It reaches into one family out of every five, brings misery and

Presented to the Tri-State Medical Association of the Carolinas and Virginia, meeting at Charleston, February 9th and 10th.

sufferings to hundreds of thousands. One out of ten persons in this country is in need of treatment for some emotional or mental disorder.

Each year mental disorders cost us almost a billion dollars in lost earnings alone, yet we spend more money to develop high octane gas than to discover effective cures for mental diseases. We cannot afford to let these conditions continue. You owe it to yourself and to your fellow-humans to see to it that the job of prevention, treatment and research is done now.

World War II brought to acute focus the high incidence of mental ill health throughout this country. Many an Army medical officer for the first time was brought face-to-face with the importance of psychiatry, and many lost their feeling of antagonism toward psychiatry. Their experience in the service with the treatment of "combat fatigue," "combat exhaustion," etc., has shown them the potentialities of modern psychiatric treatment.

Younger physicians are desiring more training and are getting away from the idea that you can separate the body from the mind. We know that today psychiatry no longer concerns itself solely with the grosser mental disturbances, but to a greater extent it concerns itself with the vast range of everyday medical problems that present themselves to the practitioner, especially the psychosomatic disorders and the neuroses.

It has been only in the past few years that there has been any real effort made in the investigation of the relationship between what we have been accustomed to call the physical aspects and the psychological aspects of disease. Every physician sees individuals whose diseases show a combination of physical and emotional problems, such as hypertension, asthma, peptic ulcer, colitis and menstrual disorders, in which the emotional state may be the real cause of the disorder. He also sees the patient with well-defined organic illness whose emotions delay response to the usual medical regimen.

The specialty of psychiatry has emphasized the importance of the knowing of a human being as a whole, and the relationship of psychiatry to practice of medicine, pediatrics, dermatology and surgery, but it has failed in its task of educating the public and the general practitioner because psychiatry often talks in a strange, incomprehensible language. On the other hand, the general practitioner lacks confidence in the evaluation and treatment of emotional factors because he feels the psychiatric technique is non-specific. These ideas must be changed. There is no such thing as differentiating organic from functional disease. There are not enough psychiatrists to meet these emotional problems. The general practitioners are in a better position to help emotionally sick human beings. The old-time family doctor was successful in treating his patients because he knew them as people and he learned to treat them and not the disease.

Psychiatric treatment like surgical treatment is most effective when carried out early, promptly and skillfully. The longer the delay the less optimistic is the prognosis. Now, let us pause for a moment and see just what constitutes psychiatric treatment when the above factors have been taken into consideration.

For simplicity and convenience psychiatric therapy should be divided into prophylactic and specific.

Prophylaxis is one of our best means of vaccinating people against nervous break-downs, just as we vaccinate against diphtheria, smallpox, whooping cough, etc. We know that little progress was made in diseases such as typhoid, smallpox, etc., until the problems were approached from a preventive standpoint.

In order that good prevention programs may be carried out successfully, the masses of our people must be informed of these preventive measures and the results that can be obtained. Only in this way can a good sound Mental Hygiene program be carried out successfully. It should be the aim of every community in the State to arrange and carry out a good sound Mental Hygiene program. But many communities are lacking in resources to carry out these programs. Mental-health needs are not yet recognized by the average citizen. We need to know more about prevention. We need to understand that a large percentage of the mentally-ill can be treated and returned to society as effective persons. If citizens of each State were aware of the possibilities and insisted that these be realized, the problem would soon be solved. They do not know what to expect when preventive measures are applied. Mental Hygiene should be applied in the home, in the school, in the industries, reformatories, courts, etc. More and better child-guidance facilities are urgently needed for socially handicapped children, especially those with personality defects, who come to the attention of various Social Agencies and Courts.

In order to carry out an effective Mental Hygiene program all the resources available in the community must be called upon to coöperate in the treatment. Each organization must contribute its experience, such as medical, psychiatric, psychologic, legal, educational and religious.

We are in need of the establishment of clinics to stop the futile and hopeless cycle of chronic alcoholics from police station to court, to correctional institution, and back to their homes, merely to repeat the process in a few days, weeks or months. In the United States there are 600,000 chronic alcoholics, 2,400,000 excessive drinkers. Excessive

drinking, plus disease, crime and poverty, resulting directly from use of alcohol, cost the country $750,000,000 annually. The time has come to stop treating alcoholics as social offenders and start treating them as sick people. We must be aware of the fact that some persons have a disease, alcoholism, just as others have a disease, tuberculosis, cancer, or infantile paralysis, and that, with proper treatment, most of these alcoholically diseased persons can be restored as useful members of society. This is a medical problem and not a social one. These people should be put in hospitals and not in jails. Alcohol has always been a problem and it is on an increase. There is not a general hospital which will willingly admit alcoholics. They are messy patients and general hospitals will not give them prolonged treatment. If an alcoholic is taken into a hospital he is usually given a sobering-up process and immediately released. The fundamental problems of why he drinks and curing him are left untouched. Alcoholic clinics should be established throughout our States so that after a man is sobered up he can be given a follow-up to try to get at the root of his drinking, and remove the desire to go out on another binge when he leaves. For the care of the already-chronic alcoholics provision will have to be made in hospitals. They should not be left with the alternative of sleeping on a prison cot or a street corner. We have got to have places where psychotic alcoholics can be treated against their will until they are able to take their places back in society.

I have been impressed more and more in my work by the lack of interest shown by our urologists and gynecologists in the psychological and emotional aspects of their patients. We know that women have many symptoms that are on an emotional basis. Back pain, frigidity, dysmenorrhea, amenorrhea, menopausal discomforts and cancerphobia have led to mutilating operations without due consideration being paid to the emotional aspect of their symptoms. Thousands of women between the ages of 30 and 60 are being subjected to hysterectomy. The pathologists are reporting "normal" in one out of three in some surveys. Many patients that are not helped, many of them made worse, come to us in a marked stage of hysteria, premature menopause and actual psychosis. Certainly these observations should make us think more about the preventive aspects of medicine.

Specific Treatment

The patient who is having mental difficulties confronts the physician with the important decision, whether this patient can be properly treated at home. In most cases it is difficult to recover from a nervous disease in the midst of home and business tension. Most such patients must be sent on a trip, or hospitalized either in a private institution or State institution. In either case, he must be completely *isolated from his family*. If he is hospitalized absolutely *no visiting* should be allowed until the patient has recovered from his mental illness. This is a universal rule which should be explained carefully to patient and relatives. Most of them are not inclined to accept this advice freely. (Relatives often require more time, care and treatment than the patients.)

Such isolation of patient hastens his recovery and allows the physician more time with his patient. Psychoanalysis is claimed by men who follow this idea to be an effective method of treatment. But it is the opinion of many men that any treatment that lasts from one year to several years cannot be worth while. Not only is it time-consuming but costly.

Psychotherapy is one of our simpler methods of treatment. By psychotherapy we try to relieve the patient from his anxiety by giving him insight into his condition. This form of therapy can be applied in many ways.

(a) Let him "get a load off his chest" by expressing himself freely. The physician must be a good listener.
(b) Give him reassurance in a simple way.
(c) Change his ways of living by planning a balanced program of work, play, rest and exercise.

In many cases psychotherapy is more effectively carried out under partial sedation, which is a very effective method of releasing his inhibitions and freeing his acute anxieties. Sodium amytal and sodium pentathol are the sedatives of choice for use in this method. Sodium pentathol was used very freely during the second World War. Many cases that "blew-up" on the front were effectively treated by this method. One soldier that I have in mind went into a profound depression on the Cassino front when his sergeant was killed by his side. Pentathol was given and it was revealed that he had a severe repressed guilt feeling. He felt that if he had been more alert he could have saved his sergeant's life. After he had received several of these pentathol interviews, his tension, anxiety and guilt were completely removed and he was restored to normal health. It is true that military conditions were very different from those of civilian life, but not fundamentally so.

For several years a number of different shock therapies have been used in the treatment of different mental diseases with good results. Insulin, metrazol, and electric shock have been the methods of choice. The shock therapies, however, are still undergoing critical evaluation because different results are obtained according to the material used and according to the intensity of the treatment.

It was in 1935 that the medical profession was

first informed of the possibility of treating insanity by artificially-induced convulsions. Meduna observed that epileptics are seldom afflicted with dementia praecox. Working on this basis he began to treat insanity by using metrazol. His results were encouraging, but the patients were usually terrified by its use.

In Italy two workers, Cerletti and Bini, experimented by treating mental diseases by inducing convulsions with electricity. In 1938 they announced their technique. Ever since then electric shock has been used in place of metrazol because there is less fear reaction to electric shock. The response to electric shock is very much like that to an epileptic seizure. Following the seizure or treatment the mind is confused. It is believed by many that this mental confusion is necessary to a favorable outcome. However, the confusion or loss of memory gives the patient a great deal of concern. It usually passes in due time following discontinuance of the treatment. The average patient requires eight to 20 convulsions; some require many more.

The main indications for electro-shock therapy are manic-depressive psychoses, involutional states, acute catatonic episodes, depressive reactions and menopausal syndromes. A mental patient who has heart disease or high blood pressure should be treated with special caution; but often the mental symptoms cause him to exercise so violently or he is so disturbed that the exercise is harder on his heart than a series of shock treatments would be. The side-effects from the use of electric shock have seriously handicapped us in using intensive treatment in ambulatory patients, but not with hospitalized patients. Most patients ill enough to require shock treatment should be in a hospital.

Insulin shock is a very valuable form of therapy in the treatment of schizophrenia; however, it requires special equipment and a specially-trained staff, without which it is a risky procedure. Many patients vary a great deal in susceptibility and response to any given dose of insulin. It shortens the illness or increases definitely the percentage of remissions in mental diseases.

Insulin in sub-shock doses is a valuable method of sedation in acute anxiety and excitement. It is valuable, also, in the treatment of undernourished psychiatric cases and it can be used in a general hospital. It can replace sedative drugs to a large extent. Insulin is very valuable for restlessness of alcoholism and drug addiction, and to increase the appetite. Sub-shock doses of insulin are indicated when we desire to make antagonistic and negativistic patients coöperative. It is generally agreed that by the proper use of insulin-shock and electro-shock therapy in the early stages of mental illness result in improvement or recovery if the illness has been less than six months, and proving very economical, saving to the individual as well as to the State.

Prefrontal lobotomy has resulted in marked improvement or recovery in 66.2 per cent in one series of cases of schizophenia, and has been used with gratifying results in the treatment of intolerable pain due to carcinoma, tabes dorsalis, phantom limb and in the thalamic syndromes.

The value of electro-shock in schizophrenia is still questioned. Many observers are not getting sustained results. So when any one recommends electric convulsive treatments in schizophrenia, it is with the full realization that results are still limited with any of the shock methods. However, even though it is not permanent, it is a valuable symptomatic treatment in the control of acute aggressive excitable patients. It limits the use of restraint, sedation and continued hydrotherapy.

Convulsive shock therapy is of definite value in affective disorders: 80 to 90 per cent show full or social recoveries. The depressions can be cut short from four to eight treatments. In the manic phase 12 to 20 treatments may be required. In the involutional melancholia the results are as convincing as in other depressions. The results in the paranoid type are less favorable. In the psychoneuroses they can be successfully treated as far as the depression is concerned. Anxiety states and obsessive-compulsive types are relieved after two or three treatments; they are more accessible to psychotherapy.

Morphine addicts and chronic alcoholics have been relieved in some cases. Experience in epileptics is not very encouraging. It does not seem to affect the number of seizures, but does relieve their cloudy states and the psychotic characteristics.

The disappearance of pain of "phantom limbs" after electric shock treatment has been reported where medical and surgical procedures have failed.

Hazards of Therapy

The shock treatments are not without hazards or risks. The convulsions are severe enough to fracture the extremities or the vertebrae, or to cause dislocations, but these convulsions can be softened by using introcostrin if properly used.

The physiological changes produced by shock therapy are under investigation. We know that there is a temporary damage to intellectual function, but there is no evidence of permanent brain damage. We also know that there are alterations in the brain waves and chemical changes in the blood.

We are in need of more neurophysiological studies to know what takes place in cerebral physiology during these convulsions.

Conclusion

Misconception in psychiatry is due to lack of education in public and medical fields. We can

agree that psychiatry is a specialty of medicine, concerned primarily with the problems of mental health and mental disease. It has attempted to find the cause; it early devoted itself to disease prevention and finally turned to specific treatment.

At the moment the World War II has brought to acute focus the high incidence of mental ill health, and there is a danger that psychiatric progress may be hindered by being called upon to perform miracles. There is the danger that the public may react and decide that, since psychiatry cannot prevent and cure all mental disorders, it has no value and should be discarded.

We know that there is a science of human behavior; that there is a relationship between body and mind; that it is possible to understand the cause of good and bad adjustment, and that within limits, personality can be altered by a carefully planned Mental Hygiene program in our communities; that treatment can be successfully carried out if mental illness is recognized early and proper treatment instituted at once; that treatment is more effectively carried out by isolating the patient from his home. Careful choosing of a psychiatry hospital is essential. The use of psychotherapy modified by use of drugs and our various forms of sleep therapy, plus total Push System will bring results by at least giving the patient another lease on life, if not cure of his mental illness.

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Discussion, with a Paper on a Related Subject, in Next Issue.

Bismuth Therapy for Colds

(Tracy Levy, Tuscaloosa, in *Jl. Med. Assn. Ga.*, May)

W. Lloyd used sodium bismuth thioglycollate (Thio-Bismol) in the treatment of sore throat with febrile and other catarrhal symptoms involving the nose, pharynx and larynx. He used 0.1 gm. (1. c.c.) intramuscularly and found the patient improved in one hour and well in 12 to 24 hours. A second injection was rarely used. No ill effects were observed except for an occasional ache at the site of the injection.

This work was done from October, 1944, through September, 1945. The two drugs used were bismuth subsalicylate in oil, dose 1 c.c. (2 grains). Two analbis suppositories were used in each case, one in the rectum each morning for two consecutive mornings. Fifty cases were treated by injection of bismuth subsalicylate, 25 by the use of analbis suppositories. This work was conducted primarily to get grounded air-crew members back into the air as quickly as possible without the danger of otitis media. aero-otitis media, or sinusitis.

Routine therapy consisting of nose drops, argyrol, and aspirin, when combined with bismuth therapy resulted in cures from colds in an average of 60 hours in 75 cases. In an equal number of controls treated similarly, but without bismuth, an average of 144 hours were required to recover.

Bismuth by injection and suppository proved equally effective.

Sinusitis is unaffected by bismuth therapy. Bismuth therapy is effective in the treatment of tonsillitis.

Tularemia and Undulant Fever Treated With Atabrine

(D. H. Ecke, Vandalia, & D. H. Ecke, Urbana, in *Ill. Med. Jl.*, Jne)

Eight cases of tularemia (P. tularensis) and four cases (three positive and one doubtful) of undulant fever (B. abortus) have been successfully treated with atabrine dihydrochloride. Recurrence of symptoms has taken place in none of the tularemia casse, and only one recurrence of undulant fever was noted—this after an interval of nearly five years. The treatment was one 1.5 grain atabrine tablet three times daily for a total of five days.

None of the patients was able to afford streptomycin nor was the drug available in most cases. It is now a question of whether this treatment will give positive results when extensively used. It is our hope in offering this article for publication that more cases of tularemia and undulant fever will be treated with atabrine in an effort to establish the exact value of the drug as a combatant of these two pathogenes.

Rapid Penicillin Syphilotherapy on an Out-Patient Basis

(H. D. Chope & J. C. Malcolm, in *Jl. Venereal Dis. Inf.*, June)

From July through December, 1947, 437 syphilitics had been treated on an out-patient basis with penicillin in POB with and without other drugs. Not enough time has elapsed to evaluate the clinical results of this therapeutic regimen, but it has been assumed that 3,000,000 units of penicillin in POB in daily doses of 300,000 units for 10 days, plus 5 intravenous injections of mapharsen and 3 intramuscular injections of bismuth subsalicylate; or 6,000,000 units of penicillin in POB administered daily for 10 days in doses of 600,000 units represent adequate treatment.

In this series of 437 patients treated, 96.6% completed the prescribed therapy as compared with 26.6% completing therapy by weekly arsenic and bismuth injections.

Treatment reactions occurred in 16 patients (3.7%); in 5 so severe as to require discontinuing therapy, and in one with cardiovascular syphilis the reaction was fatal.

End Results of Operative Treatment of Low-Back Pain

(Edw. Parnall & Thos. Moore, Albuquerque, in *Rocky Mountain Med. Jl.*, May)

While the sanest attitude to take toward treating backaches is that of conservatism, many cases should respond to fusion. Gross anatomical defects, such as spondylolisthesis, extreme narrowing of the lumbosacral interspace and the like, should respond well to surgery. Also certain minor defects, such as a dorsal type of lumbosacral facet, when we can be sure that they really contribute to a low-back instability—with very few exceptions we operate on those cases which show some sort of lesion by x-ray examination.

The results in 43 cases of low-back pain, following low-spinal fusion, including the lumbosacral joint, are presented, with excellent results in 16, satisfactory in 20 and poor in seven.

Postoperative care included very early ambulation, beginning in most cases two days postoperatively.

The Present Status of Penicillin in the Treatment of Syphilis

J. Lamar Callaway, M. D., Durham, North Carolina
and
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From the Division of Dermatology and Syphilology, Department of Medicine, Duke University School of Medicine, Durham, N. C.

Introduction

This is to be a very brief review of some of the highlights of the status of penicillin in the treatment of syphilis as of December 1st, 1947, as reported by the Syphilis Study Section of the National Institute of Health.[1] This is not our opinion, but the opinion of this group as based upon the findings of the study of some half million cases of syphilis treated with penicillin. These cases have been collected from the group as treated by the United States Public Health Service, the National Institute of Health, and some 40 other centers selected to participate in this group study. We have only been one of these 40 groups participating in the study.

Since the report of 1943 by Mahoney, Arnold and Harris of the beneficial effect of penicillin in the treatment of early syphilis, more than half a million cases of syphilis in various stages have been studied, as treated with this antibiotic. But available data are only provisional and therapy has not been standardized. Despite this fact penicillin is, today, the principal agent employed in the treatment of syphilis.

The purpose of this report is to summarize for the practicing physician the principal facts of clinical importance regarding penicillin in syphilis.

Knowledge of the chemistry of penicillin is incomplete, however, on a basis of presently available knowledge, crystalline penicillin G is the preferred product in the treatment of syphilis of any type in man. The preferred route of therapy is the intramuscular. The oral administration of penicillin is mentioned only to be condemned. The aqueous or normal saline vehicle is preferred; however, in early syphilis penicillin in peanut-oil and beeswax has proved efficient and at the present it is the only satisfactory means of delaying the absorption of penicillin that is applicable in the therapy of syphilis.

The best available clinical experimental evidence indicates that penicillin therapy is non-toxic for man and there are no reported instances of the necessity of permanently discontinuing penicillin therapy because of a toxic reaction. However, the Jarisch-Herxheimer reaction (therapeutic shock) is common in treatment of all types of syphilis with penicillin and sometimes it is essential to discontinue the therapy for two or three days.

Today, there are no known proven instances of penicillin resistance in either experimental or clinical syphilis.

Early Syphilis (Primary and Secondary)

Treatment Schedule: Crystalline penicillin G in aqueous solution has been found to be the best penicillin preparation to use in the treatment of early syphilis. A total dose of 4.8 million units should be given over an eight-day period. Individual doses of 50,000 units each are given intramuscudarly every two hours during the day and night. This makes a total number of 96 injections which requires hospitalization except under extraordinary conditions.

Peanut-oil and beeswax has been found to be the only practical absorption-delaying vehicle for penicillin. Under certain conditions it offers the advantage of being adaptable to office or home procedure. However, it causes local discomfort and allergic reactions slightly more frequently than does the aqueous penicillin. The dosage should be six million units giving 600,000 units (2 c.c.) intramuscularly each day for 10 days.

Post-Treatment Observation for Early Syphilis: During the first year after treatment, the patient should return each month for an inspection of the skin and mucous membranes, especial attention being given to the buccal cavity and the anogenital region. A blood STS (serological test for syphilis) quantitatively titered should be done. A relapse, either clinical or serological, is most likely to occur in the fourth or ninth month post-treatment. A clinical relapse is usually preceded by a serologic relapse. A serologic relapse is represented by the return of positivity in STS reversed to negative or sustained increase in titer of a still positive STS. Seroresistance may also be apparent from the beginning of treatment. The patient should have a spinal fluid examination done routinely after the sixth month.

Indications for Retreatment During the First Year: A patient should be retreated during the first year if there has been a clinical relapse of any type whether it is infectious, mucocutaneous, ocular, supposed reinfection, neuro-recurrence, etc. If there has been a serologic relapse confirmed by two

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or three repetitions of STS (to exclude laboratory variations), the patient should be retreated. Also if there has been a development in abnormalities of the spinal fluid with asymptomatic neurosyphilis present six months or later after recent treatment the patient should be retreated. Also if there is any failure of blood STS to fall appreciably within first six months after original treatment, the patient should be retreated. However, retreatment need not be given if seropositivity persists at low titer (fluctuating) or if the trend toward seroreversal is still downward.

Prenatal and Congenital Syphilis

The Prevention of Prenatal Syphilis: Penicillin is nearly 100 per cent effective and preferable to arsenic and bismuth in the treatment of prenatal syphilis. In maternal early syphilis penicillin is effective regardless of the trimester in which it is given. The time-dosage schedule should be a total of 4.8 to 6 million units of aqueous crystalline penicillin G, given at two- to three-hour intervals, over a period of eight to 15 days. After completion of treatment the mother should be followed clinically with titered STS once a month until delivery (and preferably for one year after treatment) and at appropriate intervals thereafter. The infant should be followed for a minimum of three months by frequently repeated physical inspections, quantitatively titered serologic tests for syphilis preferably every two weeks, and x-rays of long bones taken at the first and sixth weeks of life.

Infants Born of Syphilitic Mothers: When the mother has primary or secondary syphilis the infant should have an STS at birth (either cord or venous) and every two weeks for the first two months. This should be repeated the third and fourth months of life. If the mother has latent syphilis, the infant should have an STS at birth (either cord or venous). This should be repeated at six weeks and at three and four months after delivery. Twenty per cent of the normal, nonsyphilitic infants of seropositive mothers are seropositive at birth. The serial quantitative titration of an infant's STS is essential and the positive STS in the first month is not an indication for treatment unless other evidence of congenital syphilis is present. Routine x-ray examination of the long bones at the first and sixth week is essential. If the infant is seronegative and otherwise normal at the age of four months, you can dismiss it as nonsyphilitic.

Treatment Schedule for Congenital Syphilis: In infantile congenital syphilis (in children up to two years old) crystalline penicillin G in aqueous solution should be given every two or three hours both day and night to a total dosage of 200,000 units per kilogram of body weight over a period of eight to 15 days. Penicillin in oil and beeswax is probably not as desirable in infants and young children.

Post-Treatment Observation of Congenital and/or Prenatal Syphilis: Infantile congenital syphilis should be followed the same as in adults with early acquired syphilis. If the pregnant woman has a recent infection, she should be followed during and after delivery the same as other patients with early acquired syphilis.

Neurosyphilis

Treatment Schedule: A total of 4 to 10 million units of crystalline penicillin G in aqueous solution over 7½ to 21 days is the initial course for early or late asymptomatic neurosyphilis, gumma of the brain or cord, and vascular neurosyphilis. A total of 10 to 20 million units of pencillin over a period of 12 to 20 days accompanying induced fever (unless contraindicated) is advisable for patients with neurosyphilis entailing serious threat to life or vital functions, general paresis, taboparesis, primary optic atrophy, nerve deafness in late syphilis, nonparetic syphilitic epilepsy and Erb's spinal spastic paraplegia. There are, at present, no available data for the comparison of aqueous penicillin with POB in neurosyphilis.

Symptomatic Neurosyphilis: In symptomatic neurosyphilis penicillin intramuscularly exerts prompt influence on spinal fluid abnormalities. There is some evidence that penicillin plus fever is more efficacious, but exact comparisons are not yet possible. The influence of penicillin on multiplicity of clinical manifestations of asymptomatic neurosyphilis is not readily assessed. It has been difficult to distinguish clinical improvement in the inflammatory component caused by therapy and symptoms from irreversibly degenerative tissue changes. However, in general the responses have been much better than with metal chemotherapy.

Asymptomatic Neurosyphilis: There is prompt reduction of cell count, to normal 10 to 24 weeks after treatment, which is maintained in most cases. The protein is reduced promptly and normal values are usually reached in six months. The Wassermann and colloidal tests improve more slowly. The trend toward normal in all tests depends on the duration of the infection and the degree of pretreatment abnormalities. Response is more prompt and marked in early than late asymptomatic neurosyphilis. The effect on blood STS titer, both early and late, is similar to that in arsenic-bismuth types of treatment.

Post-Treatment Observation of Neurosyphilis of Any Type: The spinal fluid should be retested every six months for two to three years, and then at yearly intervals. The cell count and quantitative estimation of protein are most important. If they fall to normal, regardless of the Wassermann or colloidal curve, the process is probably inactive and clinical relapse or progression is unlikely. A periodic neurophychiatric reëxamination, including

ocular fundi, visual acuity, visual fields, primary optic atrophy, audiometer tests, etc., should be repeated every six months for first two to three years.

Latent and Cardiovascular Syphilis

Penicillin therapy in the treatment of latent and cardiovascular syphilis has not been adequately followed either in the number of cases or length of follow-up. It will probably be many more years before there is any definite evidence on which to base an opinion of the place that penicillin should take in the treatment of latent and cardiovascular syphilis.

Retreatment of Penicillin Failures

Indications for the retreatment of penicillin failures include clinical relapse of any type, serological relapse, seroresistance, and probably patients showing persistent serpositivity (four dilution or 16 Kahn units) one year after the original course. All pregnant women should be treated if they have syphilis in relapse or of less than four years duration.

The method of treatment should be crystalline penicillin G in aqueous solution or penicillin in oil and beeswax, according to the schedules previously given, plus 600 mgms. or oxophenarsine hydrochloride in 10 intravenous doses of 60 mgms. each for a total of 19 days; and 200 mgms. of bismuth subsalicylate in oil, given every five to seven days in 10 intramuscular injections of 200 mgms. each (of the salicylate, not of bismuth metal) over a total of 50 to 70 days. The addition of arsenic and bismuth increases the risk of serious reactions, but the anticipated mortality rate is only 1 in 30,000.

1. Syphilis Study Section, National Institute of Health: The Status of Penicillin in the Treatment of Syphilis, (Dec. 1st, 1947): *J. A. M. A.*, 136:873-879, 1948.

Discussion

Dr. J. M. Northington, Charlotte: Gentlemen, we are indeed fortunate in having this excellent piece of work, which has just been, or is being, completed, presented before our Association. So many and so frequent are the changes being wrought in the treatment of syphilis with penicillin that it behooves us to keep posted on these developments from month to month. Your report is encouraging and we are very appreciative, Dr. Riley, of your bringing it to us. We appreciate your contribution for its substance, and for your clear, forceful, logical, unhesitant presentation of it. We shall anticipate, with much pleasure, the privilege of listening to you on many subsequent occasions.

Dr. Duncan Pringle, Charleston: I enjoyed Dr. Riley's paper and want to say that the treatment of infantile syphilis by the method she has outlined is being used at Roper Hospital.

Penicillin in Treatment of Syphilis
(*Jl. A. M. A.*, March 27th)

In the treatment of latent syphilis, in which the only evidence is the positive serologic test many clinicians are treating latent syphilis with the same schedules of penicillin therapy used in the treatment of early syphilis.

Penicillin is no more effective than arsenic and bismuth in reducing the quantitative titer of the test. Irrespective of method or duration of treatment, seroresistance is the rule in syphilis of more than five years' duration.

For patients with seroresistant latent syphilis, who previously have received six months of continuous metal chemotherapy or its equivalent, the use of penicillin produces no presently apparent clinical or serologic results other than occasional gain in weight.

Two Cases of Tetanus Neonatorum
(C. A. St. Hill & H. Lederer, in *Brit. Med. Jl.*, May 22)

The latest cases of tetanus neonatorum reported in Britain were one case each in 1928 and 1918. The occurrence, therefore, of two recent cases within two months prompted their recording.

Promptly after recognition of these cases, the instruments, gauze, lint, ligatures and dressings used by midwives were all cultured, but none revealed the presence of Cl. tetani. Both mothers had sprinkled their infants' umbilical stumps with baby powder—of a different make in the two cases. These were obtained and cultured. The powder used on Case 2 gave a good growth of virulent Cl. tetani, but none of these organisms could be isolated from the powder used on Case 1. Samples of powder of the same brand as that used on Case 2 were obtained from various chemists, and several other brands of baby powder to act as controls. All the samples of the powder of the brand used in Case 2 showed the presence of numerous anaerobic organisms, though Cl. tetani was not isolated, while the control powders gave no such growth.

The makers of the suspect powder submitted the various raw materials used in its manufacture. From one of these materials, aluminium silicate (kaolin), an anaerobic, spore-bearing bacillus was isolated, which, however, proved to be nonvirulent on animal inoculation.

The use of this kaolin in the manufacture of the powder was discontinued by the manufacturers.

Cold Prevention Study
(D. W. Cowan & H. S. Diehl, Minneapolis, in *Minn. Med.*, May

Reports from various sources that influenza vaccine seems to prevent attacks of the common cold led to this study, at the request of the Commission on Influenza, Army Epidemiological Board, Office of the Surgeon General, U. S. Army.

The experimental subjects were University of Minesota students—666 unselected, except that it was made known that we wanted persons who were especially susceptible to colds; 480 completed the study.

The study indicated that influenza vaccine A and B is of no value for the prevention of the common cold. The subjects who received influenza vaccine reported more reactions than the control group, and the subjects who received vaccine made by one manufacturer reported more reactions than those who received vaccine made by another company.

Bell's Palsy
(T. G. Tickle, New York, in *Jl. A. M. A.*, April 10th)

Assuming that 85 to 90% of patients with Bell's palsy recovered spontaneously, there are 10 to 15% that should have the benefit of surgical treatment. In my opinion, all patients that lose response to faradic stimulation and show no improvement in six weeks' time should have the sheath slit from the stylomastoid foramen to the horizontal semicircular canal. It is not necessary to clean out all of the mastoid cells, but only enough to expose the descending portion of the facial canal.

DEPARTMENTS

HUMAN BEHAVIOUR

James K. Hall, M.D., *Editor*, Richmond, Va.

ENGLAND GOVERNMENTALIZES MEDICAL CARE

The press reported that on July 5th the care of the sick in England and in Wales had become a government function.

Of the 17,000 doctors in England and Wales, 15,000 have signed up to take part in the newly created way of caring for the sick. Dentists and druggists, too, will be participants in the new scheme. And many others who contribute to the comfort of the sick and the ailing, as, for example, the makers of spectacles, of hearing aids, and of artificial limbs, will also be included in the group of those who minister to the sick. The government in England and Wales has already assumed ownership of almost 3,000 hospitals and of more than 600 clinics. About 200 hospitals owned by religious orders have been spared from governmental ownership.

One may suppose that hereafter, as heretofore, the doctor will be called to come into the home or into the hospital to minister to the patient. But after the doctor's services to the patient have been concluded, the medical man will send the bill for his labors, not to the patient or to the patient's family. The doctor's statement will be rendered by him to the government; and by the government the doctor's bill will be paid. In like manner are nurses to be compensated for their care of patients by the governmental treasury. Druggists, too, for filling prescriptions, will send their bills to the government. And so also will those who furnish spectacles and hearing aids and crutches and artificial limbs and rolling chairs look to the public treasury for their reward.

The National Health Service Act must necessarily be long and detailed and complex to cover so large a field as the care of the health of all the people in densely populated England and Wales. One should withhold the expression of dogmatic disapproval of the legislation that seems so undemocratic until one has read the bill.

But many questions press for an answer. Does the person who wishes the doctor to call ask the doctor directly to make the visit?; or is the request for medical attention addressed to some government agency or official? And must the doctor who has become a government servant answer any and every call that comes to him? Is the physician restrained by the government in writing prescriptions? May the doctor prescribe freely even the most expensive drugs—for all of which the government must pay?

Inasmuch as most of the hospitals in England and Wales are now owned by the government, one can but wonder what may serve as a guide in admitting patients to the various accommodations. Will the admitting authority recognize the social distinctions that we Americans think the British set so much store by? Might the Prime Minister, perchance, be assigned to a ward bed and the Lord Mayor's cook to a suite of private rooms?

Will there be any likelihood of Judy O'Grady and the Colonel's lady becoming roommates during an obstetrical, or other, confinement? Is it probable that no difference in palatability or in nutritive value can be detected in the trays that go to Sammy Weller and to Mr. Pickwick?

One can but wonder, too, how democratic and how satisfying to the people the new and radical Health Act may be.

Are the doctors, the nurses, the dentists and the druggists to become the professional bell-hops of the people, instant in cheerful response to every call that comes? Has a fee basis already been established, by which the services of all doctors are brought to a level? Will the government have the authority to direct the individual in selecting a physician? May the citizen have the doctor of his choice? also the nurse?

What effect will the new arrangement for medical care have on the people? Will it tend to depersonalize the work of the doctor? How will the physicians of England be affected by their new status? And will young men be so eager to take up the study of medicine as formerly?

The British government is without a written constitution. The British people probably think of their accepted, traditional way of doing things as their constitution. But the National Health Care Act now in effect in Wales and in England would seem to us, if adopted by our national Congress, to be profoundly undemocratic, unconstitutional and as substituting destructive governmental activity for individual effort.

One must wonder how the British government, so soon after the mightiest war ever engaged in by it, can find the funds with which to buy all the hospitals owned by the people.

But many other forms of private property have been confiscated by the English government. When the government shall come to own all the wealth of the British Isles, revenue will cease to flow into the public treasury from taxation and other sources of national income must be found.

Two of my neighbors here in Virginia in other days expressed their vigorous objections to the imposition of a tax upon themselves, however small,

to support a service by the colonial government for affording them spiritual nourishment. I surmise that Patrick Henry and Thomas Jefferson would today heartily disapprove the National Health Service arrangement just established in England. Jefferson, despite innate physical frailty and the turbulent period in which he lived, reached more than four score years. Patrick Henry was carried out of quiet country life by an abdominal seizure, probably appendiceal, made fatal by the symposium of doctors and their purgative ministrations. Had Patrick Henry reached the age of 85 instead of dying at 65, the history of our country would undoubtedly be different.

One can hardly conceive of all the doctors of the United States as federal employes. The citizen of our country insists upon exercising the privilege of selecting his own physician. But a good deal of untruth is concealed in such a statement. In the United States today more than half of all the hospital beds are in the state hospitals. In those hospitals neither the patients nor the members of their families have any voice in selecting their physicians; the government provides the doctors and the nurses and all the other employes. And there are countless other groups for whom doctors and nurses are supplied—in prisons, in schools, in service posts, and in so-called charitable institutions. The majority of the citizens of our country, I surmise, are so situated that they are unable to exercise the privilege of selecting their own doctors. For them medical care is provided by the government.

I was but a youngster when, on March 4th, 1885, Grover Cleveland came down from Albany and took the oath of office as President of the United States. Yet I recall that the new President said, as one of his inaugural epigrams, that it is the duty of the citizen to support the government and not the duty of the government to support the citizen. But the civic philosophy enunciated on that not distant day has for many years been steadily dying in our own country, and it is now without standing or influence. Our people have been encouraged to come to the seat of government for all their needs.

The tendency toward federalization of our activities goes steadily along. Upon theirdischarge from service in the Second World War, countless young doctors were enger to re-enlist in the medical service of the government rather than to engage in private practice. The government service features a short work week and a short work day. We have been relentlessly taught for several years to work less and to insist upon being paid more for the less work. The do-and-dare spirit of our ancestors has been steadily lessening in influence.

Lack of criticism by us of the socialization of all life in the British Isles affords evidence that we experience little genuine objection to such undemocratic philosophy. One may wonder, indeed, if much money furnished by us to the English people may not be used by them in taking over private property by the government. We speak, per contra, in sharp criticism of Russia's governmental tyrannies, but I recall no recorded protest by any influential citizen of our country against the confiscation by the British government of all private property.

The more willingly the medical men of England yield the management of their individual professional lives to their government, the less respect I shall have for them—and the less in helpfulness and in medical progress shall I expect of them and of their successors. Subsidization of the individual tends to quiet his questing and to lessen his wonderment about where the blue begins.

HISTORIC MEDICINE

JAMES KERR, M.D., M.CH.

We are indebted to Nichols[1] for certain facts as to the career of Dr. James Kerr which can not fail to interest the readers of this journal.

During his honeymoon at the Philadelphia Exposition in 1876, Dr. Kerr heard a discourse by Lister on the antiseptic technic which he was then introducing; becoming a convert, Dr. Kerr made a trip to Europe to perfect himself in the Listerian methods.

In 1880 Dr. Kerr removed to Winnipeg, then a primitive pioneer settlement just being carved out of the wilderness; and he was active and influential in its development. He served as Health Officer of Manitoba; was an organizer and surgeon of Manitoba General Hospital and a founder and Professor of Surgery of Manitoba Medical College, 1883-88. He was a surgeon in the Canadian Militia during Riel's Rebellion in 1885. From 1882-88 he was Chief Surgeon of the Western Division of the Canadian Pacific Railroad; and in that capacity he selected the site for Banff Hotel, at first intended for a tuberculosis sanitarium, but later becoming a famous tourist resort.

In 1888, at the age of 40 Dr. Kerr removed to the City of Washington, where for the remainder of his life he engaged with distinction in the practice of surgery. He was Superintendent and Surgeon of Garfield Hospital, and Surgeon to Providence and Emergency Hospitals and the Woman's Dispensary. He was Professor of Surgery in Georgetown University 1891-94, also in Columbian (later George Washington) University. He had a summer home at Warrenton, Virginia, where he

1. John B. Nichols, in *Med. Ann. D. C.*, June.

engaged with sccess in the breeding of race horses. He died at Warrenton, February 12, 1911.

Dr. Kerr married Laurie Jane Bell, cousin of the illustrious inventor of the telephone, Alexander Graham Bell, at Brantford, Ontario, then the home of the Bell family. Dr. William Osler, who was his intimate friend, was best man at the wedding. That wedding had a historical setting, the birth of the telephone; at the very time and place of its occurrence Alexander Bell in his home at Brantford experimentally established the first telephone installation in history, successfully operating over miles of wire.

Dr. Kerr pioneered in the development of surgery in fields previously inoperable. He acquired surgical proficiency in his practice among the miners of Nova Scotia and the settlers of Manitoba. He declined attractive offers of appointment on the faculty of McGill University and as Chief Surgeon of the newly formed Johns Hopkins Hospital. In the Washington area he performed the first cholecystectomy, the first Gasserian operation, the first operation for intussusception and others.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

SYMPOSIUM ON LOW BACK PAIN

Low-back pain is due to so many different causes, and is attributed to disease in so many different organs and systems as to lend itself well to discussion in a symposium.

Medical Considerations[1]

Low-back pain has caused much controversy in industrial medicine and in compensation rulings. Lumbar pain is common in acute infectious diseases, from fatigue and muscular exertion, in pregnancy, especially near term. Post-operative backache is also frequent. The pain of acute fibrositis or lumbar myositis, usually bilateral, is increased by contraction of the back muscles and on regaining an erect position after stooping. The pain comes on suddenly as a result of exposure to cold, a hard cough or a strain done under faulty posture, and this condition is subject to frequent recurrences.

Chronic low-back pain is a condition where a chronic backache is caused by fatigue or constant unbalanced strain and after lying in bed in one position. In this condition there is likely to be a focus of infection or a constant posture defect.

Renal calculus without colic causes a continuous unilateral aching and tenderness, increased urination, slight hematuria, perhaps pyuria. Tumor of the kidney produces at times a backache which is dragging and dull and radiates downward.

Low-back pain is encountered in coccygodynia, certain uterine disorders, rectal diseases and prostatitis, congential malformation of the 4th and 5th lumbar and 1st sacral vertebrae, compression fracture of a lumbar vertebrae, Charcot spine and pancreatitis. With the low-back pain of chronic arthritis, there is a progressive ankylosis of the vertebrae, tuberculosis of the spine, or spinal gonorrheal arthritis.

Less common causes of low-back pain are caudaequinal tumor, vesical calculus, fecal impaction, hernia, pancreatitis and carcinoma of the pancreas.

Treatment involves giving the patient a definite understanding why he is having a backache. If there are no specific causes, the use of heat, counterirritant, salicylates, and iodides, body supports and belts are helpful.

In many of these cases it is most important to teach the individual to live with his backache.

Neurologic Aspects[2]

Cutaneous pain is sharp, pricking or burning, while deep pain is dull, aching, and at times sickening. Cutaneous pain is accurately localized, while deep pain is diffuse, especially that arising from the deeper structures. Deep pain may be felt at a distance from the lesion, often visceral or somatic in the form known as referred pain. Low-back pain is generally dull, varying in severity, is poorly localized.

Not only may lesions of the kidney, bowel, ovaries, tubes, prostate cause low-back pain but by the same mechanism disease of the periosteum, ligaments, fascia and muscles of the spinal column.

Low-back pain may result from lesions of the muscles, fascia, and ligaments and cartilage of the spine. Fibromyositis of the back muscles is not an uncommon cause. Faulty postural habits may be the cause, particularly in asthenic and psychoneurotic persons.

The commonest cause of persistent lumbosacral pain is degeneration or traumatic injury of the intervertebral disc.

The diagnosis of herniated disc depends on study of the history of the case, upon evaluation of the symptoms, and upon the result of a neurological examination for areas of hypalgesia and alteration of the knee and ankle jerks. The signs of spinal-root irritation are most important. The segmental character of the pain or paresthesia, aggravation of the pain by coughing or straining, increase of pain and presence of muscle spasm when the roots are stretched are all important points. The disc involved can generally be identified by finding hypalgesic areas and corresponding numbness which indicate the root compressed. Loss of knee jerk or ankle jerk is indicative of a fourth lumbar and a first sacral level. X-ray films may help but

1. R. A. Moser, Omaha, in *Neb. Med. Jl.*, June.

2. G. A. Young, Omaha, in *Neb. Med. Jl.*, June.

are often disappointing.

As the symptoms at times remit, treatment should be at first conservative: Extension of the affected limb, manipulation followed by plaster immobilization of spine and lower extremities, novocaine injections of tender points in lumbar and gluteal muscles, and particularly repeated epidural injections of the sacral canal with 20 to 30 c.c. of 1 per cent novocaine followed by normal salin to total of 60 to 100 c.c. Rest in bed with hot packs or infrared lamps plus analgesic medication is beneficial in many cases. When such measures prove ineffective, surgical removal of the offending disc is demanded.

Gynecologic Aspects[3]

At least half the patients who consult a gynecologist complain of backache, yet this pain in women is only rarely due to genital causes, and it is unwise to predict that a gynecological operation will provide relief.

Genital prolapse almost always causes backache, but uncomplicated retro-displacement of the uterus does not. In a patient who has borne children backache is likely due to some obstetrical injury, resulting in prolapse, cystocele and rectocele. Damage to the coccyx, strain of the ligaments of the pelvic girdle and persistent abnormal mobility of the sacroiliac joints are common obstetrical injuries.

Injury or inflammation involving the uterosacral ligaments, when a source of trouble, are usually very tender to touch—best detected by rectal palpation. These ligaments are frequently damaged by excessive traction with a tenaculum during operations on the cervix or during dilatation and curettage.

Chronic cervicitis is a frequent cause of backache which disappears after conization or cautery or even simple puncture and cauterization of infected cervical glands.

Pelvic tumors, regardless of size, rarely cause backache if they are freely movable and do not cause pressure or impair circulation. If a tumor is malignant and the peritoneum or cellular tissue has been invaded, then backache may become a prominent symptom.

Backache which occurs only with menstruation rarely has any organic significance. In childless women who have never suffered menstrual backache, or whose menstrual backache increases, endometriosis should be suspected.

Orthopedic Aspects[4]

Under a good light, with a long sheet with a 9-inch circular opening in the middle over the patient's head, observe the patient standing, for any list of the spine, a true scoliosis with rotation or a sciatic scolosis due to active shift of the spine to relieve unilateral tension or pressure, the swing of the legs, whether free or actively restricted and any muscle spasm; also motions in the various portions of the spine.

Recumbent on a hard table giving full length support to the patient, with the pelvis level, measure the distance from the anterior superior spine to the tip of the internal malleolus on each side, and the circumference of each thigh six inches above the patella—should show ¼ to ½ inch more on predominant side. Make passive motion of the legs to reproduce pain; straight-leg raising, then with the foot dorsiflexed, the cross-legged test. With acute flexion of one hip plus hyperextension of the opposite hip over the edge of the examining table, rotate one ilium against the other and note production of pain in one or the other sacroiliac. Passive iliac compression or separation may aid localization. Passive flexion of hips and knees to full degree will strain the sacrolumbar joint only.

In the prone position tender areas are demonstrated by digital pressure over certain sites.

Rectal examination reveals the status of sacrospinous and sacrotuberous ligaments when readily palpable, and of the coccyx.

The commonest clinical finding is tenderness lateral to the posterior superior iliac spine, due to heavy exertion or exertion in an awkward position.

Treatment of acute low-back strain consists primarily of rest and graduated physical activity on a semi-rigid mattress. Any flexion contracture of the hips suggests the addition of flexion of the knees to flatten lumbar lordosis; this may be added to any strain for comfort. Rest on either side in similar position is allowed if comfortable. A strain having no nerve symptoms is seldom improved by leg traction. Diathermy, infrared radiation or hot packs afford relief and shorten convalescence. When improvement justifies change to ambulatory treatment, support by adhesive strapping or corset is added. Activity is restricted for at least three months.

Of particular importance is the equalization of leg length by shoe elevation. Minor shortening of a leg is common and causes little difficulty. The addition of a strain in the low-back area to leg-length is prone to cause symptoms.

Under certain conditions as in pregnancy, obesity, muscular weakness or bone deficiency, the line of gravity is moved posterior to the sacroiliac joint and balance of the body is then possible only by excessive muscular effort or by accentuating the lumbar lordosis with secondary increase in the angle of pelvic inclination, a flexed position of the hips and dorsal kyphosis. In strain of the low-back structures, posture improvement will contribute greatly to clinical improvement. This improve-

3. J. J. Freymann, Omaha, in *Neb. Med. Jl.*, June.
4. W. R. Hamsa, Omaha, in *Neb. Med. Jl.*, June.

ment follows the use of supports to decrease abdominal prominence or lumbar lordosis and the medical treatment of the underlying general deficiency.

HOSPITALS

R. B. Davis, M.D., *Editor,* Greensboro, N. C.

DOES YOUR HOSPITAL HAVE A HOUSEKEEPER?

The operation of a hospital is more of a problem today than ever before. Even though we collect practically all of our bills, yet we are in the midst of more trouble from other sources than ever before. One of the many perplexing problems is that of housekeeping.

A good housekeeper can do much in economical operation as well as relieve the administrator of numerous details. A housekeeper can requisition for linens and supplies for her department in such a manner as to relieve the administrator of the details, such as the length of sheets or mattress pads, the type of pillow ticking, the texture of table linen,, and as to whether temporary or washable linen is used in the dining room. She can make thrifty purchases of wax for floors, cleaning fluids for windows, and polish for furniture. She will get more efficient service from orderlies and maids, arrange their vacation and time off, keep her supplies well inventoried, and make possible larger purchases by anticipating her needs. She can keep up with and prevent losses from linen supply and shop around for most satisfactory and economical laundry service—whether it be done off of the premises or under her supervision on the premises. An administrator with a housekeeper that will discharge these functions is lucky, and such a housekeeper should be classified as a professional person.

All too often, housekeepers are employed from a group of less fortunate people as to education and/or income. A housekeeper needs more than the ordinary high school education; as much for the purpose of dispelling any inferiority complex when she is in contact with the heads of the other departments as for the actual operation of her department.

Recently, the trustees of one hospital have brought to my attention the great benefits to be derived from a *good* housekeeper. Formerly this hospital put up with the services of an individual not of the highest type, for the saving of fifty dollars per month in salary. Then a real housekeeper became available and they insisted upon the administrator employing her. The first three weeks that she was on duty revealed a discrepancy between the amount of linen sent out and the amount returned and charged for. This was reported to the business administrator who refused to believe that such a thing could happen under his administration, but promised the housekeeper he would look into it. Before the end of the second month, she discovered and reported four serious "mistakes" which had been tolerated for years in the hospital. One—many, many pieces of linens were lost. Two—linen that was never sent in was charged for. Three—the laundry claimed to be giving the hospital a special rate, therefore, refused to make any adjustment. Four—not only was the laundry not giving a special rate, it was charging in some instances five times as much as other laundries would have charged for the same service. It was evident to the trustees that the business administrator had not been on his job and that the hospital was losing from three to four times as much a month as the difference in the salaries of an inefficient housekeeper and an efficient housekeeper. She also was able to dispense with the services of one employee and at the same time keep the hospital much cleaner than had been formerly the case. How much she will have saved at the end of twelve months is hard to say; but from what information I have, it will easily be three times her salary.

Let us, therefore, scrutinize closely the housekeeping department in our hospital and see if we have an efficient and energetic housekeeper. If we have, let's raise her salary. If we do not have, let's make a desperate effort to get one and be sure that she is placed on a professional rating rather than one classified as a "glorified servant."

OBSTETRICS

H. J. Langston, M.D., *Editor,* Danville, Va.

THE MANAGEMENT OF OCCIPITO-POSTERIOR-POSITIONS

What is to be said takes it for granted that there is no cephalo-pelvic disproportion or any complication other than the occipito-posterior position. The maneuver McDevitt[1] has used for the past four years is this: With the patient well sedated but not beyond the coöperative state, the cervix completely dilated and effaced, the head in the pelvis and the bladder empty, four or five deep breaths of nitrous oxide are given at the beginning of a contraction and the patient told to bear down. The anterior suture of the three sutures that make up the "Y" of the posterior fontanelle is then grasped by the doctor's right index finger if the L. P. P., his left index finger if the R. P. P., and force exerted towards anterior rotation without upward pressure.

1. C. J. McDevitt, Murray, in *Ky. Med. Jl.,* July.

After rotation is accomplished in the primipara the patient is anesthetized with either nitrous oxide or cyclopropane and the delivery completed with forceps and episiotomy. In multipara the delivery is usually completed spontaneously under nitrous oxide analgesia.

McDevitt has used this maneuver in 135 deliveries and has had to resort to one of the accepted operative treatments in only 12 cases (9%). There were three fetal deaths in this series. Two were macerated and the third lived for 18 hours. Death was from some type of blood dyscrasia. The infant bled from the rectum from the time of delivery, also from the sites of the hypodermic injections.

The maneuver here described and recommended is simple and safe. It will reduce the time of the second stage of labor in those cases which would spontaneously rotate to an anterior position, also reduce the incidence of procedures that are more dangerous to mother and baby. Of particular importance is the fact that deep anesthesia, which is required in all the accepted procedures is obviated and forceps delivery after rotation in the multipara is dispersed with in the vast majority.

In the discussion the importance of *flexion before an attempt at turning the head* was emphasized, and it was said that even an experienced operator sometimes forgets to flex and it is not until the front part of the head impinges on the wall of the pelvis that he realizes his mistake.

PEDIATRICS

E. L. Kendig, Jr., M.D., *Editor*, Richmond, Va.

INFANTILE CORTICAL HYPEROSTOSIS

Since the report of Caffey in 1945 of the syndrome called infantile cortical hyperostosis many reports of cases have appeared in the literature, the most recent being that of Shuman.

A 4-month-old male infant was well until 10 days before when it developed an upper respiratory infection with fever, irritability, rhinitis and an occasional, nonproductive cough. Treatment was symptomatic; no sulfa or penicillin. The symptoms subsided except for the fever of 101 to 102° and the irritability. The day of admission the mother noted brawny swelling of the lower jaw equal on the two sides. Irritability was most marked when face and jaw were touched. Sulfadiazine, 1 grain per pound, started on admission, had no effect. After 2 weeks penicillin, 20,000 units every 3 hours intramuscularly, was substituted, and proved equally ineffective. Laboratory examinations were negative, except for a white blood cell count of 19,500 with 70 per cent pmns., and staphylococcus aureus in the throat culture. Roentgen examination of the mandibles during the first week of hospitalization revealed no disease process. In the fourth week a tender swelling appeared over the left clavicle. Skeletal roentgenograms now showed:

"No definite abnormality of the calvarium. . . . The bones are well calcified and are of average density and show . . . normal architecture. The maxilla shows nothing unusual, but there is marked abnormality of the mandible, which shows extraordinary subperiosteal new bone formation which appears to be at least 1 cm. in thickness. The new bone . . . varies very slightly in density. In places there appears to be slight lamellation of the new bone. The margins of the new bone are irregular in contour. There is a similar change about each clavicle with extensive subperiosteal new bone formation which appears to be most prominent in the outer half of each clavicle, and here, too, the new bone is amorphous and irregular in contour.

Nearly all of the ribs show similar change, most marked in the anterior third of the ribs. There is no evidence of any destruction and, on these films, no evidence of any pleural thickening or effusion.

The bones of the spine and long bones show no essential variation from the normal. . . . . .

The changes are those of infantile cortical hyperostosis."

The irritability exaggerated by handling the face or upper extremities, continued low-grade fever, facial edema, and leukocytosis gradually resolved over a 6- to 10-month period. On two occasions a hemoglobin of 9.0 grams was encountered and transfusions were administered.

The etiology of this condition is not known. The birth, the diet of the mother, heredity, and a bizarre metabolic disorder have been considered, but no proof for any of these factors has been found. The role of a respiratory infection has been frequently mentioned. Syphilis has been proven not to be a factor.

Irritability, persistent fever, leukocytosis, swelling of lower jaw, and the roentgenographic appearance of the bones are the characteristic features. The mandible, the clavicles and the ribs are the bones generally found to be involved. The roentgenographic picture is that of subperiosteal new-bone formation with elevation and thickening of the periosteum. *The normal duration of the disease is from six to 10 months. Growth and development proceed unaltered by the disease.*

H. H. Shuman, Fitchburg, Mass., in *Jour. of Ped.*, 32:195, 1948.

Statistical evidence suggests that the sex factor is of no practical importance in blood transfusion reactions, although the chance that a reaction will occur is somewhat increased when the donor is a female, regardless of the sex of the recipient.—*Proc. Staff Meetings Mayo Clinic*, Mar. 17th.

NEUROLOGICAL SURGERY

THE SELECTION OF CASES FOR THE SURGICAL TREATMENT OF HYPERTENSION

J. M. Meredith, M.D., *Editor,* Richmond
Department of Neurological Surgery, Medical College of Virginia, Richmond

Thoracolumbar sympathectomy and splanchnicectomy for certain selected cases of hypertension is now widely accepted and firmly established as a means of therapeutic attack in certain selected cases of hypertension. The operative mortality in the various neurosurgical clinics throughout the country does not exceed 1 to 2 per cent today. Certain pre-operative criteria have been well established as a result of experience gained in the last nine years since Smithwick first introduced the operative procedure generally in use today. These criteria include: urinalysis, non-protein nitrogen determination, electrocardiogram, chest plate (especially to determine the presence or absence of cardiac enlargement), amytal test (administration of 12 to 15 gr. of sodium amytal by mouth in divided doses during a seven- to eight-hour nocturnal period: a drop in pressure to 140/100 or below is considered favorable), Mosenthal test (probably the best single test of kidney function), an intravenous pyelogram, fundus examination, and a general physical survey by an internist. The cold pressor test is of value in pre-hypertensive individuals.

In the occasional case of hypertension in adolescent or young adult males, coarctation of the aorta is the chief etiological factor. This is detected, and should always be kept in mind as a possibility in such patients, by blood pressure determination in the femoral as well as brachial arteries, palpation of the peripheral vessels in the lower extremities, underdevelopment of the lower half of the body, the characteristic notching of the undersurface of the ribs in the chest x-ray film and the typical x-ray appearance of the heart and the aorta. Sympathectomy may be the operation of first choice, logically enough, in milder degrees of coarctation, to be followed by operative attack on the coarctation itself by the thoracic surgeon, provided the sympathectomy has proved of little benefit. Pregnancy is possible after sympathectomy for hypertension, as demonstrated by several of our cases, and sterility, through loss of ejaculatory power, does not always follow the operation in the male.

The operation is feasible and has been carried out successfully in patients who have had coronary occlusion, cerebral hemorrhage or thrombosis, angina pectoris, and high choked discs, producing marked diminution of vision. Operation in the last type of case (cited by Peet) was followed by marked permanent visual improvement and disappearance of the choked discs.

Once the hypertension is established (one to two years), operation should be done *without delay* as the success of the operation is more probable the shorter the duration of the hypertension. Women patients, as a group, do better than men and those aged 40 or less do better than older patients, but there are many exceptions to the latter statement. Given a patient with not too long-standing a hypertension, adequate renal and cardiac status and a fairly labile blood pressure, as demonstrated by the amytal test, operation is indicated without delay in view of the extremely low (1 to 2 per cent) operative mortality, the frequent and devastating penalties of long-standing hypertension being the alternative. If the family history is indicative of a probable hypertension in one or more descendants, the first appearance of beginning elevation of the blood pressure is sufficient justification for the operation, in our opinion.

THERAPEUTICS

J. F. Nash, M.D., *Editor,* St. Pauls, N. C.

PARENTERAL NUTRITION—PRE- AND POST-OPERATIVE

A study made at St. Barnabas Hospital, as part of the teaching program of surgical fellows, residents and internes has been productive of results of remarkable value. The preliminary report[1] of the investigator's impressions will interest all doctors.

For the average adult individual who is unable to take anything by mouth, the following daily requirements were worked out.

Vitamin B complex and Vitamin C
Fluids 3,000 c.c.
Sodium chloride 6-18 grams
Carbohydrates (glucose) 150-180 grams—600-720 calories
Protein (amino acids) 100-150 grams—400-600 calories
Alcohol 120-180 c.c.—960-1080 calories
Total—2,020-2,400 calories.

This solution is now being given routinely to postoperative patients when, for the first 24 (occasionally 48) hours, the patient is not permitted to take nourishment by mouth; and used preoperatively in patients who have been unable to eat or retain food; or to supplement oral feedings when these have not provided sufficient calories. Each of 12 patients has received more than 20 liters of this solution during a pre- and post-operative period of observation.

1. C. O. Rice *et al.*, Minneapolis, in *Jl.-Lancet,* March.

Solutions are prepared by using the commercial aminisol 5%, glucose 5% in 1000 c.c. of distilled water; 60 c.c. of 95% alcohol is injected through the rubber stopper directly into the aminisol solution. It is then thoroughly shaken. Of this solution 1000 c.c. provides 750 calories.

Preliminary studies suggest that complete caloric and essentially complete nutritional requirements can be provided parenterally by the use of glucose, amino acids, alcohol and vitamins.

In a series of more than 300 operations, these investigators have completely eliminated any period of starvation with the parenteral use of glucose, amino acids and alcohol, and their patients have not experienced the lethargic, exhausted, ambitionless feeling so commonly observed for two to four weeks after an operation. The convalescent recovery at home has been materially shortened. Early ambulation has been accomplished much more easily.

The poor-surgical-risk patient, incident to nutritional loss, has been transformed to a good surgical risk by this method of alimentation. This has been done as both a supplemental feeding, and as the sole feeding.

It is concluded that:

Alcohol can provide calories, the energy from which can thereby spare the need for using reserve store of glycogen and protein.

Alcohol has a beneficial effect upon the motility of the gastro-intestinal tract and bladder, reducing the incidence of gas pain, colic and reducing the need for post-operative catheterization.

Optimum nutritional requirement of a patient, suffering from disease or the effects of an operation, are provided only when at least 18% of the caloric intake is derived from protein.

Even though an adequate quantity of nitrogen intake is provided, this nitrogen is not economically utilized unless adequate and readily available calories are provided to protect it. Alcohol seems able to provide these essential calories.

Alcohol can also provide post-operative sedation sufficient to do away with most of the need for narcotics.

SURGERY

WILLIAM H. PRIOLEAU, M.D., *Editor,* Charleston, S. C.

FOREIGN BODY LOCALIZATION

LOCALIZATION and removal of foreign bodies may prove to be most difficult. Attesting to this are the many methods which have been devised. Some require special apparatus with special training in its use. For metallic foreign bodies the most generally used methods depend upon localization by x-ray in relation to skin markers. This procedure has the disadvantage that the skin markers may be at some distance from the foreign body, and the more serious one that the position of both the markers and the foreign body may move during the operation for removal. To overcome this difficulty Gardner[1] describes a technic which has proven most satisfactory in his hands. While previously reported, it is not generally known and was developed independently by him. Under fluoroscopic control two long slender needles are inserted at right angles into the tissues at some distance from the proposed incision, so that they cross in proximity to the foreign body. Anterior-posterior and lateral x-ray films are then made to determine their relative positions. The field is draped with the needles in place and the area is explored at operation. The foreign body is usually easily found in proximity to the fixed point of the crossed needles. If difficulty is encountered, the needles are withdrawn and reinserted in the same manner, so that they cross in closer approximation to the foreign body.

The particular advantage of this method is that the two crossed needles anchor the tissues and the localizing point is fixed near the foreign body. By it even small foreign bodies may be readily removed.

1. Gardner, C. E., Jr.: Foreign Body Localization in the Soft Parts. *Surgery.* 23:275-277, Feb., 1948.

RHINO-OTO-LARYNGOLOGY

CLAY W. EVATT, M.D., *Editor,* Charleston, S. C.

SINUSITUS RESPONSIBLE FOR 90 PER CENT OF RECURRING AND CHRONIC COUGH IN CHILDREN

CHRONIC suppurative sinusitis is the major cause of the recurring and chronic cough in children. Recurring bronchitis is the most common condition observed in the chest clinic. Periodic bouts of coughing is the main complaint. An upper respiratory infection—usually a cold, less commonly a throat infection—almost invariably precedes the cough.

This is according to the experience of a Pacific Coast physician.[1] Likely not so high a percentage of our children's coughs are so caused, but more than we suspect.

Brown goes on with his report:

The recurring cough is usually afebrile and without physical signs in the chest.

Chronic sinusitis was responsible for almost all cases of recurring bronchitis, recurring asthmatic bronchitis, bacterial asthma, chronic bronchitis and bronchiectasis in an extended study.

To overlook the possibility of a chronic suppurative sinusitis is to neglect the treatment of

1. E. E. Brown, Ashland, Ore., in *Northwest Med.,* June.

well over 90 per cent of coughs encountered. Less common causes of cough are foreign body, second infection type of tuberculosis, mediastinal tumor, etc.

Symptoms which suggest chronic sinusitis are frequent colds of a prolonged constant cold, nosebleeds, cough and snoring at night, aprosexia in the morning and a few symptoms on arising, such as sneezing, headache, fetor oris, anorexia and puffs under the eyes.

Repeatedly Brown has received negative roentgen reports on patients with a constant, clinically active sinusitis. Conversely, positive reports may represent past rather than present lesions, or a nonbacterial allergy.

When chronic sinusitis is diagnosed in any child with a recurrent or chronic cough, the sinusitis is treated as follows: 1) nose drops twice daily, 2) hot towels applied to the face; 3) elevation of head during recumbency.

Ephedrine sulphate, 1 per cent in normal saline, two to five drops in each nostril with the head back and turned to the respective side to shrink the membrane and allow drainage of pus from the sinuses through the ostium in the lateral wall of the nose. Antipyrine, 2 to 5 gr. per ounce, may be added for its decongestive value.

Cold cream is first applied to the face so that very hot towels may be used safely.

Chilling is to be avoided to prevent exacerbations of sinusitis, usually labeled new colds.

For the most part autogenous vaccines were used, the bacteria being grown from swabs of the nose and pharynx.

Vaccines are best begun before the cold weather commences and continued until the following June. The first four injections are given at weekly intervals, then biweekly inoculations.

For the cough in an eight-year-old child:

Rx	Ephedrine sulph.	gr. iii
	Camph. tinct. opii	oz. ss
	Glycerine	oz. i
	Aqua q. s. ad	oz. iv

Sig. Dram i q 4 h. for cough.

GENERAL PRACTICE

WILLIAM R. WALLACE, M.D., *Editor*, Chester, S. C.

TREATMENT OF THE PSYCHONEUROSES

1. A. B. Jones, St. Louis, in *Miss. Val. Med. Jl.*, March.

SPECIALISTS in that field say that diagnosis is itself a large part of treatment of psychoneuroses. Jones,[1] of St. Louis, does a good deal toward clearing up some of the puzzles.

There are three generally accepted psychotherapeutic methods beneficial in the treatment of psychoneuroses—suggestion, persuasion, and psychoanalysis.

Suggestion is a process of communication resulting in the acceptance with conviction of the communication in the absence of logical adequate grounds for acceptance. Suggestibility is a normal characteristic of mankind. Some factors affecting suggestibility are: (1) one's knowledge of the subject, the more one knows about a subject the less suggestible he is; (2) the bodily state of the person to whom suggestion is made, i.e., illness, fatigue, etc.; (3) one is more likely to accept things that are in accord with one's feeling and desires; (4) the manner in which the suggestion is presented—either by example, persuasively or indirectly; (5) the prestige of the individual offering the suggestion, i.e., trappings, the frock coat, reputation in the community; e.g.—Weir Mitchell and certain clinics. Suggestion may come from others or from within—autosuggestion. Included under the heading of suggestion are the bottle of medicine, the bedside manner, various prescribed rituals in conduct, relaxation, habit training, use of hypnosis, narcosynthesis and the like.

Persuasion is the presenting of an idea to a patient, at the same time offering him what he will consider to be an adequate rationalisation of the subject. There is a large element of suggestibility in persuasion. After a thorough investigation one explains to the patient that he does not have tissue change in his organs, parts, etc., and there are no physiological and anatomical reasons justifying his complaints, and based upon these investigations there is no logical reason for the complaints.

The method of choice in treating a psychoneurosis is some form of psychoanalysis. In the individual case the extent and depth of the analysis varies from superficial uncovering of the current disturbing conflict to a prolonged investigation of the causes responsible for the patient's condition and the removal of the condition by the removal or alteration of *all the causes* thereby freeing the patient from symptoms.

The cure lies in changing the conditions within the personality that brought into being the conflict.

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

SOMEWHAT ABOUT IMPOTENCE AND STERILITY

OUR PATIENTS demand that we know all there is to be known on these subjects. McCullagh[1] speaks to the point, and offers much less than many hope for.

All should welcome his saying that male climacteric is a poor term because it implies that testicu-

1. E. P. McCullagh, Cleveland, in *Bul. N. Y. Acad. of Med.*, June.

lar failure sufficient to cause symptoms is a physiological process in men, which has not been shown to be the case. Sexual impotence due to androgen deficiency, it is conceded, responds promptly to testosterone, but androgen deficiency is a rare cause of the complaint.

McCullagh goes on to say:

True hyperactivity of the testes as a result of pituitary hyperfunction has never been shown to exist. In the past the diagnosis of pituitary gonadal deficiency was common. Although functional pituitary deficiency of clinical significance may occur, it is seldom apart from severe nervous conditions; or organic disease of the anterior lobe, such as exists in Simmonds' disease, pituitary or parasellar tumor. The diagnosis of pituitary hypogonadism during adolescence usually depends on suspecting the disease, perhaps because of shortness of stature, and on the demonstration of a local lesion by x-ray and visual field studies.

The semen is abnormal in 50 per cent of instances of childlessness. For examination it should be ejaculated into a clean glass bottle and no attempt should be made to keep it warm. Time for collection is four days after coitus; it should reach the laboratory promptly and be examined 30 minutes after ejaculation, this time being allowed for liquefaction to occur.

In many cases where little or no abnormality is demonstrated, general advice as to rest, sexual habits, diet, strict moderation or avoidance of alcohol and tobacco, and the use of thyroid may be followed by pregnancy. In spite of the fact that there is good experimental evidence showing the intimate relationship of various vitamins, especially B complex and E, their clinical value in the majority of patients is still questionable.

When the semen count is greatly reduced and testicular structure approaches normal, therapy with pituitary gonadotropin should be tried; but much more frequently than not it will fail. With steady improvement in therapeutic preparations and better selection of cases, better results may be hoped for. Testosterone has found no place as yet clinically in this problem. In many instances in which the wife is normal, insemination from a donor seems the best solution, and if this is not desirable, adoption of a child should be advised rather than the carrying on of treatment over an unreasonably long period of time.

POINTS IN TREATMENT OF THYROID DISEASES
(J. H. Means, in *Bul. N. Y. Acad. of Med,* May)

The only sound way to treat hyperfunctioning adenoma of the thyroid is by surgical removal after proper preparation. In certain phases of thyrotoxic Graves' disease there may be no thyrotoxicosis, and under such circumstances the indication may be, particularly if the ophthalmopathy is severe or progressing, to give thyroid. When thyrotoxicosis exists and presents an indication for treatment, we need to know which offers the patient most—surgery, prolonged antithyroid drug therapy, or treatment by means of radioactive iodine.

For such a purpose, were there no fear of doing injury, treatment with radio iodine would be by all odds the best therapy. From the patient's point of view it is delightfully simple—one swig of a nearly tasteless watery solution. Hospitalization is usual for preliminary study of the case, but it is not necessary for therapy. There is no necessity for frequent and close surveillance for toxic side effects, as is imperative in the prolonged use of antithyroid drugs. There is not the ordeal of an operation. To what degree the doctor should worry about late untoward effects, no one at present can say. The proponents of radio iodine therapy brush them off light-heartedly. The very fearful refuse to use the treatment at all. If one asks experts on the effect of irradiation on tissue as to the likelihood of late carcinogenesis, one gets different replies from different experts. My own belief is that the prospect of radio iodine-induced cancer in the treated cases in the years to come is slight, but no one can say that it is non-existent.

Of cases of thyrotoxic Graves' disease we are treating none by prolonged use of any antithyroid drug. Most such patients we still treat by thyroidectomy after preparation with an antithyroid and iodine. For a long-term evaluation of radio iodine therapy we are selecting patients 45 years or over. The idea is that if carcinogenesis does result in certain cases, it will not be before 20 or more years.

DERMATOLOGY

FALSE POSITIVE SEROLOGIC TESTS FOR SYPHILIS

THE PROBLEM of the false positive serologic report for syphilis is a real one. The probable social and psychologic tragedies from the diagnosis of syphilis when the patient does not have the disease should be borne well in mind in each case. The diagnosis should never be made on the basis of a single positive report.

Joseph[1] brings up this subject and elaborates:

In vaccinia the average of false positives is 15 per cent, eight to 14 days following vaccination. It rarely remains positive longer than four months. False positives occur in infectious mononucleosis in 20 per cent of the cases. Nonspecific seropositivity in malaria patients has become a serious problem in veterans. In this disease, as in infectious mononucleosis, false positives often occur with the complement-fixation tests, and the reactions are frequently strongly positive. There are often anticomplementary reactions. *Probably 100 per cent of all patients with acute malaria having positive blood smears for plasmodia give a positive serum test at some time in this phase of the disease.* In the larger series reported the incidence ranges from 22 to 100 per cent; the greatest incidence is from 15 to 20 days after a paroxysm. Most reactions reverse to negative within four weeks.

1. H. L. Joseph, St. Louis, in *Jl. Mo. Med. Assn.*, June.

The incidence of false seropositivity in a small series of patients with hyperproteinemia associated with a variety of pathologic conditions has been reported as 23.5 per cent.

The physician should be slow to credit the positive or doubtful report on the blood from a patient with a negative history and no physical findings of syphilis. Especially since the advent of penicillin therapy for syphilis treatment is started hastily in too many of these doubtful cases. Subsequent serologic reversal in these cases is attributed to the treatment, and the patient labelled as having had syphilis. When false seropositivity is suspected, the patient must be studied probably for months, before arriving at a verdict, and in the interval, no anti-syphilitic treatment is to be given. Weekly or biweekly quantitative serologic tests are most important.

A persistently strongly positive reaction with high or rising titer is usually diagnostic of syphilis. A positive flocculation and negative complement fixation reaction, low-titered or weakly-positive reactions, fluctuating or decreasing titer or conflicting reports—none of these should be accepted as proof of syphilis.

INTERNAL MEDICINE

George R. Wilkinson, M.D., *Editor,* Greenville, S. C.

GASTRIC CARCINOMA: SUSPICIOUS MIND NECESSARY FOR EARLY DIAGNOSIS

Marshall[1] decries all efforts to stir up mass hysteria regarding cancer. Such efforts, he warns, succeed only in developing a lot of phobias on the part of the patients and cause serious damage to health in a much larger group of individuals, who have no evidence of cancer, but who will go along for years in constant fear of cancer because of the overemphasis upon certain of the dramatic facts about the frequency of malignant disease, the effect upon the individual, and the low rate of curability. Proper concern is to be enlisted by temperate presentation of facts to the public.

Points this surgeon regards as deserving of special emphasis are:

Gastric cancer may become extensive and inoperable before it causes any recognizable alteration in gastric function. One should regard with suspicion, minor alterations of gastric function, even the unexplained development of simple anorexia, particularly in those past 40, and use all the diagnostic methods at hand.

Patients should be urged to seek medical advice early and the physician should make a serious attempt to determine the basis for the symptoms.

Our various diagnostic methods will not always distinguish between malignant ulcer and a benign gastric ulcer. In a series of 131 patients operated upon with a diagnosis of benign ulcer, there were 26 malignant ulcers. Because of this high percentage of error the treatment of all patients with gastric ulcers should primarily be surgical and especially should all stomachs affected by chronic and recurring ulcerations be resected. Resection for gastric ulcer can be carried out by experienced surgeons with very little risk—96 consecutive resections were performed in this group without a fatality.

Adenomatous polyps should be considered and treated as carcinoma.

Roentgenologic examination should be made and, if negative, and symptoms continue should be repeated in a month or two. Gastroscopic examinations are extremely valuable. Absence of HCl from the gastric contents is of no special value in the diagnosis, and high acid values by no means rule out gastric carcinoma. Achlorhydria should be regarded with greater suspicion and repeated x-ray studies should be made.

No interpretation of, or treatment for, any type of gastric distress should be made until gastric malignant disease is definitely ruled out. Any individual who has persistent achlorhydria should have roentgen studies at regular intervals over a period of years. The method of cytologic diagnosis of gastric carcinoma as advocated by Papanicolaou should be employed.

Few gastroenterologists will agree that all patients with gastric ulcers should be treated surgically. Certainly all of us should pay more attention to very slight digestive symptoms in those growing or grown old.

In a period of 12 years (1935-46) 245 patients with the diagnosis of probable gastric cancer were admitted to the Brooklyn Hospital. From this series, 117 cases whose records were suitable for study were selected by Cook[2] for analysis. Forty-eight (Group 1) were patients who had been admitted during the years 1935 through 1940; the remaining 69 (Group II) had been hospitalized during the 1941-46 period.

It has been shown on many occasions that gastric carcinoma may be asymptomatic.

A series of 117 cases of carcinoma of the stomach seen in a period of 12 years has been reviewed with particular reference to factors favoring or hindering early diagnosis. Comparisons of cases in the two successive six-years periods covered indicate no significant advance toward the goal of early diagnosis and prompt operative intervention. It is noted that failure of early diagnosis has been due chiefly to incorrect evaluation of symptoms, primarily those whose symptoms were attributed to ulcer.

1. S. F. Marshall, Boston, in *Penn. Med. Jl.*, May.

2. A. W. Cook, Brooklyn, in *Brooklyn Hospital Journal*, April.

From this review and a perusal of the literature Cook concludes that:

In patients under care with the diagnosis of peptic ulcer, the disappearance of the *inter*mittent exacerbations of pain, with substitution of a *re*mittent or continuous course should be viewed with grave concern, as should irregularity, diminution, or exacerbation of the "ulcer" symptoms.

Loss of weight and unexplained anemia in patients, with minimal or no gastrointestinal complaints, are *suggestive*, the persistence of occult blood in all specimens of a gastric analysis with very little or no free HCl after injection of histamine *highly suggestive*, of gastric malignancy.

Complete investigation of all patients with pernicious anemia would uncover unsuspected cases of carcinoma of the stomach.

More extensive use of gastroscopic examination and study of the "cell block" and the smear made from gastric washings will be the means of diagnosing some cases earlier.

Positive roentgenologic evidence of a gastric neoplasm must not be awaited if early diagnoses are to be made.

BLOOD AND PLASMA IN SURGICAL EMERGENCIES

The administration of blood and plasma is in many cases life-saving. However, there is reason to believe that these remedial agents are used in some cases not to best advantage, in some in which they are not indicated.

What Simeone[1] has to say about their use in surgical emergencies applies to much of their use in other cases.

Autotransfusion is a useful procedure which is not utilized as fully as should be. The necessary apparatus should be readily available in every operating room. The blood shed in the peritoneal cavity can be easily aspirated and reinjected into the patient. Blood for this purpose has been successfully collected from the vagina in massive metrorrhagia.

Especially in using plasma pooled from a large number of donors, the incidence of homologous serum jaundice should be kept in mind as a hazard to weigh against the possible benefits from plasma administration. The use of plasma should be limited to the replacement of lost blood while waiting for whole blood, and to instances of obvious loss of plasma (burns). To use plasma for replenishing serum protein, or for fulfilling the daily protein requirements of a patient, is hazardous, impractical and ineffective. To administer 120 grams of protein would require two liters of plasma, and there are better ways to accomplish that end. Neither blood nor plasma should be used when the benefit to be derived therefrom does not outweigh the calculated hazard from their use.

Blood and plasma are indispensable agents for restoring the circulating blood volume when this is dangerously decreased in surgical emergencies. In traumatic shock, whole blood is lost from the circulation and whole blood should be used for replacement. In burns, plasma is lost from the circulation and plasma is indicated for restoration of the circulating blood volume during the period of expansion of the extracellular fluid space.

The necessity of a careful check on fluid replacement in severe burns is emphasized and the use of the water-tolerance test is described. Within a period of 30 or 40 minutes a liter of 5 per cent dextrose in distilled water is given intravenously and the effect of this upon the hourly urinary output is noted. If the oliguria or anuria is due to lack of available body water, there will be a prompt diuresis; if to renal damage there will be no diuresis. Review of what fluid the patient has already received may suggest that the test be done with plasma (hemoconcentration and low plasma protein), or if the specific gravity and the chloride concentration of the urine are low, it may be preferable to inject dextrose in saline. As a rule, dextrose in distilled water is the most useful.

Whole blood is necessary to treat the anemia early and late during convalescence from a severe burn.

1. F. A. Simeone, Boston, in *R. I. Med. Jl.*, May.

Some Pertinent Facts as to Peptic Ulcer

(Sara M. Jordan, Boston, in *Med. Ann. D. C.*, June)

A patient should understand that his developing an ulcer has put him in a category from which he cannot escape as long as he lives. With that understanding, an intelligent patient is willing to use self-discipline.

As to hospitalization, for the active ulcer three weeks in hospital routine, 17 days of which are spent at complete bed rest. Food is gradually increased according to a Sippy schedule modified for the individual's requirements. One of the aluminum hydrate products is given to neutralize, this checked by gastric-content analysis. As antispasm therapy, usually belladonna and the application of heat, is used in all cases of irritability of the stomach or duodenum, or of small and large intestine, together with vitamin therapy, and in malnutrition cases supplementary protein in the form of amino acids. The physician must plan the life routine, help to solve psychogenic problems, wean the patient from smoking. We tell our patients unequivocally that smoking must be given up for life.

The existence of brain tumors has to be inferred. Cardinal symptoms are headache, vomiting, and visual changes; additional symptoms are epileptic attacks, drowsy and comatose states, intellectual impairment, personality changes, monoplegic, hemiplegic, and paraplegic states, and cumulative involvements of cranial nerves are common.

With convulsions beginning after adolescence think at once of brain tumor. Even in children one can not just dismiss the case as another case of epilepsy.—R. H. Quade, in *Wisc. Med. Jl.*, June.

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MOST DIAGNOSIS AND TREATMENT CAN BE SATISFACTORILY DONE OUTSIDE HOSPITALS

IT IS OBVIOUS to any doctor who looks into the matter that a large percentage of persons put into hospitals would be better off in health as well as pocket if they had been taken care of in home and office. Comforting and encouraging it is to read an article by a Harvard and Peter Bent Brigham doctor[1] which elaborates this theme.

First Dr. Levine contrasts the hospital service and the diagnostic and therapeutic armamentarium of the long ago with that of today. The main purpose of a hospital a hundred years ago was to isolate infectious cases, especially smallpox, and to serve as an almshouse for the very poor. There were no special examinations or therapeutic procedures that could not be performed at home or office. It then mattered little if the doctor who first met the medical problem missed the diagnosis of any but the very acute cases. Now it matters much. One must, except in obvious cases, choose what test or tests to perform, or the specialist to be consulted for further guidance. The practitioner's college and hospital training may leave him bewildered. Now he needs an entirely different point of view, one that is suitable to practice outside hospitals.

He now must choose which of an endless variety of examinations he should perform. He cannot do all of them, for much time and money would be wasted. After carrying out a reasonable procedure for every new patient—which might well include a routine urinalysis, a determination of the b. p., adequate family and past history, present illness and physical examination—additional study may not be necessary. He must discover the one patient out of a thousand he sees who has a brain tumor, or pernicious anemia; the one in a hundred who has pulmonary tuberculosis; the rare case of coarctation of the aorta, as well as recognize such common conditions as acute appendicitis, cancer of the bowel, and streptococcus sore throat.

To illustrate that the specialist has generally an easier diagnostic task than the G. P., it is said it was not difficult for the late Dr. Harvey Cushing to make the diagnosis of brain tumor in most cases, for his patients were sent to him with that diagnosis already suspected, in perhaps most cases already made.

This doctor who is motivated by the desire to get folks well would have us know well those diseases which are amenable to medical or surgical treatment, and from which spontaneous recovery does not take place; also to know and practice simple means to *rule out* diagnoses as well *as to rule them in*, short cuts, which need not be abso-

1. S. A. Levine, Boston, in *R. I. Med. Jl.*, June.

lutely accurate, but which guide quickly to the correct diagnosis. "All experienced physicians constantly employ this method," says Dr. Levine, "but very little is formally taught about it."

Hyperthyroidism may be suspected — loss of weight, weakness, shortness of breath and other vague signs or symptoms; a basal metabolism test can answer the question. But if the patient prefers summer to winter and has a dry skin it is very unlikely that he has hyperthyroidism, and one might well discard the idea of doing a metabolism test and look in another direction for the explanation. If under the same circumstances, the patients prefer cold to warm weather and have a warm, moist skin, the metabolism test might be the first to do.

In a recent experience such simple bedside clues proved decisive in a patient's recovery. The man had pain in the chest from coronary artery disease; ecg. confirmed the diagnosis. In bed for weeks, seen one morning, his bedroom cold, he was covered with only one sheet and his feet were uncovered; he said that for some years he had felt warm and did not like many bedclothes. That directed attention to the thyroid gland. On careful palpation a small nodule was felt which had been overlooked. Gratifying recovery followed on iodine therapy and a subtotal thyroidectomy.

A hundred years ago, between bacterial endocarditis and tuberculosis, it did not matter whether the correct diagnosis was made. Now it makes the difference between life and death. Here, also, a short cut can be employed. If there have been prolonged fever, sweats and loss of weight and no murmurs can be heard, blood cultures would be the last thing to obtain. Such a patient will almost never have bacterial endocarditis. This simple bedside observation justifies dismissing that disease from mind and looking for t. b. in the sputum or gastric washings, or making an x-ray picture of the chest. Auscultation for a few moments may spare the patient the cost of several unnecessary blood cultures.

Now that patent ductus arteriosus or coarctation of the aorta can be cured, it is imperative that these diagnoses be not missed. It should be routine to palpate the femoral arteries and abdominal aorta in every case of hypertension. If these pulsations appear normal and vigorous, one can fairly safely rule out coarctation. If they are difficult to feel or entirely absent, the possibility is great, and then one should test the b. p. in the legs. In coarctation it will be found lower in the legs than in the arms. The finding of a strong femoral pulse fairly well eliminates the possibility of coarctation of the aorta.

If the patient can walk briskly in cold weather without stopping and with no pain or distress in the chest, one can be fairly certain that he is not suffering from angina. This does not apply to the diagnosis of coronary thrombosis. If a woman has symptoms suggesting coronary artery disease and is known to have had a normal or low b. p. all her life, look for some other cause—as gallstones, arthritis of the spine, or diaphragmatic hernia.

Many a good doctor of former times would delight in this: The appearance of the tongue will aid in making diagnoses and help to eliminate certain possibilities. When a middle-aged or elderly patient is seen who is anemic, the possibility of pernicious anemia must always be considered. If the tongue is dirty, coated and furrowed, one can readily dismiss pernicious anemia from mind. A clean, smooth tongue demands gastric analyses and blood counts. If the patient is apathetic and full-blooded, it is extremely unlikely that uremia is the cause of his presenting symptoms. A hemoglobin test can be performed readily, whereas the blood urea nitrogen determination is much more elaborate. If the urine specific gravity is 1020 or more, it is extremely unlikely that the patient has uremia.

Previously Addison's disease was fatal; now it can be controlled and patients enabled to live long and useful lives. The finding of even slight enlargement of the heart is a reliable sign that Addison's disease is not present.

Physicians too often send patients to hospitals for diagnosis when simple examination in the office or the home would have been adequate. The diagnosis of angina pectoris in the great majority of the cases can be made after an intelligent appraisal of the symptoms and little additional useful information will be acquired by elaborate hospital study. If, on careful auscultation, the diagnostic signs of mitral stenosis are detected, it will not help materially to know whether the heart is slightly or moderately enlarged or whether the electrocardiograms show right- or left-axis deviation. The more intelligent use the physician makes of the methods that require no more than what he carries in his head and in his bag the less he will need the hospital.

The hospital is needed when diagnosis is obscure. Even there the wisdom of the physician is taxed to select tests wisely. The hospital is also needed to carry out certain care, medical or surgical, that cannot be performed adequately or at all at home.

It is well for a physician, on leaving the bedside of any patient who is seriously sick or not getting along well, to keep asking himself: what further might I do that would help diagnostically or therapeutically? What may I be overlooking?

It is important to think frequently of those conditions, even if rare, that are curable. In a case of "arthritis of the spine" which had disabled a man for 18 months x-ray examination even showed

some arthritic changes in the upper dosal region. Later a more astute observer did a lumbar puncture, established the diagnosis of enucleable cord tumor, and the patient was completely cured. It is more important to think of rare diseases that are curable and that do not spontaneously disappear, than of the more common diseases that are not curable or which do well with symptomatic treatment.

Certain combinations of symptoms or signs often go together. Mitral stenosis, auricular fibrillation and a past history of rheumatic fever often are found in the same individual. Finding two of this triad, one should look for the third. If a patient with a past history of rheumatic fever later is found to have auricular fibrillation, he very likely has mitral stenosis, whether you can hear the diastolic murmur or not. Likewise, if a rheumatic with mitral stenosis develops a very irregular rhythm, it is most likely auricular fibrillation. Another common grouping is gallop rhythm, bundle-branch block and pulsus alternans. If two of the triad are present, it is well to look for the third. Similarly the triad of renal stones, limb pains and parathyroid adenoma may be helpful to enable the physician to think about these rare but curable cases of tumor of the parathyroid. Also diabetics at the age of 50 to 60 years so frequently have coronary-artery disease and gallstones that this combination of conditions should be kept in mind.

There was very little in the way of cure that could have been done 100 years ago outside or inside a hospital. Now, it matters greatly whether a profound anemia is due to metastatic cancer of the bones or to pernicious anemia. A patient was not neglected then if abdominal swelling from ascites was attributed to cirrhosis of the liver, when in fact it resulted from pericardial constriction. Now little can be done for the former, but the latter may be cured. Then a murmur due to rheumatic aortic valvular disease could be confused with one due to patent ductus arteriosus without jeopardy to the patient, for neither condition could be treated effectively. Now one of the two can be remedied. All this places us under obligation to use judiciously the various methods of study that are available, and particularly the simple bedside techniques that we all have at hand. In this way we will continue to merit the confidence of our patients, who entrust their health to our care.

Write Dr. Levine for a reprint. Every doctor should have for his own, and should read, mark, learn and inwardly digest, every word of this address. I hope Dr. Levine will soon write a book on this general subject. Such a book, backed by all the authority of one of the greatest of medical schools and hospitals, is urgently needed to impress doctors that doing their best for those who put themselves in their hands includes no wastage of the patients' time, comfort or money.

It would be interesting to know how much time is spent in hospitals by members of doctors' families, as compared with the time so spent by the families in the general population.

An editorial in a highly-scientific journal just off the press would have every case studied exhaustively. According to this editor:

Diagnosis of the nature and cause of an anemia requires a careful history as regards dietary habits, gastrointestinal complaints, bleeding, chemical exposure, hereditary disease and the like. A careful examination, followed by an evaluation of the blood picture, will then usually lead to a fairly conclusive idea as to what type of anemia is present, and its possible etiologic mechanisms. A few other studies, including such procedures as stool examinations for occult blood, x-ray examinations, bilirubin estimations, studies of the aspirated bone marrow, etc., will usually lead to a final diagnosis. This procedure, the editor admits, is time-consuming. On the other hand, he maintains, a careful study is valuable for the patient, informative for the physician, and productive of knowledge which should be helpful in determining whether a simple medication or perhaps a radical surgical procedure is the treatment of choice in a given case.

The prescribing of multi-drug preparations is wasteful of the patient's finances. If the patient has an iron deficiency, he needs iron in adequate amounts. There is no evidence that liver and the various vitamins act as adjuvants to iron. When a patient has pernicious anemia he needs liver extract or folic acid in optimal amounts and not iron or vitamin B complex. The watchword should be "specific medications for specific deficiencies." None of the various antianemia preparations stimulates blood formation. There are no hematopoietic stimulants; only materials which supply a given deficiency.

A patient who has hypochromic anemia due to unrecognized chronic bleeding from the bowel, by the time a neoplasm becomes obvious, it may be too late for radical surgery. Or a patient with pernicious anemia is given pills containing liver extract in sufficient amount to initiate a minor therapeutic response, but hardly sufficient to prevent neurologic complications.

For most of us a routine blood count and hemoglobin estimation discloses all that is "valuable for the patient," if not sufficiently "informative for the physician;" and there is no excuse for multiplying expensive examinations and prolonging the time under care just to gratify the curiosity and inflate the ego of the doctor. And it is astonishing to see how this consultant strains at the gnat of waste of the patient's pennies on drugs, after so grace-

fully swallowing the camel of waste of the folding money on prolonged hospital study and a multiplicity of examinations.

Surely all will agree on specific medications for specific deficiencies so far as such medications are available, as well as, with the caution not to overlook cancer, nor to give too-little liver.

ON PREVENTING CERTAIN CONGENITAL MALFORMATIONS

Reports consistently indicate a relationship between rubella in the mother during the first few months of pregnancy and congenital malformations among the offspring, particularly congenital cataracts, microphthalmia, microcephaly, deaf mutism, and congenital heart disease.

For several years these reports have been coming out, but little has been said about what to do. Nevius[1] offers practical prophylaxis.

If a family has one child with a congenital defect and then has more children, the chances of a defective child occurring subsequently are 24 times greater than among the population at large.

Rats have been fed on a diet deficient in vitamin B complex, and had offspring regularly showing short mandibles and short or absent radii, ulnae, tibiae, and fibulae. The addition of a 2 per cent dried pig liver to the diet or addition of riboflaving alone prevented these malformations up to the 13th day after conception.

There is a high incidence of deformed babies among mothers who received radium therapy or irradiation during pregnancy.

For the prevention of malformations from these known causes, it is urged that women receive adequate amount of vitamin B complex (especially riboflavin) during pregnancy, and it is recommended that the utmost care be exercised not to irradiate the pregnant uterus.

To prevent the disastrous after-effects of rubella during the first trimester of pregnancy, it is advised that all girls between the ages of five and 15 be deliberately exposed to rubella during an epidemic, thus preventing subsequent attacks. In the case of a known exposure to German measles during the first three months of pregnancy, the intramuscular injection of 10 c.c. of immune globulin will probably prevent the occurrence of the disease. Where the clinical disease develops, a therapeutic abortion is indicated following recovery from the disease.

These measures are none too vigorous. They are clearly indicated and should be adopted generally. Only 18 normal babies from 132 pregnancies! More than half of them with cataracts, more than a third mentally deficient, more than half with malformed hearts, and one case each of cretinism and mongolian idiocy in the lot!

1. W. B. Nevius, East Orange, in *Jl. Med. Soc. N. J.*, June.

The First Report of the Joint Committee of the National Society for the Prevention of Blindness and the American Academy of Pediatrics includes 132 mothers who had German measles during the first trimester of pregnancy, and *of the babies born of these 132 pregnancies only 18 were normal.* Sixty-two weighed less than six pounds at birth; 76 had congenital cataracts; 35 were deaf; 22 were microcephalic and 46 mentally retarded. Malformations of the heart were diagnosed in 67. Disturbances of the eye, other than congenital cataracts in 13, included congenital glaucoma, microphthalmus, nystagmus, chorioretinitis and strabismus. Hyposadias was observed in four, inguinal hernias in four, malformations of the extremities in three, cleft palate in three, harelip in one. There was in the lot one cretin, one mongolian idiot.

This subject should be discussed *now* in every county medical society, and acted on *now.*

LET'S SAVE CHILDREN FROM DEATH BY VIOLENT ACCIDENTS

A reduction in the number of child accidents is the objective of a campaign to be launched this fall by the Metropolitan Life Insurance Company with the coöperation of the U. S. Children's Bureau, the American Academy of Pediatrics, and the National Safety Council. Few of us realize that accidents are the leading cause of death among children of more than one year, the rates far surpassing those of any other cause. And in this age group there has been little improvement in the past 15 years, although the death rate from disease has been cut two-thirds.

In the age group five to nine, the death rate for accidents was 25.7 per 100,000 as compared with a rate of 4.6 for rheumatic fever and organic heart disease 7.2.

The present low death rates from all nonaccident causes, as compared with those of but a few years ago, are the result of advances in medical science and concentrated efforts in the field of child health. Efforts are to be intensified to reduce the number of child accidents to a minimum. The program is planned to encourage public health, medical, safety, and other organizations, as well as the general public, to given even greater attention to the child safety phase of the child health program.

As part of the campaign the Metropolitan has prepared a 12-page booklet, "Help Your Child to Safety," which stresses the importance of effort on the part of all members of the family in removing physical hazards and discourages practices resulting in child injuries. The Metropolitan Field Force throughout the United States will coöperate in this campaign by distributing the booklet, and in other appropriate ways will help to make the

public aware of what can be done to cut down the tremendous toll of child accidents.

Supplies of the booklet and copies of statistical charts, prepared talks, suggested areas releases, and other source material will be available upon request by September 1st for use in local organized child safety programs.

Doctor Addison Gorgas Brenizer, Junior

Again Charlotte and the large territory from which ailing persons come to Charlotte seeking surgical relief have available the services of a Dr. Addison Brenizer. We have reason to believe that to a great measure the loss we sustained when Dr. Addison Brenizer, Sr., was incapacitated some years ago by an attack of coronary thrombosis has been repaired.

Addison Brenizer, Jr., was born at Charlotte, was educated in the humanities and the premedical sciences at Davidson and Princeton, and in medicine at Harvard. He served his internship at the Massachusetts General Hospital after which he was resident in surgery at the same hospital on Dr. E. D. Churchill's service. In the latest war he was chief of surgical service of a unit serving on Guam and Saipan. His last army service was as chief of surgery at Tilton General Hospital, from which he was discharged with the rank of Major in June of this year, after 44 months of active service.

Dr. Brenizer has had the very best of opportunities for the training of his brilliant mind all the way through his educational course, and he has improved all these opportunities. Since his graduation his opportunities for diagnosis and treatment in civilian and military surgery have been unexcelled, and of all these opportunities he has taken full advantage.

Charlotte and its environs—even its remote environs—are fortunate and happy again to have available the services of a Surgeon Addison Brenizer.

The death rates in almost all the countries of Western Europe in 1946 and 1947 were equal to or below the prewar level. The postwar death rate in France is the lowest in her history. The record is very favorable also in England and Wales, the Netherlands, the Scandinavian countries and Switzerland. If account is taken of the aging of the population in these countries, their current death rates are lower than ever before.—*Stat. Bul. Met. Life Ins. Co.*, May.

Anginal pain may be caused by disease of the tissues of the mediastinum or of the heart. It seems to be due to excessive activity in the vasodilator pain fibres in the posterior nerve roots passing to the mediastinal structures and the coronary vessels, and it is not necessarily due to anoxia.—R. Wyburn-Mason, in *Brit. Med. Jl.*, May 22nd.

NEWS

Dr. McCaw Tompkins Honored by Johnston-Willis

The new 75-bed addition to Johnston-Willis Hospital has been named Tompkins Pavilion, in memory of the late Dr. James McCaw Tompkins.

Dr. Tompkins was president of Johnston-Willis from 1929 until his death in 1947. He was a son of the late Dr. Christopher Tompkins who, with the late Drs. George Ben Johnston and A. Murat Willis, founded the hospital in 1909.

Located then at Sixth and Franklin Streets, the first hospital had a capacity of 60 beds. In 1924 the hospital moved into its six-story building at Kensington and Colonial Avenues. Designed originally for 130 patients, the present hospital has undergone several interior structural changes to help meet the growing need for more hospital beds in Richmind. In 1947 Johnston-Willis purchased the 18-unit apartment building adjacent to its property on Kensington Avenue and converted it into a nurses' home, and the Johnston-Willis Nurses' Training School, founded and operated continuously since 1909, was moved into it early this year.

The former Nurses' Home, a structure erected in 1928 at the rear of the hospital, became the nucleus for the new 75-bed unit just opened to patients.

The Carteret County Medical Society held its regular monthly dinner meeting at the Morehead City Hospital on June 14th, with the hospital as host.

The scientific program consisted of a moving picture presented by Mr. Richard Vaden, representative of Abbott, Inc., entitled "Modern Trends in Intravenous Therapy." The technique demonstrated in the picture was unusually good and the showing was well received.

Dr. J. W. Morris, Morehead City, presided as president of the society, Dr. Frank E. Hyde as secretary.

We think it is worthy of comment that Dr. Morris was recently elected president of the Morehead City Chamber of Commerce.

N. Thomas Ennett, M.D.
Publicity Chm.

New Hanover County Medical Society Medical Symposium

The New Hanover County Medical Society will hold its second annual summer Medical Symposium at Wrightsville Beach, N. C., August 20th. A complete program for which will be mailed out later. Among the distinguished doctors to participate are Dr. George Crile, Jr., surgeon at the Crile Clinic, Cleveland, Dr. John S. L. Browne, professor of medicine, McGill University, and Dr. Edward G. Waters, chief of obstetrics at Margaret Hague Maternity Hospital and professor of obstetrics and gynecology at Columbia University.

The meeting will last from 11 A. M. until 10 P. M., with intermissions for lunch, cocktails, and dinner. The entire program and registration desk will be at Lumina Pavillion.

Virginia Board of Examiners

Dr. Guy M. Horsley, of Richmond, has been named president of the Virginia Board of Medical Examiners. Other officers elected are Dr. C. L. Riley, of Winchester, vice-president, and Dr. K. D. Graves, of Roanoke, re-elected secretary-treasurer.

A total of 129 candidates took their final examinations the first week in July and 139 the Part I examinations covering the first two years of medical school work. Final

examinations also were being taken by 17 candidates for chiropody registration.

Eighth District New Officers

Dr. Kenneth Geddie, of High Point, was elected president of the Eighth District of the North Carolina Medical Society at the group's semi-annual meeting at Jefferson Country Club, High Point, N. C., June 30th.

Elected with Dr. Geddie were Dr. Cy Gray, of High Point, vice-president, and Dr. A. R. Cross, of High Point, secretary-treasurer. The officers will serve a six-month term. Dr. Joseph B. Stevens of Greensboro, retiring president, was in charge of the session.

Dr. Robert B. Lawson, of Winston-Salem, read a paper on the Diagnosis of Poliomyelitis. Other papers were presented by Dr. Angus Randolph, of Winston-Salem, and Dr. J. T. Davis, Dr. Ralph Lake and Dr. Sherwood Barefoot, all of Greensboro.

Research Fund Makes More Awards

An additional $103,000 in research funds for heart disease has been announced by the Life Insurance Medical Research Fund, raising to $2,000,000 the amount provided by the Fund since it was organized in 1945. The awards include 12 student fellowships, three post-graduate fellowships and nine grants-in-aid to hospitals and universities.

Fellowships of $1,500 to $1,800 go to students who have not yet received the doctorate, and provide for a year's additional undergraduate training under leading scientists. Post-graduate fellowships of $2,500 to $4,000 go to graduate workers for similar study.

To date, the Fund has made 103 grants-in-aid to 48 medical schools and has provided support for 60 research fellows. This brings the 1948 allocations to $637,000.

Of the 12 Student Research fellowships, two provide for work under the supervision of Dr. Tinsley R. Harrison at the Southwestern Medical College, at Dallas; one for work under the supervision of Dr. Harold D. Green at the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, and one for work under the supervision of Dr. D. C. Elkin at Emory University School of Medicine, Atlanta.

Of the nine Grants-in-Aid of Medical Research made to hospitals and schools, two are made to Duke University and one to the University of Mississippi.

The American Congress of Physical Medicine

will hold its 26th annual session Sept. 8th-11th at the Hotel Statler, Washington. All sessions will be open to members of the A. M. A. In addition to the scientific sessions, the annual instruction courses will be offered in two groups: (1) 10 lectures primarily on physics and physiology, attendance limited to physicians; (2) 10 lectures general in character open to physicians and physical therapists. The physical therapists must be registered with the American Registry of Physical Therapy Technicians.

Full information may be obtained by writing to the *American Congress of Physical Medicine*, 30 North Michigan Avenue, Chicago 2.

Dr. John William Roy Norton, a native of Scotland County, was sworn in as State Health Officer in ceremonies held in the State Laboratory of Hygiene, July 1st. He succeeds Dr. Carl V. Reynolds, who resigned recently after holding office for 14 years.

Chief Justice W. P. Stacy of the State Supreme Court administered the oath before a large group.

Dr. Ross S. McElwee, Jr., of Statesville, N. C., recently released from service in the Medical Corps of the Army, has entered upon a residency in surgery in the Cornell Medical Center in New York.

Raymond Milner Wheeler, M.D., announces the opening of offices for the practice of internal medicine at 401 North Church Street, Charlotte, N. C.

Arthur J. Draper, M.D., announces the opening of new offices for practice in Internal Medicine, at 1425 Elizabeth Avenue, Charlotte, N. C.

Dr. Douglas Jennings, of Bennettsville, S. C., has been elected president of the Junior Chamber of Commerce.

Dr. Wm. Braxton Ingram announces the opening of offices for the General Practice of Medicine, Professional Building, Charlotte, N. C.

Dr. Addison G. Brenizer, Jr., Diplomate of the American Board of Surgery, announces the opening of offices for the practice of General Surgery, 1425 Elizabeth Avenue, Charlotte, N. C.

Dr. Glenn W. Pennington announces the new location of his offices, 1111 East Morehead Street, Charlotte, N. C.

Dr. John P. Harloe announces the opening of offices for the General Practice of Medicine, 1314-16 Independence Building, Charlotte, N. C.

Dr. A. L. Baker, formerly assistant chief of the neuropsychiatric division for the Veterans' Administration's Richmond branch area, has accepted a position as associate physician with Elmcrest Manor Hospital, Portland, Conn. Dr. Baker had been with the Richmond branch office since November, 1946. For 17 years prior to that, he was with Craig House, a Beacon, N. Y., neuropsychiatric hospital, first as an assistant physician and later as medical director. A native of Newport News, Dr. Baker did premedical work at William and Mary College and received his M.D. degree from the Medical College of Virginia.

Schering Sponsors Scientific Film

The first of a series of scientific motion picture films on various phases of endocrinology was recently released by Schering Corporation of Bloomfield, N. J. The subject of the Schering film is "The Physiology of Normal Menstruation." The film is completely animated, in color, and available with or without sound. The script was written by Dr. Somers Sturgis, Associate Surgeon at the Massachusetts General Hospital, and Dr. John Rock, Clinical Professor of Gynecology at Harvard Medical School. The film may be obtained free of charge for showing before interested groups by writing to the Medical Service Department of Schering at Bloomfield, New Jersey.

Sulfadiazine is rated (Council on Pharmacy & Chemistry of the A. M. A) lowest as to toxicity—one-half to one-third as toxic as most of the other sulfonamides.

MARRIED

Dr. William Burdette Crawford, Jr., and Miss Florence Marianne Nelson, both of Charlottesville, Virginia, were married on June 15th.

Dr. Robert C. Pope, of Enfield, N. C., and Miss Ruthmary McColl, of Loray, were married on June 17th.

Dr. John Ware, of Asheville, and Miss Dorothy Dalton deal, of Charlotte, were married on June 5th.

DIED

Dr. William B. Crawford, Wayne County's oldest physician, died April 20th at Oak Glenn, five miles west of Goldsboro, N. C. Dr. Crawford, who was 87 years old, had practiced his profession in rural Wayne until a year ago. He served his community as doctor and best friend for 61 years.

Dr. Crawford wrote last fall that in a radius of 10 miles from his home he has six patients whom he attended in 49 maternity cases. Every mother and 47 of the children are still living.

Oak Glenn was built by Dr. Crawford's grandfather Howell in 1839 and before the War Between the States was one of the most attractive places in the county. His parents moved to the home in 1872. At it he spent all except six years in Goldsboro and 10 years practicing medicine at Selma and at Lexington. Following a serious illness at Lexington, Dr. Crawford returned to Wayne. For many years Dr. Crawford wrote regularly for Goldsboro newspapers. His columns commanded a wide following.

Dr. Rufus L. Raiford, 67, prominent physician and surgeon, and founder of Raiford Memorial Hospital at Franklin, Va., died in his sleep in the night of June 25th. Dr. Raiford received his medical degree in 1906 from the University College of Medicine, which later became part of the Medical College of Virginia, in Richmond.

His wife, Mrs. Lora Katherine Burgess Raiford, who survives him, was an invaluable aid to Dr. Raiford in the early days of his practice and in the administration of the hospital. He founded the hospital in 1929 and was actively engaged in its operation until a year ago when he retired.

In addition to his wife, he is survived by two sons, Dr. Morgan Raiford, of Philadelphia, and Dr. Fletcher Raiford, of Franklin, associated with his father in the hospital, and two brothers, E. Jerome Raiford, of Petersburg, and E. Wister Raiford, of Ivor.

He served a number of years as secretary of the South Side Medical Association and was a member of the American Medical Association, Southern Medical Association, The Tri-State Medical Association, Medical Society of Virginia and the Southampton County Medical Society.

Dr. James Sinkler Irvine, 80, died May 30th at his home near Evington, Va. He had practiced medicine more than 57 years. He was a graduate of New London Academy, Virginia Polytechnic Institute and University of Virginia, and had an interneship under Dr. Hunter McGuire.

Dr. John Joseph Williams Looney, 68, eye, ear, nose and throat specialist, died May 12th at his home at Rocky Mount, N. C. Dr. Looney was a graduate of the University of Virginia and was for a number of years affiliated with the Mayo Clinic.

Dr. Edward Buehler Clement, of Salisbury, N. C., died at Brunswick, Ga., on June 18th. He was returning to his

home by motor when he was seized by a fatal heart attack. Dr. Clement was born in 1881; he was graduated from the Jefferson Medical College in 1906, and for many years before his retirement he specialized in the treatment of diseases of the eye, ear, nose and throat.

Dr. Julian M. Robinson, 73, died at his home at Danville, Va., June 29th. He was a son of the late Dr. W. L. Robinson. For 45 years he had practiced at Danville, for most of the time specializing in surgery. He received his degree at the Medical College of Virginia in 1899, and had internships in New York hospitals.

Dr. Alex McLeod, of Aberdeen, N. C., died in the Moore County Hospital at Pinehurst, June 19th, after an illness of several days, at the age of 72. Dr. McLeod was a business, political and civic leader of that section of the State for half a century. A native of Moore County, soon after graduation in Baltimore, he began the practice of medicine in nearby Hoffman 52 years ago. Two years later he moved to Aberdeen where he had lived and practiced till a few days before his death.

Dr. Joseph A. Rucker, 77, died June 30th at his home at Bedford, Va., after an illness of several months. He was a native of Bedford County, and had lived in the county all his life. He was graduated in Medicine from the University of Louisville in 1893. For many years he was resident physician of the National Elks Home in Bedford, as well as physician of Randolph Macon Academy. He was surgeon of the Norfolk and Western Railway for 50 years, having received his gold pin last year, and chairman of the Bedford Board of Health.

BOOKS

DIAGNOSIS IN GYNAECOLOGY: A Classification of Gynaecological Diseases Based on Aetiology and the Clinical Logic for Diagnosis, by James V. Ricci, A.B., M.D., Clinical Professor of Gynaecology and Obstetrics, New York Medical College. *The Blakiston Company,* 1012 Walnut St., Philadelphia 5. 1948. $4.50.

This small volume aims to teach the art of gynecological history taking and the method of making the examination so as to arrive at a correct diagnosis. It attempts to teach how to analyze and evaluate signs, symptoms and laboratory data "so that the student may learn to think in terms of a sound differential clinical logic." The book is not offered to supplant a regular textbook on gynecology, but rather to supplement it. So used the book will serve a useful purpose.

HANDBOOK OF TREATMENT AND MEDICAL FORMULARY, by Charles M. Gruber, Ph.D., M.D., Professor of Pharmacology, Jefferson Medical College, Philadelphia. *F. A. Davis Co.,* 1914 Cherry Street, Philadelphia. 1948. $7.

The rapidity with which reports are made in medical journals, and even lay publications, of new treatments of various conditions, medical and surgical, makes it difficult for any physician, and particularly for a general practitioner, to know at any time what is best treatment. This handbook supplies that information as to medical treatment, general and in the medical specialties, and as to surgical treatment commonly a part of general practice.

CORRELATIVE NEUROANATOMY, by Joseph J. McDonald, M.S., M.Sc.D., M.D.; Joseph G. Chusid, A. B., M.D., and Jack Lange, M.S., M.D. Fourth edition, revised, 60 illustrations. *University Medical Publishers,* P. O. Box 761, Palo Alto, California. Second printing March, 1948. $3.

This is a book for the student of gross anatomy, neuroanatomy, neurodiagnosis and neurology, which correlates the anatomy and physiology with the clinical findings of neurologic conditions. Diagrams show the distribution and functional components of the cranial, spinal and autonomic nerves. The essentials of the brain and spinal cord localization are shown.

In Part I each major peripheral nerve is well illustrated and described. The autonomics are discussed, including the physiology and the pharmacology.

Part II on neurodiagnosis has a discussion of the anatomy, physiology and localization in the brain and spinal cord. Motion, sensation, reflexes, trophic changes, electrical examination, intracranial pneumography and examination of the cerebrospinal fluid are outlined. Electroencephalography, with representative electroencephalograms, is presented.

Part III, dealing with diseases and disorders of the central nervous system, has been rewritten and enlarged.

An appendix gives a useful list of neurological signs and syndromes, a brief discussion of muscular dystrophies and atrophies and an outline of the neurological examination.

THE ACUTE BACTERIAL DISEASES—Their Diagnosis and Treatment, by Harry F. Dowling, M.D., F.A. C.P., Clinical Professor of Medicine, George Washington University; with the Collaboration of Lewis K. Sweet, M.D., Chief Medical Officer in Pediatrics and Infectious Diseases, Gallinger Municipal Hospital; and Harold L. Hirsh, M.D., Director of the Bacteriology and Immunology Laboratory, Georgetown University Hospital. 465 pages with 55 figures. *W. B. Saunders Company,* Philadelphia and London. 1948. $6.50.

First are considered the general factors in the diagnosis of the acute infectious diseases. These diseases are then grouped according to their distinguishing clinical features, a great aid in narrowing the likely diagnosis to one group of diseases. Further diagnostic procedures necessary in any case are described under individual diseases. Then come four chapters of general measures and special agents most effective in the treatment of bacterial diseases. In separate sections are grouped diseases caused by cocci, diseases caused by bacilli, bacterial diseases in which exotoxins are a major factor.

This is a readable, reliable coverage, in a rea-

sonable compass, of the diagnosis and treatment of the acute bacterial diseases. Every practitioner of general medicine, or any of its subdivisions, will find its teaching of daily usefulness.

PRACTICAL BACTERIOLOGY, HEMATOLOGY, and PARASITOLOGY, by E. R. STITT, M.D., Ph.M., Sc.D., LL.D., Rear Admiral. Medical Corps. and Surgeon General, U. S. Navy, Retired; PAUL W. CLOUGH, M.D., Physician-in-Charge of the Diagnostic Clinic, Johns Hopkins Hospital; SARAH E. BRANHAM, M.D., Ph.D., Sc.D., Senior Bacteriologist, National Institute of Health, Professional Lecturer in Preventive Medicine, The George Washington University School of Medicine. Tenth edition. *The Blakiston Company*, 1012 Walnut St., Philadelphia 5. 1948. $10.

For two-score years editions of this manual, first by Stitt and later by Stitt and his collaborators, have been covering the field of clinical microscopy in a single volume. During most of this time it was the general practice to publish separately such books on bacteriology, helminthology, protozoölogy, hematology, mycology and urinalysis. In each new edition more space has been assigned to the diagnostic work and the various laboratory procedures, and we are told that in the present edition special effort has been made to correlate still further laboratory data with symptoms and history. An especially useful feature is to be found in the appendix under the heading Laboratory Procedures Useful in Diagnosis, Indexed by Diseases.

It is plain that this long-established, standard book has been kept up to the character formed by its first edition, and that it represents today, as it did 20 years ago, the best in its field.

MEDICAL HYPNOSIS, by LEWIS WOLBERG, M.D., Assistant Clinical Professor of Psychiatry, New York Medical College. Volume I: The Principles of Hynotherapy, $5.50; Volume II: The Practice of Hypnotherapy, $6.50. *Grune & Stratton, Inc.*, 381 Fourth Ave., New York City 16. 1948.

As the author frankly admits few methods of treatment in the history of medicine have been so acclaimed on the one hand and so condemned on the other as has hypnosis. The two volumes are offered as a contribution to the growing literature on hypnosis in treatment, as accounts of experimental work in this field and an attempt to delineate utilities and limitations, advantages and disadvantages.

A good portion of Volume I is devoted to a step-by-step description of hypnotic induction, illustrated by excerpts from descriptions of hypnotic sessions. The principles of psychotherapy are discussed and the psychopathologic aspects of different disease conditions. Volume II gives three complete cases with a view to enabling the reader to follow the various stages in treatment and to observe the management as if the patients were present from beginning to end of therapy.

There is no attempt to represent hypnosis as a cure-all. It is said that a certain personality is essential to a physician getting best results from hypnotherapy and that the services of a psychoanalyst can be of great value to any physician who desires to specialize in psychiatry. In the final chapter the author deplores the spectacular use of hypnosis on platforms and in private parlors. He says there is need for protective laws which would safeguard the public and the medical profession from the abuses of hypnotherapy much as we are protected now by laws from the abuses of other remedial agents.

ESSAYS ON HISTORICAL MEDICINE, by BERNARD J. FICARRA, A.B., Sc.B., M.D., Professor of Research Biology in charge of Experimental Physiology, St. Francis' College, Brooklyn. Member of the American Association of the History of Medicine. *Froben Press, Inc.*, 1776 Broadway, New York 19. 1948. $5.

Chapter heads are:

American Pioneers in Abdominal Surgery
Amputations and Prostheses Through the Centuries
Famous Cripples of the Past
Surgical References in Shakespeare
The Evolution of Blood Transfusion
Walter Reed at King's County Hospital
A Historical Review of Pathology
Famous Autopsies in History.

Many will believe that a better choice could have been made as to the American Pioneers, that some should have been included who are left out, and that some who are included could have very well been left out. It is startling to see it set down that, "In 1879, Robert Lawson Tait (1845-1899), of Alabama, perfected colecystotomy." Lawson Tait, of Birmingham, England, was born in 1845 and died in 1899. In 1879 Birmingham, Alabama, had only a few more than 3,000 inhabitants, and no surgeon by the name of Tait. There is a chapter headed, "The Peerless Surgeons," and it deals with the achievements of a *number* of surgeons of great ability and renown. Still, to one keenly conscious of the meaning of words, it is uncomfortable to see more than one set down as being peerless, for peer means an equal, and certainly there could not be a number of surgeons, neither one of whom had an equal.

Very welcome is the author's choice for inclusion of an inspired passage from the pen of our own Hubert Royster: "The essential ingredients in the make-up of a surgeon are the mental, the moral and the mechanical. The first has to do with knowledge, the second with judgment, and the third with skill. In such order they provide the why, the whether, and the how of every surgical question."

Despite its imperfections—and what book does not have them?—the book contains much of interest, entertainment and profit.

DISEASES OF THE EAR, NOSE AND THROAT, by William Wallace Morrison, M.D., Professor of Otolaryngology and Attending Otolaryngologist, New York Polyclinic Medical School and Hospital; Senior Assistant Surgeon in Otolaryngology, New York Eye and Ear Infirmary; Associate Clinical Professor of Otolaryngology, New York University College of Medicine. *Appleton-Century-Crofts, Inc.,* 35 West 32nd St., New York City. 1948. $8.50.

This book is based on the teaching of otolaryngology for more than a score of years. The author has written for the undergraduate student and the general practitioner, keeping in mind constantly the need to be clear and concise, always laying stress on the commoner disease conditions and dealing briefly with those that are rare.

Certainly there is a long-standing need for a book to meet these ends. The author has admirably achieved his objective of supplying a practical book of instruction for the diagnosis and treatment of the vast majority of diseases of the ear, nose and throat by the general practitioner of medicine. Every family doctor should have the equipment which is recommended and put it into daily use. By so doing he can educate his patients to come to him for most care in this field rather than to go direct to the specialist, to the enhancement of the G. P's. prestige and his income.

THE ASEPTIC TREATMENT OF WOUNDS, by Carl W. Walter, A.B., M.D., Assistant Professor of Surgery, Harvard University; Senior Associate in Surgery at the Peter Bent Brigham Hospital. Illustrated by Mildred B. Codding, A.B., M.A., Surgical Artist Peter Bent Brigham Hospital. *The Macmillan Company,* 60 Fifth Avenue, New York 11, N. Y. 1948. $9.

This book begins with the development of the concept of asepsis and traces the development of chemical disinfection, and physical disinfection by boiling water, by steam, by dry heat and by such rare means as the ultra-violet ray. In the discussion of disinfection of the skin special emphasis is placed on the prime importance of mechanical disinfection. It recalls the teaching of the wise professor of chemistry in my own Alma Mater 40 years ago that "the best of all antiseptics is an abundance of soap and an abundance of hot water." There are chapters on airborne contamination, operating room technic, preparation of parenteral fluids, blood and plasma facilities, hospital infections of wounds, control of communicable disease, maintenance of sterilized equipment, and so on.

Much attention is paid to proper masking. No great importance is attached to air sterilization by the ultraviolet ray.

A reviewer can but find himself in hearty agreement with the foreword, that the volume contains information of the utmost value to every one concerned with the surgical care of patients; and it may well be added, to the care of medical cases also.

HISTAMINE AND ANTI-HISTAMINICS
(Ella Emloss, in *Jl. Am. Med. Womens Assn.,* May)

Certain antibodies known as reagins are formed when an antigen to which a patient is sensitive enters his system. The action of antigen and reagin together in the tissues or blood stream releases histamine or a histamine-like substance which brings about utricaria, allergic rhinitis, asthma, etc. Benadryl and pyribenzamine are most effective when used along with attempts at control of the offending antigen, by either desensitization or avoidance. Side effects are more common with benadryl than with pyribenzamine. Occasionally allergic reactions occur due to these drugs themselves. In some patients they are dramatically effective in the treatment of allergic rhinitis and urticaria, less effective in asthma. Improvement resulted in 57 of the 87 asthmatic patients. The oral administration of pyribenzamine to 120 patients with acute or chronic allergic rhinitis relieved sneezing and itching in 90%, rhinorrhea and nasal congestion in 70%.

MORPHINE, MEPERIDINE AND METHADON
(E. M. Christensen & E. G. Gross, Iowa City, in *Jl. A. M. A.,* June 12th)

Methadon is an analgesic agent three times as potent as morphine. It lacks sedative properties. Undesirable side effects are minimal. It may be administered intravenously for analgesia of rapid onset and short duration or subcutaneously for slower onset and longer analgesic action. The addition of atropine or scopolamine decreased both intensity and duration of the analgesic effects.

Scopolamine injected with the analgesic increased the sedation. Neostigmine increased both intensity and duration of the analgesic action.

Methadon was found most useful as an analgesic in postoperative subject and in cases of pain from many other causes.

EXAMINE SPUTUM OF ALL WHO COUGH AND EXPECTORATE
(Herman E. Hilleboe, in *Journal-Lancet,* June, 1947)

Nearly four per cent of all persons who visit physicians' offices are coughing or expectorating. The alert physician will insist upon a sputum examination of all such patients. Such practice will be rewarded by the discovery of tubercle bacilli in three or four out of every 100 specimens examined. The family doctor will fairly often discover to his astonishment that a patient with slowly resolving pneumonia has an acid-fast reason for prolonged convalescence

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About 1877 Dr. George Kibbels came to Highlands, N. C., from Oregon, and having been successful in treating yellow fever in Knoxville by using rubber beds and cold-water baths, he went to New Orleans in 1879 when the yellow fever was epidemic there, and there contracted the disease and died.—Arthur's *History of Western N. C.*

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JAMES M. NORTHINGTON, M.D., Editor

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The Alcoholic of Today

Robert V. Seliger, M.D., Baltimore
Fellow of the American Psychiatric Association
Chief Psychiatrist of the Neuropsychiatric Institute of Baltimore and Member of the Committee on Crime Prevention of the American Prison Association

Workers in all fields of public health and welfare regard alcoholism as a major factor in the destruction of family life, in children's behavior problems, in juvenile delinquency and in general community turmoil.

Although alcoholism is now recognized generally as, in most instances, a symptom of emotional illness—ranging from a major psychiatric reaction to an attempt to escape from dreary existence—and is to be distinguished from social drinking, nevertheless, the dangers of heavy social and heavy daytime drinking must be more thoroughly understood.

In industry, including the liquor industry, heavy social drinking produces inefficiency, absenteeism and costly errors of judgment.

The Alcoholic

When we describe an alcoholic as a sick person, the description is accurate; and, in common with those suffering from other illnesses, many alcoholics can be "cured." Some even work out their own recovery.

Just what is an alcoholic? So far as any especial alcoholic personality *type* is concerned, there is none. By and large—excluding the total psychopath, the psychotic, the epileptic, the deteriorated and the feeble-minded—the alcoholic of today has better than average intelligence, but a poorly integrated personality, with marked emotional instability and inability to accept frustrations.

His unsatisfactory interpersonal relationships and his emotional immaturity, which place self above all else, produce a need which he thinks can be satisfied through the use of alcohol—as a narcotic, as an anesthetic, or as a release from the bonds which tie him to a hum-drum, every-day plane of living.

But, unlike the social and even the occasionally intoxicated drinker, alcohol dominates him to the extent that it drastically affects one or more of his essential life activities, such as his ability to maintain economic equilibrium, his reputation or the harmony of his home-life. Loss of insight, or the ability to evaluate what damage his drinking is doing to himself and others, is a usual consequence.

For any or all of these reasons, the alcoholic should be recognized as a sick person who needs competent psychiatric treatment. How he got that way in the first place may be just as complicated and hard to define concretely as will be the treatment needed for his cure. Actually, an alcoholic is developed by many interrelated factors together with his biological make-up and metabolism. He is the product of his ancestry, their racial background, drinking and other life habits.

His own personality, of course, results in part from his early experiences in life—his hurts and

happiness—and also his later experiences which may be profoundly formative.

Among these influences are vocational factors, emotional experiences, religious attitudes and convictions, ideologies, the social drinking habits of his friends, and the social pressure to drink among friends and business associates. Then there are his own inner drives, striving against inhibitory barriers.

To round out a picture of an alcoholic, insofar as that is possible, it may be said that studies of both men and women many times reveal the following characteristics:

(1) Self-pampering
(2) Frustrated strong urges
(3) A habit of avoiding responsibilities
(4) Various emotional hurts
(5) Psychosexual frustrations and hurts
(6) The emotional urge to take the brakes off certain sex drives and allow them free range.

Also, psychiatric study may, often, bring out marked insecurities constantly active in the personality and identification and imitation factors, rather than any inherited tendency to be an alcoholic.

Alcoholism may result, in some cases, from heavy social drinking, time, body changes and strains and griefs of life. According to some investigators, on the other hand, alcoholism may be evidence of latent or overt homosexual ingredients or of intense, unconscious, self-destructive tendencies.

The pathology of alcoholism, as such, is found in disorders of the neuropsychiatric field, including encephalopathies of various types, neuropathies and behavior deviations shown by personality, emotional or thinking disturbances of the individual's usual behavior or that commonly accepted as usual by society.

Treatment—General

Treatment of the alcoholic patient depends, of course, on his condition. Delirium tremens or predelirium tremens in patients under 55, uncomplicated by bromides, pneumonia or permanent obvious organic brain changes, should be treated immediately—on the spot—by intravenous administration of 1,000 to 2,000 c.c. of normal saline with 50 c.c. of 50 per cent glucose per 1,000 c.c., insulin, and heavy doses of vitamin B_1. Appropriate sedation of phenobarbital and dilantin is used to prevent convulsions resulting from the abrupt withdrawal of alcohol. If the office is unequipped to treat this condition, the patient should be placed immediately in a psychiatric hospital.

Non-acutely intoxicated patients may be examined at the initial interview. This includes the usual complete psychiatric history from birth; psychiatric examination; a thorough physical (including neurological) survey and thorough psychological testing or "screening through." Whenever possible, the mate should be examined, in the same way, to help obtain an overall understanding of the entire situation.

Personality structure is evaluated through use of the Rorschach Analysis, the Murray Thematic Apperception Test, and the Goodenough Draw-A-Person Test. Intellectual resources are investigated by the complete Kohs Blocks Test and by the Bellevue-Wechsler Adult Intelligence Measurement Scale (which is also useful for assaying the sensorium and spotting early signs of possible organic states). Other special laboratory tests may be required, in certain cases, such as, for example, "brain-wave" tracings.

Of all the aids in understanding a given personality in action, the Rorschach inkblot analysis is the most helpful, for its findings reveal definite personality traits and tendencies of which, often, the patient himself is not aware.

The findings of all the examination-procedures and surveys help determine how and where the patient should, ideally, be treated.

In each individual case the following factors must be evaluated and carefully weighed:

(1) Level and quality of the patient's intelligence.
(2) Presence of any organic brain changes or deterioration.
(3) Level and quality of emotional maturity.
(4) Quality and intensity of the individual's desire to stop drinking.
(5) Presence or absence of any major psychiatric illness.
(6) Presence or absence of any minor psychiatric illness.
(7) Life problems and reaction to emotional strains at the time, either at home or in business, which may be too much to cope with.
(8) The patient's occupation, social contacts, family group and so on.

Treatment—Psychiatric

At the outset the patient and his family should be told that total abstinence is one part of the goal.

It should be remembered that treatment of alcoholics is not an exact science, nor does alcoholism have any specific. It just isn't possible to look into a textbook and find a formula which will give automatic results.

Each patient must be taken as a wholly new and entirely different problem, the solution of which is unique.

The psychiatrist must win the complete confidence of the patient, and this will not be possible unless he is plastic, tolerant and careful to avoid a brusquely dictatorial manner which might create a

resentment, ruinous at the outset.

In this connection, the attitude of the patient's mate is extremely important. Since the alcoholic patient needs to understand himself, and also, in many cases, to know that his cure lies in this and in developing emotional maturity, discussion of specific situation-problems is strongly indicated.

Mention has been made of the fact that some alcoholics have stopped drinking by themselves. Others have been helped by religious groups, lay groups and lay-and-religious groups. Even the old "Keeley Cure" helped many an alcoholic, and some now recommend a conditioning or aversion treatment without psychotherapy; while others, with deeper interest, use this method in order to get a beach-head on the patient and then follow up with psychotherapy.

The author feels, as a result of personal discussions and conversations with other therapists that, generally speaking, deep, lengthy psychoanalysis alone, hypnosis alone, hypnoanalysis alone, narcoanalysis alone, and the assaultive therapies alone, such as, chemical, drug or electric shock or various types of lobotomy, are not helpful in the treatment of alcoholism.

Generally speaking, competent, especially trained psychiatrists are required. Ideally, and in most cases, treatment should be at a farm arrangement.

Summary

To summarize, an alcoholic is a sick man, but his addiction to alcohol is itself a symptom rather than a disease. Alcoholism may be part of any psychiatric clinical reaction or produced by any psychiatric clinical reaction. It presents itself like the top of an iceberg. The great need is to understand what lies beneath.

The Rorschach (inkblot) Analysis has, with a great deal of consistency, presented the following in the non-psychotic, non-feebleminded and non-deteriorated alcoholic patient—or, the alcoholic of today:

A high-handed approach and aggressive drives without any clear-cut goals; an immature attitude regarding other people in positions of authority; strong to violent emotional forces inadequately controlled by judgment; basic difficulty in getting on with others; tendency to shirk adult responsibilities; lack of perseverance; ocersensitiveness in regard to self; tendency to blame the environment (paranoid trends); stubborn and contrary; deep inner anxieties.

Medical psychological treatment of the alcoholic consists of obtaining a thorough understanding of him, as a person, and in his particular life situation, in order to be of aid in his rehabilitation, together with the patient and family knowing at the outset that one of the goals is total abstinence.

Some patients are helped by daily subshock injections of insulin, over a period of many months, and do not require extensive, or deep, or even brief, psychotherapy.

Experience with non-deteriorated alcoholic patients indicates that successful results are accomplished by the following factors:

(1) Careful selection of patients, as above indicated.
(2) Personality of the psychiatrist.
(3) Vitamin and insulin therapy in controlled dosage with sedation as indicated to aid on the physical side.
(4) Formal psychotherapy (distributive analysis or brief psychoanalytic therapy), with emotional reëducation.
(5) Interpersonal relationship of patient and therapist.
(6) Suggestive influences.
(7) Interviews with the mate and close relatives.
(8) Intangible but dynamic factors including, also, the emotional climate during treatment, at home, and at work.
(9) Full coöperation of the patient and his family and associates.
(10) Continuous follow-up.

Conclusions

Today, more than ever before, medicine and psychiatry are working with the problems of alcoholism, but we have only scratched the surface.

Because of alcoholism's widespread, insidious encroachment in all spheres of life, and its destructive effects on the family and the community, the medical and allied professions must attack the problem in its early stages.

Moreover, they must strongly support existing community programs, educational courses, and church activities, giving to these endeavors the solidarity of medical backing and guidance to aid us in prevention.

In spite of all our vaunted knowledge, in spite of recent conferences sponsored by industrial and medical groups, and in spite of the personal experience of every individual who has had an alcoholic in his family, or perhaps was an alcoholic himself, or who knows an alcoholic who was "cured," we shall accomplish little unless we keep very firmly in mind the fact that this psycho-socio-biological illness is comparable visually to tumors, including cancer.

And, finally, I would like to suggest that it might be wise to keep in mind the fact that alcohol is not as inert a substance as water, and that, when taken internally, it may act as a sedative, or a hypnotic, or an analgesic, or as a narcotic, or as a temporary anesthetic—and in some cases as a permanent anesthetic, producing death.

The Differential Diagnosis of Sciatica*

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BY THE TERM sciatica is meant the occurrence of pain in the leg, typically beginning in the affected hip, extending to the thigh, popliteal space, calf, ankle, and dorso-lateral or dorso-medial aspect of the foot, and terminating, often, in the toes. It is, typically, a postero-lateral pain and not anterior in the thigh (see below—"1") or elsewhere. We are to consider the *different causes* of sciatica, together with the characteristic type of pain and other symptoms and signs found in each lesion, and variations in the location of the findings. Examples of all the 16 types of lesions to be discussed have been seen in our clinic in patients who were sent for investigation of a syndrome characterized by backache and leg pain.

1. The commonest cause, by far, of unilateral typical sciatica as just described is a *protruded lower lumbar disc at the fourth or fifth interspace.* A typical history and neurological findings are as follows: The patient may or may not have had a long history of low backache with little or no extension into the leg. It characteristically is intermittent in character, being often relieved by rest in bed on fracture boards, the application of diathermy and the wearing of a firm lumbosacral support. The pain is exaggerated by walking and standing and by coughing, sneezing or straining. Eventually the patient may become bedfast, as ambulation greatly exaggerates the pain and he prefers to lie in bed with the affected leg flexed at the knee.

Examination (in the erect position) often discloses a loss of the lordotic curve of the back (flat back). There is hypesthesia or anesthesia over the lateral or medial aspect of the calf, ankle and toes, possibly a diminished ankle jerk on the painful side and limitation of straight-leg raising and of Lasegue's maneuver on the painful side. In the erect position, the pelvis is apt to list away from the lesion. Bilateral jugular compression for 60 seconds or more in the erect position may exaggerate the pain in the leg and forward-neck flexion with cough (supine position) may also aggravate the pain. With the patient prone, tenderness is elicited at the fourth or fifth lumbar interspace by the examiner's thumb and also along the course of the sciatic nerve in hip, thigh, popliteal space and calf. X-ray films frequently show narrowing of the fourth or fifth lumbar interspace. In doubtful cases, a pantopaque injection is done. The spinal fluid protein may be elevated to 125 mg. per cent or more in protruded disc cases. There is rarely any sphincteric disturbance or saddle anesthesia, although foot-drop may occur.

There may be no *appreciable backache* or demonstrable back tenderness in protruded disc cases at the time of examination, although often there has been backache previously.

In herniated discs at the *third lumbar interspace,* the location of the pain and the condition of the reflexes are somewhat different from the much more common fourth or fifth interspace protruded disc. In third interspace discs, the pain typically occurs in the *anterior* thigh in its greatest severity and the knee jerk on that side is diminished or absent, whereas the ankle jerk is equal in intensity to the uninvolved side, and the chief tenderness is elicited on pressure at the third interspace.

2. *Tumor of cauda equina*: Frequently there is *bilateral* pain in hips and thighs and saddle anesthesia. Lumbar puncture demonstrates a very high protein (100 to 1000 mg. per cent), the fluid often being yellow and tending to coagulate (Froin's syndrome). There is frequent bladder and bowel disturbance. The pain is worse at night *after retiring* in many tumor cases, in contrast to protruded disc cases in which it is worse while ambulatory. Cauda equina tumor may, however, produce only *unilateral* sciatica (Love), simulating closely a protruded disc. Unilateral saddle anesthesia can occur with large fifth lumbar interspace protruded discs.

In tumors of the cauda equina, a subarachnoid block as shown by the Queckenstedt test is often present if the needle is introduced at the fourth lumbar interspace and, therefore, may be caudad to the tumor. Subarachnoid block is uncommon in the average case of protruded lumbar disc and the fluid is rarely grossly xanthochromic.

3. *Spondylolisthesis* (usually the body of L^5 is anterior to the sacrum): X-ray examination discloses the lesion. It used to be believed that this lesion could cause only low back pain but several recent cases, operated on with the orthopedist, showed this not to be the case as peripheral sciatica was also present. No protruded discs were found in several patients who had severe peripheral sciatica and spondylolisthesis; they were relieved by spinal fusion only.

However, it *is* possible to have spondylolisthesis in a patient with low backache and unilateral peripheral sciatica and also have a protruded disc as the cause of the peripheral sciatica. Such cases

*Read at the Medical College of Virginia Alumni Scientific Assembly, June 8th.

should always be fused at the time the disc is removed.

4. *Metastatic malignancy*: The diagnosis is especially difficult when x-ray examination of the spine is *still negative*. When spinal films, in such cases, are negative, an accelerated sedimentation rate and an elevated serum phosphatase suggest metastatic spinal disease as a likely possibility. It may produce a unilateral sciatica typical of a protruded disc but which requires upper thoracic cordotomy, not a lumbar disc operation. Caution: *Never* perform a disc operation without preliminary *plain films of the lumbosacral spine.*

5. *Congenital spinal anomalies*: Marked lumbar scoliosis and spina bifida occulta with adherent roots.

6. *Extraspinal peripheral stretching of the sciatic nerve (from trauma or therapeutic manipulation)* may closely simulate a protruded disc in the end results produced.

7. *True sciatic neuritis*: Due to a distant focus of infection, a real entity and scarcely to be distinguished without operation from a protruded disc, although some physicians still doubt this theory. Some of the most typical cases of protruded disc one sees clinically have no disc at operation and, vice versa, borderline clinical cases (even with the pantopaque injection being questionable) may have large protruded discs. Decision as to when and on whom to operate can come only with increasing experience.

8. *Old spinal injury* may cause trauma to anterior or posterior lumbar or sacral nerve roots simulating a protruded disc.

9. *Neurofibroma or other tumor of the sciatic nerve* produces a sciatic nerve involvement, occasionally without much pain, but resulting, perhaps, in a pronounced foot-drop and sensory and reflex diminution or loss.

10. *Peripheral neuritis due to noxious agents*: Alcoholism (and avitaminosis); lead intoxication; diabetes mellitus.

11. *Improperly placed therapeutic (gluteal) injections*: Penicillin, bismuth and other medications may inadvertently injure the sciatic nerve (needle trauma).

12. *Peripheral vascular disease* may simulate sciatica fairly closely but it is to be distinguished by demonstrating an occlusion of the dorsalis pedis and posterior tibial arteries, by relief obtained by lumbar block with novocaine, or by the injection of tetraethyl ammonium chloride and oscillometric studies. In an occasional elderly patient, there may be a combination of this lesion and a protruded disc.

13. *Herpes zoster* involving dermatomes of the sciatic nerve distribution. Vesicles or scars should lead to the correct diagnosis. The essential lesion here is an inflammatory one in the posterior root ganglia and is not surgical.

14. *Marked lumbosacral spondylitis, Marie-Strumpell's disease or sacroiliac osteoarthritis* can cause severe low backache and pain in one or both hips and thighs simulating, to some extent, a peripheral sciatica.

15. *Sciatic causalgia* may occur from incomplete sciatic nerve injuries in the pelvis, hip or thigh caused by a knife wound, a bullet, or by bony fracture of the pelvis or femur.

16. *Acute or chronic lumbosacral strain* (lumbago) causes exquisite low backache with, occasionally, some extension into one or both legs posteriorly. This syndrome, if recurrent and associated with an unstable lumbosacral joint, is often greatly improved by a spinal fusion performed by the orthopedist.

An Extract From "Surgical Lectures of 150 Years Ago"

(V. Z. Cope, in *Proc. Royal Soc. of Med.*, June)

John Abernethy (1764-1831), successor to John Hunter, as London's surgeon:

A young man fell from a garret window (having climbed up one night to see his sweetheart) and fractured his pelvis. He was brought to the hospital, and I, being a "younker," was directed to draw off his water. I had done it three or four times when the nurse of the ward, an old woman, said to me: "Lord bless you, young gentleman, you need not give yourself the trouble of coming to draw off his water, for I can make him piss when I like." I asked her how? She then thrust her fist on the lower part of his body making pressure and the urine flowed immediately.

Best Treatment of Benign Tertian Malaria

(J. F. Monk, in *British Med. Jl.*, June 26th)

The relapse rate following best treatment with quinine alone averages well over 50%, though the daily dosage totals 30 gr. (2 g.) and is given for 10 to 14 days. With the additional dosage of pentoquin of 60 mg. daily, very few, and only mild, toxic symptoms have been reported. The ideal drug for the prevention and radical cure of benign tertian malaria has yet to be discovered. The disuse of unaided quinine therapy is recommended.

No treatment so far administered to a large series of cases of naturally occurring B. T. malaria is more successful than quinine given concurrently with pamaquin. Paludrine given concurrently with pamaquin is equally successful.

Pentaquin, 20 mgm., given concurrently with quinine, 10 gr., 3 times a day, for 14 days, is likely to produce a lower relapse rate than any other therapeutic regimen. The toxicity of pentaquin is approximately three-quarters that of pamaquin.

A 31-days intermittent course of quinine, 10 grains, and pamaquin, 10 mgm., t.i.d., in 3 courses of 7, 5 and 5 days (during 31 days), proved successful in the complete eradication of P. vivax infections in all patients followed up in a series of 45 cases. It is suggested that such a course is worth extended trials among chronic relapsing cases in a non-malarious area.

Tuberculosis progresses in a preponderant majority of cases, toward healing.—*H. C. Sweany.*

A Brief Sketch of Tattooing With One Method of Its Removal

W. Jervey Ravenel, M.D., Charleston

> And the Lord spake unto Moses, saying:
> Ye shall not print any marks upon you, I am the Lord." (Leviticus, xix, 1 and 28).

HISTORICALLY, tattooing has been practiced since the most primitive times. The word tattoo is derived from a Tahitian word meaning "a mark," but the practice is very widely spread, being universal in the South Sea Islands and also found among the North and South American Indians, the Dyaks, the Burmese, the Chinese and the Japanese. Tattooing is found on many Egyptian mummies, and is common enough still among civilized sailors.

A Dr. Wuttke labored to prove that tattooing is a kind of writing. Whatever may be the case elsewhere, its origin in Japan, where it reached its greatest perfection, is neither ceremonial nor symbolical, but merely cosmetic. Its end was to take the part of a garment or decoration, and especially among those Japanese who worked in a half-nude state. Still further, this was found to be prevalent in large and civilized cities where nudity might have been objectionable. It was a substitute for clothing, but now that clothing is compulsory in Japan it has lost its meaning.

Many savages paint their skins as a means of protection against cold, or against the sun's heat or the bites of insects; others again attempt thus to make their aspect more terrible in war, as Caesar tells us did the ancient Britons. Tattooing has often been employed as a badge of brotherhood in some cause, and more often still as a means of identification for slaves and criminals. The so-called branding of the letters *D* for Military Deserter, and *B C* for Bad Character, given up in 1879, was merely tattooing with needles and India Ink (*The Scarlet Letter.*)

As interesting as tattooing may be, let us now turn away from the Burmese and the Japanese and the criminal and be concerned with that group that would be more apt to consult us as physicians, namely, the sailor, or perhaps a civilian, who yielded to the cosmetic urge in a lax moment probably because of over-intoxication or passion for Agnes, Mabel or Becky, whose name now appears indelibly engraved on his arm or chest when he goes back to wife, Alice or financeé, Constance, or in the case of a recent Scandinavian sailor who came to me with three names—Ruth, Louise and Sadie—but married Ingrid, who gets violently mad with him every time he takes off his shirt.

More than 20 designs have been found on an individual, such as transfixed hearts, swords, serpents, flowers, initials, a woman's figure, occasionally obscenities, and more recently, since the war, a listing of the various battles this individual took part in, as Iwo Jima, The Bulge, etc.

Whatever the marking may be, it can be generally assumed that it gives an index to the individual's attitude at that particular time when he had it done, and in due time, the attitude changing, he seeks obliteration.

There are three methods of removal, namely, electrolytic, chemical and surgical. We are concerned with the surgical method, therefore the other two will be touched upon only lightly.

Electrolysis is the use of electricity by means of a needle attached to a negative pole. A softening action is brought about by the alkali formed at the point of penetration of the skin by the needle. After the pigment is laid bare by the needle, it is scraped and picked away. This is done while the softening action of the alkali continues on the tissues where the pigment is deposited. Certain equipment is required which most men do not have on hand, because the scarcity of cases would not warrant its purchase.

Of all chemical methods, that advocated by Variot in 1888 seems to be the most satisfactory. He used a 50 per cent tannic acid solution and tattooed this into the skin. Later silver nitrate was rubbed into the treated area forming a heavy deposit of silver tannate, the excess wiped off and the wound dressed. (See Ref.)

Now we come to the third method, removal by surgery. This is accomplished by removing the skin containing the pigment, or by shaving off the part of skin containing the pigment with a dermatome.

The dermatome can be used if the tattooing is not too deep. About .016 inch thickness is taken off, which in most cases, takes off the depth of the tattoo.

The method we are concerned with here is excision of the tattoo.

An elliptical incision is used because of the ease with which it can be closed without distortion. The long axis of the site is used as the long axis of the incision. Having first sterilized the area and anesthetized with one per cent novocaine hydrochloride, the incision is made. Absolute sterility is necessary because the width of the scar makes a great deal of difference in the final result. The position, size and shape of the tattoo are the deciding factors as to the length and breadth of the portion to be taken out. A long, narrow blemish is much more

easily removed than a short one of equal width. The narrower the part to be removed, the fewer the steps required for the complete removal. After the selected portion of skin has been removed and hemostasis is accomplished the lateral edges of the skin are undercut to allow a more flexible closure.

The closure is begun with silk or some other non-absorbable material. I use the interrupted mattress suture, beginning in the middle of the incision. The next suture is taken between this suture and one end of the incision and the next is taken to match on the opposite side of the middle stitch. This is repeated until the sutures are fairly close to each other. After this I make a very superficial continuous suture to more closely approximate the edges of the skin. This is especially important after the last stage, since the final scar is the one that should be the most inconspicuous. A dry dressing is applied and the sutures left in for at least ten days unless an infection develops.

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POINTS IN PROCTOLOGY FOR THE GENERAL PRACTITIONER

An article[1] of great practical value in the practitioner's daily work is abstracted as a reminder of the urgent need for prompt treatment in some cases and for prompt referring or consultation in other cases.

A thrombosed external hemorrhoid will always subside with no treatment. Surgical excision, not incision, is indicated. Frequent sitz baths relieve sphincter spasm, shorten suffering and hasten absorption. For lubrication to diminish the irritation of friction nothing is better than plain vaseline.

Perianal abscess requires *immediate* incision and drainage to prevent great tissue-destruction and fistula-formation. The incision should be tangential or circumferential rather than radial.

Inflamed anal crypts cause pain and sphincter spasm. Extension of infection may produce a chronic fissure, a perianal abscess, or a fistula. The pain of a fissure brought on by bowel movement may persist for a few minutes or until the next bowel movement.

The pain of a perianal abscess is constant, and unaffected by bowel movement.

Sometimes in the early stage the abscess is not evident upon external inspection or external palpation, but is found by palpation with the index finger inserted into the rectum and flexed to oppose the thumb outside.

Anal cryptitis and perianal dermatitis, the latter frequently of fungus origin, are the two commonest causes of pruritus ani. The essayist has never seen a patient with pruritus ani who failed to show some local abnormality on examination.

It is not surprising to read that a change in bowel habits in any adult is presuumptive evidence of cancer of the colon until other diagnosis has been established and carcinoma has been ruled out by adequate examination. Being told that diagnosis of "intestinal flu" frequently delays recognition of the presence of a carcinoma for weeks and months should put us on our guard. A diagnosis of ulcerative colitis cannot be established without proctoscopic or x-ray examination.

The demonstration of diverticulosis by x-ray examination is acceptable as the explanation of disturbance of bowel habits only when the roentgenologist has ruled out the possible presence of a coëxisting carcinoma. When change in bowel habits is accompanied by blood in the stool, particular care must be taken to rule out the possible presence of a polyp or of a carcinoma before accepting diverticullitis as the cause of symptoms. Barium enema examination should be repeated if bleeding persists.

1. R. A. Scarborough, in *Calif. Med.*, Spet., 1947.

The End of Compulsory Vaccination in Britain

(Major Greenwood, in *British Med. Jl.*, July 3rd)

On July 5th, not quite a year beore the 200th anniversary of Edward Jenner's birth, vaccination will cease to be obligatory in law. For 95 years parents have been under a legal duty to permit their infant children to be vaccinated.

The great cities of Sydney and Melbourne are contrasted in vaccinal states. In the 10 years before the most serious outbreak of smallpox in Sydney, recorded vaccinations were only 30% of registered births in New South Wales; the corresponding figure for Victoria was 81%. In 1881-2 Sydney had a considerable prevalence—154 cases of smallpox widely disseminated; in 1884-5 Melbourne had 56 cases. The fatality in the Sydney experience was 25.9%, which is a normal fatality for classical smallpox; of the 56 patients in Melbourne only four died.

Chronic Fibrosis of the Pancreas

(W. M. Kelsey, in *N. C. Med. Jl.*, May)

Repeated pulmonary infections or chronic gastrointestinal disturbances in patients under a year of age warrant examination of the stools for fat. If this is found duodenal drainage should be performed. In case of excessive fat in the stools and no trypsin in the duodenal juices, the diagnosis of cystic fibrosis of the pancreas must be made.

Current medical school enrollment comes close to 24,000; 55% are being educated via the G .I. Bill of Rights. Only 18 out of every million rural dwellers go to medical school. For city folks the rate is 66 per million. Harvard Medical School undergraduates last year came from 33 states and a number of foreign countries. Johns Hopkins medical students represented 26 states.

Propylene glycol ethyl ether, non-inflammable and non-toxic, applied to the surface, renders the removal of adhesives painless, and reduces the traumatic reaction of removal.—*Invest. Dermat. Jl.*

DEPARTMENTS

HUMAN BEHAVIOUR

JAMES K. HALL, M.D., *Editor*, Richmond, Va.

Dr. William Thomas Parrott

LATE in the afternoon of Friday, July 23d, I attended in the Church of Christ on Gordon Street in Kinston, North Carolina, the funeral service of my many-years friend. In the Parrott Memorial Hospital of Kinston he had died early in the afternoon of the day before. His physical structure had become so victimized by malignancy that Death proffered him the only portal of relief from long-continued suffering. Yet he had lived reasonably long, estimated even in terms of mere years—a poor measuring rod to apply to a busy, commendable mortal.

Dr. Parrott was born on the family plantation near Kinston on September 11th, 1875. Except for the few years spent elsewhere as a student, he lived his life for almost seventy-three years amongst his people and he gave himself generously in ministrations to them up to the level of his high capacity.

His education was obtained in Kinston, at the University of North Carolina, at the University of Maryland, and at the School of Medicine of Tulane University, from which he was graduated in 1899. Prior to that graduation, he had trained himself in pharmacy in Baltimore. Before entering upon private practice in Kinston he did graduate work in medicine in London and in Berlin. In the former city he devoted himself especially to the study of some of the tropical diseases, in which he exercised an alert interest throughout the remainder of his life.

Through the joint efforts of Dr. W. T. Parrott and his brother, Dr. James M. Parrott, Kinston was blessed many years ago by the creation of a private hospital—now known as the Parrott Memorial Hospital. Such an undertaking would have been hazardous in that distant day for two physicians so young had they not been equally unusual. The Parrot Hospital served as an incentive to other communities and it became also an exemplar. In that hospital difficult medicine was practised skillfully and the effort of the young medical men to extend the periphery of medical knowledge was unceasing.

Dr. W. T. Parrott, ever on tip-toe for the newer knowledge, early sensed the possibilities of diagnostic helpfulness latent in the newly discovered x-rays. Eventually he specialized in radiology. In that field he was a pioneer. He finally became a victim of his professional zeal and unselfishness. The penetrating energy of the rays insidiously thwarted the functioning of many of the cells of his active body, and ultimately he lost a hand. For many years he must have suffered constantly, but he did not complain. When handicaps made it necessary for him to give up regretfully his radiological work, he gave no thought to retiring.

Instead, he stepped into another domain of medical practice. He became the Medical Superintendent of the Caswell Training School—North Carolina's institution for the care and the education of the state's mentally subnormal children. Others, perhaps, but none of us who knew Dr. Parrott, marveled at all that when more than 60 years old he was eager to undertake the superintendency of a mental hospital. He was a modest man, but he was also always yearning to know more and to do more, and he did not associate the thought of age with the human mind. He doubted not, perhaps, that his desire to know was associated with the capacity to learn; and learning was always his chief delight. He probably did not experience physical comfort during the years of his superintendency. The x-ray burns had deprived him of a hand, and the deeply penetrating powerful energy doubtless disturbed the normal functioning of myriad cells. But his mind was devoted to his new and all-engaging interest, and not to contemplation of himself. He made a splendid superintendent of the school, winning and holding the devotion of the children and the admiration of those who laboured with him and the deep appreciation of the people of the state of North Carolina.

Dr. Parrott was an individualist. He evolved, rather than adopted, opinions. He was unostentatious, and the thought of publicising himself would have pained him. But he probably had little respect for mere conformity. He belonged to that school of medicine that looked upon the physician as the ministering servant of the people around him. Day and night and hours and weather and compensation meant little to him. In his philosophy the doctor was the most trusted citizen, and the most useful, too, in the community. What greater reward could there be?

During the service in the church there were no flowers, no choir, no music, no eulogium. The minister's recitations and his prayer expressed the thanks of the large assemblage for the splendor of Dr. Parrott's life and of his devotion to his fellow-mortals.

Long-needed rain fell as a benediction during the service in the church and the interment in the lovely cemetery on Shine Street. While I was a guest in Dr. Parrott's home one night several years ago, he told me that Elizabeth Shine, a native of the county of which Kinston is the seat,

became the wife of George Farragut, a native of an island of the Mediterranean. They became the parents of the great naval commander, David Glasgow Farragut, born in Tennessee. I doubt not that Shine Street, within a few feet of which Dr. Parrott lies encrypted, does honor to the family name of the mother of the great Admiral.

During the interment, while the blessed rain fell upon the parched earth, I found myself wondering if the eager, restless mind of Dr. Parrott had not already spoken to Elizabeth Shine Farragut about her mighty son. And I wondered, too, if Dr. Parrott might not then be in communion with many of his friends and mine of other days—Dr. Dave Tayloe, of Washington; Dr. Cyrus Thompson, of Jacksonville; Dr. Warren, of Williamston; Dr. Laughinghouse, of Greenville; and Dr. Marriott, of Battleboro.

The dead man still lives. The son, who bears his father's full name, is likewise a physician. The other son, not long ago a prisoner of war of the Germans, is now a lawyer. He is soon to be a state legislator. The widow all the rest of the days of her life will be comforted and sustained by her contemplation of her husband's unselfish and heroic life. Always he was giving himself in ministrations to others. For him there was no other way of life.

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

PROSTATITIS A COMMON CONDITION UNCOMMONLY DUE TO VENERY

INFECTIONS of the prostate and its adnexa are generally assumed to be consequent on venereal disease. Particularly in small communities, where few secrets exist, this false assumption causes delay in seeking aid and in some cases injury to character.

Thus an understanding urologist[1] opens a discussion of a subject which he develops instructively.

These infections have a great range of severity—from an acute, painful illness to a condition so insidious that the patient can not say when the symptoms began. It is said 35 per cent of all adult males have infection of the prostate, many with no symptom pointing to that organ. Most such infections come from parts of the body other than the urethra.

Various cocci and the colon bacillus cause more cases than any other organisms. The gonococcus is a rare offender. In some cases no bacterium can be found by smear or culture. The prostate may be infected from a distant focus, or it may be the focus to furnish infection to a distant organ. It is common for the prostate to be infected from the upper urinary tract.

Acute prostatitis will declare and diagnose itself. Pain is felt in the perineum or lower lumbar region, or in the pelvis or down the thighs. In most chronic cases history and urinary symptoms point to the prostate. A "silent" prostatic and/or seminal vesical infection may cause arthritis, myositis, neuritis, or iritis. Vague pains are often relieved by attention to the prostate. In time the infection may cause many gastro-intestinal or/and nervous symptoms.

In acute prostatitis and vesiculitis all manipulations must be very gentle. Repeated rectal palpation may be required for diagnosis of prostatic abscess. The diagnosis of the chronic form is made by rectal palpation and microscopic examination of the expressed secretion. More than one attempt may be required to obtain secretion for examination, or that first obtained may be normal. Henline prefers that the patient be kneeling on the table with knees well separated and head level with knees.

The treatment of acute prostatitis is bed rest, local heat (hot Sitz baths), soft stools, and administration of sulfonamides and penicillin. Chronic prostatitis requires adequate drainage through the ducts, by massage of prostate and both vesicles, twice a week at first, later at longer intervals. Next to massage in importance is seeking and, if found, treating urethral stricture by passage of sounds. Vaccines are not recommended.

One should always seek earnestly to learn the primary source of the infection now causing the prostatitis, and so be able to undertake its eradication.

This urologist closes with: "Routine examination of this gland should be as frequent as that of the teeth and tonsils. Most cases can adequately be cared for by the general practitioner."

1. R. B. Henline, M.D,. N. Y. City, in *Nebraska Med. Jl.*, August.

THERAPEUTICS

J. F. NASH, M.D., *Editor*, St. Pauls, N. C.

SOME REMARKABLE RESULTS FROM THE SOME USE OF VITAMIN E

A TEAM of three Canadians[1] have had such gratifying experience with Vitamin E therapy that they are impelled to report this experience, which is herewith briefed for our readers.

The number of cases studied is small and uncontrolled. The authors, one a surgeon, one an internist, and one an obstetrician, have no access to hospital wards.

1. Arthur Vogelsang *et al.*, London, Canada, in *Med. Rec.*, Feb.

They have seen eight indolent ulcers and report two. A man of 63, had a right leg covered from toe to knee with old and recent ulcers of all sizes, up to two inches, off and on for 19 years, on an arteriosclerotic basis. He was treated in bed with local applications with little or no relief for a month. He was given 500 mgm. of tocopherex (Squibb) per day; improvement in one week's time, completely healed in 10 weeks. A woman of 70, who had recurrent ulcers of both legs for 18 years, while under observation for fundus carcinoma, had an indolent varicose ulcer over the left internal malleolus for six months. There was great improvement in this ulcer in the next 10 days on tocopherol therapy and it was completely healed in 15 days.

The rapid and effective response in these cases is ascribed to an increase in local capillary circulation. Indeed, the affected extremity after treatment often became warmer than its mate. Many other dermatological conditions characterized by defective blood supply from whatever cause may prove to respond to tocopherol therapy.

Of arteriosclerotic gangrene the experience is limited to two cases. A man, 74, seen March 19th, 1947, with areas of moist and dry gangrene of both feet and legs extending halfway to the knees, and cyanotic hands. Blood sugar normal, N. P. N. 43 mgm., sedimentation rate 76. X-ray of the legs showed arteriosclerosis. He was given 300 mgm. Ephynal per day beginning March 23rd and on the 26th he mentioned "pins and needles" in his feet and a change for the better of his lesions. His hands were no longer cyanotic. Two days later pulsation in the left popliteal artery was first palpable, and by the 30th most of the epidermis of the legs and dorsum of the feet had sloughed off, leaving normal, pink skin beneath. On April 18th, the gangrenous leg areas were well healed, and the skin color of the legs and feet were nearly normal. Only a few of the deeper scabs on the left foot had not detached themselves at this time, and by the end of six days, his feet were healed.

Nine cases of thrombophlebitis and phlebothrombosis, six of them puerperal and one at eight months of pregnancy, have been treated. The redness and tenderness soon decreased, and the peripheral edema followed suit, but more gradually. Thrombosis may develop during tocopheral therapy but then is mild and responds quickly to a higher dosage. The possibility of a clot being loosened by the relaxation of its constricting vein, or, in phlebothrombosis, from a direct attack on the thrombus, must be borne in mind. Perhaps a small dose and a more gradual response would be desirable when giving tocopherol, at least to phlebothrombosis cases.

Of thromboangiitis obliterans, one verified and one probable case are reported. A lady, aged 56, single, had pains in her toes in 1938; toes became dusky red to purple, and gangrene was feared. A glass boot and other measures over a period of 15 weeks gave temporary relief. Buerger's exercises and careful avoidance of exertion and heat maintained the status quo until July, 1946. Frequently during the eight years the toes were ulcerated. Once, in 1942, she spent seven weeks in bed. Toes always numb, as were the feet and lower legs. There was considerable edema of the feet and lower legs during these years, not altered by a salt-free diet.

On June 12th, 1946, 200 mgm. Ephynal per day was begun. On the 15th she could scarcely sleep for the tingling in her arms and legs, and in the next few days purpuric areas of all sizes appeared over the trunk and extremities, accompanied by sensations of "pins and needles." In 10 days edema decreased, toes practically returned to normal color and felt warmer. By July 23rd her feet and toes were no longer numb. She now could kneel on the floor to work or pick things up. She is now leading a very active life as a practical nurse.

A colleague has treated four patients displaying intermittent claudication with the tocopherols, with excellent results in three.

A score of cases of cerebral thrombosis have been studied, most of them of months' or of as long as 2½ years' standing. Even in the old cases improvement was achieved, up to 25 per cent of the disability. This gain was made principally within the first three weeks.

From observations on three cases it seems that acute nephritis, perhaps even some cases of true nephrosis and chronic nephritis, respond to the administration of the tocopherols.

A patient with amyloid disease of the kidney has shown great improvement under tocopherol therapy.

The tocopherols have a specific influence in increasing platelets and decreasing capillary fragility. Dosages as high as 700 to 900 mgm. per day have been given with great benefit.

Parenteral E seems to take effect in one-half to one-third the time that oral doses require.

The authors have been impressed with the improvement in eyesight observed by some patients on intensive tocopherol treatment. Many who were about to purchase glasses no longer found it necessary. One woman became able to drive her car at night again, as she had not been able to do for years. Bearing in mind the physiological effects of the tocopherols they may be valuable in cases of burns, the non-union of fractures, osteomyelitis, and delayed wound healing.

GENERAL PRACTICE

William R. Wallace, M.D., *Editor*, Chester, S. C.

TREATMENT OF CONGESTIVE HEART FAILURE

In every case of congestive heart failure of more than slight degree, says Ernstene,[1] bed rest should be continued for at least six weeks. If there is difficulty in the use of the bedpan and the patient is improving satisfactorily, after 10 days, a commode may be allowed, or a daily trip to the bathroom, but no other exceptions should be made. Afterward, gradually increasing activity is permitted, but no dyspnea and fatigue, and there must be careful observation for a gain in weight and any return of edema.

This clinician goes on to outline the management of this common condition of importance to us all.

Every patient in failure should be completely digitalized, and digitalization maintained permanently. Digitoxin has the advantage of causing little gastric irritation. With patients who have not been taking digitalis begin with 0.8 mg. followed in six hours by 0.4 mg.—average necessary to digitalize. When auricular fibrillation is present the ventricular rate is the best guide. If, in the absence of thyrotoxicosis, this is still above 70 beats per min. the day after the first two doses of digitoxin, 0.2 mg. twice daily are continued until control of the ventricular rate has been accomplished or there is evidence of overdosage. When the rhythm is normal, the ventricular rate cannot be used as a guide. Then begin digitoxin as outlined, and on the second day place upon a maintenance dose.

Except for ventricular paroxysmal tachycardia, there are no contraindications for the use of digitalis in congestive heart failure.

Absorption of digitalis from muscular tissue is no more rapid than from the gastrointestinal tract. In cardiac emergencies (which are rare) intravenous administration of a digitalis preparation is indicated. The dosage is the same by either route. Of ouabain the initial dose is 0.5 mg., this followed by 0.1 to 0.25 mg. q. 4 to 6 h.—a total of not more than 1.0 mg.

Be certain that patients to whom ouabain or digitalis preparations are to be given intravenously have not received digitalis during the preceding two weeks.

The diet should contain less than 2 Gm. of Na Cl per 24 hours. Give two to three liters of water daily; if unable to drink sufficient water give five per cent glucose in distilled water by intravenous drip to make up the total fluid intake.

No salt is used in cooking, no salted foods and only salt-free bread and unsalted butter are allowed; no foods prepared with baking soda or baking powder.

Use of diuretic drugs hastens restoration to a state of comfort. Mercuhydrin is equal to the others in diuretic action and is less toxic. The intramuscular route is preferred because of its greater safety. The mercurial is given daily—initial dose of 0.5 c.c., increased to 1.0 cc., and then 2.0 c.c., in case the individual fails to lose three pounds in 24 hours—until no further diuresis results and weight remains stationary. After all edema has disappeared the interval between doses is lengthened gradually, eventually discontinued.

Ammonium chloride is helpful at times (4 to 8 Gm. daily) in preventing a return of edema after the patient is up and about. In other patients synthetic theophylline, 0.1 Gm. t.i.d., is effective for the same purpose. A small dose of phenobarbital two or three times a day during the early part of treatment may be needed. In case cyanosis or dyspnea persists oxygen is beneficial, by tent, nasal catheter or special mask; also in case of development of pulmonary embolism, edema or pneumonia.

In failure of the right as well as the left ventricle, with veins engorged to the angle of the jaw when the patient is sitting upright, venesection 500 c.c. or 600 c.c. of blood is indicated, and in less advanced cases whenever digitalis therapy and the other measures set down fail to produce a satisfactory response.

1. A. C. Ernstene, Cleveland, in *Jl. Kans. Med. Soc.*, June.

FIRST-STAGE ETHER FOR BRIEF ANESTHESIA

For many years, an Iowa doctor[1] reports, he has used first-stage ether for brief surgical procedures with entire satisfaction. Reduction of certain fractures, dislocations, such as those of the elbow and shoulder, and opening abscesses, such as ischiorectal, are a few of the conditions in which this transitory anesthesia is useful.

The editor of this Department welcomes this report, for his own experience agrees with that of Dr. Heald. Both of us have found first-stage ether especially satisfactory in the reduction of Colle's fracture. Procaine injection into the blood pool at site of fracture has been unsatisfactory and does not give relaxation. First-stage ether gives complete relaxation and one has ample time to make accurate reduction, checking with the fluoroscope, repeating the manipulation, if necessary, until reduction is accurately done.

Any doctor can administer first-stage ether anesthesia easily, safely and with satisfaction.

An old-style closed oblong cone is made with a newspaper folded in a folded towel, large enough to cover mouth and nose, fastened together with

1. C. L. Heald, Sigourney, in *Jl. Iowa State Med. Soc.*, July.

safety-pins. The cone is half filled with gauze. Ether is poured freely into the cone which is held over the nose and mouth, allowing a half-inch of air space for the first minute, until the laryngeal and nasal reflexes are dulled, then the cone is held close against the face. The patient is reassured and is directed to breathe deeply and to hold his arm vertically. After a minute or so the upraised arm slowly falls. When this occurs, the mask should be removed, the necessary procedure performed without delay, but without undue haste. A few minutes after removing the cone, the patient awakens, with no excitement or vomiting, and walks out of the office unaided.

This is one of the many old, reliable expedients of practice that have been almost entirely replaced by highly-touted, newer measures of not half the value of the old.

SURGERY

WILLIAM H. PRIOLEAU, M.D., *Editor*, Charleston, S. C.

AN ABSORBABLE POWDER TO REPLACE TALC

IN THE last few years there has been published convincing evidence that talcum powder used for lubricating gloves upon getting into operative wounds may act as an irritant and cause inflammatory reactions in the nature of granulomas and adhesions. In some instances this has led to serious trouble. To absolutely prevent such complications, it would be necessary to discontinue the use of talcum powder. The wet technic for gloves answers this purpose, but it is unsatisfactory in that it is sloppy, leaving excessive moisture in the glove and often wetting the sleeve of the operator's gown. Also an antiseptic used in the water may irritate the skin of the operating personnel.

A preferable method would be to find a suitable substitute for talcum powder. Considerable work is being done along this line. Recently MacQuiddy and Tollman[1] reported the use of a starch compound which seems to satisfy all requirements of being a good lubricant and not acting as a tissue irritant. It is to be hoped that these findings will be confirmed and that this or a similar powder will be made generally available.

In the meantime every precaution should be taken to prevent the entrance of talcum powder into operative wounds. Its importance should be impressed upon the operating room personnel. Cleansing of the operating suite should be by vacuum and wet mopping. Dry sweeping and dusting should be prohibited at all times. In putting on gloves only a minimum of powder should be used, and care should be taken to avoid spilling it on the floor, especially when it may be spread by forced ventilation. Finally, care should be taken to use only intact gloves and to change them as soon as punctured. It has been demonstrated that gloves become punctured during operation much more frequently than is realized, forming a ready source of deposition of talcum into wounds. Needless to say, the gloved hands should be rinsed so as to remove any powder on the surface. Only by constant attention to such details can complications be reduced to the minimum possible.

1. Observations on an Absorbable Powder to Replace Talc. E. L. MacQuiddy and J. P. Tollman, Omaha, *Surgery*, May, 1948, Vol. 23, No. 5.

PUBLIC HEALTH

N. THOMAS ENNETT, M.D., *Editor*, Greenville, N. C

We were impressed with the following editorial comment in the *Journal of the A. M. A.*, July 17th:

"SCHOOL HEALTH COMMITTEES

Every school, regardless of size or location, has numerous health problems which it must solve to the satisfaction of its local community. Teachers must realize the health status of the children in order to fit the educational program to the individual child's needs and capabilities. Teachers of physical education must know which children have cardiac lesions, hernias and recurrently dislocating joints if exercise is to be safely used. Medical examination obviously must be provided for all school children—but how, at what frequency and by whom?

School authorities are obviously in need of carefully considered medical advice; where shall they obtain it? The report of the recent Conference on the Coöperation of the Physician in the School Health and Physical Education Program suggests that each local medical society appoint a School Health Committee to represent its membership in working with the local school authorities. A generally acceptable program including health service, health instruction, healthful school living and the health aspects of physical education has been developed through the combined efforts of forty-five health and educational organizations. School administrators have expressed themselves as in general agreement with the purposes of their program. Apparently the schools are entering a period of rapid development of their health programs. As this development takes place, local medical societies must be prepared to provide through their School Health Committee the consultation and advice that will be requested."

We suggest that this committee work with the local health officer as well as the school authorities, jointly—not only in giving "consultation and advice." The committee might request the members of the medical society to participate, upon

request of the health officer, in school medical activities, especially in the preschool clinics.

After many years of experience as a public school medical director, and also experience as a health officer, we believe that the school health work would be better coördinated with private practice, and as a result, materially improved, if each local medical society had an active school health committee.

We have long been of the opinion that the goodwill of the private physician is esential to the success of any public health program, and also it has been our experience that if the program is sound the profession will approve it.

DENTISTRY

J. H. Guion, D.D.S., *Editor,* Charlotte, N. C.

TOOTH DECAY IN RELATION TO DIET AND GENERAL HEALTH

A study by Larsen,[1] based on the findings in 866 children ages 6 months to 18 years living on sugar plantations and examined in 1946, 180 children studied in 1947 in three selected kindergartens, and 104 children recently arrived from the war-torn Philippines, makes thought-provoking revelations.

Of 20,492 teeth of plantation children, 41 per cent were decayed, missing or filled; the 180 kindergarten children had 3,677 teeth of which 55 per cent were decayed, missing or filled; among the 104 immigrant Filipinos only 11 per cent of the teeth were decayed, missing or filled.

In a previous study dietary differences between the Polynesian and the Oriental seemed largely in the *type of starch, rice being acid-residue* and *taro being alkaline-residue.* In these groups there was a striking difference in tooth decay. The children on Polynesian diets had almost no decay, whereas the Polynesians on an Oriental or high-rice diet showed 98.2 per cent with decay.

Conditions producing good general health were found to be associated with severe tooth decay, and conversely, poor health was associated with excellent teeth. Heavy carbohydrate eaters (Polynesians on taro) had excellent teeth, and heavy carbohydrate eaters (Orientals on rice) had extremely poor teeth. Oxalates—high in taro and low in rice —may be one of the factors preventing tooth decay.

The observations tend to verify the role of aciduric bacteria as an index of decay immunity and that oxalates and fluorides, as well as the alkaline residue food values in the Hawaiian diet, might account for decay resistance in certain groups in Hawaii. These factors are more important in preventing decay than climate, heredity, cleanliness of the teeth or specific food factors including sugar.

Two postwar Filipinos, aged 3 years and 7 months and 4 years and 7 months, respectively, each had 20 perfect deciduous teeth. They ate rice (three times a day), had a sweet cake of rice flour and molasses rolled in banana leaves (twice a week), taro (three times a week), fruit and vegetables (four times a day), meat (twice a week) and candy (once a day), they chewed sugar cane frequently. They drank no milk.

Reading these reports, one can but wonder if it would not be feasible to provide that a large part of the carbohydrate of our own people be obtained from taro. Poi, a favorite food of the Hawaiians, is taro—ground, made into a paste, and allowed to ferment.

Taro is the bulbous root of several varieties of the family one member of which is the well-known elephant-ear. The Polynesians also eat the leaves of these plants. The taste of taro is said to be somewhat acrid, perhaps suggestive of that of horseradish. This acridity is almost disposed of by pounding and multiple boiling, or fermentation.

There appears a promising prospect of supplying our people with another important food from the tropics, this food having the quality, when eaten, not as a substitute for all other carbohydrates, but as a three-times-a-week addition to the ordinary mixed diet, of remarkably protecting our teeth against decay.

Elephant-ear grows in profusion in this climate. It may be that taro can be readily and cheaply grown in all the Southern States. It may be that favorable conditions will be found only in Florida; and south Georgia, Alabama, Mississippi, Louisiana and Texas. Even if we had to import, it ought not to be expensive.

This is far-and-away the most promising report, as to its bearing on dental caries prevention that has come to the attention of this department. It is confidently hoped that this lead will be followed up energetically, and that a remarkable degree of success will be achieved.

1. N. P. Larsen, M.D., Honolulu, in *Jl. A. M. A., July* 3rd.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

SURFACAINE A MANY-USE SOOTHING AGENT[1]

'Surfacaine' (Cyclomethycaine, Lilly) is a local anesthetic agent which acts on damaged or diseased skin and on rectal, vaginal, bladder and urethral mucous membrane. It provides topical anesthesia for abrasions, burns and certain types of superficial skin lesions, and for all painful rectal

1. *Physicians' Bulletin, Eli Lilly & Co.,* July-Aug.

conditions in which the pain arises in the mucous membrane or ulcerated fissures. Instilled in the urethra and bladder, it will permit limited instrumentation of the urethra and surgical procedures of the bladder.

When the cream or jelly is applied to abrasions, within five to 10 minutes anesthesia is sufficient to allow scrubbing with a brush and tincture of green soap without complaint by the patient. The value of the agent is great in the removal of dirt from skin abrasions in children. Freedom from pain can be maintained by the use the cream as a dressing.

In burns the drug usually produces complete relief of pain for four to eight hours after each application. For extensive burns the ointment is recommended; the cream or jelly when small areas are involved. Compression dressings may be used in conjunction.

Surfacaine has produced gratifying effects in cases of sunburn. dermatitis venenata, itching from any cause, painful anal fissures or ulcerated hemorrhoids, intense itching of pruritus ani, and as a dressing for episiotomy and other perineal wounds.

The jelly is useful as a lubricant and anesthetic agent for urethral instrumentation. Pure crystalline Surfacaine substance is available for augmenting the concentration of the jelly or to prepare one's own solutions for anesthetizing.

RECENT DEVELOPMENTS IN OUR KNOWLEDGE OF BRUCELLOSIS

We have been well educated on the value of milk pasteurization, cattle vaccination, etc., but not enough has been said about the importance of direct contact with infected hogs as a source of human disease, particularly in farmers, butchers, and packing house workers. Far too many farmers have worked hard and long to clean out an infected cattle herd, while disregarding infected hogs which were causing the disease in his cows. Whereas infected milk is the source of most epidemics, almost all isolated cases can be traced to contact sources.

Urschel[1] strikes this new note. He goes on in confident vein.

Chronic brucellosis should always be considered in the differential diagnosis of any chronic, low-grade, remittent or recurrent illness, with tiredness as a feature. A positive agglutination test is not necessary for the diagnosis of the chronic disease. A positive skin test is necessary if the agglutination is negative ,but does not of itself mean active infection; it only confirms the diagnosis, made otherwise. Because our means of diagnosing the chronic disease are so poor, we must exclude more easily defined entities before making this diagnosis.

In treating acute brucellosis, *a disease frequently self-limited,* any therapeutic measure must be considered critically bzefore evaluation.

Skin-test with 0.1 c.c. of 1-12,000 brucellegen. (This must be diluted in all cases of suspected hypersensitivity.)

Skin-test is read in 48 hours, and recorded in centimeters of erythema. Increase in fever during this 48 hours is noted, as are lymphangitis and lymphadenitis.

For therapy, brucellin is diluted (with normal saline) 1-10; 1-100; 1-1,000; 1-10,000; 1,100,000.

If skin reaction to brucellergen has been mild (less than 3 cm.) and no fever, start intradermal therapy with 0.1 c.c. of 1-10 brucellin.

If moderate (3-6 cm.), and no fever, with 0.1 c.c. of 1-100 brucellin.

If severe (over 6 cm.), but no fever, 1-1,000 brucellin.

If skin reaction is severe, and general reaction occurred, start with 1-10,000 brucellin.

If skin-test sloughed, start with 1-100,000 brucellin.

Intradermal injections are to be repeated every 3-4 days. Increase the dosage as indicated by the amount of reaction. The ideal therapeutic dose is that which will produce a moderate local reaction without generalized response. Treatment should be continued for at least 12 weeks after patient is free from fever.

The preferable agent for therapy in acute or chronic brucellosis is vaccine or one of the purified preparations prepared from Brucella organisms, by frequent intradermal injections, in dosages which produce a moderate local reactions and no general (fever) response. Such treatment should be continued for at least 13 weeks after the patient with acute brucellosis becomes fever-free, and for at least 20 weeks in the treatment of any case of chronic brucellosis.

Streptomycin alone is apparently of some value in acute brucellosis, in combination with certain of the sulfonamides it appears to be more effective.

Of the recent combination of sulfonamide therapy with blood transfusions, preliminary reports are optimistic.

In chronic brucellosis, the only treatment of any value is with the specific agents, preferably brucellin, used in small doses, frequently repeated.

However different may be our opinions about the prevalence of brucellosis and its importance in the field of human health, all will have been pleased at reading after one who has studied the subject well and arrived at definite opinions.

1. D. L. Urschel, Mentone, in *Jl. Indiana Med. Assn.,* July.

PEDIATRICS

E. L. Kendig, Jr., M.D., *Editor*, Richmond, Va.

POLIOMYELITIS DISCUSSED BY A RECOVERED DOCTOR

A specialist in OALR and teacher[1] makes a valuable contribution to our meager knowledge of the disease condition which right now is giving doctors in North Carolina most concern. His having recently recovered from an attack of polio specially qualifies Dr. Guyton to write with authority. Careful reading of what he has to say will make plain much that has hitherto been obscure. It will be noted that no stock is taken in the contention that spasm is an important feature of polio—or that it is any part of the disease.

The virus of poliomyelitis attacks not only the anterior horn cells but areas throughout the entire nervous system. Many persons have attacks of gastrointestinal poliomyelitis. In a few of these cases the virus enters nerve endings of the nasopharynx or lower GI tract and spreads to the central nervous system. In many the disease enters the bulbar region of the brain through one of the cranial nerves, while in other cases it attacks the spinal cord first after entering through a spinal nerve. Once the disease enters the CNS it spreads rapidly to all areas in almost every case.

Meningitic symptoms often herald the onset of polio—severe low backache, muscle aches and pains, rigidity of back and neck. Lumbar puncture reveals an average of 75 w.b.c., polys. and lymphocytes in variable proportions. The protein may be double or triple normal, other chemistry of the spinal fluid normal; pressure possibly slightly elevated. The spinal fluid picture is non-specific. The virus does not invade the meninges, but grows only in areas which contain large numbers of nerve cells. The meningitic symptoms are caused by toxic products exuding through the pia mater from the areas of neurogenic parenchymous infection. Only rarely may the virus of polio be found in the cerebrospinal fluid. Meningitic symptoms usually last two or three weeks.

Encephalitis is severe in a few of the patients with extreme headache, drowsiness, disorientation, fever and oculomotor disturbances. If the virus enters the CNS through a cranial nerve, the encephalitis will precede paralysis as long as two to three days: if through a spinal nerve, the paralysis appears first. The symptoms of encephalitis usually lasts from three days to a week, subsiding rapidly thereafter. There are usually no residual symptoms.

Urinary retention often is one of the first symptoms noted in polio and may precede paralysis by two to three days. Secondary centers control this function in the pons and the medulla, and as the process spreads through this area in its course from the brain to the spinal cord, it may easily cause this urinary retention.

In virtually all cases of polio there is some involvement of the bulbar zone, usually not so much that the patient has difficulty with respiration and swallowing. Most of these symptoms are caused by hyperactivity of the sympathetic nervous system and may last for two to three months and occasionally indefinitely.

High b. p. and a fast pulse occur in many cases during the acute stage. Skin t. may be very low over the entire body, particularly the paralyzed portions; yet the patient be bathed in a sea of sweat. There is excesive sweating of the head, and most patients suffer intractable itching from the consequent dandruff.

The saliva is scanty and viscid. Constipation is a regular feature.

Severe muscular pain and muscular tenderness are invariable. In many cases these begin several days before paralysis; they may last for months or years. The muscle becomes extremely tender to touch.

The cause of muscle pain and tenderness in polio is yet undetermined.

Heat in any form ameliorates the pain by vasodilation. Likewise prostigmine by the same means.

Muscle contracture may occur either in paralyzed or non-paralyzed muscles. Those muscles which suffer most pain have greatest tendency to contract. Also, the pain of polio and the tendency to contract usually involve the entire body, whereas paralysis is here and there. The contracture of polio for the first month or so is plastic and can easily be reversed by physiotherapy, whereas the contracture of late polio is complicated by fibrotic changes and is difficult to overcome.

Spasm as a cause of pain and contracture in polio has been ignored in this discussion. Dr. Guyton, as a patient, was told by several competent physiotherapists that his contracted muscles were in spasm. Electromyographic tests showed them devoid of all spasm. Unless the word spasm is to be stretched beyond all horizons, says he, it cannot be used in connection with the contracture of polio.

1. A. C. Guyton, University, Miss., in *Jl. Tenn. Med. Assn.*, July.

A New Drug for Itch

Woolridge[1] gave 72 patients each two ounces of 1 per cent gamma isomer of hexachlorocyclohexane in a vanishing cream base (Kwell Ointment—Commercial Solvent Corp.) Each was instructed to take a hot, soapy bath after which the ointment was applied to all areas of the body below the chin; after 24 hours a second hot, soapy

1. W. E. Woolridge, in *Jl. Invest. Dermat*, 10:363, 1948.

bath, then to don dry, clean clothes. Secondarily infected patients were cured as readily as those without infection. Only one reaction was encountrede in the entire series. The results obtained with this drug appear to be better than those of any other remedy we could employ under similar conditions.

The members of the patients' families were treated, whether or not they presented evidence of scabies.

CLINICAL NEURO-PSYCHIATRY

PRACTICE OF PSYCHIATRY IN OFFICE AND HOME

An Iowa psychoneurologist[1] offers reasons why the family doctor should see after a good many of his patients who have difficulties in this field and gives helpful suggestions.

Psychiatric work with the patient is limited by the desires of the patient to get well. The psychiatrist can present the possibilities of health in attractive terms, but it is well to give the patient the feeling that the responsibility is his alone.

The physician takes a real interest in the patient and at the end of the interview should have a definite idea of his condition mentally, emotionally and physically, and the factors responsible. Then he is ready to lay his plans for treatment as required. In numerous cases a psychosis is the referring diagnosis, but a definite physical disease is the ultimate diagnosis. One in 25 of our adolescent population will require mental hospital treatment. Nearly half of first admissions return to the community within four months, over one-half within a year. If adequately treated early, commitment might never be necessary, and if properly understood many patients that are now sent to the hospital for mental disease would not need their liberties restricted.

The patient suffering from psychosis or personality defect is entitled to the same early and adequate treatment in general hospitals as is furnished to medical and surgical patients.

Convalescence in their home community is hindered by lack of professional contacts between their home physician and the hospital physician. Commitment is oftentimes delayed while the relatives merely hope a change for the better will take place. The family and the physician talk of a nervous breakdown and the need for a rest. Many times patients, as a result of being taken into confidence, change so as to become socially acceptable in the home. The patients feeling insecure and fearful about financial arrangement for their care and how their loved ones can get on in their absence and without their help, should be discussed frankly and honestly with them. Honesty should be the only policy of the doctor in meeting mental cases.

Physical restraint and restraint by use of drugs are unnecessary with the majority of patients. Of the actuating motives in all cases understanding is best achieved by the general practitioner who knows the patient. Where special treatment is necessary a specialist in psychiatry should be consulted. General hospital provision, where the mental patient has the same opportunity for physical examination, x-ray studies and laboratory work as the medical and surgical patient of the community, will prevent developments which require many hospital commitments. As more doctors interest themselves in the needs and possibilities of such treatment we will have fewer chronic and custodial cases to commit to institutions.

Most forms of psychotherapy used in psychiatric hospitals can be given fairly general use in the general hospitals and require application of principles and techniques that can be learned by physicians who will interest themselves in such patients.

Most psychiatric patients feel insecure. Never deliberately falsify facts. This will make them feel insecure in their friendship with the doctor.

Be willing to take time to listen to the patient until he feels he has a friend who is trying to understand and help him.

Do not use a treatment which merely does something to the patient to the neglect of doing something *with* him.

Never hesitate to use sedative drugs while awaiting beneficial results from psychotherapy shock or physiotherapy. Do not tell the patient the names of the drugs used.

A hopeful attitude in behavior difficulties will do much to start the patient on the road to recovery and dispel his doubts.

1. J. I. Marker, Davenport, Iowa, in *Miss. Valley Med. Jl.*, July.

HOME HYDROTHERAPY FOR MINOR NERVOUS CONDITIONS

Gay[1] says some nervous states can best be taken care of in the home, that home hydrotherapy is a useful means of attacking disturbing sensation of tension, sensory and motor hyperactivity and mild visceral dysfunctions, that it is safer and often more effective than prolonged sedation with barbiturates.

An ordinary bathtub three-fourths full water 98°, the patient lies so that only his head is above water. Distractions, disturbing thoughts and draughts should be excluded. The bath lasts for a minimum of 20 minutes. Warm water must be added to keep t. of water at 98°.

1. J. R. Gay, in *Proc. Staff Meet. Mayo Clinic*, 23:193, 1948.

Upon entering the water, the patient's reaction is usually that of a slight chill. This is followed by diffuse cutaneous vasodilatation which produces a warm sensation and a comfortable fatigue. The maximum effect is attained if the patient becomes drowsy or falls asleep. If a patient must be active after a warm bath, follow the tub with a cold sponge-bath or a shower—not advisable if the patient is retiring immediately. Warm tubs are best taken in that part of the day in which the distress from tension is maximum. Tubs taken before retiring may be useful in resolving sleep difficulties.

For more severe conditions, the collaboration of a neurophychiatrist will usually be required. Not the least of the value ascribed to home hydrotherapy is the fact that here is a tangible procedure and something which the patient usually can do for himself. Also, it can be administered in the home without the necessity for special equipment. Care must be taken to prevent scalding, chilling or suicidal attempts if the patient is depressed.

OBSTETRICS

H. J. Langston, M.D., *Editor,* Danville, Va.

THE RH NEGATIVE MOTHER IN PRIVATE OBSTETRICAL PRACTICE

The purpose of this discussion is to review a group of obstetrical patients as they present themselves in private practice, outlining the routine management and studying the end results, in order to arrive at some conclusions which may be presented to an Rh negative patient with regard to the prognosis of her pregnancy as well as of her child.

The material for this study consisted of 623 cases as they presented themselves for prenatal care.

The procedure[1] was:

1. To determine the Rh factor on all obstetric patients.

2. In the case of the Rh negative patient, the Rh factor was also determined on her husband.

3. If the husband was Rh positive, tests to determine the presence or absence of anti-Rh agglutinins in the blood of the mother were run at frequent intervals during the last eight weeks of gestation, in the hope that if a rising anti-Rh agglutinin titer was found an early induction of labor might be considered in order to decrease the amount of fetal liver damage.

4. Following delivery of Rh negative women having Rh positive husbands, the Rh of the infant was determined.

5. If the infant was Rh positive, tests for anti-Rh agglutinins were repeated on the mother. In this manner an attempt was made to determine the importance of the Rh factor as the mechanism in the production of pregnancy accidents; i.e., abortion, abruptio placentae, premature labor, stillbirth and erythroblastosis fetalis. There was only one case of erythroblastosis fetalis in this series and it was stillborn.

An analysis of this group of cases would lead us to assume that the Rh negative wife married to an Rh positive husband should minimize the risk to the infant from the standpoint of erythroblastosis fetalis. Icterus and hydrops as shown in this series developed only once in 129 Rh negative pregnancies (.77%).

The same Rh negative patient with an Rh positive husband has a very definite chance to have pregnancy accidents, i.e., spontaneous abortions, premature separations and premature labor, as there were 28 accidents in 129 pregnancies (21.6%), 6.5% greater than that found in Rh positive patients.

This group of patients represents a type of complication for which no uniformly successful therapy is available, and it is useless to promise any results with hormone, vitamin or other agents so frequently advised. Methionine for the prevention and treatment of liver damage in erythroblastosis fetalis is undergoing considerable investigation.

Some consideration should be given to the idea of early induction of labor if anti-Rh agglutinins or blocking antibodies are detected late in pregnancy.

The conclusions to be drawn from this study are that as far as erythroblastosis fetalis is concerned, the absence of the Rh factor in the obstetrical patient with an Rh positive husband is emphasized out of all proportion to the actual occurrence of erythroblastosis fetalis and that it is of more significance in accidents of pregnancy.

1. R. A. West, M.D., and N. C. Siebert, M.D., Wichita, in *Kansas Med. Jl,* July.

GYNECOLOGY

WHY THE HYSTERECTOMY?

A Northwest surgeon[1] says that in his city each larger hospital now demands a consultation by a competent obstetrician for every Cesarean section performed. This consultation is free of cost both to the patient and the physician, and each case must fulfill the indication for the section before the operation is allowed. The level of obstetrics done in his community has been raised, a few unnecessary sections prevented, and it is said these consultations elevate the public's opinion of the physician, the patient and her family being better

1. A. F. Lee, Seattle, in *Medical Record,* June-July.

satisfied that the proposed operation is indicated. The list of consultants here is felt to be adequate only when it includes men who are American Board Diplomates, Fellows of the American College of Surgeons, or those seasoned by years of alert obstetrical practice.

This author suggests that perhaps attention should be now directed to the commonest major gynecological procedure, hysterectomy. He says plainly that if our search fails to find a good reason for hysterectomy the uterus should be left in place.

Adenocarcinoma of the uterine fundus is treated by total removal of the uterus, tubes and ovaries, preferably in conjunction with x-ray and radium treatment. Sarcoma of the uterus is treated by a similar operation. This disease process is often unsuspected but rather discovered in the routine examination of the uterus removed for fibroid or other tumors.

Malignant polyp of the uterus and carcinoma of the ovary and tube are best treated by complete removal of these organs along with the uterus and regional lymph nodes, with surrounding tissues.

In case of leiomyomata, bleeding, pressure tumor and pain may lead the woman to surgery. It is surprising the number of uteri with intramural fibroids and menometrorrhagia that are remedied by a curettage. The myomectomy should not be forgotten, for a few younger women are short on tumors and long on a desire for future pregnancy.

Under chemotherapy and nonsurgical management a great proportion of salpingectomies and oöphorectomies are obviated.

Uterine rupture is a true indication. Inversion may sometimes be cured only by vaginal or abdominal hysterectomy.

Carcinoma of the cervix except in very unusual curcumstances and in very unusual hands is far better treated by x-ray and radium.

A review of 187 hysterectomies performed in 1946 in a city hospital is presented and these operations are classified as *indicated* (76%) or *contraindicated* (24%).

Lee thinks it likely that over half of these belong in the *contra*indication column. He concludes:

Too many contraindicated hysterectomies are are done. This is a hazard to our patients and our profession. This should be corrected. Perhaps, consultations should be required on each case before a hysterectomy is decided on.

Obturator Hernia

(H. D. Adams & D. C. Smith, Boston, in *Jl. A. M. A.*, July 10th)

Obturator hernia, although rare, must be kept in mind and, in the presence of strangulation and obstruction, recognized early as a surgical emergency if a fatality is to be avoided. The diagnosis is suggested by the history or presence of pain, or both, along the course of the obturator nerve, and the demonstration of a mass and/or tenderness in the upper inner aspect of the thigh and, possibly, a mass on the anterior pelvic wall felt by bimanual examination. The treatment is surgical through an adequate abdominal incision.

DERMATOLOGY

Penicillin Plus Fever Cures 80 Per Cent of Syphilis in 7½ Days

Artificially-produced fever increases the effectiveness of the 7½-day penicillin treatment for syphilis to more than 80 per cent, a substantial improvement over both penicillin alone and penicillin and mapharsen in combination for the same length of time.

In the hands of these investigators[1] penicillin alone proved 70 per cent effective, and penicillin given with mapharsen was 49 per cent effective against syphilis in 7½ days.

Each patient was given an injection of 20,000 units sodium penicillin q. 3 hrs. for 60 doses, plus three 3-hour sessions of artificial fever on alternate days, beginning 23 hours after the penicillin was started. In all, 120 patients were treated under the penicillin-fever method, including 64 who were in the secondary stage of syphilis and nine whose blood tests did not show the disease. Eleven of the group did not finish treatment—eight non-coöperative, two because of cardiac fatigue during fever therapy, and one because of uncontrollable fever. All syphilitic lesions healed immediately after treatment, although no more quickly than with penicillin alone.

No serious reactions resulted. Sixty-four of the 100 patients whose blood tests were positive for syphilis achieved negative blood tests. In 16 of the 109 who completed the 7½ days, the treatment failed—blood tests continued positive. Two of these 16 had relapses of primary syphilis and five had relapses of secondary syphilis. In five the primary stage of the disease progressed to the secondary, and four who had achieved negative blood tests again had positive ones 12 months afterward.

1. Herman N. Bundesen, President of the Chicago Board of Health, *et al.*, in issue for July 31st of *Journal of the A. M. A.*

Painful Shoulder.—Lesions of the tendon of the long head of the biceps frequently cause pain and disability in the region of the shoulder. When the arm is raised, the biceps tendon is prevented by the supratubercular ridge from slipping inward and is forced upward against the transverse humeral ligament and may be dislocated. A shallow sulcus with a medial wall angle less than 45° increases the tendency. When dislocation is recurrent or traumatic, surgery is indicated.—*H. H. Hitchcock.*

A zone of osteoporosis on the medical aspect of the base of the first metatarsal bone and the first phalanx is probably the earliest roentgen evidence of gout.

THE HEREDITY OF CANCER

THE SUBJECT of heredity in human cancer was introduced[1] by Prof. Tage Kemp, of the Human Genetics Institute, Copenhagen. In Copenhagen an investigation had been carried out at the Institute in coöperation with the Danish Cancer Registry, the Radium Centre, and numerous hospitals and clinics. Surveys of several hundreds of families picked out at random had been made. Results obtained up to now show that tumour-causing factors might be endogenous or environmental. The chief endogenous factor is hereditary predisposition. In the field of breast cancer the families of 197 women and three men were studied. This study gave no basis for supposing that exogenous factors played any important part in the development of breast cancer; hereditary predisposition was indicated as the chief factor. The development of the endogenous cancer was probably due to a general hereditary predisposition, and the localization of the tumour was determined by either endogenous or exogenous factors. The experiences of both clinical and experimental investigators confirmed that the probability of mammary cancer and leukaemia developing at an earlier period of life was greater when there was a demonstrable hereditary taint.

Prof. D. Smithers, of the Royal Cancer Hospital, reported on the family histories of 459 patients suffering from cancer of the breast which had been investigated during the period 1944-7. Attempt was made to confirm the causes of death of relatives by letters to hospitals, doctors, and the Registrar-General department, but in only a few cases was the attempt successful. It was believed the incidence of cancers in the families was underestimated. Many people died of cancer without their relations knowing the cause of death, and many patients with cancer of the breast survived for long periods following treatment and ultimately died from some other cause. Of the 459 families analyzed, the patient in 292 of the cases had no knowledge of any family history of cancer. Of the 167 cases in which the patient reported cancer in the family, 76 mentioned cancer of the breast. In 54 of the cases a history of cancer in more than one member of the family was obtained. Details of three families taken from the group: In one case the maternal grandmother of the patient died of carcinoma of the breast. She had five sons and three daughters. All three daughters developed cancer of the breast between the ages of 60 and 65. One of the sons died of carcinoma of the rectum. The eldest of the sisters was the patient's mother. The patient herself developed carcinoma of the breast at the age of 42. One of the other sisters

1. In a Symposium on the Genetics of Cancer, in London, June 24th-25th, reported in *British Medical Journal*, July 10th.

had no children; the other had a son and daughter, neither of whom up to date had developed cancer. The brother with cancer of the rectum had three daughters and three sons, and all three daughters had carcinoma of the breast, the ages of onset being between 40 and 50.

Prof. L. S. Penrose, of the Galton Laboratory: It is still doubtful whether heredity plays any significant part aetiologically. Investigators have collected a series of cases, the incidence of similar disease among their relatives, and compared their results with the incidence among a control group of cases free from the disease and selected at random. A survey of 521 histories of cases of mammary cancer, which Professor Penrose describes, had been undertaken in an endeavour to remove some of these uncertainties. The evidence from the mothers, sisters, fathers and brothers strongly suggested that transmission of a specific factor was a major cause of mammary cancer. The hypothesis of inheritance of specific organic disposition suggested by Bauer was supported by the homolateral familial findings. The theory, however, implied a significant decrease in the incidence of malignancy of other types in these families, which was not found in Professor Penrose's survey, nor was there any increase in the incidence of cancer generally which might have suggested a general hereditary predisposition to malignancy of any type.

WATER WINGS—OR ANGEL'S WINGS?

Frequently this journal reminds of ways of keeping from being killed as well as of ways of keeping from dying of disease. A sportsman's publication,[1] for July, carries a sensible article on ways not to drown yourself and others.

This article's urgent advice is here passed on to doctor readers in the hope that some of them will feel obligated to so counsel their patients, even their own children, even their own selves.

North Carolina has thousands of acres of deep-water lakes where none existed a few years ago. The sale of small boats has increased in proportion to the water. Small boats are fun, especially if they have a powerful outboard motor attached to them. You meet the same type of people buzzing around on a lake that you encounter on the highway. You find the speeder, the reckless driver, the show-off, and the incompetent—all deadly.

If you can't swim, don't go near the water. Learn to swim.

Don't swim for at least two hours after a heavy meal. Don't over-estimate your ability to swim.

Do not mount an outboard motor on a hull too weak to stand the strain of its power.

Look out for floating logs, snags, and partially or shallowly submerged rocks and logs.

Don't go out even on a small lake without keeping an eye to the weather. Sudden summer storms churn small lakes into frothing cauldrons. A pair of wooden oars are hardly a fit competitor to a 40-mile wind. Don't take chances with rough weather. If you get caught head 'er into the wind.

A small boat has a small load capacity, even on the smoothest water. Don't exceed it.

Be sure your boat is sound from stem to stern before going out on the water.

And don't dive into water unless you *know* it to be plenty deep and free from obstructions.

1. Rod Amundson, in *Wildlife in North Carolina*, July.

CANDIDATE DEWEY AGAINST SOCIALIZING MEDICINE, AND FOR INTELLIGENT REASONS

Under the apt title "No Hedging" the Editor of the *Journal of the Oklahoma Medical Association* writes:

In an address before the Oregon State Medical Association Governor Dewey said that before conducting an exhaustive investigation he looked upon government control of medicine as a hopeful possibility. But "By the time I was half-way through I was thoroughly convinced that compulsory medical care was unworkable, that it would bankrupt our society and destroy the standard of medical care in our nation, and it would be the greatest catastrophe in [all the history of] the United States."

"I had felt all along that if there were any merit to this thing it could be done and should be done on a state level and kept close to the people . . . . if it failed abandon it. Then we got the rest of the research on what happened in other places where it had been tried. We got the Saskatchewan program, the New Zealand program and the Australian program and it was clear on the record that every time they tried to compel people to pay a certain sum to government for medical care they destroyed the medical care they were to receive. . . . I don't want to run the risk of having happen to the health of our people what has happened to the health of every group of people that has tried to drag the medical profession down to the Socialist level. You won't drag anything up. You will enlarge the volume of medical care but utterly destroy the quality of medical care."

Our Oklahoma brother concludes: Such forthright declarations deserve serious consideration.

Such a forthright, intelligent declarer deserves, not only the serious consideration, but the vigorous support and the enthusiastic vote, of every physician, dentist, pharmacist and nurse; and of every patient—past, present and prospective—for, calamitous, catastrophic (in the words of Governer Dewey) as would be the passage of the W.-D.-M. to those who minister to the sick, the sick them-

selves would be affected even more disastrously.

Governor Dewey, like Patrick Henry, is guided by "the light of experience;" like Al Smith, he "looks at the record."

We do not have to submit to being kicked. Any group that submits to being kicked, when it does not have to submit, deserves to be kicked, and kicked soundly.

All we need to do is use our influence that others cast their votes, and cast our own votes, for intelligence and honesty, against ignorance and bombast.

NOT ALL OF ORGANIZED LABOR FAVORS STATE MEDICINE

Says the Editor of *Northwest Medicine,* in the issue for July of that excellent medical journal:

When the Wagner-Murray-Dingell Bill was under consideration in Congress, it was heartily supported by representatives of the American Federation of Labor and the Congress of Industrial Organization. When the last session of Congress sidetracked this Bill, and even more when it passed the Taft-Hartley Bill, organized "Labor's" resentment was unrestrained. They asserted intention of compassing the defeat of members of Congress who voted in favor of this Bill.

Two editorials in the June 11th issue of the western edition of *The Labor Union,* published in Dayton, Ohio, owned by A. F. of L. organizations, are entitled "Facing the Fact" and "Compulsory Health Insurance." These editorials opposing state medicine and supporting medical service bureaus organized and maintained by the medical profession in various parts of the country, are herewith presented.

"Facing the Fact

"Senator Wayne Morse of Oregon, whom no one can call a conservative, has expressed opposition to the Wagner-Murray-Dingell compulsory health insurance bill on the grounds that 'there is no escaping the fact that the passage of the bill would lead to the socialization of medical services.'

'I appreciate the fact as do my doctor friends that there are needed improvements in providing the American people with a more adequate health program, but I shall continue to hold the opinion that these objectives can best be attained through a program developed by the doctors themselves rather than by the politicians.' "

"Compulsory Health Insurance

"This is a particularly vicious example of the growing tendency to turn to the government for a cure for all our ills, real or imagined.

So far as our health is concerned, objective surveys show it to be excellent and unequalled in any other country.

The great program of paying for it has already been solved for the great majority of workers and their families by the many voluntary prepayment plans now available which are open to all who wish them, at less cost than government medicine.

It is true that there is a small number of indigents who need governmental aid, but that can be handled without saddling everyone with some more high-priced 'social security' which would require still another gigantic bureaucracy to administrate and more 'withholding taxes.'

As Senator Morse and others have said, the bill would be just the first step toward socialized medicine."

Not "the first step toward socialized medicine," but the whole trip—and a one-way trip only. It is as gratifying as it is surprising to learn that there is a respectable minority in the ranks of "Labor," with sense enough to realize that passage of the W.-M.-D. monstrosity of a bill would lower the quality and raise the price of medical services to the "worker," and, what is infinitely worse, be a long, long, step toward the taking over by the Government of everything, including the privileges and rights of "Labor."

CHRISTIAN'S ADVICE TO FUTURE FAMILY PHYSICIANS

Medicine has been undergoing now for a long time a pigeon-holing process by which has come about more and more splitting up into what we term specialties, leaving fewer and fewer with a broad scholarly knowledge of medicine. This has brought about a curious situation, comments Christian,[1] by which the only one now supposed to know medicine as a whole is the medical student, who, however, is being taught this by individuals, almost no one of whom knows all of medicine as he, the medical student, is expected to know it.

This Virginian for a dozen generations, now Harvard Professor Emeritus of Medicine, would urge all planning to become family physicians or specialists in internal medicine to fulfill the requirements of, and become certified by, the Board of Internal Medicine; this should be done in the years immediately following completion of hospital internship, since later on it becomes much more difficult of attainment. The requirements of this Board can be obtained from the Secretary of the Board. The student before graduation from the medical school should familiarize himself with these requirements and be guided by them in planning his training.

1. H. A. Christian, M.D., Brookline, Mass., in *Jl. Okla. Med. Assn.,* July.

It may be several months before roentgenograms give supporting evidence of tuberculosis or secondary osseous carcinoma. The diagnosis is frequently missed because negative roentgenographic evidence at one or two examinations was regarded as excluding these conditions.

NEWS

Luxury Hotel Becomes Hospital

The handsome five-story brick structure which was ormerly Pine Needles Hotel, at Southern Pines, is now a hospital—Saint Joseph of the Pines. The building with all furnishings was bought by Bishop Vincent S. Waters, head of the Roman Catholic Diocese of North Carolina, and very few changes were necessary in order to make it ready for opening as a hospital the 1st of July.

Eighteen patients were admitted in the first week. The first baby to be born in the hospital arrived July 5th. The nursing staff consists of Sisters of the Third Order of St. Francis, whose Mother House is at Maryville, Mo.

Eight Sisters comprise the present nursing staff, which is set up at present to take care of 60 patients, and will later accommodate 100. The patients' rooms are as they were before, with the same handsome furnishings and comfortable beds. Two delivery rooms and two operating rooms have been set up on the second floor, and an x-ray room and office on the first.

On the second floor a 21-bed wing has been set aside for Negro patients, furnished just the same as the quarters for white patients. This wing also has its own nursery and waiting rooms.

Chief of staff is Dr. Francis Owens, of Pinehurst, who recently closed his small hospital and clinic there and moved his equipment and patients to St. Joseph of the Pines.

Dr. Witten Establishes Foundation

The Virginia Corporation Commission has granted a charter to the Jack W. Witten Foundation, a non-profit corporation of North Tazewell.

Dr. Jack W. Witten (M. C. of Va., 1905), member of the House of Delegates from Tazewell County, Va., has gained national prominence in his more than 40 years of medical practice and rearing and educating boys in Southwest Virginia. He has taken many boys into his own home to live, and has sent scores of them through high school and college. The Foundation proposes to establish a fund to be used for "such public, charitable and benevolent uses and purposes as may most effectively assist, encourage and promote the wellbeing of mankind in general, regardless of race, color, condition or creed."

Bonnie B. Hall, of North Tazewell, and Hubert Peery, of Tazewell, will be members of a board of trustees with Dr. Witten. The corporation's duration is limited to 50 years.

Dr. Witten's work in this field has inspired writers for periodicals of the widest circulation to pay tribute to this good doctor and cite his achievement as a wonderful illustration of the possibilities of a combination of educated intelligence, energy, unselfishness and vision.

Edgecombe has New Health Officer

Dr. John A. Linberry, formerly of Mayodan in Rockingham County, N .C., has been employed as County Health Officer for Edgecombe County and will assume his official duties August 1st.

Engaged in industrial health work in Rockingham, Dr. Linberry also has served as a past health officer for Harnett and Hyde Counties.

He will have only Edgecombe County as his territory. He relieves Dr. W. W. Green, who has been serving as health officer since early this year after the resignation of Dr. Robert Young.

N. C. Baptist Hospital and Bowman Gray School of Medicine

Dr. Felda Hightower, a member of the Baptist Hospital Staff and the Bowman Gray School of Medicine Faculty since 1942, has been promoted from the position of Instructor in Surgery to that of Assistant Professor of Surgery in charge of General Surgery.

Dr. Ernest H. Yount, Jr., of Newton, graduate of the Vanderbilt University School of Medicine, has been appointed to the position of Instructor in Internal Medicine. Dr. Leslie M. Morris, graduate of Bowman Gray School of Medicine, has been appointed to the position of Instructor in Radiology. Dr. R. Winston Roberts, graduate of the Duke University School of Medicine, has been appointed Instructor in Ophthalmology, effective September 1st.

Dr. C. Christiano De Sousa of Sao Paulo, Brazil, is studying on a year's Fellowship at Graylyn in Psychiatric Psychology.

An exhibit on egg embryo techniques used for growing viruses was prepared by Dr. Robert B. Lawson, Associate Professor of Pediatrics, and Miss Ruth Raymond, Research Assistant, for presentation at the First International Poliomyelitis Conference in New York, July 12th-17th. The exhibit was based on research effort to grow polio virus in eggs which is being done on a grant from the National Foundation for Infantile Paralysis by Dr. Lawson and Dr. J. Max Little, Associate Professor of Pharmacology.

Medical College of Virginia

Dean Harvey B. Haag of the School of Medicine has announced the addition of a Department of Legal Medicine to the school's curiculum, effective at the beginning of the school term this year. This Department will be under the direction of Dr. Herbert Stewart Breyfogle, Chief Medical Examiner of Virginia.

President W. T. Sanger reports the receipt of $43,000 in gifts. Leading the list is a gift of $27,400 from the Commonwealth Fund to promote the College Regional Hospital Program. Included also is a gift from the American Tobacco Company of $15,000 for research.

Two New M.D.s for Thomasville

Thomasville, N. C., will have two new doctors soon, Dr. R. D. Harris, Jr., from Leaksville-Spray and Dr. Marvin Worth Phillips, of Asheboro.

Dr. Harris, a graduate of Louisville '43, was interne and Assistant Resident in Surgery, City Hospital, Winston-Salem. Surgeon U. S. Navy 1945-1946, and assistant to Dr. C. V. Tyner, Leaksville, since 1946.
ing.

Dr. Phillips, a graduate of the Medical College of Virginia and an ex-interne of City Hospital at Winston-Salem, i sa kinsman of the late Dr. C. H. Phillips, whose office he will use.

These two added will make a total of only eleven doctors to see after the health of 15,000 in Thomasville and half as many in the adjacent territory.

Dr. Karl Menninger, internationally known psychiatrist, has resigned as manager of the Veterans' Administration Hospital at Topeka, Kan., the Veterans' Administration's largest training center for psychiatrists, effective July 25th.

He will be succeeded by Dr. Frank Casey, of Goldsboro, N. C., who has served under Dr. Menninger, as the hospital's chief of professional services, since Jan. 1st, 1946.

Dr. Menninger plans to resume his director's duties with the Menninger Foundation at Topeka, an organization

which provides for the training of neuropsychiatrists and supervises a school of psychiatry. He also will become the chairman of the dean's committee and senior consultant at the Tokepa VA Hospital.

Dr. Casey, a graduate of Guilford College, Guilford, N. C., has served with VA hospitals at Lexington, Ky.; Perry Point, Md.; Gulfport, Miss., and Topeka.

Dr. W. A. Browne has resigned as chief of the Virginia Health Department's communicable disease division, effective August 1st, to become full time health director of the City of Evansville and Vanderburg County in Indiana.

Dr. Rachel D. Davis announces that she is restricting her practice to Gynecology, including Sterility and Gynegologic Endocrinology, Proctology and Urology, 111 East Gordon Street, Kinston, N. C.

Dr. William Branch Porter, Professor of Medicine in the Medical College of Virginia, Richmond, and Mrs. Porter have been in England for several weeks. Among the entertainments they attended were a dinner given by the Lord Mayor of London, an entertainment given by Lord and Lady Astor at "Cliveden," a dinner at the American Embassy at which Ambassador Lewis Douglas, United States envoy to Great Britain, and Mrs. Douglas were hosts, and the garden party at Buckingham Palace, which was given by King George and Queen Elizabeth.

Dr. S. Miles Burton, Jr., former director of laboratories and pathologists at St. Mary's Hospital, Rochester, N. Y., has been appointed Pathologist (full-time) to Lynchburg (Va.) General Hospital.

Dr. Robert R. King, Jr., of Boone, has been named health officer for Alamance County as successor to Dr. H. W. Stevens, who accepted a similar post at Wilson.

A graduate of the Bowman Gray School of Medicine in Winston-Salem, Dr. King received post-graduate training in public health at the School of Public Health at the University of North Carolina. For the past two years he has been health officer in Alleghany, Ashe and Watauga Counties.

Dr. Francis Eugene Zemp, of Columbia, recently underwent a surgical operation. He is now well on his way to a complete restoration of health.

Dr. William L. Pressley, of Due West, S. C., has been elected to the Council on Medical Education and Hospitals of the American Medical Association.

Dr. Walter B. Martin, of Norfolk, is a new Trustee of the American Medical Association.

Dr. Hamilton W. McKay, of Charlotte, is Chairman of the Section of Urology of the American Medical Association for the current term.

Dr. E. M. Burn, Charleston native prominent in psychiatry, has joined the staff of Edgewood, psychiatric hospital newly opened at Orangeburg by Dr. O. R. Yost. Dr. Burn is associate professor at the Women's Medical College of Pennsylvania, instructor of psychiatry at the University of Pennsylvania Medical School and chief of service on the visiting staff of Philadelphia General Hospital.

Dr. Stuart W. Gibbs has joined the Boice-Willis Clinic at Rocky Mount as radiologist.

Dr. Everett D. Jones, a graduate of the University of Maryland, has announced the opening of offices in High Point for the practice of orthopedic surgery.

MARRIED

Dr. James Taylor Brooks, of Greensboro, and Dr. Jean Elizabeth Bailey, of Raleigh, were married on July 10th.

Dr. John Melichamp Fearing, of Charleston, South Carolina, and Mrs. Sarah Kirkpatrick Ford, of Lynchburg, Virginia, were married on July 9th.

Dr. Alize Cole, native of Chilhowie, Virginia, and Mr. Robert A. Lightburn, formerly of Crestline, Ohio, were married in New York City on August 1st. They will reside in that city. Dr. Cole is a graduate in medicine of the Medical College of Virginia.

Dr. John Knox Wilson, of Richmond, and Miss Nancy Reid Dupuy, of Greensboro, were married on July 20th.

Dr. John Abb Payne, of Sunbury, and Miss Josie Lewis Harding, of Washington, North Carolina, were married on July 24th.

DIED

Dr. George Bolling Lee, grandson of General Robert E. Lee and a prominent New York gynecologist, died July 13th. Dr. Lee, who was 76, fell at his home in New York recently and broke his hip. His death came unexpectedly in a New York hospital, where earlier he had been reported resting comfortably.

After funeral rites at Robert E. Lee Memorial Church at Lexington, Virginia, interment followed in the family crypt in Lee Chapel on the Washington and Lee University campus, where rest the remains of General Robert E. Lee and other members of the Lee family.

Dr. Lee was born at Lexington in 1872, a son of General William Henry Fitzhugh Lee and Mary Tabb Lee. He was graduated from Washington and Lee in 1893 and had served on the university's board of trustees since 1924.

Soon after receiving his medical degree from the College of Physicians and Surgeons at Columbia University in 1896, Dr. Lee began practicing surgery in New York City, becoming prominent in the field of gynecology.

Dr. William Thomas Parrott, 72, superintendent of Caswell Training School, founder of Parrot Memorial Hospital, Kinston, N. C., and pioneer in the use of x-ray in North Carolina, died July 22nd in the hospital he founded of an illness indirectly caused by x-ray burns.

Dr. Parrott was born September 11th, 1875, at Pembroke, the old Parrott home at Falling Creek. He was the ninth and last surviving child of James Marion Parortt and Mrs. Elizabeth Warters Parrott.

He attended the old Kinston College, the University of North Carolina, the University of Maryland College of Pharmacy, and Tulane University, and studied at London Polyclinic Hospital in London, the Kaiser Wilhelm Technisches Institute, Berlin, and the Great Ormond Street Hospital, London.

Among the survivors is a doctor son, Dr. William Thomas Parrott, Jr., of Duke Hospital, Durham.

Dr. Taliaferro Clark, 81, former assistant surgeon-general of the United States Public Health Service, died July 3d, at United States Marine Hospital, Ellis Island.

Dr. Clark, a native of Fauquier County, Va., retired in 1933 after 36 years in the Public Health Service.

He was a descendant of Sir Alexander Spottswood, Colonial Governor of Virginia; William Clark, the explorer, and General George Rogers Clark.

As assistant surgeon-general, Dr. Clark acted as chief of the venereal disease division from 1930 to 1933. Earlier, he supervised Public Health Service immigration, quarantine and related services in the British Isles and Continental Europe. He was a member of the International Sanitation Conference in Paris in 1926 and a delegate to the International Conference on Tropical Medicine at Cairo in 1928.

Dr. Rea Parker, 68, Smithfield, Virginia, physician, died at his home August 2nd of a heart attack. A son, Dr. Rea Parker, Jr., of Smithfield, is a survivor.

A native of Como, N. C., Dr. Parker attended pre-medical school at the University of North Carolina in 1897-98, later attended A. & M. College at Raleigh, and studied pharmacy at the University College of Medicine, Richmond, and practiced pharmacy for a short period and then entered the Medical College of Virginia at Richmond, and was graduated in medicine in 1908.

At the time of his death, he was coroner for Isle of Wight County. He had served on the staff of the State Hospital at Petersburg and had been a staff member at Eastern State Hospital, Williamsburg, and was active in civic and religious bodies, especially in the Boy Scout program. In 1945 he was awarded Scouting's high honor, the Silver Beaver.

In 1910 Dr. Parker composed a research paper on pellagra which attracted wide attention.

Dr. James Marshall Lilly, 70, dean of the medical profession in Cumberland County, N. C., died in a Fayetteville hospital August 8th after a long illness. Funeral services were held at Hay Street Methodist Church, of which he was a steward and trustee.

Dr. Lilly was a native of Montgomery County and graduated from the University of North Carolina and University College of Medicine, Richmond, Va. He practiced in Norwood and Baltimore, Md., before locating in Fayetteville in 1907 as an eye, ear, nose and throat specialist.

Dr. Robert J. Danehy, 30, who recently located at Taylorsville, N. C., lost his life August 6th when his airplane fell near Charleston, W. Va. Dr. Danehy was on a return trip from Pittsburgh, accompanied by Jack Adams, 19, also a resident of Taylorsville.

Dr. W. Houston Moore, 68, prominent Wilmington physician and civic leader, died suddenly at his home July 23d. He suffered a heart attack six years ago but recovered sufficiently to resume an office practice in dermatology.

Dr. Moore was graduated from the University of North Carolina and Jefferson Medical College, and began the practice of medicine in Wilmington in 1911.

In 1936, Dr. Moore took the lead in the movement for the beautification of the Greenfield Lake area through planting of thousands of azaleas. He later proposed the Wilmington Azalea Festival, which was first presented last spring. For several years he had advocated construction of an amphitheater on the lake front at Greenfield for pageants, concerts, water carnivals, and similar events.

He was the first chairman of the Housing Authority of the City of Wilmington.

He served as a member of the State Board of Medical Examiners from 1926 to 1932, was for several terms councillor for the Third District Medical Society and as such a member of the executive committee of the North Carolina Medical Society, and in 1923 and again in 1939 served as president of the New Hanover Medical Society. He had served since 1934 as a member of the City-County Board of Health, a position he held at the time of his death.

Dr. Francis H. Smith, 67, physician in charge of the George Ben Johnston Memorial Hospital and a past president of the Medical Society of Virginia, died July 1st at his home at Abingdon, Va.

He was graduated from Fredericksburg College in 1899 and from the Medical College of Virginia. For five years he engaged in private practice at Lewisburg, W. Va., and in 1910 removed to Abingdon to become physician in charge of the hospital, which position he had filled since that time.

Dr. Smith was a past president of the Southwest Virginia Medical Society, the Medical Society of Virginia, the Washington County National Bank and the Abingdon Rotary Club.

Among the survivors are two doctor brothers, Dr. Phillip S. Smith, of Abingdon, and Dr. James H. Smith, of Richmond.

Dr. Charles L. York died at his home at Burkeville, Va., July 18th. He was born in North Carolina in 1888, was graduated from the North Carolina Medical College in 1914, and had practiced at Burkeville and in Nottomay County for most of the years since.

Dr. J. J. W. Looney, of Rocky Mount, died on May 12th, after having been in poor health for several years.

Exophthalmos to be Differentiated from Lid Retraction

(H. P. Hinsworth, M.D., London, in *British Med. Jl.*, July 10th)

A distinction must be drawn between exophthalmos—genuine protrusion of the eyeball—and lid retraction. Only one-third of the cases of thyrotoxicosis with diffuse goitre, and less than one-tenth of those of nodular goitre, have true exophthalmos. In the majority of cases the appearance of exophthalmos is an optical illusion dependent upon retraction of the upper lid, and, although most cases of true exophthalmos have lid retraction as well, it is to this lid retraction that the staring appearance of the eyes is largely due. As a practical clinical rule it can be said that true exophthalmos is revealed by visible sclera below the cornea, and lid retraction by visible sclera above the cornea. The effects of thiouracil therapy on these two ocular components are exactly the same as the effects of thyroidectomy. It does not reduce true exophthalmos, and indeed, like surgery, may lead to its increase. It removes lid retraction in two-thirds of the cases and reduces its degree in practically all: again, as with surgical treatment, this beneficial result may not be fully achieved until one to two years after treatment is begun.

Peptic Ulcer During Pregnancy

(D. W. James, in *British Med. Jl.*, July 10th)

A proved duodenal ulcer was aggravated during pregnancy and perforated at the 36th week. The diagnosis was not difficult once it was realized that an ulcer had existed before the pregnancy.

It is well known that 80-90% of all peptic ulcers in adults occur in men. Differences in mode of living may be partly responsible, but endocrine factors are probably also involved in this sex-incidence.

The obstetrician faced with the rare association of peptic ulcer and pregnancy need only to remember two things: (1) to survey the case from the endocrine point of view to exclude masculine characteristics suggesting an android pelvis and possible dystocia; and (2) to pay serious attention to any symptoms of indigestion that may occur during pregnancy.

BOOKS

PRACTICE OF ALLERGY, by Warren T. Vaughan, M.D., Richmond, revised by J. Harvey Black, M.D., Dallas. Second edition. *The C. V. Mosby Company,* 3207 Washington Boulevard, St. Louis 3, Mo. 1948. $15.

When, a dozen years ago, the publishers announced that a book on allergy would be soon forthcoming from the pen of Dr. Warren T. Vaughan, the interest of doctors generally was promptly elicited. When the book became available it at once was accorded phenomenal popularity. When death claimed this accomplished physician and medical author he was engaged in collecting the material for a new edition. The author of the present edition was prevailed upon to take up where Dr. Vaughan left off. Dr. Black tells us that he has tried to retain the quality and flavor of the original while making such additions and corrections as the developments in the interval had made necessary.

There is no special feature of this book to single out for praise. In all its parts the coverage of the enormous field of allergy is deserving of the highest praise. Every practitioner of medicine, whether general or in any one of the specialties, would do well in the service of his patients to add this book to the group which he studies carefully and refers to daily.

PROGRESS IN NEUROLOGY AND PSYCHIATRY: An Annual Review, Volume III, edited by E. A. Spiegel, M.D., Professor and Head of the Department of Experimental Neurology, Temple University School of Medicine, Philadelphia. *Grune and Stratton,* 381 Fourth Avenue, New York 16, N. Y. 1948. $10.

More than 2800 papers are reviewed in this volume. Note has been taken of the great public interest in psychiatric problems and new chapters on mental deficiency and criminal psychiatry have been added. There are separate sections on the basic sciences, neurology, neurosurgery and psychiatry. Much space is given to discussion of brain tumors, of psychosurgery, of child psychiatry, of psychosomatic medicine, of shock therapy, of group psychotherapy and of psychoanalysis.

Valuable as this book will prove to teachers and research workers in this special field, it may be doubted that it will prove of the greatest usefulness to the general run of clinicians.

GENERAL ENDOCRINOLOGY, by C. Donnell Turner, Ph.D., Associate Professor of Zoology at Northwestern University. New, first edition. 604 pages with 164 figures. *W. B. Saunders Company,* Philadelphia and London. 1948. $6.75.

This book is intended to meet the needs of beginning students who are concentrating on experimental biology and therefore has a broader foundation than books on this subject which are in-

tended specially for medical students or practicing physicians. The subject is presented as a fundamental aspect of biologic science rather than as a medical specialty. The book represents the teaching of this subject at Northwestern University to students, the majority of whom are preparing for medicine, dentistry or nursing, or for the teaching of biologic science. The subject matter is presented from experimental rather than a clinical point of view. The treatment of clinical conditions in this field is not emphasized since this is regarded as properly to be done in medical courses. The rapidity of growth of the knowledge of endocinology within recent years makes it highly desirable that a book of this broad character be used as a text in the premedical or medical course.

A TEXTBOOK OF CLINICAL PATHOLOGY, edited by FRANCIS P. PARKER, M.D., Associate Professor of Pathology, University of Virginia School of Medicine, Charlottesville. Formerly edited by ROY R. KRACKE and FRANCIS P. PARKER. Third edition. *The Williams and Wilkins Company*, Mount Royal and Guilford Aves., Baltimore. 1948. $9.

The first two editions have achieved for this book a high position among the practitioners of clinical pathology and extensive use in the medical schools of the country. The delay necessitated by the war and situations growing out of it and the multitude of advances in clinical pathology have necessitated an almost complete rewriting. Consolidation and rearrangement has been discriminatingly used. The chapter on disorders of the leukocytes has been rewritten by Dr. Kracke. Dr. Davidshon has completely rewritten the chapter on blood groups including all the newest advances and knowledge. In this edition the use of the thick smear in diagnosing malaria is given detailed consideration. The dealing with immunologic tests including the serologic test for syphilis has been greatly amplified. Many new illustrations and the abundance of old ones contribute greatly to the teaching value of this admirable work.

FAILURES IN PSYCHIATRIC TREATMENT, edited by PAUL H. HOCH, M.D., New York State Psychiatric Institute, N. Y. C., Principal Research Scientist (Psychiatry), New York State Psychiatric Institute; Associate in Psychiatry, Columbia University College of Physicians and Surgeons. The Proceedings of the 37th Annual Meeting of the American Psychopathological Association, held in New York City, June, 1947. *Grune and Stratton*, 381 Fourth Avenue, New York 16, N. Y. 1948. $4.50.

The foreword expresses the opinion that the present symposium is the first attempt to present a general review of therapeutic failures of different psychiatric methods of treatment. It well says that to admit failures is a sign of intellectual and emotional maturity.

Following a discussion of therapeutic failures in general, come chapters on failures with psychoanalytic therapy, failures with hypnosis, failures in the psychotherapy of children, failures with the various shock therapies, failures in the treatment of neurosyphilis and of epilepsy, and even in social case work. There are chapters on evaluation of the treatment of criminals, group psychotherapy, heredity and constitution in relation to mental disorders and prefrontal lobotomy.

In a summary of the symposium findings we read that the symposium on failures in therapy did not settle the question as to why one patient responds to treatment and another does not but it did raise many important points and will serve as a basis and starting point for other researches in the field.

TWENTIETH CENTURY SPEECH AND VOICE CORRECTION, edited by EMIL FROESCHELS, M.D., President, International Society for Logopedics and Phoniatrics; President, New York Society for Speech and Voice Therapy. *Philosophical Library*, 15 East 40th St., New York City. 1948. $6.

Nearly a score of specialists in this field, only two of whom are doctors of medicine, have collaborated in the writing of this book. The editor tells us in the foreword that his purpose is to offer to persons interested in speech and voice correction the latest developments of value and/or promise. Chapter heads include aphasia and its treatment, disarthria, allalia, psychic deafness in children, acoustic education, speech reading, cleft palate, stuttering, education of the speaking voice, education of the singing voice, voice training after laryngectomy, and a good many other subjects.

So far as may be judged by one with no education or experience in this field, this book will meet adequately a real need that is very widespread.

FIRST ANNUAL MEETING
AMERICAN ASSOCIATION OF BLOOD BANKS
HOTEL STATLER, BUFFALO, NEW YORK
August 26th-28th
For further information write The Secretary, 3301 Junius Street, Dallas 1, Texas.

CONSERVATIVE AS TO STREPTOMYCIN IN TUBERCULOSIS (Comm. on Tuberc, N. H. Med. Soc., *New England J. Med.*, Oct. 23, 1947)

To advocate the indiscriminate use of streptomycin, especially in moderately advanced or advanced cases of pulmonary tuberculosis, is premature and carries with it certain dangers and drawbacks. Among the principal dangers in the use of this drug is its toxicity, which may seriously affect hearing, sight and kidney function and cause skin eruptions. At present, it can only be said that we have seen little in the treatment of well-established pulmonary tuberculosis by streptomycin that gives cause for any great optimism regarding its curative value.

THE FIRST BLOODED AND PEDIGREED CATTLE ever brought to North Carolina in any numbers were the three Buernsey herds established in 1882 and 1883 by Dr. H. T. Bahnson and Henry E. Fries, both of Salem, and Dr. Richard H. Lewis, of Raleigh—*The E. S. C. Quarterly.*

CHUCKLES

So He Stayed

The doctors had decided that, after 20 years in the mental home, Mr. Botts could be released.

In the morning he was allowed to shave himself instead of having to submit to the attentions of the barber. Turning to address a remark to one of the attendants who had come to wish him good-bye, his razor caught the string which supported the shaving mirror, which fell to the ground.

When Mr. Botts tried to go on with his shave he looked at the blank wall.

"Well," he said with a sigh, "if that isn't just my luck. After 20 years in this place, on the very day I'm going to be let out, I've cut my head off!"

Aint Seed Nuthin

At nine o'clock a huge negress was brought in by the police. Stitching and bandaging were completed in an hour, the patient ordered to a surgical ward. To this order the patient responded.

"No, suh, doctuh. Not fo' dis gal; ah's got a' important date!"

At the door she paused to extract a razor from her stocking. She turned to the inerne with a grin, "Is yo' goin' to be heah all night, doctuh?"

"I hope so."

"Well, ah'm goin' back to de gal dat cut me up an' if yo' think *ah* wuz sliced up, wait till yo' see *dis* gal!"

Modern Parents

Mother (on telephone): Helen, dear, could father and I leave your children with you and Bob this evening? We're invited out to a bridge party.

Rough Treatment

(From the *Telescope Messenger*)

The Rev. and Mrs. John Arnold, Missionaries on furlough from Africa, are at home recuperating from treatment received in the Lincoln Memorial Hospital, Nebraska.

Excusable Delay?

(From the *Kansas City Mission Woods News*)

The firemen were delayed because they stopped at the Henry's house, next door, thinking the fire was there, because Mrs. Henry was in her yard rolling up her hose.

Doctor: "What is the cause of a split P wave?"
Helpful Student: "A crumb in the urethra, sir."

Nurse (to male ex-patient): "Why, Brown, I hardly knew you with your clothes on!"

"From the naked-eye point of view she is still a little disappointing."

"A basal anaesthetic is one which is administered per rectum."—*Examination Candidate.*

The routine use of the tuberculin test on every person who visits the rural doctor's office, then examination of family contacts and a search for the original spreader, would uncover a surprising number of hidden and unsuspected cases of tuberculosis.

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JAMES M. NORTHINGTON, M.D., Editor

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Chronic Subdural Hematoma

John W. Devine, Jr., M.D., Lynchburg, Virginia

THIS lesion is one that will interest all members of the profession, since it occurs at all ages and the most consistent symptom is headache or mental disturbance. There are none of us who do not see patients daily whose chief complaint is headache. Therefore, it is necessary for us to be familiar with this lesion so as to rule out a subdural hematoma in these patients.

Definition: An encysted collection of blood in the subdural space is known as a chronic subdural hematoma. The lesion results from trauma, which may be either very trivial or relatively severe. There is an interval, which may vary from a few days to a month or even a year or more, in which the patient is practically symptom-free.

Trotter[1] concluded that the source of the hemorrhage was almost always from one of the bridging veins running from the cortex across to the subdural space into the superior longitudinal sinus. McKenzie[2] suggested the possibility of an increase in size of the sac by a process of osmosis. Gardner[3] states that the wall of the sac acts as a semipermeable membrane and that as the complex protein molecules of the blood disentegrate, fluid enters the sac, thus increasing the bulk of the lesion. He reports experimental evidence to the support of this theory, and Zollinger and Gross[4] after performing some experiments on an intact membrane removed surgically, agree with Gardner.

Frequency: This lesion is more frequent than extradural hematoma and too frequently is unsuspected and found at autopsy. In 1940, Allen, Moore and Daly published a statistical study entitled "Subdural Hemorrhage in Patients with Mental Disease." It was taken from the records of the pathologists of the Massachusetts Department of Mental Health. The authors studied the incidence of this pathological finding among 3,100 consecutive sudden and unexpected deaths among state mental hospital patients. In this number, 245 cases of subdural hematoma were found—an incidence of 7.9 per cent. In 35 of these patients the subdural collection of blood was the primary cause of death.

Symptoms and Neurological Findings: There are no pathognomonic symptoms of this condition. A history of trauma, however slight, followed by headaches, with or without a free interval, should make one suspicious of a subdural hematoma. The interval may vary from a few days to several months and the patient may have symptoms for years before the lesion causes the patient's death. Gould[5] reports a case, proved at autopsy, in which the patient suffered for 21 years before becoming incapacitated. Love[6] reports a case, previously diagnosed as a post-traumatic psychosis because of the patient's complaint of headache following a head injury, with negative neurological findings,

cured by removal of a chronic subdural hematoma.

Mental disturbance varying from mild personality changes, such as forgetfulness, to mania, amnesia or insanity, have been reported cured by removal of a subdural hematoma. Symptoms and signs of increased intracranial pressure, such as vomiting, slowing of pulse, choked disc, and coma, are late signs, but the prognosis is very poor if the condition is allowed to go undiagnosed until they develop.

Ptosis, dilatation of one pupil and paralysis of other intracranial nerves are often seen, but fail to localize the lesion. Therefore, both sides must be explored when operating for this lesion. This should be done even if the encapsulated blood is encountered on the first side explored, as 20 to 30 per cent of these lesions are bilateral.

The neurological signs can vary from no abnormalities to definite localizing signs by involvement of the cranial nerves, or paralysis of the extremities, with corresponding reflex changes. For emphasis, I will repeat that a patient can have a large space-consuming subdural hematoma and have no abnormal neurological findings.

Special Diagnostic Procedures: Roentgenographic examination of the skull will occasionally show a fracture which will verify the history of trauma. If the pineal gland is calcified, a shift to one side as described by Naffziger[7] will help localize the hematoma.

Spinal puncture may, or may not, show an increase in pressure. Likewise, the fluid may be xanthochromic or colorless. Therefore, negative spinal-fluid findings do not rule out this lesion.

Ventriculography is the most reliable diagnostic procedure and may be resorted to if the lesion is not located by bilateral bur holes.

The following cases will serve to emphasize the points of importance in the diagnosis and treatment of this condition.

Case Reports

Case 1.—A 35-year-old Negro man was referred by Dr. Walter Johnson to Dr. Fred Morrison, ophthalmologist, on March 13th, 1946, with the following history:

On December 18th, 1945 (three months before admission), while at work, the patient was accidentally struck with a wrench causing a laceration of the left ear and loss of consciousness for a few minutes. He was admitted to the Lynchburg General Hospital for observation but was discharged after four days, apparently completely recovered from his injury. The next two weeks were uneventful and then he began to have frontal bilateral headaches. With the headaches, the patient began to have difficulty in staying awake. Two weeks before admission these symptoms increased in severity, and the patient began to notice ptosis of his left eye and a marked photophobia.

Dr. Morrison's findings were as follows: "A well developed, well nourished, 35-year-old male, very drowsy and difficult to keep awake. The examination of his left eye shows ptosis, complete, with complete dilatation of the pupil, which does not react to light. All extraocular muscles innervated by the third and fourth cranial nerves are paralyzed. Fundi: The retinal veins are slightly enlarged, but no papilledema." Dr. Morrison was suspicious of a subdural hematoma and referred the patient to Dr. W. F. Thornton and Dr. L. B. Waters for roentgenographic examination of his skull. They reported the pineal gland shifted one centimeter to the right of the midline and an old small linear fracture across the squamous portion of the left temporal base. Dr. Morrison had this patient admitted to the Lynchburg General Hospital with a diagnosis of a subdural hematoma on the left and asked me to see him.

On admission to the hospital, the patient was difficult to arouse and dropped off to sleep before he could answer questions. His pulse was 56, respiration 20, temperature 98°. Blood pressure was 120/70. General physical examination and neurological examination were negative, except for the positive findings in his left eye as described. Patient was posted for a bilateral trephine exploration the following morning.

March 14th, 1946 (12 hours after admission), before the patient was taken to the operating room, a lumbar puncture was done. The initial pressure was 250 mm. of water. The cerebro-spinal fluid was clear and colorless, contained no white blood cells and 16 red blood cells, and the Pandy test was negative.

Under local anesthesia (1% novocain) a perforator opening was made over the left parietal area. As soon as the dura was opened, the membrane of the subdural hematoma could be seen. When this membrane was opened, dark blood under pressure spurted out of the wound. The opening was enlarged and a portion of the membrane carefully removed. The wound was irrigated with normal saline until it returned clear. The brain began to pulsate and expand. The wound was closed without drainage with black silk sutures. It was difficult to estimate the amount of blood removed, but it was three to four ounces. Exploration was made over the right parietal region, but no lesion was found on that side.

The postoperative course was uneventful and a lumbar puncture on the ninth postoperative day showed clear fluid at a pressure of 100 mm. of water. Headache and drowsiness were relieved and the patient was discharged on the tenth postoperative day. The ptosis and the dilatation of the pupils gradually decreased and nine months after the operation lid and pupil movements were normal. Dr. Morrison reported a 20/30 vision in both eyes uncorrected, no ptosis or paralysis of extraocular movements.

Comment: This case is exceptional in its classic history and findings. The history of headaches following slight trauma, the drowsiness, the personality changes along with the localizing eye signs, made the diagnosis of a space-consuming intracranial lesion possible. The findings of the pineal shift was additional help in making this diagnosis. The increased spinal fluid pressure was also helpful. Following the operation, the patient told us that his symptoms had fluctuated from time to time, and that for three or four days at a time he would be free from his headache and drowsiness. This fluctuation is also characteristic of subdural hematoma.

Case 2.—This 36-year-old, white, married woman was admitted to Memorial Hospital on May 23d, 1946, with the following history:

Three days before admission, the patient fell down and hit the back of her head, causing a laceration of the scalp in the left occipital region. There was no loss of consciousness with this trauma, but the patient was under the influence of alcohol at the time and the history was not entirely reliable. The laceration was sutured in the dispensary at the Lynchburg General Hospital and the patient was discharged. She complained of headaches from

the time of the injury and continued to drink. On May 23d, 1946, she called her physician, Dr. Kenneth Cooper, who had her admitted to Memorial Hospital. Examination at that time showed the left pupil larger than the right, but it reacted to light. The left knee-jerk was greater than the right. There was a positive Babinski reflex on the left. Roentgenograms of the skull showed no evidence of fracture. The patient was very irritable and would not coöperate. She insisted on returning home and was therefore discharged the next day. The patient continued to consume varying amounts of alcohol in the next four days and on May 27th, seven days after her first fall, in going down the stairs, she slipped and fell, and could not be aroused. The family thought that this was due to alcohol and put her to bed. The following morning, after not being able to arouse her for the 12 hours, they called her physician who advised immediate hospitalization. At this time the examination showed a well developed, well nourished woman who was unconscious and could not be aroused. Blood pressure was 180/95, pulse 80, respiration 20, and temperature 99.4°. The pupils were round and equal, but constricted and not responsive to light. Her reflexes were present and equal. There was a suggestion of a positive Babinski on the right side, and there was no stiffness of the neck. Lumbar puncture showed a spinal fluid pressure of 140 mm. of water, fluid clear and colorless, and a cell count of two lymphocytes. Sugar and globulin were not increased, and the Wassermann was negative. It was my impression that this was an alcoholic polioencaphalitis but that we should watch her carefully for signs of increasing intracranial pressure. The patient was reëxamined by me six hours later, at 10 P. M. At that time her blood pressure was 190/90, pulse rate 76, and the neurological findings were the same as described before. The nurse was instructed to call if there was any change in her blood pressure, pulse rate, or respiration. At 3:30 A. M., 12 hours after patient's admission, the nurse called and reported that the pulse rate was 50 and that the patient had Cheyne-Stokes respiration. The patient was immediately taken to the operating room and perforator openings were made in both parietal areas. A large subdural hematoma was evacuated on the right side; the findings on the left were negative. Following irrigation, the brain began to expand and the wound was closed with black silk sutures, without drainage. The postoperative course was uneventful. The morning following the operation the patient was out of coma and her temperature, pulse and respiration were normal. She was discharged on the tenth postoperative day with the wound well healed.

This patient was strongly urged to give up alcohol. This advice was followed for two months during which time she was completely free from headaches and enjoyed good health. She left town after this follow-up examination. I was told that she had returned to her old habits, but is enjoying life, however.

Comment: This case brings out the frequency with which the lesion occurs in alcoholics, as well as the danger of making a diagnosis of alcoholic polioencephalitis. This patient should have been operated upon on admisson to the hospital, as the mortality increases in proportion to the duration of the coma. The patient could not have survived the rapidly increasing intracranial pressure much longer. The lack of neurological findings and normal spinal fluid pressure show how difficult the diagnosis of the condition is at times.

Case 3.—A 44-year-old Negro man was admitted to the Lynchburg Hospital on May 19th, 1946, with the following history: Found unconscious and referred to the hospital, on admission he was irrational, breathing deeply, and very restless; he moved from side to side and required restraint. He moved all extremities. The temperature was 104°, pulse 128, respiration 24, blood pressure 130/50. A lumbar puncture was done and showed bloody fluid. The fluid was so bloody that the pressure could not be obtained. Dr. George Craddock asked me to see the patient in consultation. On May 21st, I made the note: History of trauma but no evidence on body. Patient is said to have been unconscious since the onset with no lucid interval.

Physical examination revealed a temperature of 106°, pulse 130, respiration 60, and grossly bloody spinal fluid. There were no localizing signs. The patient moved all extremities. The pupils were round and equal, and not dilated. There was no external evidence of trauma about the head. My impression was that this man did not have a space-consuming hematoma; therefore, there was no indication for surgery. It was my impression that this was probably a spontaneous subarachnoid hemorrhage and I advised conservative treatment consisting of an oxygen tent, the Coleman position,[8] and frequent turning to prevent respiratory complications. The patient's temperature returned to normal on the third hospital day, and on the fifth hospital day roentgenograms of his skull were taken, which showed a linear fracture starting just above the right mastoid region and extending backward across the parietal bone into the occipital bone. There was no depression. We realized then that we were dealing with marked contusion of the brain with laceration.

The patient continued on conservative treatment, was conscious and would answer questions, but did not know where he was or anything about his past. Neurological examination was negative except for this mental dullness. During the day, the patient was coöperative and helped the nurses around the ward, but at night he would yell and shout and would often have to be restrained. He was requiring heavy sedation at night in order that the other patients might be able to get some sleep. This continued for six weeks. Lumbar puncture was done on two occasions and in each instance pressure was found to be normal and fluid clear. In the face of the marked mental disturbance, with the normal spinal fluid and the absence of neurological findings, a decision had to be made as to whether he should be committed to the State Mental Hospital. Since it is possible to have a subdural hematoma with negative neurological findings and negative spinal fluid pressure, the only finding being mental disturbance, a bilateral trephine exploration was decided upon.

On July 9th, 1946, under local anesthesia, a perforator opening was made over the right parietal area—the side of the injury. This was a negative exploration; therefore, an opening was made over the left parietal area and a large subdural hematoma was encountered. The opening was enlarged to allow for removal of some of the membrane. The cavity was irrigated with normal saline, but did not expand. The wound was closed without drainage with three layers of black silk sutures. The patient was returned to his room in good condition. On the first postoperative day his temperature rose to 103° and Jacksonian type convulsions on the right side occurred. He was taken back to the operating room and the wound reëxplored for possible further bleeding. There was no blood or fluid in the cavity, but the brain had still not expanded. The wound was closed and the patient made an uneventful recovery and was discharged from the hospital on the 21st postoperative day, mentally clear and with no neurological abnormalities.

Comment: This case demonstrates a large subdural hematoma without positive neurological findings, only mental disturbance. This patient could easily have been admitted to a state institution for insanity and the subdural hematoma gone unrecognized until autopsy. Drainage should probably have been employed in this case, since the brain

did not expand after removal of the subdural hematoma; however, there was no collection of blood or fluid at the exploration 24 hours later. There are many who would advocate turning down a bone flap and removing the entire membrane on a case of this type.

Summary

1. Trauma to the head, the development of signs after a period of days to a few months, and a variable and fluctuating course, are features which, all taken together, go to make up a clinical picture consistent with subdural hematoma, and certainly warrant the suspecting of that condition.

2. Chronic subdural hematoma can simulate almost any known disease of the brain.

3. It is possible to have a chronic subdural hematoma with negative neurological findings and a normal spinal fluid pressure.

4. Three case reports are given somewhat in detail to illustrate the widely divergent symptoms which may be found in cases of intracranial encapsulated subdural hematoma. One case presented almost classic findings, whereas in the second case the picture was obscured by alcoholism, and in the third the only symptom was mental disturbance.

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BICHLORIDE OF MERCURY POISONING TREATED WITH SODIUM FORMALDEHYDE SULFOXYLATE

(John Sarokhan, M.D., Paterson, in *Jour. Med. Soc. N. J.*, Aug.)

Since the first reported use (1935) there have been numerous reports on the efficacy of this drug in cases of Hg bichloride poisoning. In few cases, however, did the ingestion of the poison exceed two grams. Report is here made of a case in which three grams was taken, yet the patient recovered.

A 48-year-old woman on May 6, 1946, awoke with a sore throat. Without using a light, she took six tablets from a bottle in a cabinet she thought contained sulfadiazine. In 1½ hrs. she had burning in throat and later severe nausea. She had taken 45 grains of bichloride of mercury. Egg-white was administered at home and the patient brought to the hospital, vomiting and retching. Gastric lavage brought bluish blood-stained material. B. p. was 100/80. In the first two days eight successive urines showed much albumin and many casts and gave positive tests for Hg. B. p. dropped to 70/50 the first day. Some anasarca on the second. Complained of sore mouth, substernal distress, abdominal and low-back pain and diarrhea. On three successive days 10 grams sodium formaldehyde sulfoxylate in 10 c.c. distilled water was administered slowly IV, the first dose six hours following ingestion of poison. Concurrently, she received frequent gastric lavages and colonic irrigations, also plasma and electrolytes IV.

From the third to tenth day the patient slowly improved. B. p. became normal. After the second day no mercury in the urine, some albuminuria until the tenth day. PSP test 11th day 40% in 3 hours; 22nd day 54%. Discharged 25th day.

A month later the patient was symptom-free, PSP test 75 after 3 hours.

Intestinal Obstruction Caused by a Fecalith

(A. L. Goodall, M.D., in *British Med. Jl.*, July 24th)

An ironworker, 57, was admitted to the Royal Infirmary, Glasgow, complaining of lower abdominal pain of five hours' duration. Pain came on suddenly, colicky, felt mainly in the left iliac fossa but periodically it passed to the epigastrium. No vomiting before admission and the bowels had moved that day. History negative. There was tenderness over the whole lower abdomen. No rectal abnormality. Diet was limited to fluids and an enema was given. Next day he felt better, but he began to vomit in the late P. M. and the pain recurred with greater severity.

On the third day obstructive signs developed, vomiting continued, dehydration began, and the severe colicky pain persisted.

Abdomen was opened by a right gridiron incison and a stony-hard mass was felt in the ileum 15 in. from the ileocecal valve. The mass could easily be milked up the bowel, which was distended above it. Enterotomy was performed some distance above the obstructed area and a triangular stone 2 in. along the sides and 1 in. in thickness was removed.

After four weeks, when the patient returned for a barium examination, this showed multiple diverticula of the duodeno-jejunal region. In any of these the fecalith might have formed.

Carditis in Poliomyelitis

(T. E. Ludden *et al.* in *Proc. Staff Meetings Mayo Clinic*, Aug. 4th)

Thirty-five cases of poliomyelitis were studied in which necropsy was performed by the Clinic from 1925 to 1946. Myocarditis was demonstrated in 14 of the 35 cases: severe in 6 cases; moderate in 4; minimal in 3, and healed in 1 case.

In 3 of the cases in which the patients had myocarditis there were unusual lesions—in one of these, perforation of the myocardium of the right atrium; in another vegetative mitral endocarditis; in the third vegetative endarteritis of a patent ductus arteriosus.

It seemed probable that the lesions observed were caused by the same virus which caused the poliomyelitis. It is apparent that, in cases of poliomyelitis, myocarditis occurs frequently and occasionally other significant cardiovascular lesions may be observed.

Diaphragmatic hernia is so common that diagnosticians should not fail to keep it in mind. Its symptoms and signs are seldom directive. More often it is found unexpectedly at routine roentgenologic examination of the alimentary canal.—*Kirklin.*

Management of Acute Head Injuries

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From the Department of Neurological Surgery, Medical College of Virginia, Richmond

THE management of acute head injuries is best considered from two standpoints: (a) surgical types and (b) non-surgical types.

(a) Surgical types are greatly in the minority in any series of acute head injuries but it is most important to recognize the surgical cases and operate on such patients. The surgical types may be listed as follows: lacerations of the scalp, extradural and subdural clots, compound and simple depressed skull fractures, penetrating wounds of the brain, persistent cerebrospinal fluid rhinorrhea and severe or persistent cerebral edema. Rarer types of surgical hemorrhages are intracerebral and unilateral ventricular clots.

Lacerations or open wounds of the scalp make up the largest group of surgical cases of acute head injury. A laceration of the scalp should be considered a potential menace from infection unless adequate debridement, disinfection and repair of the wound is done at an early stage. Too often a small scalp laceration may be overlooked or inadequately treated with a resulting serious infection and even osteomyelitis or brain abscess.

The classical syndrome of *extradural hemorrhage* is well known and is characterized by a linear fracture of the temporal bone, a dilated pupil and perhaps edema of the scalp on the side of the clot, weakness or Jacksonian convulsion on the side opposite the clot, marked slowing of the pulse and respiration and progressive stupor. Patients may or may not have a lucid interval between the time of accident and the development of symptoms indicative of extradural hemorrhage.

Subdural clots are characterized by many of the signs of extradural hematoma but less typically so. They are more insidious in their development and often are present in the absence of skull fracture. The patient's state of consciousness is the most important feature in the observation of such cases. When there is increasing stupor or prolonged unconsciousness, with or without focal signs, bilateral temporal exploratory burr openings should be made. This is the initial procedure of choice in suspected cases of either extradural or subdural hematoma.

Compound depressed skull fractures should be operated on as soon as the patient's general condition will permit, preferably within the first eight hours. Severe associated injuries of the chest, abdomen, extremities or spine may preclude early operation, and only a modified primary debridement can be done. Shock is relatively rare in acute head injuries except when there are severe associated injuries, marked blood loss or overwhelming brain injury. Sulfadiazine and penicillin are freely given in all compound head wounds as in all cerebrospinal fluid leaks and brain injuries from foreign bodies.

Simple depressed skull fractures should be elevated as soon as practicable but operation may be postponed several days without ill effects if no signs of localized brain involvement or generalized increased intracranial pressure develop in the meantime. Rarely does a large clot accompany depressed fracture.

Foreign bodies, especially bullets, should be removed if accessible as soon after injury as possible but it is even more important to do a thorough debridement and irrigation of the wound of entrance (and of exit if present) with tight closure of the dura. It is more important from the standpoint of preventing infection to remove bone fragments in the brain than a bullet. No drainage should be employed in compound depressed skull fracture operation or after the extraction of foreign bodies.

Cerebrospinal fluid rhinorrhea will require frontal craniotomy for occlusion of the leak with muscle if the rhinorrhea does not cease spontaneously in two to three weeks. Chemotherapy should be maintained as long as the leak persists.

Cerebral edema, severe and persistent, characterized by continuous stupor, bradycardia and high spinal fluid pressure (250 mms. or more) is best treated by subtemporal decompression.

(b) Non-surgical types constitute the majority of acute head injuries and consist of cerebral concussion and cerebral contusion with or without subarachnoid hemorrhage. Treatment should emphasize adequate fluid intake (2000 c.c. a day), mild sedation with avoidance of opiates, elevation of the head of the bed and an occasional lumbar puncture in the more severely injured patient. Postural drainage should be employed when there is evidence of obstruction of the respiratory pathways by the accumulation of fluid in a patient with prolonged unconsciousness. Early ambulation is to be encouraged. It is important to remember that a serious surgical emergency may develop following what appears to be a trivial head injury. For this reason we have in our clinic an inflexible rule to observe all patients for at least twenty-four hours who have a history of having been rendered unconscious or of having had a severe blow on the head. X-ray films of the skull are made routinely in such cases.

DEPARTMENTS

HUMAN BEHAVIOUR

JAMES K. HALL, M.D., *Editor*, Richmond, Va.

The following account of the death, and life, of Dr. Myerson was received ten days before Dr. Hall's death. Had he lived he would have sent in other material for this Department which he has conducted in a way to make it the most attractive and instructive feature of the Journal for the whole time it has been under its present Editorship. In that period of twenty-four years he failed not once to make this monthly contribution to our understanding of Human Behaviour.—*The Editor.*

Doctor Abraham Myerson

DR. ABRAHAM MYERSON died on September 3d at his home in Brookline, Massachusetts, a suburb of Boston. Dr. Myerson was another intellectual contribution of Russia to our civilization. He was born in Yonova, Russia, but he came to the United States when a child. He was a graduate in medicine of Tufts Medical College in Boston in the class of 1908. After serving an internship he devoted himself for the remainder of his life to the study, the teaching and the practice of psychiatry and neurology, chiefly in Boston. He had a period of service of several years in the State Hospital system of Massachusetts. He was interested in research in nervous and mental diseases and his investigative work was fruitful.

In Tufts, in Harvard, he taught and carried on research. In the McLean Hospital, in the Boston Psychopathic and in other hospitals his alert mentality and his questioning mind constituted a stimulating force. Dr. Myerson will be missed in the field of his interest; but the influence of his work lives after him. His two sons, physicians, will pick up the torch carried so long and so well by him.

DENTISTRY

J. H. GUION, D.D.S., *Editor*, Charlotte, N. C.

THE DENTIST'S OPPORTUNITY IN ORAL CANCER DETECTION

THE DENTIST has a greater opportunity than the physician to detect early cancer in the oral cavity and on the face. He should assume responsibility in the detection of cancer in the oral cavity and about the head and neck. The patients the dentist observes usually have no medical complaints, and the time to recognize cancer is before it causes complaints. The physician rarely has the opportunity to see a cancer before it causes symptoms.

Lloyd[1] presents this thesis and elaborates.

Statistics of the Memorial Hospital for treatment of cancer and allied diseases in New York City show that 60 per cent of the patients with cancer of the gums had consulted a dentist as to other matters before consulting a physician about what turned out to be cancer. In a total of 157 cases of carcinoma of the oral cavity, 38 per cent were recognized by dentists as probably carcinoma. On the average it took 3½ weeks for the patient to be referred by a dentist to a physician.

New growths in other parts of the body are often difficult to detect in the early stages because they are not easy to see. The lips and oral cavity are easily inspected, except for small lesions on the base of the tongue or deep in a fissure. The dentist or physician who has the first opportunity to suspect a malignant growth has the responsibility to see that the patient is placed in competent hands for treatment. If cancers of the head and neck are treated when the lesions are less than 2 cm. (0.8 in.) in diameter, 55 per cent can be cured.

Any ulceration that does not respond to treatment in two weeks should be considered a cancer until it is proved otherwise; also any growth or swelling that is progressive or shows no tendency to regress in one month. A dentist or a physician should consider cancer first in any suspicious lesion instead of waiting to see what happens. In chronic conditions such as spyhilis and tuberculosis with which cancer may be confused, the treatment does not constitute an emergency; but the early treatment of cancer is an emergency measure. An innocent looking chronic ulcer may metastasize at any moment, and then it has reached a stage where the chances of cure are greatly reduced.

The dentist should make a *complete* examination of the mouth of every patient. Cancer of the lip is the most frequent of all buccal cancers, and the most easily cured. Finger cots should be available for palpation of suspicious lesions for induration.

1. R. S. Lloyd, Senior Dental Surgeon, U. S. P. H. S., in *Pub. Health Reports.* June 18th.

A dentist may detect malignant lesions on the skin of the head and neck, or the hands. Hoarseness for a month should make him think of cancer of the vocal cords.

Early cancer may manifest itself as a small nodule or ulcer, painless, and the patient may not be aware of its existence. The bases of the new lesions are hard and tend to infiltrate into the surrounding tissue. In tongue cancer the prognosis is not good; most are advanced when discovered because they are painless in the early stages and progress rapidly.

Any ulcer or swelling which is present for two weeks and shows no signs of regression is cancer until proved otherwise. The dentist has a unique opportunity to see cancer of certain parts before it causes symptoms. He should make it his duty to detect cancers of the oral cavity and to influence the patient to obtain the proper treatment.

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

THE USE OF TESTOSTERONE PROPIONATE IN NITROGEN RETENTION

A UROLOGIST'S[1] interest in the treatment of prostatism was stimulated when it was noticed that those with any elevation of the N. P. N. under treatment with testosterone, in addition to symptomatic improvement, had their N. P. N. become normal. He then began using this hormone on patients with large prostates, preoperatively. In these cases also N. P. N. levels returned to normal more quickly than with catheter drainage alone.

The favorable results in prostatic cases made him curious as to what the effect of testosterone would be on the elevated N. P. N. in disease conditions other than urological.

A few of the cases in which Matassarin has used Oreton* are abstracted.

On July 14th, 1946, a white man, 75, was admitted with a history of hypertension and coronary attacks 10 years before and a complaint of inability to pass urine, with a history on this complaint for four years. Three years before he had a complete urinary retention and had worn a retention catheter since.

He was well developed, poorly nourished, exam. negative, except for b. p. 210/88, with enlargement of the heart to the left, prostate enlarged four times; N. P. N. between 70 and 90 since 1943; urine two-plus albumin, blood count normal.

On July 17th he was given Oreton, 10 mgms. intramuscularly; 25 mgms. on the 19th, 23rd and 27th. N. P. N. was 57 on the 29th, and on the 31st, a Belt perineal prostatectomy was performed. The patient had an uneventful recovery and was dismissed from the hospital August 19th with no nitrogen retention.

On July 1st, 1947, a white woman, 24, was admitted complaining of pain in the epigastrium; last menses December 14th, 1946. For the past two weeks swelling of the feet and ankles. Two days pain in the epigastrium; hypertension for five years.

Examination negative except for b. p. 210/140 and p. 100. Abdomen size of a six-months pregnancy, marked edema of the feet, ankles and legs. Urine: 4-plus albumin with a few red cells and granular casts. The urine became more scanty, a red brown color, with red and white cells, hyaline and granular casts. White count 18,700, red count normal. First N. P. N. on the 9th was 50.

To July 9th treatment was symptomatic with intravenous fluids and barbiturates, daily urinary output less than intake. On 9th, Oreton 25 mgms. intramuscularly, daily through the 16th. Output improved second day; on fourth day greater than intake, fifth day twice the intake; dismissed on July 20th, N. P. N. of 36; b. p. 145/95. Delivered of a stillborn infant July 21st.

April 1st, 1947, a white man, 21 admitted because of convulsions and unconsciousness; patient, a cretin, received thyroid treatment since infancy. For four months had had pain in both upper quadrants and tarry stools. March 30th, he had a generalized convulsion, lasting eight minutes, following which he was unconscious for eight hours. There was hemorrhage in both conjunctivae and around the right eye; r.b.c. 2,390,000. Until April 9th urea nitrogen ranged 184-190 and his N. P. N. was 250. Oreton 25 mgms. intramuscularly on April 10, 12, 14, 18, 21, 23, 25 and 30; May 3, 7, 16, 20, 26 and 31; June 3, 7, 14, 27 and 29; July 3, 7, 10, 21 and 26; August 2, 9, 12, 15, 18 and 25. His urea N steadily decreased—162 on April 11th; 122 on 30th; 108 on May 17th; 85 on June 17th; 62 on July 7th; and 38 on August 2nd.

White man, 82, b. p. 170/110, enlargement of the heart. Prostate enlarged two-plus. Some pitting edema of both extremities. First seen August 11th, 1946, N. P. N. 67. Oreton intramuscularly 25 mgms. on each of the first two days, then 10 mgms. four times a week until Sept. 4th, then twice weekly until 25th, then once a week until his dismissal from hospital on October 26th, at which time N. P. N. 33, b. p. 140/70, and no edema of the extremities. After dismissal from hospital he was maintained on 10 mgms. of Oreton.

White man, 67, vomiting blood (ulcer). N. P. N. was 77.5. Oreton 25 mgms. intramuscularly for three days following which his N. P. N. was 28.

To date this clinician has used this hormone in

1. F. W. Matassarin, Wichita, in *Jl. Kansas Med. Soc.*, July.
*The brand of testosterone propinoate used was Schering Corporation's Oreton and kindly supplied by them.

50 cases with reduction of the N. P. N. in all cases, in both sexes, age range 21 to 83. Variety of conditions—nephritis, prostatitis, cholecystitis, heart disease, prostatic hypertrophy, toxemia of pregnancy, postoperative intestinal obstruction.

This use of male sex hormone is presented in the hope that it will stimulate others to try it, both clinically and experimentally.

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

GASTRIC HEMORRHAGE STOPPED BY THROMBIN TOPICALLY

The commonest complication of peptic ulcer is hemorrhage. In persons over 40, because of the rigidity of the arterial walls, severe bleeding is more common. The mortality in this age group is eight times that of those under 40. The mortality of those whose hemoglobin is below 9.4 Gm. (60%) is four times that of those whose hemoglobin is above 60 per cent.

Thus Rogers[1] establishes the importance of hemorrhage in peptic ulcer, and he goes on to report two cases in which happy results ensued on the administration of thrombin in two almost desperate cases.

Thrombin is a sterile, standardized, hemostatic powder obtained from bovine plasma, originally intended to stop capillary bleeding. It is either as a dry powder or in sterile isotonic solution. Its action depends on its ability to clot fibrinogen, thus forming a natural clot which seals the capillary ends. It is supplied in sterile packages of ampules containing 5,000 Iowa units.

March 15th, 1947, a business man, 64, was found on the bathroom floor of his home in a pool of vomited blood. Two days previously he had become nauseated and fainted after passing a large tarry stool. He denied any recent gastric pain or distress. He was given morphine, no fluids or food and kept at bed rest. His b. p. was 110/60; p. 72; hgb. 9.4 Gm., r.b.c. 3,050,000, w.b.c. 6,000—75 per cent segmented.

He was placed on a modified Andresen regimen—hourly feedings of skimmed milk and gelatin solution, with hard candy between feedings. Meperidine hydrochloride and barbiturates were given for restlessness and pain. P. M. following day felt faint, vomited a large amount of bright red blood, p. rapid and irregular, air hunger, hgb. 6.3 Gm., r.b.c. 2,650,000, w.b.c. 10,000.

In spite of vitamin K, liver extract, epinephrine orally, sedation, subcutaneous administration of dextrose and isotonic solution of sodium chloride with human blood plasma and blood transfusion his condition became more precarious. On March 20th r.b.c. 1,800—t. 103.6, p. 140, r. 40, irrational. After each transfusion there followed bright red vomitus and large involuntary tarry stools. Pentothal sodium IV, (10%), p.r.n. gave short periods of deep sleep with quiet and rest. When thought to be gaining, on the 5th hospital day, he vomited a large amount of red blood and passed blood-red stools. With the patient practically moribund, 10,000 units of thrombin in 2.5 c.c. of isotonic sodium chloride solution was administered orally. From this ttime on there was a steady improvement without hematemesis and with only an occasional tarry stool. The usual ulcer regimen with supportive treatment and continuation of thrombin orally, three doses daily for five days, and "pentothal sodium" intravenously, as needed. On the 17th hospital day he was up and out of bed, discharged on 27th day with hgb. 10.9 Gm. and r.b.c. 3,500,000.

Roentgen examination, May 1st, showed a healing prepyloric ulcer. May 5th a posterior gastroenterostomy; recovery was uneventful, except for peripheral neuritis of his left arm.

Two cases of gastric hemorrhage in which there was dramatic response to orally administered topical thrombin are reported, in one of which a 64-year-old man was nearly exsanguinated. This was proved to be due to a peptic ulcer eroding into a large blood vessel. The second case was in a youth aged 16 who had two moderate gastric hemorrhages which were due to acute gastritis. Both patients responded rapidly to orally administered topical thrombin.

Here is another agent to keep on hand for meeting one of the grave emergencies of practice.

1. T. M. Rogers, Sterling, Colo., in *Jl. A. M. A.*, July 17th.

ROENTGEN THERAPY IN SHOULDER PAIN

Pain and limitation of motion in the shoulder area arise from many causes, one of the most common being a tendonitis, with or without calcium-like deposit, in the rotator cuff—a term applied to the musculotendinous envelope formed by the supraspinatus, infraspinatus and teres minor and inserted into the greater tuberosity of the humerus; and the subscapularis inserted into the lesser tuberosity. The first three produce external, the last internal, rotation. The condition is sometimes called subacrominal bursitis, or calcification in the subacrominal bursa. The deposits are initially in the tendon and only secondarily work their way to the surface and thus reach the base of the subacrominal bursa. In acute tendinitis the deposit is liquid, passing into an inspissated and even gritty stage in the more chronic cases.

This according to McIntosh,[1] who goes on with a helpful consideration of the subject.

1. Harriet C. McIntosh, New York, in *Jl. Amer. Women's Assn.*, July.

Of the 50 cases reported here, 44 were classified as rotator tendonitis, and 27 so proved by the presence and location of calcium deposit, the other 17 showing a clinically similar picture. Of the remaining six cases, four showed osteoarthritis in the shoulder joint, and two showed a brachial plexus irritation from osteoarthritis of the lower cervical vertebrae. The last two do not strictly belong with the series. In both the pain recurred, and further investigation showed the probable cause as spurs projecting into the lateral foramina of several vertebrae and other measures were taken.

Fifty cases are reported, with relief of pain and limitation of motion in 38, partial relief in seven and no relief in five. There were six recurrences within a year, five being re-treated with improvement.

The editor has been astonished and pleased to learn, on the advice of a röntgenologist, that heat from an ordinary electric-light bulb will satisfactorily relieve many of these cases of shoulder pain in which x-rays reveal calcium deposits in the joint.

HOSPITALS

R. B. Davis, M.D., *Editor*, Greensboro, N. C.

HOSPITAL ADMINISTRATORS AND THEIR SALARIES

We have all heard the expression, "so many men, so many minds." It could equally well be said: so many hospital administrators, so many salaries. As far as the writer is informed, there is no way of determining what the salary should be. The trustees are prone to be satisfied if the hospital is not running in the red. This is not an ideal situation. For, while a hospital's aim is not money-making, yet it should not be a financial burden to anyone or any group.

How can we know when the administrator is getting a fair return for his efforts? Two ways suggest themselves, one that he be paid on a basis of patient-day cash receipts for the last month. This method would encourage the administrator to keep all of the rooms filled, as well as to collect the bills. With this method, one's salary check would always be based upon his last month's occupancy and collections.

Any well-organized small hospital could well try out this method. It is obvious that the pay on this basis would vary with the size of the hospital, but this variation exists in the present salary setup.

It is the writer's firm opinion that this would be a great incentive for your hospital administrator to improve the income of the hospital. Every man is a gambler by nature. This type of gambling would be very attractive for some men. At the same time, it would stimulate collections tremendously.

One would learn from his own hospital records over a certain period, what he had been paying per patient-day. If such a method were used with satisfaction, it would soon sweep the country, for it has steering ability, stimulating ability and control ability, the control being that the administrator must not operate in the red.

The other method that is well worth consideration is that of a percentage of net profits. From one standpoint, this is fool-proof but it is fraught with many dangers, for the administrator will, in spite of himself, have the ever-present inner urge to get along with cheaper materials and drugs, and to hold down the salary of other personnel. Also, the amount of money set aside for repairs and replacement would be a controversial matter between the trustees and the administrator. These matters might all be worked out on a basis of depreciation allowable by Federal income law and the experience of the hospital in regard to replaced and new equipment. Hospital administrators handle too much money, and are subjected to too many temptations to either do less than their full duty, fail to devote proper time to their office, lose or to allow to be lost too much equipment, to show partiality to the various departments, or to become too soft-hearted and unbusinesslike in regard to the conduct of the personnel of the hospital.

Should some hospital desire to try this method, the author would appreciate the opportunity to help work it out for that particular hospital without any cost to the hospital. The author firmly believes that some different system from the one now used is greatly needed, and even if we do have to obtain an efficient system by trial and error, it is best now to get started. The system under which we now operate is antiquated, inefficient, and too unnecessarily costly to be forever accepted by hospital trustees.

OBSTETRICS

H. J. Langston, M.D., *Editor*, Danville, Va.

OBSTETRICS IN A SMALL GENERAL HOSPITAL

All the cases receiving maternity service in the authors' hospital for the years 1946-1947 are included in a report of remarkably successful management:

Total number of obstetric cases cared for	582
Delivered over 20 weeks	529
Abortions under 20 weeks	48
Ectopic	5

1. C. E. Yount & C. E. Yount, Jr., Prescott, in *Arizona Med.*, July.

Morbidity: T. 100.4°—38° C. on more than any two of the first 10 days after first 24 hours:

Prenatal	3
Post-partum	12
Of the pre-natal cases, there was—	
Abscess vagina	1
Upper respiratory infection	1
Abortion—fever when admitted	1
	3
Post partum cases—	
Pyelitis	1
Mastitis	3
Upper respiratory	1
Cesarean section	5
Post partum infection, mild	2
	12
Type of delivery—	
Spontaneous	517
Abortions	48
Ectopic	3
Forceps Low	
Median 2	
High 1	
6	
Cesarean	12
Indications for cesarean section—	
Placenta praevia	7
Eclampsia	1
Dystocia	1
Rh factor	1
Not stated	2
	12

There were no maternal deaths. No mechanically induced labors and no destructive operations on the fetus. There were 533 live-born babies, 13 premature, one slightly injured at birth. There were 11 still-births and 11 neonatal deaths.

There was only one post-partum hemorrhage and only one transfusion given.

Other conditions recorded:

Manual removal of placenta	5
Uterine packing	5
Verson	1
Perineorrhaphy—primary repair	81
Episiotomy—primary repair	245
Anesthetic—and/or paraldehyde	231
Ether—obstetric—surgical	498

In the Illinois hospitals the total of forceps deliveries was 22.7%; in the Prescott 1.1%. The total cesarean sections in Illinois was 3.6%, while in the Prescott hospital it was 2.26%.

Since 1935 these doctors have been using as rectal analgesia (amnesia), paraldehyde and benzyl alcohol. In this series it was used alone in 44.3%, and with ether to obstetric or surgical degree in the remainder of the cases, including the abortions, cesareans and ectopic gestations.

Paraldehyde, ¾ to 1 drachm per 14 lb. of body weight in a 10% solution of saline, by rectum, 45 minutes preoperatively, produces deep sleep after twenty minutes and markedly diminishes the amount of anesthetic drug necessary. The post-operative sleep is quiet and will tide the child over the first few hours of pain arising from the surgical wound.

PEDIATRICS

E. L. Kendig, Jr., M.D., *Editor*, Richmond, Va.

TREATMENT OF SEVERE DIARRHEA

Regardless of the etiology of a particular diarrhea, in the interim before diagnosis, and during the specific period of treatment as well, general measures, supportive in most cases, are essential for best results.

An article[1] based on this concept affords valuable instruction.

The loss of fluids and chlorides is often great, producing a concentration of the blood stream. The blood urea rises and the blood chlorides fall.

Five per cent glucose in saline is to be given intravenously until there is clinical improvement. Two thousand to 3,000 c.c. of this solution may be required daily. Alternate between the veins of the arm and those of the leg, for the therapy must often be continued over a period of days.

Protein deficiency results from the excretion of protein from an over-active intestinal tract and inadequate digestion and absorption of proteins. It is manifested by pitting of the ankles, puffing about the eyes, low blood pressure, rapid pulse, severe anemia, inversion of the albumin-globulin ration and a low serum protein. The gastro-intestinal mucosa is edematous, and this further prevents adequate digestion and absorption.

Amigen, a particularly valuable hydrolysis product of casein, and whole blood and plasma should be employed by vein. Oral amino acid therapy should not be employed until the patient is clinically improved.

During the early stages green tea, ripe bananas and boiled or steamed rice are allowed. If these foods are well tolerated the high-calorie and high-protein diet may be instituted. All food must be appetizing to the patient.

Vitamins are required in the following dosage: Vitamin A. A single capsule of 3,000 to 10,000 units; Thiamin chloride 100 mg. parenterally; Solu-B, which contains 10 mg. of riboflavin and 250 mg. of niacinamide in 5 c.c. of distilled water. It is best to give between 15 and 25 mg. of riboflavin, 150 to 500 mg. of niacinamide and 10 to 100 mg. of thiamin chloride daily. Ascorbic aicid 150 to 1,000 mg.; Vitamin D, 500 to 1,500 units; Vitamin K, only if there is a prolonged prothrombin time, parenterally 5 or 10 mg.

Liver extract at least three times a week. After the first week or two vitamins are given orally, in

1. A. J. Cantor, Flushing, N. Y., in *Amer. Jl. Dig. Dis.*, April.

reduced dosage. For Vitamin A *maintenance* dosage is 5,000 to 8,000 units, thiamin chloride 5 mg., riboflavin 5 mg., niacinamide 25 mg. Vitamin D 500 units, ascorbic acid 50 mg., Vitamin K 1 to 2 mg. Natural food sources of the vitamines are to be employed exclusively as soon as absorption is assured. During the early stages, while fruits and fruit juices and vegetables are not desirable, supplementary vitamin preparations must be employed actively.

Iron must be used with caution as it frequently aggravates diarrhea. Iron may be employed parenterally. If there is a macrocytic anemia folic acid may be given by mouth in 5-mg. tablets 3 daily for adults. A calcium lack may be corrected by intramuscular calcium gluconate or calcium ascorbate.

Do not permit milk. Broths and cocoa may be allowed, and small amounts of carbonated water. First solids to be allowed are bland cereals, then toast, soft boiled or poached eggs, stewed chicken, and mashed baked potato. No soups other than broths, no alcohol, no fried foods, spices or pastries should be allowed. Grated raw apple, one to two tablespoons every one or two hours sometimes controls diarrhea. Apple pectin may be given, alone or combined with kaolin.

Any food to which there is a known intolerance should be avoided. As soon as tolerated at least eight glasses of water daily. It is best to avoid candies, jams, and jellies until very late.

Calcium gluconate will relax intestinal spasm and may be given intramuscularly or intravenously. When can tolerate calcium orally, the lactate 5-gram or the gluconate in 15-gram divided daily dosage. Vitamin D, 500 to 1,500 units daily, is required for adequate absorption of calcium.

For sedation, phenobarbital may be given, ¼ grain t.i.d. a.c., and h. s. A combination of phenobarbital with atropine sulphate may be of value.

Kaolin and bismuth subnitrate, 5 to 15 grains of each q. 4 h. may serve well. If there is much rectal irritation, and the diarrhea has come partially under control, kaolin combined with aluminum hydroxide and mineral oil may be given as a rectal instillation. In the later stages rectal instillations may be soothing.

Sulfa drugs are to be given only when specifically indicated, as they are of great value only when a specific diagnosis has been made.

Psychotherapy will often be the prime treatment, aside from the non-specific factors listed. The patient must be educated to accept life as it is. A regular afternoon nap, and rest before and after meals, are needed in every case.

Grain (Unit of Wt.): "Grayne, meaning a grayne of wheate, drie, and gathered out of the middle of the eare." —*Statutes of Englande*, 1542.

GYNECOLOGY

RESECTOSCOPE NOT TO BE USED ON THE FEMALE VESICAL NECK

Caulk reported 25 years ago on the treatment of contracture involving the vesical neck of the female by means of the cautery punch. It seems that he continued to use this treatment throughout the remainder of his life, since he reported results in 1935 and 1937. However, in the latter year he had encountered only 15 women and six girls for whom he considered the operation indicated. In none of his cases had vesico-vaginal fistula or urinary incontinence resulted.

Other urologists have written enthusiastically about what they call "female prostatism" and their writings give the impression that they consider the cautery-punch operation or transurethral resection of the vesical neck indicated almost as frequently in females as in elderly men with ordinary prostatic hypertrophy.

Everett[1] calls these facts to attention and comments that, if such enthusiasm were justified, at a large urological clinic with none but female patients, such as that at the Johns Hopkins Hospital, patients requiring such procedures should be frequently encountered; but that in this clinic it is a great rarity for neoplastic disease to be found involving the posterior urethra or encroaching upon the vesical neck, and that a case in which the cautery-punch or resectoscopic procedures seem necessary or advisable has never been encountered.

In such cases of new growths occasionally the resectoscope has been used to relieve obstruction or obtain biopsy material, but in all such cases the procedure has been carried out with the greatest possible caution. No inflammatory stricture or contracture has been observed which could not be satisfactorily dealt with by repeated dilations over a prolonged period.

Everett considers it unfortunate that this has not been the attitude of urologists generally. He has the impression that the resectoscope is being used much more frequently in such cases than is required or justified. He warns that cutting the least bit too deep in this region is likely to destroy the competence of the sphincter, and that if slightly more tissue is removed fistula is apt to result. At least five patients have applied to the Clinic at Hopkins in the past few years for relief from the results of this operation performed elsewhere.

Reports on three of these cases are made and the following conclusions arrived at. Benign obstructive lesions at the vesical neck sufficient to require or justify the use of the cautery punch or resectoscope rarely if ever occur in the female patient.

Such lesions when they are encountered can usually be satisfactorily treated by repeated dilation of the urethra, or if they should be such conditions as polpys or congenital valves, by simple electrocoagulation.

The use of the cautery punch or resectoscope, especially the latter, upon the vesical neck of the female is attended with grave danger of rendering the sphincter mechanism incompetent or producing vesico-urethro-vaginal fistula.

The difficulties attending the correction of such destruction in this region are so great as to, in some cases, render satisfactory result impossible.

In such event, either the patient is doomed to a life of urinary incontinence, or resort must be had to transplantation of the ureters into the bowel, a hazardous and undesirable procedure in a young and otherwise healthy individual.

Dr. Everett[1] (a son of the late Dr. A. C. Everett, of Rockingham) has rendered a great service in calling attention to this misuse of an operative procedure which has proved such a blessing to a great percentage of those persons who, late in life, come to have difficulty in urination.

The Editor of this Department concurs in all that Dr. Eversett says, and urges on all those having the decision as to management of such cases as he describes, that due consideration be paid to what he has to say.

1. H. S. Everett, Baltimore, in *Urological & Cutaneous Rev.*, Mar.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

ANESTHESIA FOR CARDIOVASCULAR PATIENTS

Will the patients' heart stand the anesthetic? All of us have encountered this question in one way or another. Many, perhaps most, of us, have long been convinced that those with heart disease, real or alleged, run little more risk than others in being anesthetized.

Adams[1] writes helpfully, gives some reasons you may want to pass on to your patients.

Preliminary to giving an anesthetic to a patient with cardiovascular disease one should reassure the patient by discussing briefly and encouragingly the anesthesia and operation. Struggling and excitement lead to anoxia and elevated b. p. Induction with cyclopropane or a small amount of pentothal sodium, followed by cyclopropane or nitrous oxide, is usually rapid and smooth.

The mixture of anesthetic gases is to contain 25 per cent or more of oxygen; respiratory exchange will be adequate, and supplementary O or nitrous oxide and O containing 25 to 50 per cent oxygen will be used, with sodium pentothal or spinal anesthesia.

Maintain the blood pressure at the preoperative level by the cautious use of fluids or blood intravenously, of neosynephrin, and of 1 per cent sodium nitrate solution. Ten or 20 per cent glucose will increase the blood volume by drawing fluid from the tissues, which is preferable to the addition of excess fluids to the body. Do not use solutions containing salt. Neosynephrin is the vasopressor substance of choice as it does not stimulate the sympathetic system, nor increase the heart rate. Sodium nitrate solution will lower an elevated b. p. A patient with an acute hypertension during anesthesia is less likely to have complications than is one with an acute hypotension or a labile b. p. Aminophyllin, grains 7½ intramuscularly, 15 minutes before operation, produces coronary and bronchial relaxation and is of value in patients with coronary disease.

Use spinal anesthesia with caution because of its effect on b. p. Anesthesia with cyclopropane may be followed by hypotension. To minimize this danger, substitute nitrous oxide for cyclopropane 15 minutes before the end of the anesthesia; hypotension will usually be evident within this time, and the anesthetist can treat it before it is of severe degree.

Deep inhalation anesthesia hazards are lessened by combining with the inhalation agent a field block or by using curare to produce relaxation.

Preoperative digitalization is indicated for patients with congestive failure, and some advocate it for those with cardiac hypertrophy.

Postoperatively the stir-up regimen of Waters helps prevent pulmonary stasis. Tracheal toilet removes excess secretions. Oxygen is valuable, but should be dispensed with as soon as possible following operations in the upper abdomen; atelectasis is favored if its use is prolonged. Penicillin and sulfa drugs control infection and reduce the strain on the heart. Binders and dressings should not restrict respiration. Prevent distention by the use of Wangansteen suction. Massage, voluntary leg movement and getting the patient out of bed will help to restore and maintain normal physiology.

Only when the anesthetist is unskilled, is the use of open drop ether indicated.

Where muscular relaxation is not important pentothal sodium 2.5 per cent solution, supplemented with 50 per cent of nitrous oxide and oxygen, provides satisfactory safe anesthesia with little effect on blood pressure and heart action and a short period of postoperative depression. If some relaxation is required it can be provided by the addition of cyclopropane or ether to the mixture of bases, and by the use of curare.

Spinal anesthesia for operations on the perineum

1. W. B. Adams, Muncie, in *Jl. Indiana Med. Assn.*, July.

and for transurethral prostatectomy is satisfactory and readily controllable. The effect on b. p. is minimal. In the presence of congestive failure this method is indicated for operations requiring higher levels of anesthesia also, as it relieves some of the load on the heart by performing a bloodless phlebotomy.

For major abdominal operations inhalation anesthesia obtained with nitrous oxide or cyclopropane combined with ether is preferred. Cyclopropane provides a rapid, quiet induction, and the use of more O than does nitrous oxide. A few milligrams of pentothal sodium provides an even more desirable induction. The use of curare relaxes abdominal muscles and makes unnecessary deep inhalation anesthesia.

The death rate is higher in patients with disease of the coronary arteries and luetic heart disease.

PABA Effective in Treatment of Rickettsial Diseases

The rickettsiae are gram-negative. The appearance of agglutinins to certain strains of Proteus in some rickettsial diseases, as observed by Weil and Felix, furnishes a good laboratory aid in the diagnosis of these diseases.

All rickettsial diseases have a high mortality rate. Rocky Mountain spotted fever has caused 400 to 560 cases with 90 to 137 deaths each year during the past decade in 47 of the 48 States. Recovery from an attack of rickettsial disease usually confers lasting immunity. Specific antiserums have been developed for Rocky Mountain spotted fever and epidemic typhus; but these, to be effective, have to be administered early in the disease when the diagnosis is difficult.

The sulfonamides were tried. The infection was more severe in sulfa-treated animals than in the control groups. This observation led to a trial of p-aminobenzoic acid (PABA) on the premise that "the antagonism between the sulfa drugs and PABA on bacterial growth might be present in rickettsial infection in the reverse direction."

A series of 10 cases of Rocky Mountan spotted fever was treated. Nine responded very favorably. The untreated controls averaged 20 hospital days and 17½ days of fever as compared with 13 and 10½ days for the patients given PABA. The t. of the treated patients dropped rapidly to normal within two to four days after treatment was begun, whereas in the untreated group the t. gradually returned to normal over 16 hospital days. The best results are obtained early in the disease, PABA blood concentrations are maintained at 30 to 60 mg. per 100 c.c. of blood for a week after the t. has become normal. Oral administration is preferred. The drug is prepared by mixing 10 c.c. of a 5 per cent sodium bicarbonate solution with each gram of PABA. In adults, an initial dose of 6 to 8 Gm. followed by 2 to 3 Gm. q 2 h. will usually produce blood concentrations of 30 to 60 mg. per 100 c.c. within two days. To obtain similar blood concentrations in children, Ravenel suggests doses ranging from 0.5 to 1 Gm. per pound of body weight per day in divided amounts administered every two hours.

GENERAL PRACTICE

William R. Wallace, M.D., *Editor*, Chester, S. C.

ALLERGY FROM THE PERSPECTIVE OF GENERAL MEDICAL PRACTICE

Clinical allergy has been recognized for 30 years. During the first 15 years the cutaneous test was the keystone. Foods, plants, hair, and bacteria were extracted until as many as 700 tests were given to some patients whose only complaint may have been nasal stuffiness of urticaria. There were two guiding principles: 1) an implicit reliance on the cutaneous test, 2) that if a patient reacted positively to the test, the substance responsible for it was put down as the cause of his symptoms and was removed as completely as possibble from his environment.

If a patient reacts positively to a cutaneous test with one allergen, he is apt to react to tests with many, so supplementary injections of mixtures of many allergens were given in the hope of rendering the patient less sensitive.

Thus Alexander[1] writes of the over-emphasis on skin testing which was so discouraging to everybody.

During the last 15 years, this allergist tells us, a more rational viewpoint has developed. It is true that feathers, dust, house pets, milk, wheat and a few others are responsible for many cases. Some occupational environments, such as barns and bakeries, present particular problems, but these as a rule are obvious. There may or may not be a correlation between the allergens to which a patient is clinically sensitive and positive reactions of the skin.

Emphasis on the fact that *most* of the continual symptoms of allergic asthma are due to *few* allergens have reduced the list of allergens for routine testing of the skin from many hundreds to dozens.

A careful history, a knowledge of allergens, the correct performance and interpretation of *a limited number* of cutaneous tests, the proper way of giving injections for hay fever, and the manner of creating a dust-free environment and elimination diets comprise the measures with which allergy is now being combatted.

The laity and many members of the medical

1. H. L. Alexander, St. Louis, in *Jl. A. M. A.*, March 13th.

profession still believe that allergy accounts for many more of the ills of the flesh than it really does.

On clinical allergy, little of consequence has beben discovered in the last decade. The recognition of "intrinsic" causes and the advent of antihistaminic drugs are the more important advances. One of the few advances has been the realization that many cases of intractable asthma, urticaria and vasomotor rhinitis, especially those which begin after the third decade, are different from typical cases of hypersensitiveness to environmental allergens. In the former cases evidence of such hypersensitiveness is lacking. Infection plays an important role. In others the cause is unknown. These are the severe, intractable cases some of which cause asthma deaths. Treatment is symptomatic and far from satisfactory.

As man is becoming exposed to an expanding list of chemical agents hypersensitiveness to these is increasing, as shown by, e.g., contact dermatitis and drug allergy.

TREATMENT OF MULTIPLE MYELOMA WITH "STILBAMIDINE"

MULTIPLE MYELOMA is to be thought of in any case of grave anemia the cause of which is heard to establish. The condition may be diagnosed in some cases by x-ray examination of flat bones, examination of bone marrow, and the presence of Bence-Jones protein in the urine, before the hemoglobin is seriously reduced.

Snapper's report[1] of 35 patients with multiple myeloma treated with "stilbamidine" administered intravenously or intramuscularly, is the most encouraging of any with which we are familiar.

In patients who have normal renal function and no Bence-Jones proteinuria the drug can be given daily. When Bence-Jones proteinuria exists, certainly when signs of renal damage are revealed, only e.o.d.: in pronounced impairment of renal function, only twice per week.

The diet should be poor in animal protein. The neutralizing action of nucleic acid, and to a lesser extent of arginine, may explain why the maximal effect with "stillbadimine" is obtained only if the diet is poor in animal protein.

In 80 per cent of the 35 patients alleviation of pain was obtained. One patient who was treated in February, 1945, has become completely asymptomatic and is still (in June, 1947), doing his daily work as a porter. Most of the remaining patients suffered relapses of pain within a year after the termination of treatment. Usually the relapses could be remedied, at least partly, by repeated series of injections. The disease is only temporarily halted. Bence-Jones proteinuria and increase of the serum globulin, if present before the treatment, continue unabated. Of 12 patients who were treated more than one year, four died. There are eight survivors, five are ambulant and in satisfactory condition. Five of the eight survivors have now lived three to 3½ years since the first sign of the disease developed: one has survived for six years.

In the majority of the cases a dissociated anesthesia of the trigeminal branches sets in several months after the termination of treatment; this does not lead to dangerous complications.

1. I. Snapper, New York, in *Jl. A. M. A.*, June 5th, 1948.

HISTORIC MEDICINE

THE NEW YORK EYE AND EAR INFIRMARY[1]

(The New York Physician)

TWO YOUNG physicians, Edward Delafield and John Kearney Rodgers, graduates of Yale and Princeton, respectively, and of the College of Physicians and Surgeons of Columbia University, founded the institution in 1820. Among all hospitals in the City of New York, from the point of age, it ranks only behind New York Hospital (1771) and Bellevue (1816).

At 45 Chatham Street, in a small two-story brick building that stands today near City Hall, the first patient was treated August 14th, 1820.

From 1824 to 1826 the Infirmary was housed in the spacious grounds of New York Hospital, on lower Broadway, in a building that had been used for the insane. The Seal of the Infirmary, adopted July 2d. 1824, depicts the Great Physician restoring the sight of a man born blind.

As the years passed, the Infirmary was moved to various streets till it found its present home in the then fashionable neighborhood, Second Avenue off Union Square. It has occupied this site since 1856. The Infirmary has never closed its doors, except for a period of three months during the yellow fever epidemic of 1822.

The founders, while studying in London in 1816, were impressed by the work being done by what is now the Royal Ophthalmic Hospital, and their vision was to make such treatment available to the blind of New York, who were then huddled with criminals and paupers in the Almshouse at Bellevue. On their return to New York, they founded the Infirmary, which was incorporated by the New York State Legislature on March 22nd, 1822, as the New York Eye Infirmary. Diseases of the ear were treated almost from the start of the Infirmary, and the title was officially changed in 1864 to the New York Eye and Ear Infirmary.

In 1873 a Throat Department was added, and

in 1890 the School of Ophthalmology and Otology was founded.

The Infirmary at present has a staff of 12 surgeons, three advisory attending surgeons, 77 assistant surgeons, 27 clinical assistants, a house staff of 24 physicians, five pathologists, 21 consulting physicians and 75 lay officers and employees.

The Hearing Research Department, established shortly after World War II, fits patients with hearings aids with individually moulded ear fittings made in the laboratory under the direction of highly trained men. The patient being fitted is seated in a soundproof room which weighs nine tons and is suspended in a cement cube in the back yard. To exclude vibrations or outside sounds, the room is set on 186 dampened springs. When the hearing aid is being selected, records of sounds that simulate the conditions under which the patient works are played and relayed into the room.

The Laryngoscopic Department features a custom-built, biplanar fluoroscope built expressly for the institution. An x-ray tube in the floor and a second one set in the wall give a two-way fix in locating swallowed foreign matter. The fluoroscope was built to specifications furnished by the Infirmary, and at a cost of $25,000.

In the Photography Department color photos are made of the ophthalmoscopic views of diseased or injured eyes, and the progress of the patient is measured by periodic comparisons of the slides as the treatments continue.

A library of over 30,000 slides of pathological eye conditions is maintained in the Photography Department. Classes from New York University regularly meet in the Photography Department to examine cases of eye defects. The slides are available to physicians other than the staff. The Department also makes color films of eye operations, and calls for these instruction films have been received from as far away as India.

During 1946, the last year for which statistics are available, the Infirmary completed 3,322 eye operations of all types, and 2,746 ear operations. A total of 33,758 persons were treated in the dispensary, and 116,466 visits were made by old and new patients, the daily average being 388.

OPHTHALMOLOGY

HERBERT C. NEBIETT, M.D., *Editor,* Charlotte, N. C.

PIONEERS IN THE CARE OF THE BLIND IN AMERICA[1]

JOHN DIX FISHER was born at Needham, Mass., graduated from Brown University in 1820 and from Harvard Medical School in 1825. For the next two years Dr. Fisher studied in Europe. At Paris, he gave special attention to the study of auscultation under Laennec, and was one of the very first in America to utilize the means of diagnosis.

While at Paris, Dr. Fisher analyzed the National Institution for the Youthful Blind (parent of all such schools) and on his return to Boston aroused such interest among the influential as to cause the legislature to incorporate the New England Asylum for the Blind, of which Dr. Fisher was vice-president and physician until his death, never accepting any fee for his services.

It is to Fisher that the honor of introducing into America the movement for education of the blind is accorded. A monument in Mount Auburn Cemetery, Cambridge, bears this inscription:

"Erected to the memory of John Dix Fisher, M.D., by those who loved his virtues—The Physician and friend of the poor—The early and efficient advocate for the education of the blind—The liberal deviseth liberal things, and by liberal things shall stand."

SAMUEL GRIDLEY HOWE was born at Boston in 1801, and graduated from Brown in 1821, from Harvard Medical School in 1824.

Dr. Howe was drawn to the conflict of the Greeks against the Turks and spent six years as a guerrilla, acting as surgeon to the Greek fleet, and administering relief. He made a trip to the United States for relief supplies, which he dispensed freely to the disabled and infirm; but those physically fit had to work for their share.

Leaving Greece in 1830 because of severe malarial fever, Howe stayed in Paris to study medicine in 1830-1831. Returned from Europe, he was engaged to open and direct the New England Asylum for the Blind (incorporated in 1829) through the good offices of his friend—John Dix Fisher. He made studies of the schools for the blind. Carrying American relief to Polish refugees in Prussia at the request of Lafayette, Dr. Howe was apprehended and spent six weeks in jail under the most terrible conditions, until released through the American Minister to Paris.

Returning to Boston in August, 1832, he opened the new school in his father's house with six pupils. It is said that Howe went about blindfolded to appreciate the difficulties of his pupils. After a demonstration of the accomplishments of his blind pupils, Colonel T. H. Perkins donated the Perkins family mansion in 1833.

After a short time, with the permission of the Colonel, the mansion was sold and the project moved to South Boston in 1839, and State aid was increased from $6,000 to $30,000 annually.

Howe directed the school for 44 years. He visited 17 states in behalf of education for the blind.

1. Herman Goodman, M.D., New York, in *Medical Record,* Aug.

His teachers were in great demand and they spread Howe's gospel. His efforts led to the inauguration of schools for the blind in New York, 1831; Philadelphia, 1833; Columbus, Ohio, 1837; and Staunton, Va., 1839.

Dr. Howe had learned from James Gall of Scotland how to use his invention of raised letters. In Boston, Howe provided a print shop, in which, from 1834 to 1836 books were printed for the use of the blind. He improved on Gall's invention, reduced the bulk of the books by 50, and the cost by 75%.

Laura Bridgman was born in Hanover, New Hampshire, in 1829 At two years of age she had scarlet fever and lost her sight, hearing and speech. Dr. Howe taught her to read and to spell words by touch, and to write with a lead pencil. She studied geography through special globes.

In time, Laura Bridgman taught others. She lived at the Perkins Institution, a reborn and helpful woman, although blind, deaf and dumb, until 1891. The reports of her progress were published in many languages. In the same cottage with Laura Bridgman was Anne Mansfield Sullivan, almost totally blind since birth. Anne was to supervise the training of a six-year-old, blind deaf-mute. The child was Helen Keller!

Dr. Howe always sought prison reform and aid to discharged convicts. He was a loyal friend of Dorothea Lynde Dix.

All North Carolinians should hold in grateful memory Dorothea Lynde Dix. It was largely through her efforts that our State was brought to provide hospital care for its insane. Dix Hill was named for her.—*Editor.*

CLINICAL NEURO-PSYCHIATRY

COMMON PHYSICAL MANIFESTATIONS OF TENSION CAUSING DIFFICULT DIAGNOSTIC PROBLEMS FOR THE GENERAL PRACTITIONER

One of the most distinguished of our neuropsychiatrists[1] offers helpful instruction and encouragement to general practitioners for use in the management of their patients afflicted with neuroses.

It is welcome news that the family doctor is competent to manage 90 per cent of the cases of neurosis in his practice. Dr. Menninger never did a day of general practice, so he is not praising himself.

A specific anxiety, he says, is by all odds the most important type of tension to the physician in the understanding of patients. It has no relation to any danger of which the patient is aware. It has nothing to do with the physiological response to threats or challenges, and has a different mechanism from that of rage or fear. It is the basis for most of the physical manifestations found in "functional" illness—the disordered stomachs and cardiac complaints, the headaches and myalgias, and the host of other symptom complexes which are referred to as neurotic symptoms.

He goes on to make clear a good deal that has been much muddled in the minds of a good many of us.

Usually the first indication that the conscious personality cannot control the threatened escape of a primitive urge is a feeling of anxiety. The apprehensiveness or fearfulness which is the expression of a conflict between the unconscious pressure and the conscious control, can be resolved sometimes by changes in the environment, or by a better understanding of the factors in the situation to which the patient is reacting. If the conflict is not resolved, the personality is forced to utilize some form of automatic defense.

One method is to channel the initial impulse into symptom expression—some disturbance of gastro-intestinal or cardio-vascular function, distorted fears, bizarre behavior, or perversions of motor function. These represent a socially approved form of escape for the disapproved impulse. The individual is no more capable of voluntary control of such symptom formation than of the rate of his heart beat.

Each symptom represents a kind of triumph of the unconscious over the conscious control.

In most, if not in all neurotic reactions, a major etiologic factor will be found to be psychological injury in infancy and early childhood, and there remains a vulnerable spot, subject to damage by an experience in adulthood similar to the one which caused the childhood scar.

The conscious portion of the personality—that part we know as ourselves—utilizes many devices to protect itself from the powerful unconscious and its primitive impulses. The commonest protective device encountered in practice is "conversion" of psychological tension into physical symptoms.

The peptic-ulcer patient, under the proper stimulus, becomes involved in a conflict which produces tension. This begins in early childhood. The child seeks security by striving to meet exacting standards while at the same time anticipating failure because of a feeling of inadequacy.

When the defenses against our neurotic anxiety become weakened we develop symptoms, it is the family physician's job to determine the nature and extent of that tension and the causes. He is able to handle the problems which constitute 90 per cent of all psychiatric cases. To employ every diagnostic procedure to eliminate an organic basis

[1] W. C. Menninger, M.D., Topeka, Kans., in *Rocky Mountain Med. Jour.*, Aug.

is a very expensive procedure, and yields only the information that there is no organic cause for the complaints.

For the doctor to determine the existence and cause of the tension, he first must establish a feeling of confidence, give the impression that he is neither rushed nor condescending, and so induce his patient to discuss his feelings fully, including those he things unimportant. The doctor has to interpret what the patient says and what he does not say, his mannerisms, his facial expression, his behavior during the course of the case-taking.

The patient is given the chance to tell his story, induced to go fully into his environment, the pressures at home and at work, the degree of competition, possible economic problems. A good lead may be obtained by inquiring about the patient's dissatisfactions, his gripes, in his life situation. Determine the past and present relationship of the person to his parents, how he got along with each of them. One should discover any specific hostilities, resentments or dependency of wife, or husband, children, or business associates. A resumé of the general health record often reveals the circumstances and time of onset of the tension state. Occupational record and adjustment of the patient, his social interests and contacts should be inquired into.

Assuming that the physician has been able to detect the emotions and relate them to the physical complaints, how can he then function in his major role of treatment?

Psychotherapy is the psychiatrist's most important method of treatment and is one of the most important tools of nearly every practitioner. Most individuals with tension are not essentially changed, and many are worsened by medications, operations, orthopedic support, magic or placeboes.

In interpreting problems to patients it isn't so much what you say as how you say it. Never minimize the illness. Unless the physician has developed a good rapport with his patient, he may meet antagonism, protest, perhaps rebellion. One must stay within the range of his patient's ability to grasp the explanation. In some instances it is wiser to attempt no explanation, and to rely upon reassurance, encouragement and specific directions.

To the patient who can understand, explain simply how emotions can be reflected in the functions of the body organs. When unacceptable impulses cannot be expressed directly, they may be channeled to the heart, the stomach or the back or elsewhere. It is wrong for some one to hate his brother but it is all right to have a headache.

The fact that the origin of the conflicct may not be entirely clear may be no major deterrent to helping the patient map out a way of living. One does not have to know the cause of a fire to know how to put it out. After the fire some reconstruction is essential so as to put the house in good running order once more.

Infectious Mononucleosis

(Sir Henry Tidy, in *Journal of Hemotology,* August)

Errors in diagnosis are numerous but with the transitory nature of ordinary attacks they usually settle themselves without important consequences. In the severer forms there may be no means of establishing the diagnosis for weeks. The possibility of infectious mononucleosis as the essential factor in some cases of benign lymphocytic chorio-meningitis should be borne in mind. The blood changes should not cause difficulty in differentiation from leukemia when the patient is seen in the acute stage. In acute leukemia, the toxic symptoms are always severe.

Diagnosis may be difficult from the rare slowly-progressive chronic lymphoid leukemia—especially difficult when it is asked for on a patient some months after a fever attack with lymphocytosis considered to be infectious mononucleosis. Either lymphocytosis or glandular swelling may persist for several months after infectious mononucleosis, but if both features are present for six months the diagnosis remains in doubt, unless it has been fully established.

I have watched three such cases, originally diagnosed doubtfully as infectious mononucleosis, gradually develop into fatal lymphoid leukemia or lymphosarcoma over periods of three to ten years.

(Raphael Isaacs, M.D., in *Journal of Hematology,* August)

In a group of 206 patients who had infectious mononucleosis, 53 had some symptoms which persisted for three months to four years. The syndrome included ease of fatigue, exhaustion, aching of the legs, weakness, depression, afternoon t. of 99.8 to 101 F., moderate splenomegaly, low b. p., low blood sugar, often low specific gravity of the urine, and the presence of infectious mononucleosis cells in the blood.

These patients had been sent in for study, with possible diagnosis of undulant fever, tuberculosis, Addison's disease, Hodgkin's disease, Rocky Mountain spotted fever, lymphosarcoma, hypothyroidism, menopausal syndrome, subacute bacterial endocarditis, neurasthenia and syphilis.

All of the group showed infectious mononucleosis cells, 1 to 7% of the total leukocytes, in the blood. These cells had been grouped with the lymphocytes or monocytes by uncritical technicians. The red blood cell and leukocyte counts and hemoglobin content were within normal limits.

Blood pressure range was: systolic 90 to 115, diastolic 56 to 70.

Most patients had some palapable lymph nodes, but never very large. Posterior cervical most commonly enlarged.

A preparation of adrenal cortical extract (Cortalex), 2 tablets (made from aqueous extract of 10 grams of adrenal gland) on arising in the morning. A feeling of wellbeing developed during the week and was quite definite in the third. The medication was discontinued and the improvement usually continued. In a few patients it was necessary to increase the dose, or resume it after its discontinuance. With the subjective improvement, there was a decrease in the size of the spleen. The change in the blood pressure were slight.

The most pernicious of all socialist ideas is that man must be guided, directed, bullied, exhorted, and, above all, protected from the hard world.—T. I. Thomas, Chief Sub-editor, Sheffield *Telegram,* in *Brit. Med. Jour.,* July 17th.

President's Message

Only about five months remain before our next meeting in Williamsburg. While that may now seem quite a long while it is not too early for the members of this Association to start thinking about a program for the coming meeting, and for those who desire, to start working on papers for presentation. We are meeting in a place that is filled with years of tradition, and we must uphold these traditions of this historic old city by having one of the best meetings that the Tri-State has ever had. To do this it behooves each and every member to bestir himself now and compile a paper or get some good man to participate in the program.

It is also of the utmost importance that each member endeavor to interest more of the young men in his territory in joining this Association. Once they become interested we need have no fear of their continued participation.

Charles N. Wyatt, M.D.
President.

SOUTHERN MEDICINE & SURGERY

JAMES M. NORTHINGTON, M.D., *Editor*

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Offerings for the pages of this Journal are requested and given careful consideration in each case. Manuscripts not found suitable for our use will not be returned unless author encloses postage.

As is true of most Medical Journals, all costs of cuts, must be borne by the author.

Doctor James King Hall

THE BEGINNING of my knowing Dr. Hall was made at a meeting of the Tri-State Medical Association held at Wilmington in 1914. A friendship which has deepened with years grew out of my advancing the idea (certainly not original with me) that justice is only a large expediency.

From the time, nearly forty years ago, that Dr. Hall, Dr. Paul V. Anderson and Dr. C. M. Gayle established at Westbrook, a few miles outside Richmond, a hospital for the care of persons grievously troubled in their minds, Dr. Hall has been a tower of strength in this field. Through all these years Westbrook has been to these people a rock in a weary land.

For more than three decades there has been hardly a medico-legal case of consequence in Virginia or North Carolina, which had as an important ingredient a question of mental soundness, in which Dr. Hall's services were not requisitioned. And his influence, more than any other in these parts, we have to thank for the doing away with the "battles of the mental experts," which so disgraced such legal proceedings up to his time.

Dr. Hall's native mental endowment was of the first order. He had the will to know and the way of learning opened before him. All knowledge came within the sweep of his interest. He was a philosopher, in the original and best sense of that term, which, after centuries of misuse has now fallen into disuse. He was a lover of learning, of which his store was so great—of that wisdom which "is humble because she knows no more."

He wrought mightily in lightening the affliction of those who had become other than their own selves; but this was only a part of his achievement. He thought much, he studied much, he did much, he wrote much—all to the lessening of the misery, to the increase of the happiness, of his fellows.

"He was a man, take him for all in all,
I shall not look upon his like again."

And, over the third part of a century—

"He was my friend, faithful and just to me."

SOME ASPECTS OF TREATMENT

Non Nocere

IMPORTANT it is to remember that disease automatically sets in action a variety of defence mechanisms about some of which we may understand a little but about many of which we certainly know nothing. It is these defence mechanisms which ultimately effect a cure, and we must be careful not to interfere with or harm their activities, and must cut across them only with caution.

An English teacher of dermatology[1] thus reminds of first principles, with application to recent advances in therapy. A synopsis is made of what he has to say further.

Ability of the physician to create harmful disease should be stressed. We attack with treatment the most trivial lesions forgetful of the healing powers of nature and of the fact that this is the age of therapeutic danger. Antiseptics, sulphonamides, penicillin and adhesive plaster may readily convert a harmless abrasion into an area of eczematous dermatitis.

A lady of 84 who never had suffered from her skin was burnt by a poultice applied to relieve pain in her chest. This burn was treated with penicillin and sulphonamides locally. The resulting sulphonamide dermatitis was treated with tar, to which she was sensitive and now, after six months, she is distracted with a widespread eczema and intolerable itching. A man of 48 scratched his leg two months ago, was treated with sulphonamides and penicillin in the ambulance room at his works, and now he must be admitted to hospital for at least six weeks of treatment of dermatitis and edema of the leg resulting from treatment. A middle-aged woman comes with a widespread dermatitis from the use of a liniment to relieve pain in a joint.

If nothing had been done in these cases it is probable that the patients would have recovered rapidly. We should always be alive to the harm that may result from interference.

Suspend all treatment in a case that is getting worse under seemingly rational treatment. It is always instructive to watch the effects of no treatment at all in the form of some bland medicament. The more able and experienced the physician the fewer and the simpler his therapies.

A full and careful diagnosis rarely demands much technical assistance—and if the nature of the remedies prescribed is known, the physician should treat his patient with complete confidence.

Wash thoroughly seborrheic disorders not attended with eczematous dermatitis. Seborrheic pityriasis and acne vulgaris respond to washing; the addition of a soapless detergent to the washing water, by more thoroughly removing the excess of grease, will hasten the response. Rosacea and eczematous dermatitis are aggravated by washing.

Local applications are rarely to be employed as therapeutic weapons; the purpose of local treatment is commonly to support and protect the skin. Local or general baths and lotions are valuable for only a limited period. Normal saline is excellent for most purposes. As a mild astringent and antiseptic potassium permanganate 1 in 8,000 is valuable. Solutions of the dyes are bland, antipruritic, antiseptic.

In soothing and reducing acute edema cold-water bandages are suitable, but for 24 to 48 hours only. Fomentations for four hours under oiled silk will macerate the skin—in infections encourage spread. A session of three or four fomentations applied in the course of an hour, once or twice a day, is the better routine. The starch-and-boric acid poultice is soothing and cleansing for sore and infected surfaces—two or three replaced every three or four hours before they have set hard.

Calamine lotion should be applied to the skin with a brush and should be allowed to dry before bandaging.

By far the most valuable local application is Lassar's paste. Soothing and protective, it rests the skin, protects it from changes of temp., from the interfering fingers of patient, nurse and doctor and from inquisitive eyes. It should be smeared on the skin—not on gauze—with a finger, covered with stockinet and left undisturbed, further paste being applied when necessary.

Psoriasis will clear rapidly on Lassar's paste with dithranol 2 gr. to the ounce.

When sulphonamides or penicillin are considered necessary it is preferable that they should be given by mouth or parenterally, for sensitization by this route, though it may not be helpful, is not such an intractable problem as epidermal sensitization.

Every patient under going x-ray therapy should receive a card recording the dosage given and should be warned to present that card whenever further x-ray treatment is under consideration. Grenz rays are relatively safe, and it is to be hoped they will again be made available and will be more widely employed in place of x-rays.

1. J. T. Ingram, M.D., University of Leeds, in *British Med. Jl.*, July 24th.

THE ROLE OF ABDOMINAL TRAUMA IN ACUTE APPENDICITIS

THERE is much skepticism among doctors generally as to appendicitis being brought on by trauma. Black[1] discusses the subject and disposes of it in a way which appeals to us as reasonable.

He credits Romanis and Mitchiner with having recognized it to be (1937) possible that a twist.

1. W. R. Black, F.R.C.S. Ed., Bristol, in *British Med. Jl.*, Aug. 28th.

blow or strain . . . will cause a concretion to move and completely block the appendix.

The role of trauma as an exciting factor in the production of acute appendicitis assumes importance, in England as in our country, from the medico-legal aspect, when abdominal injury received during employment is advanced to procure compensation in the courts. Black cites two cases of acute appendicitis, recently encountered immediately after abdominal injury, both in children of school age, where the motive for procuring compensation did not arise.

It is interesting to observe that in both cases a faecalith was impacted in the lumen of the appendix. It is reasonable to conjecture that the increased intraäbdominal pressure resulting from the abdominal injury might force a faecalith, already formed at the base of the appendix, more distally into the lumen, thereby precipitating an attack of acute obstructive appendicitis.

It is easy to agree with this English surgeon that one might justifiably conclude, in a case of acute appendicitis immediately following abdominal trauma, where the presence of a faecalith impacted in the lumen of the appendix was found at operation, that the injury was a contributory and causative factor of the attack.

DIAGNOSIS OF POLIOMYELITIS

Doubtless, in the midst of our epidemic of poliomyelitis, many cases have been so diagnosed that were not poliomyelitis. Doubtless, as the epidemic subsides, many mild and brief cases will be misdiagnosed variously. It is inevitable that errors both ways will continue to be made, so long as we have no positive bacterial means of diagnosis.

It is with a view to helping our readers to reduce these mistakes to a minimum that the means of diagnosis as stated by Toland[1] are repeated here.

Early in the disease there may be rhinitis, abdominal distress, nausea, vomiting, or "grippe" sensations. An early sign is headache, which is rare in most diseases of children. Fever rarely goes beyond 103. Nausea, anorexia, stiff neck and back and painful extremities should make the doctor wary. Often sore throat occurs, without redness and with negative culture. There is often abatement of symptoms lasting 24 hours up to three weeks, then a period of weakness in an extremity, unsteadiness, even falling; inability to move an extremity followed by progressive paralysis, pain and tenderness in a muscle group and spasm of the affected part. Neck rigidity is usual and severe; the patient wants to be left alone and is unwilling to move. In some cases there is anxiety and irritability. A few patients are somnolent, but easily aroused.

A good history is of the utmost importance. Examination shows marked resistance and pain when an attempt is made to flex the neck on the chest, back rigidity, inability to move a part or all of an extremity and pain and tenderness in a muscle group, reflexes abolished or diminished in an affected extremity, muscle spasm, and usually no disturbance of sensoria.

Patients with the bulbar type of poliomyelitis have a rapid course. They are usually apprehensive but may be somnolent, use accessory muscles of respiration because of paralysis of the diaphragm or intercostal groups, have nasal tones, difficulty in swallowing, and may show facial weakness. This type must be differentiated from meningitis and some types of encephalitis.

The abortive type may resemble many of the mild diseases and is a difficult diagnosis to make It may show nothing but nausea, weakness, coryza, sore throat and diarrhea and last only a day or two. Usually it passed as "flu" unless there are other poliomyelitis cases in the neighborhood. The possible presence of real muscle weakness is one of the few signs significant of this disease.

The spinal fluid in poliomyelitis is usually clear; in meningitis, cloudy; in tuberculous meningitis, hazy; in subarachnoid hemorrhage, bloody. The spinal pressure in poliomyelitis is normal; elevated in meningitis; normal in tuberculous meningitis. A culture of the fluid in poliomyelitis is negative; in coccic meningitis the organisms can usually be cultured from the fluid provided no sulfonamide nor penicillin has been given. The protein in poliomyelitis is usually normal or slightly elevated; in tuberculous meningitis, normal; much elevated in meningococcic meningitis.

In poliomyelitis the white blood cells are usually 350 per cu. mm.—early mostly pmns., later monos. *A day or two after the onset of paralysis the cell count is usually normal.* In meningococcic meningitis the cell count is greatly increased and pmns. predominate; in tub. meningitis, slightly increased, mostly monos. The chlorides in poliomyelitis are normal, much reduced in tub. meningitis.

1. J. J. Toland, 3rd, M.D., Philadelphia, in *Penn. Med. Jl.*, Aug.

GLASSES SHOULD NOT BE PRESCRIBED FOR PERSONS WITH SLIGHT REFRACTIVE ERROR

Spectacles perform the following functions only, whether used by adults or by children: (1) prevent or relieve some headaches, pain in the eyes, car-sickness, and disturbances from muscular conditions such as hyperphoria; (2) they increase visual acuity, for example, in cases of myopia or presbyopia; and (3) they are an adjunct in the treatment of squint.

This foundation is laid by McAlester[1] and on it

1. A. W. McAlester, III, M.D., Kansas City, Mo., in *Jour. of the Oklahoma State Med. Assn.*, Aug.

he builds his argument against the over-prescribing of glasses.

One should be very careful in prescribing glasses for low degree of refractive errors in children for continuous wear. A common story that you receive from the parents is that the child has headaches. The pupils are dilated and a small refractive error is revealed. In going into the history deeper you find that the child doesn't eat a proper breakfast that includes sufficient carbohydrates to get a maintenance balance until noon, especially if the child is very active and the headache comes just after recess or before lunch. Further comes a mid-afternoon headache, and by three or four o'clock when the child is home if he is unable to get a dessert, milk, or some other quick energy food, the headache persists until supper time. We have found through a critical analysis of many children that glasses are not beneficial in relieving headaches. Unless an adequate medical history is gone into, other cause found, and proper treatment given, relief of pain is not achieved. Just because a youngster has two or three diopters of myopia is not an adequate reason for shackling the individual to spectacles. No patient, particularly no child, should be given glasses and told to wear them continuously for the rest of life, unless one is sure that such management is necessary.

An accurate history of many adults who have migraine will reveal that they had typical or atypical migraine at the time they first entered competition, in the sixth or seventh year.

When a pair of spectacles is prescribed and given to a child there must be a very definite reason. What the instructions given as to the length of time that they should wear these said appliances or braces? Children are extremely flexible in their individual tolerance, and the ability to take care of some of the deviations from normal greatly varies with each one.

An Iowa specialist[2] prescribes spectacles if the chief complaint is of poor vision, *and* if the vision can be improved by spectacles. These are minimum requirements. He is impressed with the fact that in measuring the visual acuity of children, a trial frame *with no lenses*, or with plano lenses, will improve the visual acuity of many; and he says the same is true of some adults.

People who have astigmatism *against the rule*—even in small amounts—he has found to obtain considerable relief from its correction. Bifocal lenses are very convenient for most people. The strength of the portion of the lens through which a person reads or does close work must be for the proper distance. But some people can not wear bifocals of any strength with comfort and they are given two pairs of spectacles. Trifocal lenses are of value to musicians, merchants, draftsmen, auditors and some housewives. Occupational lenses may have their segment for close work at the upper part of the lens.

Steffens attributes many failures to help many of these people to the prescribing of corrections for their *small* refractive errors. One must proceed cautiously when a patient confronts him with a handbagful of spectacles that are all unsatisfactory, each pair having been prescribed by a different doctor. These patients usually need psychotherapy.

It is gratifying to have an ophthalmologist's backing up in our advice against glasses for those with small refractive errors. Nowadays the amounts charged for glasses are so large as to constitute an important reason for prescribing them for those who need them, only.

Trifocal lenses are new to us.

2. L. F. Steffens, M.D., Dubuque, in *Jl. Iowa State Med. Soc.*, Sept.

USE OF THE VAGINAL SMEAR IN EARLY DIAGNOSIS OF CANCER OF THE UTERUS

In view of the current interest in the vaginal smear which was aroused by recent accounts of its usefulness, a study was made by the Massachusetts Department of Public Health to evaluate the method as a diagnostic test. The findings[1] indicate that by the cytologic test for cancer it may be possible to find one case of uterine cancer among 200 to 500 women free from symptoms. The final evaluation of the technic as a screening test cannot be made until the results of the follow-up study are known three years hence.

Ayre[2] makes a contribution to the subject.

The vaginal smear and "surface biopsy" methods offer valuable means of uterine cancer control by early detection. Indiscriminate hysterectomy on the basis of positive smears without biopsies may cause this important advance in diagnosis of cancer to fall into disrepute. The cervical cone knife is presented as a practical instrument to permit precision biopsies of the squamocolumnar junction in preclinical cervical cancer, introducing the "ring biopsy." For the patient with a positive vaginal smear a confirmatory biopsy preceding radical treatment is mandatory to safeguard the future reputation of this valuable advance in uterine cancer control. Various steps in diagnostic treatment are recommended for consideration.

1. H. L. Lombard, M.D., *et al.*, Boston, in *N. E. Jour. of Med.*, Aug. 26th.
2. J. E. Ayre, M.D., Montreal, in *Jour. A. M. A.*, Sept. 4th.

Pericardium.—The principal function of the pericardium is to set a physical limit to the stretching of the heart and thereby to minimize the chances of functional valvular incompetence and muscular rupture.—*Eric Ogden.*

NEWS

MEDICAL COLLEGE OF VIRGINIA (Richmond)

A total of 1,119 students, of whom 417 are freshmen, are enrolled in the 112th session which began in September.

The School of Medicine for the current session has an enrollment of 326, of whom 84 are freshmen. In the new class of medical students, there are 71 from Virginia, 5 from North Carolina, 3 from West Virginia, and 5 others from Puerto Rico, Kentucky, Florida, and Maryland.

The Schools of Dentistry and Pharmacy at the college have the largest enrollments in their history. There are 174 students in dentistry with 50 freshmen and 214 in pharmacy with 59 freshmen. Of the 310 women in the School of Nursing, 96 are freshmen. There are also 45 students enrolled in physical medicine at the college, nine dietetic interns, 14 studying medical technology, and 25 enrolled in X-ray technology.

PROGRAM

ELEVENTH ANNUAL SYMPOSIUM

DUKE UNIVERSITY SCHOOL OF MEDICINE AND DUKE HOSPITAL

November 4th-6th

Thursday, November 4th

2:00 P. M.

Dr. Harry Gold, New York City—Newer Trends in the Management of Congestive Failure.

Dr. Carl V. Moore, St. Louis—Recent Advances in the Treatment of Anemia.

Dr. Harry L. Rogers, Philadelphia—Recent Therapeutic Trends in Allergic Diseases.

6:00 P. M.

Dinner at Hope Valley Country Club.

8:00 P. M.

Dr. C. P. Rhoads, New York City—Recent Advances in the Treatment of Malignant Neoplastic Disease.

Dr. William L. Bradford, Rochester, New York—Recent Developments in the Prevention and Treatment of Certain Communicable Diseases.

Friday, November 5th

10:00 A. M.

Dr. Wallace E. Herrell, Rochester, Minnesota—The Present Status of Antibiotic Therapy.

Dr. Stewart H. Clifford, Boston—The Prevention of Neonatal Mortality.

2:00 P. M.

Dr. Carl F. Schmidt, Philadelphia—Newer Trends and Methods in the Development of Therapeutic Agents.

Dr. Willard O. Thompson, Chicago—Therapeutic Advances in Endocrinology.

Dr. Richard H. Freyberg, New York City—The Treatment of Rheumatism and Allied Disorders.

6:00 P. M.

Barbecue Supper.

8:00-9:00 P. M.

Round Table Discussion—A question and answer program. Moderator—Dr. O. H. Perry Pepper, Philadelphia.

Saturday, November 6th

10:00 A. M.

Dr. J .E. Moore, Baltimore—The Treatment of Syphilis.

Dr. Willis J. Potts, Chicago—Special Surgical Problems of Children.

2:00 P. M.

Football Game—Duke University vs. Wake Forest College.

MEDICAL CONFERENCE, NORBURN HOSPITAL & CLINIC

October 1st, 1948

Asheville, North Carolina

Afternoon Session, 4 P. M.

Recent Developments of Chemotherapy in Surgery—Wm. A. Altemeier, M.D., F.A.C.S., Associate Professor of Surgery, University of Cincinnati.

Venous Thrombosis and Pulmonary Embolism—Louis G. Herrmann, M.D., F.A.C.S., Associate Professor of Surgery, University of Cincinnati.

Dinner, 6:30 P. M.

Evening Session, 8 P. M.

General Problems of Cancer—Edwin P. Lehman, M.D., F.A.C.S., Professor of Surgery, University of Virginia; President, The American Cancer Society; President, The Southern Surgical Association.

Control of Cancer—Charles S. Cameron, M.D., F.A.C.S., Medical and Scientific Director, The American Cancer Society.

MATHESON FOUNDATION LECTURES IN OCTOBER

The Matheson Foundation and the Mecklenburg County Medical Society will again sponsor a series of medical lectures this fall. The program will cover the afternoons and evenings of October 21st and 22nd. All phases of the program will be held in the ballroom of the Hotel Charlotte, and this hotel is reserving a number of rooms for out-of-town guests who apply early.

Among the features of the program are: A Symposium on Congenital Heart Disease to be presented by Dr. Harry Gold of Cornell, Dr. Eugene Pendergrass of Pennsylvania, and Dr. Julian Johnson of Pennsylvania; a presentation by Dr. J. B. Amberson of New York on the Treatment of Tuberculosis with Streptomycin; and a Clinico-Pathologic Conference under the direction of Dr. Balduin Lucké of Pennsylvania.

THE AMERICAN GOITER ASSOCIATION will hold its next meeting at the Hotel Lorraine, Madison, Wis., May 26th-28th, 1949. The program will consist of papers dealing with goiter and other diseases of the thyroid gland, dry clinics and demonstrations.

The Van Meter Prize Award of $300.00 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland will be made at this meeting. The competing essays may cover either clinical or research investigations.

For details write Dr. T. C. Davison, 207 Doctors Building, Atlanta 3.

FRANK RAY, M.D., announces the association of DEWITT D. PHILLIPS, JR., M.D., in the general practice of medicine, offices in Liberty Life Building, Charlotte, North Carolina.

DR. R. L. VANN has located in Statesville for the practice of general medicine. He is a graduate in 1945 of the Bowman Gray School of Medicine. Dr. Vann had an internship in St. Louis; and for two years he was a member of the Medical Corps of the United States Army.

A New Slant on Movies

Announcement has just been made of a motion picture producer who is publishing a booklet describing how to prepare your film before sending it to a recording studio to have it converted from a silent to a sound version. This booklet furnishes simplified footage scale charts, layout for the preparation of your script and other important information.

All 16-mm. film, whether photographed at 8, 16, 24 or 64 frames per second, is adaptable to sound. After the

film, whether black and white or color, is prepared, a high fidelity sound track can be placed on your film by this producer for a very nominal fee.

These booklets, No. 221 entitled "Make Your Movies Talk," can be obtained gratis by writing

C. Lawrence Walsh & Company,
801 Brighton Road, Pittsburgh 12, Pennsylvania.

Lonalac for Diets of Restricted Sodium Content

Lonalac, nutritionally similar to whole milk powder but virtually free of sodium, aids in the maintenance of protein nutrition when milk, meat, eggs and cheese must be restricted. Congestive heart failure, hypertension and toxema of pregnancy have been treated with low sodium diets. Sodium analyses of foods, diet plans, literature on use of low sodium diets and samples of Lonalac are available from:

MEAD JOHNSON & COMPANY, EVANSVILLE, 21, INDIANA.

William H. Shaia, M.D., announces the opening of offices for the general practice of medicine, 2400 Wilkinson Blvd., Charlotte, N. C.

McChord Williams, M.D., F.A.C.S., Charlotte, announces the removal of his offices to 211 Hawthorne Lane.

MARRIED

Dr. Hugh Franklin Swingle, Jr., of Johnson City, Tennessee, and Miss Joan Dickey Lincoln, of Marion, Virginia, were married on August 21st.

Dr. Robert C. Kesler, of Greensboro, and Miss Ruth Albertine Lee, of High Point, were married on August 20th.

DIED

Dr. James K. Hall, 73, president of Westbrook Sanatorium, Richmond, Va., died September 10th at a Richmond hospital, after an illness of a few days.

Dr. Hall was born in 1875, in Iredell County, N. C., a son of Dr. Eugenius A. Hall and Amanda McCullough Howard Hall. He was an academic graduate of the University of North Carolina in the class of 1901; and in medicine of Jefferson, Philadelphia, in 1904. He served an internship at the Polyclinic Hospital, Philadelphia, and from 1905 to 1911 was a member of the medical staff of the State Hospital at Morganton, N. C., serving as first assistant physician for the latter portion of that period.

In 1911 he participated in the organization of the Westbrook Sanatorium, at Richmond, of which he was president and head of the department for men.

His associates in the organization of Westbrook were Dr. Paul V. Anderson and Dr. E. M. Gayle. The undertaking involved the purchase of the larger portion of the former country estate of the late Major Lewis Ginter, then a few miles from the city.

Dr. Hall was a member of the Medical Society of Virginia and of the Medical Society of North Carolina and of various other medical organizations.

He had served as president of the Southern Psychiatric Association; the National Association of Private Psychiatric Associations; also of the Tri-State Medical Association and the Richmond Academy of Medicine. In 1941 he presided over the annual meeting in Boston, Mass., of the American Psychiatric Association.

He was a member of the American Association on Mental Deficiency, the American College of Physicians, the American Academy of Political and Social Science, the American Association for the Advancement of Science and the National Committee on Mental Hygiene.

He was an associate editor of *the Journal of Southern Medicine & Surgery* and of a History of Psychiatry and frequently contributed otherwise to medical literature.

Dr. Hall was for many years a member of the State Hospital Board of Virginia and he also served for some years as chairman of the Governor's Board on Criminal Mental Hygiene, which studied prisoners in the penitentiary.

He was a member of the North Carolina Historical Association and was the author occasionally of historical sketches.

Dr. Hall's chief concern was human behaviour about which he wrote each month in *Southern Medicine & Surgery.*

He married, in 1912, Miss Laura Witherspoon Ervin, of Morganton, N. C., who survives her husband.

Besides his wife he is survived by three sons, James King Hall, Jr., Dorman Thompson Hall and Samuel Ervin Hall, all of Richmond.

Dr. Hanford Waterfield, 52, psychiatrist on the staffs of Lenox Hill and Vanderbilt Hospitals, died August 18th at his home in New York. He spent his earlier years in Richmond when his father, the Rev. R. T. Waterfield, was pastor of several Methodist churches

Dr. Waterfield's first profession was that of teacher, as head of the French department at John Marshall High School. He later attended the University of Virginia and received his M.D. from the College of Physicians and Surgeons, Columbia University.

Dr. O. C. Brunk, 69, Richmond police surgeon and internist on the staff of Johnston-Willis Hospital for more than 35 years, died August 19th at Johns Hopkins University Hospital in Baltimore.

He received his academic and medical degrees at the University of Virginia and at the outset of his professional career became a member of the staff of the Central State Hospital in Petersburg, where he remained for six years until he was made head of the Eastern State Hospital at Williamsburg.

He served as director of the Williamsburg institution for five years and then settled in Richmond.

Dr. Israel Kaup Redd, 55, for 32 years a physician at Ellerson, Hanover County, died August 21st, after a brief illness. Born at Studley, Hanover County, he was educated in private schools, at Richmond College, and at the Medical College of Virginia, where he was graduated in 1914. After an internship at Norfolk General Hospital Dr. Redd located at Ellerson, where he began a practice that was to last a third of a century.

Dr. Redd was a close student of the Civil War, and was an authority on the battlefields near Richmond. He is said to have known the location of every entrenchment and the part it played in the great conflict.

Dr. Joseph Bear, 59, Richmond obstetrician, died unexpectedly of a heart attack August 28th just after treating a patient.

Dr. Bear was at the time of his death president of the Richmond Obstetrical and Gynecological Club, and a member of the teaching staff of the Medical College of Virginia.

Born in Richmond, he was graduated from the old Manchester High School, received his degree in medicine from

the Medical College of Virginia in 1912 and interned at the old Memorial Hospital. He practiced in Richmond his entire professional career, except for the time he served in the Army Medical Corps during World War I.

Dr. Bear was a member of the Richmond Academy of Medicine, the Tri-State Medical Association, the Medical Society of Virginia, American Medical Association and the Richmond Caduceus Club. He also was a member of Beth Ahabah Synagogue.

Among the survivors are two doctor brothers, Dr. Harry Bear and Dr. Hyman Bear, both of Richmond.

Dr. Montgomery H. Briggs, Co-Founder of Rutherford Hospital, Rutherfordton, N. C., died in that hospital August 28th. Dr. Biggs was born and reared in Philadelphia and graduated from the University of Pennsylvania Medical School in 1897.

Dr. Biggs and Dr. Henry Norris opened the first hospital between Charlotte and Asheville, in 1906, and devoted the rest of their lives to the provision of the best of medical, surgical and hospital care for the people of a large section of Western North Carolina.

Dr. Moses A. Foil, retired physician and civic leader, died September 13th at his home at Mt. Pleasant, N. C.

Dr. Reginald Olando Mundin, 63, died August 29th at his home in Richmond. Dr. Mundin, who had practiced in Richmond intermittently for 40 years, was a graduate of Virginia Union University and Shaw University, Raleigh, N. C.

A Rare Type of Feeblemindedness Easily Diagnosed if Borne in Mind

(Herman Josephy, M.D., Chicago, in *Ill. Med. Jour.*, Aug.)

In 1934 Foelling, of Islo, discovered and described a new and hitherto unknown type of mental deficiency. When phenylalanine, one of the essential aminoacids, is deaminized, phenlypyruvic acid is formed as an intermediate metabolite. Normally this is broken down to water and CO_2 and never appears in the urine. It is found only in those cases which classify as phenylpyruvic oligophrenia.

The test for phenylpyruvic acid in the urine is very simple. A few drops of a 5% aqueous solution of ferric chloride are added to the specimen, which should be acid, or, if alcaline, must be acidified. Immediately a dark green color develops which fades to a pale yellowish green in 5 to 15 minutes.

Two basic factors are important. The first is that all individuals who excrete this acid are feebleminded; the second that these patients excrete phenylpyruvic acid in every urine specimen they pass. A high protein diet makes the reaction stronger.

Phenylpyruvic oligophrenia is rare—from 0.13% to 0.8% —among institutional inmates. Up to now no cases have been found among Hebrews or Negroes. Mental retardation is noted "very early."

Of Josephy's 16 cases all the individuals are fair haired, white-blond to light-brown. There is none with a dark complexion, although one has a dark-haired Italian father and several dark-haired normal siblings, and another one has two parents of Italian origin.

Vitamin D Not Beneficial in Arthritis

(J. S. Browning, Indianapolis, in *Jl. Ind. State Med. Assn.*, Aug.)

I do not feel that there is any place for vitamin D in the treatment of arthritis. Any improvement to be expected is far offset by the toxic effects.

BOOKS

CLINICAL LABORATORY METHODS AND DIAGNOSIS (3 Volumes), A Textbook on Laboratory Procedures with their Interpretation, by R. B. H. Gradwohl, M.D., D.Scs., F.R.S.T.M. & H. (London), Director of the Gradwohl Laboratories and the Gradwohl School of Laboratory Technique; Pathologist to Christian Hospital; Director, Research Laboratory, St. Louis Metropolitan Police Department, St. Louis, Mo.; Commander, Medical Corps, United States Naval Reserve, Ret.; Fellow, American Public Health Association; and, for Volume III, Dr. Pedro Kouri, Director, Institute of Tropical Medicine; Professor of Parasitology and Tropical Medicine, Havana University. Fourth edition. *The C. V. Mosby Company,* St. Louis. 1948. $40.

Nearly twenty years ago the author planned, wrote and offered to the profession the most comprehensive work up to that time on laboratory methods in clinical diagnosis. Since that time he has put out a second and third edition and now comes the most comprehensive textbook of *Clinical Laboratory Methods and Diagnosis* ever offered to the profession, the fourth edition of Gradwohl.

Volume I deals with examinations of urine, blood, gastric contents, puncture fluids, feces and a number of special tests; Volume II with bacteriologic and serologic diagnostic methods, postmortem examinations, tissue and toxicologic examinations, laboratory methods in the detection of crime, basal metabolism tests and electrocardiography. A dozen or so authorities in special fluids contributed chapters to the first volumes. Volume III's six chapters are devoted to parasitology and tropical medicine—general principles; medical protozoölogy; human helminthology — nemathelminthes and platyhelminthes; diseases due to spirochetes, viruses and bacteria, and diseases caused by arthropoda.

As the first edition was the most comprehensive work in this field when it was published, so is the fourth edition in a class all by itself. As an authoritative work covering the whole field of the laboratory in diagnosis, it has no peer. Laboratories and clinicians have been looking forward to its appearance eagerly and will welcome it with enthusiasm.

PREOPERATIVE AND POSTOPERATIVE CARE OF SURGICAL PATIENTS, by Hugh C. Ilgenfritz, A.B., M.D., F.A.C.S., Formerly Assistant Professor of Surgery, Louisiana State University School of Medicine. Foreword by Urban Maes, M.D., D.Sc., F.A.C.S., Emeritus Professor of Surgery, Louisiana State University School of Medicine. Illustrated. *The C. V. Mosby Company,* St. Louis. 1948. $10.

The authors observed that the undergraduate program was concerned chiefly with pathology and diagnosis of surgical disease, to the neglect of treatment, including preoperative and postoperative care, and set about writing a book to supply the

need for instruction in this special field.

The general aims are declared in the first chapter. Then come chapters dealing with fluid and electrolyte balance, metabolism and nutrition, sedative medication, general preoperative measures, general postoperative measures, shock, transfusion, systemic complicating factors, organic diseases, new drugs, postoperative complications, wound care, burns, surgery of special organs. An appendix carries diet lists, preparation for x-ray studies, oxygen administration, infusions and transfusions.

The book deserves hearty welcome as a setting forth in a handy volume of information essential for best operative results.

STANDARDS FOR THE DIAGNOSIS AND TREATMENT OF CANCER, by The Cancer Committee of the Iowa State Medical Society. *Athens Press*, Iowa City, Iowa. 1948. $1.

The first edition elicited so much interest as to require the printing of more than 50,000 copies. This edition is demanded for a continuation of the life-saving work initiated by the first.

It portrays a well-conceived plan of instruction for creating and maintaining an awareness as to cancer, with a minimum of chance of creating cancerphobia.

HOSPITAL TRENDS AND DEVELOPMENTS 1940-1946, edited by A. C. BACHMEYER, M.D., Director University of Chicago Clinics, and Director Hospital Administration University of Chicago; and GERHARD HARTMAN, Ph.D., Superintendent University Hospitals, and Professor of Hospital Administration, University of Iowa. *The Commonwealth Fund*, New York, 1948. $5.50.

Hospital Trends and Developments is a compilation of articles selected from the periodicals in the hospital and allied fields in 1940-1946. The needs of the hospital administrator, the department head, board members and trustees, and the student of hospital administration were in mind.

The editors continue in this book the work begun in *The Hospital in Modern Society*. The contributions are from journals in the fields of hospital care, medicine, public health, business organization and management, law, sociology and psychology. There are chapters on Current Trends, Rural Hospital and Health Facilities, Hospital Developments in Foreign Countries, Volunteers and Volunteer Service, and Regional Planning of Hospital Services and Facilities.

A choice compilation of propaganda for the Wagner-Dingell-Murray plan, for the hospital tail to wag the doctor dog, blandly assuming that Ph. D's. know a lot more about how to care for the health of humans than do M. D's.

A good many years ago one of the contributors told this reviewer that more than 60 per cent of the Negroes who died in S. C. in the previous year had no doctor's attendance in the last illness. He

said he had heard the statement made in a meeting of Health Officers held at Columbia. Inquiry, direct, of the State Health Officer of S. C., brought the fact that the statement was that "of those dying in S. C. without medical attendance in that year, more than 60 per cent were Negroes." When this was shown to the hospital authority making the absurd statement he treated it lightly, apparently thinking there was little difference between what he had said and what the S. C. Health Officer had said."

A-B-C's OF SULFONAMIDE AND ANTIBIOTIC THERAPY, by Perrin H. Long, M.D., F.R.C.P., Professor of Preventive Medicine, Johns Hopkins University School of Medicine; Physician, The Johns Hopkins Hospital. 231 pages. *W. B. Saunders Company*, Philadelphia and London. 1948. $3.50.

This book presents the author's experience in the use of sulfonamides and antibiotics for more than twelve years; i.e., for the whole time that these agents have been obtainable. It is likely that it represents a longer and wider experience with these agents than has been had by any other physician. Doctors everywhere will eagerly welcome and use daily this little authoritative work on these remarkable products.

OCCUPATIONAL MARKS and Other Physical Signs. A Guide to Personal Identification, by Francesco Ronchese, M.D., Instructor in Dermatology, Boston University School of Medicine. Foreword by John G. Downing, M.D., Professor of Dermatology, Boston University School of Medicine. *Grune & Stratton*, New York. 1948. $5.50.

The foreword tells us that recently an expert was able to deduce, solely from examination of the legs of an individual murdered and dismembered that it was a female, her station in life and probable occupation—information which led to identification.

The book sets down markings more or less characteristic of scores of different occupations, all the way from baker and bologna-sausage cases make to teacher and trumpeter.

Granuloma Inguinale Treated with Streptomycin (L. C. Marshak, M.D., *et al.*, Chicago, in *Jour. A. M. A.*, Aug. 7th)

Eleven patients with lesions of granuloma inguinale were treated with streptomycin. All showed an immediate favorable response, with disappearance of Donovan bodies and healing of lesions. A progressive resolution of the lesions was observed long after discontinuation of streptomycin therapy. Four patients, with lesions of from two to 28 years' duration, whose disease had been resistant to antimonial therapy, showed prompt response to streptomycin. Three relapsed after a period of three weeks to eight months. No sign of developing resistance to streptomycin was observed in one patient retreated after a relapse. Eight patients had been observed for two to 15 months and showed no evidence of relapse.

Protein Hydrolysate's value in cases of peptic ulcer is only as a food.—*Waldman.*

Treatment of Phthisis with Salicylic Preparation

(*British Medical Journal*, July 17th)

In the Annual Conference of the British Tuberculosis Association Professor Jorgen Lehmann (Gothenburg) described the treatment of pulmonary tuberculosis with para-aminosalicylic acid. In a large series of cases, many of them with advanced disease, improvement was noted in more than 50%. The most striking effect was an improvement in general well-being coinciding with an increase in weight, raised haemoglobin, and a fall in the blood sedimentation rate. Improvement in the radiological appearances was seen in the exudative type of disease, but in the more chronic cases cavities were little affected. The treatment, however, made it possible for many of these cases to have coincident or subsequent collapse therapy. Toxic effects were not usual, though some patients had had vomiting and diarrhoea. The drug was given orally in doses of 14 g. daily (for an adult) divided into four or six doses. It was rapidly absorbed and excreted and a blood concentration of 3 to 6 mg. per ml. should be maintained. Treatment could be continued for several months, and bacterial resistance to the drug did not occur. The blood sedimentation rate was the most sensitive indicator for the management of treatment.

Treatment of Headache with Sodium Nicotinate

(M. T. Block, M.D., Newark, in *Clinical Medicine*, July)

The dosage in most cases was 10 mg. intramuscularly twice a week, the number of doses 1 to 6. No patient received more than 6 injections and 2 of those who received 6 injections obtained no relief. The patients were not informed as to the reasons for the injections until the amount of relief obtained had been ascertained.

The effects of sodium nicotinate on 35 patients with headaches of varying types: 25 obtained complete relief with four injections, three with six injections. Five patients obtained amelioration of symptoms while two were not affected.

Side reactions, as peripheral flushing and a feeling of heat, did not occur with 10 mg. doses.

The use of a sodium salt of niacin in 10 mg. doses is recommended for the treotment of headaches not due to intracranial pathology, particularly for those of the idiopathic type.

*The sodium nicotinate was supplied by Farnsworth Laboratories—Fornate.

Urethane Therapy in Leukemia

(A. J. Creskoff *et al.*, in *Journal of Hematology*, August)

It is our impression that urethane will prove to be an occasionally useful adjunct in the management of chronic leukemia.

It is the opinion of the authors that in the treatment of leukemia in general, urethane is less consistent in effect than irradiation therapy and more consistent and more efficient than such agents as Fowler's solution, benzol, and colchicine.

Urethane deserves further trial in the treatment of leukemias of all types.

Many Cases of Tuberculosis Among Patients Dying in a State Mental Hospital

(F. H. Tanner, M.D., Lincoln, in *Neb. State Med. Jl.*, Sept.)

This study is based on 119 consecutive postmortem examinations, in a State hospital, 1943-1946, in which period there were a total of 336 patient deaths: 196 males and 140 females. The autopsy rate was 35.4% of the total deaths. The 119 autopsies included 78 males and 41 females.

The mortality data shows a rather marked predominance of males even though there were more female patients. One-half had been in the hospital five years or more.

Pulmonary tuberculosis was the cause of death in 18 cases—15% of all the cases autopsied. In 11 additional cases active tuberculosis was found. This total of 29 cases represents 24% of all the cases examined at autopsy.

These figures show that tuberculosis often is present in the aged. It is believed the disease was acquired, in most instances, after entering the institution. Only 15 deaths out of 119 were attributable to the heart (12.5%) and of these only three (2.5%) were from coronary artery disease. This is even more remarkable when the age and predominance of males is considered.

A predominance of inflammatory diseases, both primary and complicating, particularly of lungs, is noticed and would suggest to this hospital physician that in these mental cases almost a routine use of general chemotherapeutic agents would be proper, and the use of B. C. G. vaccine seems worthy of investigation.

Edema.—Use of mercurial diuretics and rigid restriction of sodium in the diet has modified our conception of cardiac decompensation. The symptoms of congestive heart failure fall into two large groups: (1) Those due to poor function of tissues and organs caused by the heart's inability to maintain the blood supply of the part. The muscular weakness of congestive failure in this class. (2) Those related to accumulation of salt and water in the organs and tissues—dyspnea, orthopnea and cough. These symptoms will disappear on rigid salt restriction even though the circulation has not improved. The dyspneic, orthopneic, miserable patient becomes a comfortable, normal-appearing ambulatory subject as long as sodium is withheld. The circulation may not have improved, and return to a normal diet is likely to produce a recurrence of symptoms.—*E. A. Stead.*

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JAMES M. NORTHINGTON, M.D., Editor

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Risks and Problems of Pathology in Pregnancy and Labor

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SEPSIS AND HEMORRHAGE have been the major life threats of pregnancy and parturition for countless years. Accumulated awareness of the lethal powers of these complications has produced a series of correlated happenings. More has been written of sepsis and hemorrhage than of any obstetrical dangers, indicating the concern they arouse. Practical application of recent advances has helped in preventing or correcting their occurrence and effects in pregnancy and parturition. So true is this that, when we regard the remarkable reduction in maternal mortality, we find the major contribution to have been salvaging those parturients who in other years would have died because of hemorrhage, toxemia and/or infection. It is impossible to estimate the numbers saved by transfusions, sulfa drugs and penicillin. The role of these agents in controlling the greatest of these pregnancy risks is too well known to require elaboration, but their amazing effect in saving, within a generation, countless thousands of parturients is still awesome.

Removing such a large section of major contributors to the death roll has increased the *relative* contribution of the former lesser contenders. For instance, we now find that heart disease is responsible for one-third of all of our maternal deaths. Therefore, the serious medical complications of pregnancy now are given more intense and scrutinous study in an effort to better control and limit their adverse effects on maternal and fetal life. For such reasons, I have taken for your consideration a group of pathological conditions complicating or developing in pregnancy and parturition, which may act as life threats, increase morbidity and in many cases materially influence the postpartum and later life of the patient.

A Feature of the Program of the New Hanover County Medical Symposium, held at Wrightsville Beach, August 20th.

Heart Disease

Heart disease is considered first because of frequency and fatality. Heart disease is a common complication of pregnancy solely because its frequency curve is highest during the reproductive years. More than 90 per cent of all the cardiac cases seen are of rheumatic origin, and in four out of five mitral lesions account for the symptoms. Deaths from cardiac disease rank third in our list. Married women with heart disease are naturally concerned about pregnancy possibilities. They want to know what their chances are for surviving, what, if any, effects the pregnancy will have in worsening their condition and shortening their lives. The most favorable prognosis is given to those patients who have been able to lead normal lives without symptoms indicating heart strain, who have survived adolescent and early adult years without cardiac failure, who have a single valvular lesion, preferably not with aortic regurgitation, and who have no or slight cardiac enlargement.

The outlook is worsened for all patients with cardiac disease who have suffered heart failure when not pregnant, or who have, in addition to

their cardiac disease, some complication such as hypertension or marked cardiac enlargement. In the more favorable group, the chances for survival are good with the death rate not much in excess of the rate for non-pregnant cardiacs of similar age. With a more severe lesion, the maternal death rate is twice as high as for non-pregnant cardiacs of comparable age. One of the most unfavorable complications is auricular fibrillation, which markedly increases the death rate of pregnant cardiacs. Pregnancy constitutes a distinct risk to the cardiac patient. Her circulating blood volume rises nearly 50 per cent, and in addition there is some hydremia. Pregnancy causes increased cardiac output, greater oxygen consumption, and progressive strain on the circulation. It is not possible to predict how such normal physiological changes will affect an individual who has a disabled heart, and the evidences of disturbance, while usually appearing gradually, may come on suddenly with calamitous results. Experience indicates that the maximum load is developed at the eighth month of pregnancy with an easing off in the ninth month.

The practical application of knowledge is insistence upon maximum rest and the prohibition of interference with the pregnancy at the eighth month. Between the sixth and the eighth months, when the load is heaviest, the threat greatest and the patient least able to tolerate any added strain, any interference is contraindicated. Cardiac patients are carried beyond the ninth month, when general improvement is to be expected, and improvement in circulatory mechanism will permit interruption if this be needed. These patients and their course are individually so unpredictable that they must all be watched with extreme care and hospitalized as soon as any evidence of cardiac strain appears.

It is the duty of the physician caring for the pregnant cardiac to control her prenatal course with a view to obviating the possibility of cardiac failure. She must be warned and guided, not only in the amount of effort she puts into the care of her home and her family, but also as to her hours of sleep, the games she plays, frequency of intercourse, control of weight, fluid ingestion and any psychic factors interfering with her peace of mind. She is to be put to bed as soon as any symptoms of congestive failure appear, even though these be minimal. She may then require hospital observation until the time of delivery. It must be remembered that many pregnant patients with no heart disease have symptoms simulating it. They frequently are breathless, have edema of the feet, become fatigued easily, sometimes have a rapid pulse, occasionally nocturnal dyspnea. A patient having definite cardiac history and findings, presenting such symptoms, must be considered abnormal, and the possible development of cardiac failure must be borne in mind until the symptoms are otherwise explained.

Superimposed subacute bacterial endocarditis must be constantly considered during pregnancy. We have seen a number of autopsies which revealed that death was due to an old cardiac lesion, the obvious reason for the patient's demise, at which numerous fresh vegetations were demonstrable on the valves. Many of these patients did not show the weakness, night sweats, fever, nose bleeds, loss of weight and appetite, etc., which are common manifestations of active endocarditis. When suspected, the increase in sedimentation rate and white blood count, increase in cardiac size, and identifying the causative organism by repeat blood cultures are usually sufficient for diagnosis. Prognosis in general is very bad, with reactivation, although a recovery in one case has recently been reported.

Tuberculosis in Pregnancy

The coëxistence of pregnancy and tuberculosis is to be expected, since almost all pregnancies occur between the ages of 15 and 44 years, the period during which tuberculosis claims the vast majority of its victims. Opinion as to management of tuberculosis in pregnancy has varied as much as, perhaps more than, that which obtained for heart disease. At one extreme it was believed that pregnancy was a cure for tuberculosis; at the other, that pregnancy should never be advised, never even permitted to continue, in a tuberculous patient. The opinion now is that pregnancy *per se* probably exerts little effect upon the course of tuberculosis. The lifting of the diaphragm, the increase of circulation, etc., are probably unimportant. However, a pregnancy means not only more work for the organism; it also means more housework, less rest, more interference with nutrition, all of which tends to activate preëxisting tuberculosis.

Therapeutic abortion is of little help and is seldom advised except in cases of active pulmonary disease with hemoptysis, and in such cases it is considered only in the first three months of pregnancy.

Most urgently indicated is the intensification of all forms of treatment usually advised in the management of the tuberculous patient. Statisically, tuberculous gravidae who have never had collapse therapy, prolonged hospitalization, or thoracoplasty, have a mortality three times as high as have patients where such measures were employed. Pregnancy is no contraindication to uni- or bilateral collapse therapy; indeed, patients so treated may be expected to respond promptly and satisfactorily Pregnancy in patients who have had thoracoplas-

ties, likewise, have better labor experiences than the untreated.

Obviously, the success of any of these measures is determined by the nature and extent of the disease itself. Collapse therapy before and during pregnancy is not only permissible but helpful, the amount of refill during the last trimester being determined by presence or absence of dyspnea. Thoracoplasty *during* pregnancy is contraindicated because of the high mortality rate. Patients who have arrested tuberculosis frequently question the advisability of marriage. Unless the marriage involves, in the care of home and other activities, more physical effort than the patient can tolerate, it is not forbidden; but pregnancy should be deferred for two or three years until the tolerance of the patient to the marital status has been positively determined. The delivery of these patients is much the same as that of any others. Cesarean section is certainly not needed unless there is some obstetrical indication for abdominal delivery. The anesthesia is usually local or spinal and the postpartum management varies only in that lactation is never permitted and that the newborn must not come in contact with the mother.

Diabetes Complicating Pregnancy

The seriousness of diabetes in pregnancy has been mitigated by the discovery and progressive development of insulin. This has resulted in many more juvenile diabetics attaining to the childbearing age. The outlook in longstanding diabetes is not as good as in more recent cases, inasmuch as vascular disease incident to diabetes has been operative over a longer period. It is the degree of the pre-pregnancy vascular change that determines maternal and fetal mortality and morbidity, for the longer the duration the greater the risk. If the vascular system has not become diseased, or only very mildly so, maternal danger is slight, and with good control of the diabetes the prognosis is good.

It is important first to determine whether the patient has diabetes, inasmuch as glycosuria in the latter part of pregnancy is a common finding in more than half of normal pregnant women. The status can be determined only by blood-sugar determination and the sugar-tolerance test, and a careful investigation of any symptoms suggesting diabetes. A very severe maternal threat is the onset of *preëclampsia*. This is common to these patients and may be extremely difficult to control. Where the diabetes is of long standing, the vascular damage is evidenced by intercapillary glomerular sclerosis, retinal changes, albuminuria and hypertension, and for such patients the outlook is poor. In the case of one of our recent diabetic patients, mild edema progressed to general anasarca, although there was at no time albuminuria or rise in blood pressure. This condition resisted all attempts at dehydration by means of magnesium sulphate, intravenous glucose and mercurial diuretics, although there were no coëxisting evidences of vascular disease.

With such patients there may be difficulty in controlling electrolyte balance. The administration of estrogenic hormones exerts a suppressive action on the gonadotropic pituitary hormone and also upon the diabetogenic hormone. It is possible to reduce insulin requirement in diabetes by administering large doses of estrogen, as much as 10,000 rat units every four or five days, for the purpose of inducing an inhibitory action on the pituitary diabetogenic internal secretion. Premature delivery, intrauterine and neonatal death are not infrequent in diabetes and may be predicted by excessive rise in chorionic gonadotropin after the fifth month. Blake and her coworkers have found that such accidents may be prevented by exhibiting estrogen, or, preferably, diethylstilbestrol, with or without progesterone, in rather large doses.

Diabetic patients are encouraged to await normal delivery, although termination of the second stage of labor with forceps is preferable to a long second stage. Cesarean section is certainly not indicated unless there is a reason other than the diabetes. It is also necessary to watch the baby for evidence of hypoglycemia for the first 24 hours and prophylactically employ 10 per cent glucose by mouth every two hours. The physician in charge of the diabetic phase of the case must carefully watch the patient for a few days postpartum, inasmuch as rapid changes in insulin requirements are a common occurrence.

Hyperthyroidism

Hyperthyroidism is a very uncommon complication of pregnancy. The condition itself is being encountered with less frequency than some years ago, even in the non-pregnant. Until recently the tendency has been to treat the condition as an acute and emergent one, without regard to the pregnancy, and to operate upon the patient after suitable preparation. More recently there is an accumulating interest in thiouracil and propylthiouracil in the treatment of hyperthyroidism, and while the author has had experience with but one case, 13 have been reported in the literature. Propylthiouracil promises much in the treatment of hyperthyroidism complicating pregnancy, although it is much too early to render final judgment. The fear that its use might work some injury to the thyroid of the newborn, which is known to be fully functioning at birth and secreting during the seventh month of gestation, has not been borne out by experience to date. Medical control of this rare complication of pregnancy, therefore, is a distinct possibility.

Anesthetic Complications During Pregnancy

I do not propose to discuss anesthesia for delivery in even general terms, for that is a subject requiring prolonged discussion in itself. If one were discussing anesthesia in Chicago, for instance, it would be heretical to even mention spinal anesthesia. On the other hand, in our clinic it would be highly improbable that many patients requiring operative termination of labor would be delivered in the course of a year with anything other than some form of spinal or regional anesthesia. In some clinics, including our own, local anesthesia is deemed suitable in some cases, and in other clinics it is very extensively employed. We certainly have no argument with those who maintain that local anesthesia is a very good form of terminal obstetric anesthesia. We use inhalation anesthesia very frequently, mostly gas-oxygen with small amounts of ether, but we use cyclopropane only rarely.

Cyclopropane is regarded as a rather dangerous anesthesia for obstetric patients. It resembles chloroform in its tendency to produce ventricular fibrillation, especially so as the patient is recovering from the anesthesia. If it is used, the patient must be observed most carefully and under no circumstances must she ever be given pituitrin. I believe it is now well recognized that the combination of cyclopropane anesthesia and pituitrin injections predisposes to sudden death as the patient is recovering consciousness. The combination of the toxic myocardial action of cyclopropane with the sudden increase in circulating adrenalin concurrent with anesthesia recovery, plus the well known constricting action of pituitrin on the peripheral arterioles and capillaries, and the even more marked effects on the coronary and pulmonary vessels, producing some cardiac dilatation and weakness, with the slowing of the cardiac rate and reduction of cardiac output—all these considerations render this combination of drugs extremely bad for *any* patient, and most especially for the pregnant.

Another and very serious hazard for the obstetric patient taking anesthesia is the possibility of gastric content regurgitation in the course of anesthesia. For many years this has been recognized as a not infrequent occurrence and such patients who exhibited suggestive symptoms were regarded with great concern for several days postpartum. The matter has been more recently pointed up by Mendelsohn and others and renewed attention is being given this rather severe anesthetic complication. Obstetric patients are more or less fit subjects for this sequence of events because, unlike the average surgical patient, they are seldom properly prepared for the anesthesia which terminates the second stage of labor. They frequently come to the delivery room after long labors, often with stomach full of food, or with much fluid administered by mouth. There is in many cases increased acidity of the gastric content, and the induction of the anesthesia is hurried. Patients who aspirate regurgitated material exhibit symptoms of either solid material obstructive block, or aspiration of highly acid gastric content. The former group will choke to death from complete laryngo-tracheal obstruction unless the air passages are freed *immediately*. The second group aspirate highly acid fluid material, and show cyanosis, dyspnea and rapid heart rate, with the immediate appearance of an asthmatic type of bronchial congestion associated with wheezes and rales of various types. Pulmonary edema frequently follows, produced by the irritative action of the hydrochloric acid with subsequent bronchial exudation, spasm and congestion. The right lung is most often involved although if the aspiration is extensive there are bilateral signs.

Prevention of this complication consists in having the stomach empty when the patient is anesthetized. In long labors fluid is given by vein rather than by mouth or the stomach is washed out before the induction of anesthesia. Administration of an alkali to neutralize acidity of the stomach content is recommended; but best of all is the use of a regional block or local type of anesthesia such as spinal or local infiltration whereby the patient retains her expulsive efforts, without loss of the vomiting reflex should the need develop. It is important that there be at hand in the delivery room, ready for immediate use, a suction tube and laryngoscope, with a delivery table suitable for placing the patient in the Trendelenburg position instantly, should vomiting occur. Only by prompt recognition of the occurrence of the complication and urgent attention to the details required for its correction, can victims of the accident be salvaged from the mortality list.

Embolism Complicating Pregnancy and its Treatment

When one speaks of embolism during pregnancy, almost invariably he refers to the postpartum phase, when embolic manifestations are most commonly encountered. Antepartum embolism is seldom seen. Most embolic accidents are noted subsequent to pelvic surgery or cesarean section, although many will be encountered in persons with no surgical-obstetrical experience. The complication adds heavily to morbidity and mortality in pregnant patients, however, and probably accounts directly or indirectly for five to ten per cent of maternal deaths. The importance of this complication in surgery and obstetrics accounts for the widespread attention it has received in recent years and which is leading us slowly but surely into more rational methods of early detection and management. It must certainly be stated that one no

longer waits until symptoms are full-blown or pulmonary embolism has occurred, excluding of course those rare catastrophic manifestations which appear and kill without previous warning. Almost always there is an earlier calf cramp, a concomitant rise in pulse, temperature and respiration for which there is no ready explanation, chest pain which may be transient with or without cough or bloody sputum, and tenderness in the inguinal or popliteal area or the calves of the legs without associated swelling or edema. The first signs to look for are deeply located tenderness in the calf of the leg, and a positive Homan's sign, which is calf pain induced by sharp dorsiflexion of the foot. While we favor and practice early ambulation of obstetrical and surgical patients, there is nothing in the literature or in our own experience to make us believe that it materially influences or reduces the incidence of embolism.

When venous thrombosis is diagnosed, with or without accompanying symptoms of embolism, the question of treatment immediately arises. Fortunately we no longer rely solely upon hope, worry and patient sedation. Treatment is divided along rather widely divergent lines, one favoring surgical attack and the other relying upon anti-coagulation therapy. When one considers the sources of postpartum embolization, it is apparent that nothing short of vena cava ligation would suffice for many. It is also clear that if lower ligation is carried out it must be bilateral. But ligation of the inferior vena cava upon embolic patients, most of whom are critically ill, is associated with an extremely high mortality. It is also readily admitted that the procedure itself is neither specific nor physiologic, and is often followed by symptoms which persist and are a source of great distress. For these reasons I have ligated in only a few cases, and have preferred in general medical anti-coagulation therapy. Here, recourse is had to two anti-coagulant drugs—dicoumerol and heparin. We use both but generally prefer the former for prolonged therapy.

The administration of dicoumerol is a simple procedure. It can be given by mouth, and its effect followed by a daily prothrombin determination. It has disadvantages, however, which certainly should be recalled. In the first place, its action is delayed 36 to 48 or more hours, and in some cases this is highly undesirable. It acts directly upon the liver and checks the formation of prothrombin at its source, but does not act upon the prothrombin already circulating or formed. Also, the daily testing of prothrombin time is a task of no slight magnitude, while the lag in the effect of the drug makes the patient more susceptible to overdosage, with recurrent or severe hemorrhage, especially following operative procedures. It should not be used whenever there is marked hepatic dysfunction or pathology. In general, overdosage can be corrected by use of vitamin K or with whole-blood transfusions, and a gamble taken upon the induction of further embolization. Ordinarily the initial dosage is 300 mgs. of dicoumerol following in 24 hours by 200 mgs., the dosage then continued in daily 100 or 50 mg. amounts until the prothrombin time is between 20 and 30, preferably at the lower level.

The level *must be kept low* if the treatment is to be effective. When the need is urgent and while awaiting the effect of dicoumerol, heparin is given. Heparin works differently than dicoumerol, since its action is entirely within the blood stream. It interferes with platelet clustering and the freeing of thromboplastin from the platelets; it produces an anti-prothrombin and prevents the conversion of prothrombin to thrombin with resultant blood coagulation. It is not only effective in preventing propagation of an already formed clot; it tends to break down partially organized clots and keeps open the other channels of lymphatic and venous blood flow. Complications of its administration are the time element, the prolonged venoclysis or repeated daily intravenous injections, interference with the patient's activity over the long hours of drug administration, and local reactive pain. In its optimal use, the blood coagulation time will be prolonged three times that of the patient's normal as determined before medication was started, so that the normal of 10 to 15 minutes will be increased to 30 to 60 minutes.

Recently there has been offered by Loewe and his coworkers a solution of heparin in a Pitkin menstruüm which slows the rate of release of the heparin when injected intramuscularly. In this manner an initial dosage of 300 mgs. of heparin accompanied by 1 mg. of epinephrine and 25 mgs. of ephedrine sulfate is found to suffice for 24 hours for 90 per cent of patients. Subsequent dosage depends upon the response as judged by a comparison of the coagulation time with the patient's normal, the test used being the Lee-White modification of the Howell technique.

It is probable that we will arrive at a method for controlling intravascular coagulation by an effective medical means, not technically difficult to administer nor tedious nor trying to the patient, not requiring elaborate, difficult or uncertain laboratory techniques to determine its effectiveness. Ideally it will be a method which will require not more than one injection a day, which can be controlled or revoked with ease, the effect followed with simple laboratory methods, and with demonstrative effect upon already formed clots and clot propagation. In any case, embolization markedly increases the sum total of morbidity, and to some

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Psychosomatic Medicine: Problems in the General Hospital

JOHN F. WILLIAMS, M.D., Richmond, Virginia

THE traditional training given in most of our medical schools and hospitals has omitted considering the treatment and nursing care of the patient with psychosomatic illness. Because of this it is difficult and often impossible to obtain in the general hospital the minimal care needed for these patients.

Too often lay superstition and misinformation of students of nursing and medicine are carried over into their professional lives. In general there is a tendency to consider the "nervous patient" or the patient with "functional illness" as one who is usurping valuable bed space, and who is receiving care and treatment that well could be put to better use. Once the patient is labeled "neurotic," the familiar hospital grapevine begins to function, and nearly everything done for him is colored with the resentment — conscious or unconscious — of those responsible for his care.

Assuming, as is generally the case, that the nurse on general duty has had no opportunity to learn the art as well as the science of nursing, it is the duty of those responsible for her training to give her the fundamentals of body-mind relationships. Adequate supervision by those who have some insight into the nursing needs of these patients and some knowledge of the present trends to understand the patient as a sick human being in distress are a necessity. Good nurses love their work, and physicians as well as patients receive immeasurable benefit from their efforts. If we want our neurotic patients to be properly attended, it is our duty as physicians to arrange for conferences with nursing superintendents in which a program of instruction in basic psychosomatic concepts is agreed upon.

Although some medical schools are teaching psychosomatic medicine, not many interns and fewer residents are prepared to cope with the emotional factors of illness. In happier times it was the custom for interns to accompany visiting staff members on hospital rounds. This often proved mutually instructive. When this is not possible some arrangement must be made to give the house staff the rudiments of treating the psychic components of disease. Conferences, informal discussions and case reports led by an informed and interested member of the visiting staff will help. Inestimable harm can be done some patients by unnecessary conversation about blood pressure, etiology, prognosis and treatment. Such expressions as "you're just neurotic . . there's nothing the matter with you," "you must get hold of yourself," "it's only imagination," and the like should be purged from medical speech. Pain is no less severe because it is caused by the pressure of life. No pain is imaginary. In the acute phases of nervous illness, before proper psychotherapy is possible, relief of discomfort is as necessary for the neurotic patient as it is for any other patient and sterile hypos have no place in their treatment.

If it is emphasized to the intern that the great bulk of his practice may be made up of the so-called functional illnesses, he may be stimulated to give more attention to this often neglected part of his work.

The coöperation of consultants is important. The results of many arduous hours of psychotherapy can be destroyed by the unintentional but careless remarks of a consultant. We are all only too familiar with the average patient's tendency to misinterpret or misconstrue chance remarks made at the bedside. In fairness to the consultant he should be fully informed of the patient's history and he, in turn, should limit his remarks to simple assurance and tell the patient that the results of his examination will be given to the attending physician.

One of the greatest causes of the perpetuation of neurotic illness is the lack of proper pre- and post-operative care. Wonderful progress has been made in the preparation of the patient's body for surgery, but little or no attention has been given to the emotional aspects of the ordeal. We are familiar with the careful pre-operative preparation of the patient with toxic goiter. The benefits to the patient as well as to the hospital as a whole that would accrue as a result of similar well planned care in the form of proper explanation and assurance would be tremendous.

No patient is helped by being brought early to surgery and left on the stretcher in the hall. There it is often impossible for him to avoid seeing gory specimen trays and blood-stained linen, and to observe moaning and vomiting patients being carted hurriedly from the operating rooms. As a result, a natural apprehension is enormously increased which produces physiological changes. These, in turn, may result in harmful or even dangerous complications. The employment of proper sedation and, in selected cases, of intravenous anesthesia given while the patient is still in his room can do much to prevent emotional stress. If inhalation anesthesia is used the coöperation of an understanding anesthetist can be of great assistance. Many patients

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are psychologically unfitted for a spinal or local anesthesia and in these some other agent should be administered if possible.

Early ambulation helps greatly to cut short the post-operative period and the hospital stay. In addition to its known physiological benefits it is of obvious psychological value. Any reasonable means of eliminating the need for the time-honored soapsuds enema and the perils of the bedpan and urinal will do much for the morale of any patient.

The control of post-operative pain should be taken for granted, but too often codeine is considered a panacea. Nervous patients generally have a low threshold for pain, and dosage of adequate medication should be given them accordingly.

Asthma, peptic ulcer and other gastro-intestinal disorders, many dermatoses, some conditions of the nose and throat, and certain rheumatic diseases are known to be largely psychosomatic in origin. Essential hypertension kills about one-fourth of those over fifty. Although the etiology is unknown, the psychological components of this disease often determine the outcome.

Apprehension is the product of our times. It is our responsibility to prevent additional psychological illness by our coöperative efforts.

Discussion (Includes paper by Dr. O. R. Yost—June issue)

Dr. Paul D. Camp, Richmond: I am neither a psychiatrist nor a doctor of psychosomatic medicine. I know very little about the subject Dr. Yost has presented, but I have worked with Dr. Williams from time to time and I certainly agree with what he says.

There are about a third, I believe, of the cases which I see in practice limited to cardiology, in which there is no discoverable organic or structural heart disease. Such patients come in because of some cardiac anxiety neurosis, which may be a bad term. These people have symptoms which give them concern about their hearts, and with what means we have we are unable to determine structural damage. They may have damage we can't demonstrate. These patients, as Dr. Williams says, suffer a great deal of pain. I think they are in general more unhappy than patients who have organic heart disease, and it is certainly the doctor's duty to respect their complaints and try to get them well and not tell them their pains are imaginary.

Another large percentage of patients do have organic cardiovascular disease but what is worrying them is the group of symptoms not due to structural damage, but to apprehension and anxiety that goes with the damage, so again I think that this branch of medicine is extremely important.

Dr. Johnson, Buffalo, N. Y.: I am strongly interested in psychiatry and psychosomatics, also in worry states in the ordinary citizen that I won't call psychoneurotic or psychotic.

Everywhere now we are having discussion about the future of the general practitioner. In Buffalo we have a program to bring the general practitioners up-to-date on what the specialists know about psychosomatics in medicine and psychiatry, to enable them to take care of a goodly number of psycho-neurotics and leave the psychotics and neurotics to the specialists.

We hear a lot of advice given—don't worry. If you will bear with me a minute, I'll tell you how I tell patients how not to worry. Maybe this is all wrong medically, but it seems to work—I ask them do they answer all their problems with their conscious minds or subconscious minds? The vast majority say they answer with their conscious minds. I tell them they don't. They sit up and take notice immediately. I tell them—"if you have a worry, you must have a problem; if you have a problem, you ought to be able to put it in ten words or less, like a telegram; if you cannot put it in ten words or less, you have no problem, no worry." I tell them "if I am sending my wife a telegram, I have to revise it ten times to get the impression over to her I'd like to make;" "so by the time you have got your problem in ten words you think your wife will understand, you understand it yourself. When you ask yourself—is this a problem that I can answer?, is my knowledge and experience sufficient so I can answer this problem?, and if, for the sake of argument, it is a medical problem"—you know it is—"then take that problem to some doctor in whom you have confidence"—and that is quite important. "Your bringing your problem to me, in itself, explains the problem so I understand it, your problem is gone, your worry is gone." You can see the patients' faces light up. Then I give them another one to answer—"now I have your problem, why don't I worry? For three reasons—I know the answer, or know where to get the answer, or know it is unsolvable, like social security." "If it is a problem you should know the answer to, answer it, not by holding your head in your hands trying to guess the answer. That isn't the way to get the answer. All you have to do is to state the problem to your subconscious mind and put your conscious mind on stating some other problem—not answering but stating." I tell them that I try to think of my name, and the only way I can think of my name is that my name is on the top of my prescription pad and I can look on that and write it at the bottom. I am forgetful. Then they really can see the point; so all you have to do is to tell them to give it to their subconscious minds, and put their conscious minds on something else. It is so simple they all leave with a smile on their faces and come back in a week and say, "All my problems are solved."

Dr. J. K. Hall, Richmond: Mr. President, if I had been, as I generally am, properly restrained by the interrogatory that came to Job out of the dust, "Who is this that confuseth counsel with words without knowledge?", I would have remained in my chair. We have a lot of that confusion, more of it, I surmise, in medicine than anywhere else, maybe. I am certain that I am inclined to talk more about things I know less about, and that is an enormous domain.

A good many years ago in your city, Mr. President, I attended for the first time the meeting of the Medical Society of the State of North Carolina. I had been dealing for two or three days prior to the opening of that meeting with the Board of Medical Examiners. They were kind enough to license me to practice medicine, largely because I was living in an insane asylum—had been for two or three years. I knew none of the members of the State Medical Society, and I don't suppose any of them had ever heard of me. Several doctors discussed a paper that was read and I don't remember the paper, but I remember when one doctor arose and said, "Mr. President" and everybody looked at him intently and he stood speechless, it seemed to me for two or three minutes and said, "Mr. President" again, his auditors looked at him intently and didn't seem surprised at his speechlessness. Then he said this, "The saddest sight in life is the individual who doesn't know how to live it." The remark was made by Dr. Cyrus Thompson, whom I later came to know well, and immensely wise he was, in knowledge of his fellow man and gifted in the use of language beyond almost any other doctor that I have ever known, both written and spoken language. "The saddest sight in life is the indi-

vidual who doesn't know how to live it." That remark comprehends all the neuroses, I surmise, and all the psychoses, and it embraces all mortals who have conscious difficulty in living their lives or in being lived by their lives, whichever it may be.

I feel, Mr. President, that a good deal of the criticism of present-day medicine is deserved. I feel that the dissatisfaction of the people with the practice of medicine comes from the inability or unwillingness of the doctor to sit by the patient and hear the patient's story. Most of us like to talk about ourselves. Sometimes we enjoy talking about others, but we are most interested in ourselves. As the doctor of today—the practice of medicine—becomes more mechanized, the doctor doesn't have the time, he thinks, to sit and hear the patient's story. He doesn't become well acquainted with the patient as did the docor of a more distant day and he doesn't give the patient the opportunity to experience that comforting state that comes from verbal expurgation. Very often a sick person is enormously benefited by being given the opportunity to pour out an account of his condition into sympathetic ears.

I am greatly impressed by what was said just before I began to say something myself.

Dr. R. B. Davis, Greensboro: As a surgeon I certainly do appreciate the fact that we have been told in no uncertain terms that our patients will recover more quickly if we are a little more considerate of them, spend more time listening to them, prior to the time they go under the knife. I go to our hospitals to operate—and see doctors when scrubbing up laughing and hollering and slapping each other on the back and it sounds like a picnic or a big poker game. I say, "Fellows, whose sister is coming up to be operated on this morning?" They say "Nobody's." I say, "Whose mother? You fellows are talking and laughing and whooping and that patient is listening to it, and the people in the hall and in the other rooms are hearing it. That isn't increasing the confidence of whoever it is you are going to operate on, or of the others." It is so profoundly true, so materialistic. We think we can do with scalpel, scissors or needle all that needs to be done, but it isn't true.

I enjoyed the papers.

Dr. Yost (closing): I wish to thank Dr. Camp and Dr. Johnson and Dr. Hall and Dr. Davis for their discussion of the papers.

The only other point I would like to emphasize is what Dr. Hall said about busy practitioners. If we would take a little more time and let the patients talk. It is one of the finest forms of psychotherapy that can be carried out in general or any other practice, goes a long way in helping neurotics, keeps them from going to institutions or becoming malignant mental cases. Thank you.

Dr. Williams (closing): I also want to thank those who discussed my paper. Dr. Camp mentioned that I worked with him. I had the pleasure of working with Dr. Camp three years in the out-patient department of the Medical College of Virginia, and we used to see some interesting cases together and it gives me a good deal of pleasure to know that he recognizes one department that in his estimation is psychosomatic.

Dr. Johnson's rather practical approach to the problem helps. Psychiatry is nothing more than trying to understand another human being.

I appreciate Dr. Hall's remarks and Dr. Davis' statement regarding surgery. In papers previously read to this meeting Dr. Wilson spoke of the mental as well as the physical problems in treating coronary occlusion. Dr. Linton spoke on the early ambulation and things that were detrimental to patients such as anxiety; Dr. Remsen spoke about colonic disease and other dseases possibly as psychosomatic; Dr. Hayne in geriatrics spoke of worry in connection with elderly people being a factor of illness Much work on the bones and joints by Halliday and others in this country takes note of the mental aspect; and in conclusion, of course, I agree with everything Dr. Yost said and appreciate being on the same program with him.

Headaches and Head and Face Pains

(W. J. Frawley, M.D., Appleton, in *Wisconsin Med. Jl.*, Aug.)

Migraine.—Of greatest importance for diagnosis of migraine is the occurrence of the headache in repeated isolated attacks with complete remission in the intervals.

Histamine Cephalagia.—Formerly considered a type of migraine, histamine headache occurs in attacks of acute pain rather than headaches on one side of the face or forehead, and accompanied by local edema, lacrimation and nasal congestion. It occurs each day in cycles lasting weeks or months. Desensitization by injections of graded doses of histamine is recommended. Pyribenzamine and Benadryl have proved most effective, 50 to 100 mg. t.i.d.

Hypertension Headache is more often due to causes other than the hypertension and is likely to occur each morning soon after awakening and gradually wear away.

Myalgia of the Head.—Many "sinus headaches" are due to physical allergy involving muscles in relation to the head and neck. Benefit is reported from treatment with Niacin in 54 out of 72 cases—25 mg. by hypo., increasing up to 100 mg. daily. Benadryl and Pyribenzamine, and desensitization doses of histamine are of some value.

Brain Tumor characteristics—constant, progressive, localized headache with, later, change in personality, loss of vision and vomiting. Proof may be furnished by finding choked disks, increased intracranial pressure or changes on x-ray of the skull. Brain tumor may be present without any of these symptoms or signs. The possibility of a brain tumor must be daily borne in mind. It is by no means an uncommon condition.

The Evolution of Gastric and Duodenal Ulceration

(J. D. Craig, M.D., in *Brit. Med. Jour.*, Aug. 14th)

Although gastric ulcer was mentioned by Celsus and was well recognized in the 18th century, the disease does not appear to have been at all common until the middle of the 19th century, William Brinton (1857) concluded that 5% of the population were subject to gastric ulcer at some time or other in their lives. At that time gastric ulcer was predominantly a disease of young women, many of whom suffered from perforation. Haematemesis occurred more commonly in men, generally in the fifth decade, but by the end of the century this complication, too, was once more often affecting young women (Hale White, 1901).

It is generally believed that the apparent rarity of duodenal ulcer until the present century was the consequence of failure to recognize the condition, but improvement in diagnosis was concomitant with an increase in the frequency of the disease.

The evolution of acute gastric ulcer, of chronic gastric ulcer, and of duodenal ulcer has been so different as to raise the strong suspicion that they may be distinct diseases, albeit related to one another. It should not, therefore, be assumed that gastric ulcer differs from duodenal ulcer only in its situation.

Rh Factor.—It is wrong to inject any female with blood from another individual unless either the recipient is known to be Rh-positive, both recipient and donor to be Rh-negative, or the recipient to be too old to bear children. This rule must be broken only if the patient is expected to die before Rh-compatible blood can be obtained.—R. H. Hughes, in *Brit. Med. Jl.*, Aug. 14th.

DEPARTMENTS

DERMATOLOGY

THE USE OF VITAMIN THERAPY IN DERMATOLOGY

For this issue, VICTOR R. HERSCHMANN, M.D., *Editor,* Durham, N. C.

OF THE MANY therapeutic agents introduced to the medical profession during this century, vitamins in all probability have captured the fancy of the patient more than any other. It is common in office practice for the patient to ask if a deficiency of one vitamin or another is not responsible for his ailment. Possibly because of the great impression made by the disappearance of skin lesions in such diseases as pellagra and phrynoderma a miraculous quality is imparted to the value of vitamin therapy in dermatological conditions. Because of the pressure exerted by the patient many vitamins are administered, and in turn the patient assures his physician that improvement has occurred following the ingestion of one or another vitamin. As a result there develops a feeling that certain vitamins are helpful in conditions for which they may not be indicated.

It may be of value to tabulate the dermatoses in which the various vitamins are more or less specific and those which are apparently of benefit in a large enough percentage of cases to warrant trial.

Vitamin A

1. Definitely of value:
   Phrynoderma (keratosis pilaris)
2. Apparently of value:
   Darier's disease
   Pityriasis rubra pilaris
   Xerosis of the skin
   Acne vulgaris
   Kraurosis vulvae
   Ichthyosis

Vitamin B_1 (Thiamine)

1. Definitely of value:
   Skin manifestations of beri-beri (subjective)
2. Apparently of value:
   Herpes zoster

Vitamin B_2 (Riboflavin)

1. Definitely of value:
   Glossitis due to deficiency
   Cheilitis due to deficiency
   Perleche due to deficiency
2. Apparently of value:
   Seborrheic dermatitis
   Acne rosacea

Nicotinic Acid

1. Definitely of value:
   Skin and mucous membrane lesions of pellagra
2. Apparently of value:
   Leukoplakia
   Urticaria

Vitamin B_6 (Pyridoxine)

1. Definitely of value:
   None
2. Apparently of value:
   Acne vulgaris
   Seborrheic dermatitis
   Dermatitis medicamentosa associated with drugs causing granulocytopenia.

Pantothenic Acid

1. Definitely of value:
   None
2. Apparently of value:
   Lupus erythematosus

Vitamin C

1. Definitely of Value:
   Skin manifestations of scurvy
2. Apparently of value:
   Colloid milium
   Urticaria
   Petechia not associated with platelet decrease
   Postarsphenamine dermatitis

Vitamin D

1. Definitely of value:
   None
2. Apparently of value:
   Lupus vulgaris
   Psoriasis

Vitamin E

1. Definitely of value:
   None
2. Apparently of value:
   Stasis eczema
   Lupus erythematosus

Vitamin K

1. Definitely of value:
   None
2. Apparently of value:
   Purpuric dermatoses not associated with platelet decrease
   Urticaria

Folic Acid

1. Definitely of value:
   Skin and mucous membrane manifestations of sprue
   Skin and mucous membrane manifestations of pernicious anemia

Vitamin B_{12}

1. Definitely of value:
   Skin and mucous membrane manifestations of pernicious anemia.

UROLOGY

RAYMOND THOMPSON, M.D., *Editor*, Charlotte, N. C.

URETHRAL STRICTURE and URINARY CALCULI

AT A MEETING of the British Association of Urological Surgeons held in June the principal discussion was on these two subjects.[1]

MR. H. L. ATTWATER: Only 5 per cent of cases of urethral stricture come for treatment within five years of the initial infection. No form of treatment had yet produced a certain cure. All operations on the urethra are themselves traumatic procedures, and may be precursors of stricture.

The first indication for surgical intervention is failure to achieve reasonable results by dilatation. Internal urethrotomy far too often fails to produce a lasting result.

MR. MILLIN described how a complete excision of the stricture was carried out, taking away as much as 6 cm. of the urethra. Anastomosis must be obtained without tension. The results could be wellnigh permanent.

DR. LEANDER (Stockholm) said that the essentials in perineal excision are: (1) as complete excision as possible of all cicatricial tissue; (2) mobilization of the urethral stumps so that they could be sutured without tension; and (3) provision that there be no dead space between the sutured urethra and the perineal section.

MR. MACK had noticed an increasing incidence of urethral stricture, and while information was available on the incidence of gonorrhea, none was forthcoming concerning non-specific urethritis, but it was his impression that there were more cases nowadays, following the advent of sulphonamide and penicillin treatment, in which stricture was a sequel of that condition. He was against operation for urethral stricture if it could be avoided. He had found certain advantages in internal urethrotomy.

THOMAS, of Norwich, said that in the first half of the 18th century almost every small town in Norfolk had a man skilled in lithotomy; but vesical calculus almost entirely disappeared between the years 1910 and 1930, perhaps attributable to a rising standard of living. The change to mixed farming in a country which for many years was a grain-producing area, had brought this about. For many years the lithotrite had been a popular instrument in Norfolk, but recently the number of cases suitable for its use had diminished. Norfolk could no longer be considered an area where vesical calculi were common. In children they had now become very rare.

PYRAH: Calcification in the tubules of the kidney occurs mainly as the result of two factors: (1) an increase in the concentration of calcium ions within the kidney, brought about either by an elevation of the serum calcium, as in hyperparathyroidism, or by a reduction in the total tissue fluids of the body, as in pyloric stenosis, with vomiting and consequent dehydration; (2) strong alkalinity of the reaction of the kidney fluids or glomerular filtrate, either as a result of generalized alkalosis, or of local changes arising from infection, in which case the concentration of calcium salts which would not otherwise be precipitated came down in the renal tubules as calcium phosphate.

Of 11 cases of hyperparathyroidism in which adenomas were removed, four had renal calculi. A few cases had been reported in children of calcification in the tubules of the kidney following an overdose of codliver oil. Using the rat, moderate degree of calcification was sometimes found after only two days of an overdose of vitamin D, and usually in three days, first in the tubules of the cells near the cortex. In rats killed after four or five days of overdose a much heavier degree of calcification was found. Rats fed on excessive vitamin D for two or three days only and killed 10 or 12 days later were usually free from calcification. It was concluded that the calcareous debris had gone into solution or had been extruded down the collecting tubules.

1. *British Medical Journal*, July 10th.

OBSTETRICS

H. J. LANGSTON, M.D., *Editor*, Danville, Va.

ECLAMPSIA NOT TO BE OVERTREATED

NO DOCTOR is satisfied with the results in his cases of eclampsia. Many have suspected that orthodox treatment of the present is overtreatment. Mengert and Hermer report[1] excellent results from treatment by "scientific neglect."

Since the etiology of eclampsia is unknown, treatment is entirely empiric. Generally it is active and energetic because the condition presents such a demand for prompt and effective action. With the beginnings of modern surgery, delivery was effected immediately by vaginal or abdominal operation with a maternal mortality of 30 to 50 per cent. Through bitter experience it was learned that survival rates improved under conservative treatment.

Treatment now in use in a teaching hospital of Southwestern Medical College is reported by two of the teachers.

Upon admission, or after the initial convulsion, ¼ grain morphine is injected into a vein and ¼ grain under the skin; additional drug is administered at 30 min. intervals till the respiratory rate is below 14, but not below 10, per min. Occasion-

1. W. F. Mengert, M.D., and R. L. Hermer, M.D., Dallas, Tex., in *Jour. Mo. State Med. Assn.*, Sept.

ally, an enema of 20 to 30 grains of chloral hydrate in 200 c.c. of water is substituted in order to avoid excessive morphinization. Phenobarbital is reserved for the postconvulsive period. External stimuli, including bright light, noise, needle pricks and catheterization, are guarded against. A medical student remains in constant attendance. Fluid intake is limited to replacement of the daily insensible loss—1,500 c.c.—plus the amount of previous 24-hour urinary output. No hypertonic solution is employed. Five per cent glucose in distilled water is the standard infusion material. The obstetric status is ignored during the convulsive phase, treatment being conducted without regard to the pregnancy. After the convulsions are controlled sedation is achieved with 3 grains of phenobarbital daily. Labor is not induced for at least two, and preferably three, days after the last convulsion.

Five women with toxemia of pregnancy died within a short space of time. Pulmonary edema, resulting from excessive administration of fluids, accounted for, or was a feature in, the deaths of each of them. In consequence, the treatment of preëclampsia and eclampsia was revised to *limit the fluid intake.*

This treatment, the authors say, is simple and represents "scientific neglect"; it is effective, as evidenced by a series of 21 consecutive cases of eclampsia so treated with satisfactory recovery in each case.

ASPHYXIA OF THE NEWBORN TREATED BY ROCKING

We may learn from a British source[1] a simple and apparently effective way of dealing with "white asphyxia" of the newborn.

Dr. N. C. Forsyth died last November. He had a practice in midwifery of about 90 cases a year. Since 1932, when Dr. Eve published his rocking method of artificial respiration, Forsyth applied it in all his cases of "white asphyxia"—11 cases—without a death.

Recent evidence has strengthened Eve's confidence that in asphyxiated babies natural respiration may be started by rocking if the cerebral blood (stagnant in quiescence) can be moved onwards. The valves in the vessels ensure that the movement will be towards the heart. It is rarely remembered that every millilitre of venous blood which can be coaxed from the rigid cranial cavity is replaced by a millilitre of arterial blood from the lungs.

The report of Forsyth's work with comment by Eve goes on:

The second new and important lesson learned from these 11 successful cases is that in shock, rocking is certainly not harmful, and appears to be beneficial. The treatment at present orthodox in these asphyxia cases is concentrated on shock, and consists mainly of quiescence and hope. Granting that rocking is harmless in shock, it must be far preferable to this stagnation treatment.

Eight of Dr. Forsyth's cases were due to strangulation of the cord round the neck (nerve cells starved and anoxic); five where instrumental deliveries. Two recent cases were: (1) A breech case, baby born in white asphyxia with a faintly beating heart. The face turned pink after four or five double rocks, but the first respirations occurred only after rocking for eight minutes. (2) In a boy delivered by cesarean section no heart action could be felt. The first breath occurred after rocking for seven minutes, but the change in color from white to pink was noted some minutes before the first gasp. This illuminating precedence (*circulation before respiration*) was observed by Dr. Forsyth in all his 11 cases.

Dr. Forsyth, in his first case, rocked the baby in his hands before the fire (success after 35 minutes). Later he found it better to stand holding the baby, wrapped in a towel and lying on its side, to his chest. Thus he could hear the respiration, and the nurse could suck mucus from the throat with a No. 10 rubber catheter. He could rock the baby—as women do—by swaying his body through some 40 to 70° each way without fatigue. These angles have been verified and found easily attained if the knees are bent a little alternately. Gravity would have longer columns of blood to act on if the infant's legs were extended and the arms raised straight overhead. Ten double rocks a minute are enough. Presumably steep angles are best.

Some conclusions must be tentative until Dr. Forsyth's evidence is properly confirmed—notably, that if rocking restores the circulation the respiration restores itself.

1. F. C. Eve, M.D., F.R.C.P., in *Brit. Med. Jl.*, Sept. 18th.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

ACUTE HEAD INJURY AND ITS MANAGEMENT

All cases of traumatism of the head, whether the skull be fractured or not, should be regarded as potentially serious. In but a small percentage of cases will surgical intervention be required. All such cases should be kept under observation for the first few hours after the accident. All this was taught all of us when we were in college, but every now and then we learn of a disaster from disregard of this teaching.

An article[1] from the Philippines based on these established principles is briefed to refresh our minds on this subject.

1. A. T. Zavalla & P. A. Morales, Univ. of Philippines, in *Philippine Jl. of Surgery*, Jan.Feb.

Upon arrival of a patient with a head injury to the emergency section pulse and respiratory rates are taken every 15 minutes, t. readings every hour and b. p. every two hours. The normal pulse pressure is 40; an increase to 50 or 60 mm. indicates an increasing anemia of the brain; a fall to 30 mm. means even more serious cerebral anemia.

Consciousness returning means that cerebral pressure is being reduced and the patient is improving; unconsciousness after a lucid interval indicates usually progressive intracranial hemor. rhage.

Bleeding from one or both ears nearly always means fracture of the base of the skull. Hemorrhage from the nose and mouth may also occur in fractures of the base of the skull. Subconjunctival hemorrhage or orbital ecchymosis on one or both sides, particularly if occurring some days after the accident, will suggest basal fracture. A unilateral pupil dilation with increasing stupor or progressive hemiplegia usually signifies localized hemorrhage from a lacerated meningeal artery and calls for trephining.

X-ray examination should be deferred until the patient is out of danger unless a depressed fracture is suspected.

The management of acute head injury aims to decrease intracranial pressure. This can be accomplished by

1) Dehydration—limiting the fluid intake and administration orally or rectally of magnesium sulfate.

2) Spinal puncture. Most authorities concede its usefulness in diagnosis, but opinion is divided as to its treatment value. There is danger of herniation of the medulla through the foramen magnum and of recurrence of the hemorrhage. Its value in lowering the pressure substantially is doubtful because spinal fluid reforms quickly. Some maintain it is of value because it permits arterial blood to enter the skull and aid oxygenation of the brain. The authors usually perform repeated lumbar punctures when there are evidences of increased intracranial pressure, but usually wait for a lapse of at least six hours after the accident. A lumbar puncture should not be done on one with an extradural or subdural hemorrhage.

3) Hypertonic glucose injections will draw fluid from the brain, and other body tissues, into the blood vessels, thus lowering the intracranial pressure. After a few hours, the decrease is followed by an even higher increase. Hence two hours after the glucose injection, a retained enema of 150 c.c. sat. sol. magnesium sulfate to counteract the secondary rise. The use of sucrose is not followed with such an increase in the pressure.

A high body t. increases metabolism and demand for oxygen. To prevent cellular damage minimize clothing, discard blankets, use ice bags to the head, an electric fan is allowed to blow directly on the patient, and every ten minutes exposed surfaces of the body are thoroughly sponged with "iced" alcohol. To further aid in the oxygenation, continuous inhalation of oxygen is provided for from an oxygen tank.

Surgical intervention is indicated in cases of depressed fractures of the skull, compound fractures, fractures of the skull in which foreign bodies have entered, and in middle meningeal hemorrhages.

HOSPITALS

R. B. Davis, M.D., *Editor*, Greensboro, N. C.

IT TAKES A HEART AS WELL AS A BRAIN TO BE A DOCTOR

The ultimate success of any organization will depend upon its competent parts. It is obvious, therefore, that each member of the group should be by nature, as well as by training, adaptable to the position he or she occupies. A certified public accountant needs to be trained as well as gifted in mathematics. An architect must have, besides mathematical training, the ability to scale heights for inspection of his building. If climbing makes him dizzy, then he cannot become a successful building architect no matter how thorough his book-learning. If a pharmacist is allergic to a number of drugs from the contact standpoint, he will not be suitable to fill prescriptions written for these drugs. If a musician does not contain within her soul the bars of music, it will be impossible for her to thrill the souls of others with the music she makes. It is what you use in your profession and not what you know that carries you to the top.

In the medical profession, as in no other, the participant must give himself wholeheartedly to the cause. Many in the profession, and particularly in the teaching specialty, have too often overlooked this important fact. It is vital to the practice of the healing art that the doctor have a sincere desire to help the unfortunate ill. A candle of kindness has to burn eternally in the heart of the real doctor. He must be both father confessor and sin forgiver for the heart, the mind, and the soul of his patient. He must right the wrong and relieve the physical pain.

It has been written that "it takes a mighty heap of living to make a house a home." Likewise, it takes a lot of the milk of human kindness to make an M.D. a doctor. If one's fears are to be relieved, the reliever must be profoundly sympathetic and patient. No four words have ever meant more to sick mankind than those "our old family doctor." Storms of apprehension, racking and ruining the mother of a sick child, are calmed by the reassur-

ance of her family doctor that the child will soon be all right.

What is it in the family doctor's heritage, environment, habits and training that sets him so far above the rank and file in the community's respect, admiration and affection?

Inheritance largely determines one's thoughts and deeds. A high-tempered, selfish, profane, dishonest heritage is a curse which only God Almighty can lift. On the other hand, a saintly mother and an honest father will pass on to their offspring a heritage to be coveted by any man.

Environment plays a great role in the development of the individual. One is known by the company he keeps. For the would-be doctor, my advice is never to make friends among those morally deficient, worldly rich, or inherently insincere. The worldly rich are those who sell themselves to worldly pleasures to excess, and perhaps who are looked up to by other members of the group of the same age because of their financial ability rather than their moral and intellectual qualities. All too often the embryonic doctor finds himself among older men who regard profanity, vulgarity and inebriety as proper and pleasant pastimes. These individuals wield a baneful influence over the young lives entrusted to their care. Environment before and after the medical student enters college is of vital importance if the product turned out by the medical colleges is to be "all-wool and a yard wide." Great importance, therefore, should be attached to the environment of the *would-be* good old family doctor.

The habits of animals or men determine their usefulness. If you act well, what you do will be well done. If you are not fair and honest with your own self you will not be unfair and dishonest with your neighbors, your friends or your patients. If you abuse your physical body and degrade your moral conscience by continually performing unwholesome acts you cannot become a respected and honored citizen of your community. No one should be satisfied with less and especially no doctor should be.

The training of the medical man today includes so many scientific and near-scientific facts that no one human mind is capable of taking it all in. To cram a brain full with impractical scientific experiments is damaging that brain's capacity to absorb and remember the facts which will enable the doctor to relieve the most patients in the shortest period of time of the common ailments—mental, moral and physical—to which mankind is subject. If the educator himself were thoroughly saturated with the meaning of the practical facts, he could understand what the writer means. On the contrary, it seems to be the unhappy experience of those choosing medical faculties, that they most often employ teachers, tremendously interested in teaching everything, decided and undecided, about their subject; thinking, it is presumed, that each student is going to specialize in that particular subject, so must know all that the professor knows and be burning with the same ambition to become "an authority" on that particular subject.

The training of any young doctor should have as its main object the making in mind and heart of a worthy successor to the old family doctor Later in life, after having had an opportunity to develop his likes or dislikes for any branch of medicine, if the doctor decides to specialize, he is truly a Phi Beta Kappa candidate to become a specialist; but even then, it takes a heart as well as a mind to be a real doctor.

THERAPEUTICS

J. F. Nash, M.D., *Editor,* St. Pauls, N. C.

Recent Advances in Treatment[1]

Chloroquine is the treatment of choice for malaria. Dosage schedule:

1. To terminate acute attacks: 0.3 grams twice on the initial day at 4-hour intervals, and once on each of two successive days.

2. For suppression: 0.3 grams once weekly.

Two other recent advances in antimalarial therapy:

1. Revival of use of the toxic drug plasmochin in the form of the naphtholate (pamaquin) in an attempt to cure repeatedly relapsing vivax malaria.

2. Experimental use of a member of the 8-aminoquinoline group, S N 13276, which may be curative in vivax malaria.

Para-aminobenzoic acid is relatively specific in the rickettsial diseases—typhus, Rocky Mountain spotted fever, and scrub typhus—if administered in the first week following onset. Properly used it guarantees no fatalities. Rapid decrease of toxic symptoms. Reduction in complications—bronchitis, pneumonitis, myocarditis, and hemorrhage.

To maintain a desired plasma level of 30 to 60 milligrams per 100 c.c., an initial dose of 8 grams is followed by 3 grams orally in powder q. 2 h., with 10 c.c. 5% sodium bicarbonate per gram of para-aminobenzoic acid, to lessen gastric acidity. Possible toxic effects are acidosis, leukopenia, abdominal distention, delirium.

1. *Jl. Indiana State Med. Assn.,* Aug.)

Propylthiouracil in the Treatment of the Anxiety State

There is a variety of symptoms—inability to relax, fatigue, jitteriness, insomnia, etc.—characteristic of the anxiety state which will not respond to bromides, vitamins, tonics and the like.

To a large extent the set of automatic reactions to a dangerous situation can be duplicated by stimulation of the thyroid *and* the adrenal.

Jones[1] has had favorable experience with the use of propylthiouracil for this stimulation. An outline of this experience:

From each patient data must cover past ailments, detailed family history with emphasis on interfamily relationship, emotional and intellectual development, sexual relations, etc.

The dominant complaint in this series was a state of uneasy tension, restlessness, frequent change of jobs, irritability, but no violent temper, tiredness on awakening, poor sleep, frightful dreams and fear of disease, especially heart ailments and cancer.

"The recent campaigns to call attention to hidden cancer and heart disease has wrought havoc with these patients, damage [almost as great as] if they actually were afflicted with these diseases."

Main complaints are palpitations, belching, nausea, tightness around the chest relieved by deep inspiration; dizziness.

The selection of patients for this series was based on inability to find physical or laboratory explanation of the complaints. Reassurance was given that there was no cause for alarm; a mild sedative was prescribed and the patient instructed to return in two weeks. If no improvement had occurred, prophylthiouracil, 25 mgm. twice daily for two weeks, was prescribed. Weight, BMR and blood count were determined at five- to seven-day intervals.

Jones concludes: Propylthiouracil is effective in counteracting all or most of the psychological disorders of the anxiety state. The anti-thyroid action is ineffective in neurasthenia, conversion hysteria and compulsion neurosis.

Suggestion is made to change the term psychosomatic diseases into hypothalamo-somatic syndrome.

Although the majority of the subjects were multiparous, 50 per cent of the series were found to be free from striation. Ninety years ago, according to Credé, only 10 per cent of gravid women were exempt from striae. The author attributes this reduction in incidence to the greatly increased consumption of citrus and other fruits of high vitamin C content within the last century.

Relief of Cough by Use of an Orally Inhaled Aliphatic Amine

1. A. D. Jones, M.D., New York, in *Medical Record*, August.

A NEW DRUG administered by a new technique is offered[1] to relieve coughs—2-amino-6-methylheptane in a small tube from which the vapor is inhaled through the mouth directly into the throat and lungs.*

Results: 83% "marked" relief reported by the group treated with the plain, unflavored amine.

Most of the 30 patients noted relief for one-half to one hour after a single application of the Oralator; 3 that its effect lasted only 15 minutes; 7 up to four hours. Mean duration of treatment was 3.9 days. Number of individual treatments in some cases 8 to 10 daily.

*Available as Eskay's Oralator of Smith, Kline & French Laboratories.

1. Kenneth Christophe, M.D., Boston, in *Medical Record*, Aug.

THE USE OF METHYL-ISO-OCTENYLAMINE (OCTIN) IN MIGRAINE HEADACHES

IN A STUDY made[1] over a period of seven months, 22 patients were followed and repeatedly treated with Octin, a drug which has been used for many years as an antispasmodic, particularly in the genitourinary field, and was first used in migraine in 1945 by Palmer. This drug produces a mild stimulation of the inhibitory fibers (sympathetic) and a direct relaxation of involuntary muscles with constriction of the blood vessels.

Many of these headaches are easier aborted if treated early and it is much more convenient for the patient to take a tablet than to get a hypodermic injection, and the patients will coöperate better with oral doses.

For oral use, 1 tablet of 2 grains of Octin mucate was taken early and repeated every half hour if the headache was not relieved, up to a total of four tablets. The average patient would obtain relief from the first tablet, if he were to get any relief at all; in several cases the tablet would postpone the headache for three or four hours, and thus many patients spontaneously took their Octin tablets every four hours for several doses, rather than q. ½ h. The first dose parenterally was .5 c.c. of Octin hydrochloride (1½ grains per c.c.) intramuscularly (small doses to test for possible hyper-reactors) increased up to 2 c.c. as needed later; usually 1 c.c. gave relief. Several patients who had only partial relief from oral Octin obtained full relief from its parenteral use. Because of the irregularity in severity and intervals, prompt use of the drug at the first sign of headache is preferred to a daily maintenance dose.

The side-effects were minimal—sensation of weakness, paresthesia of the face and arms, and a sense of sluggishness or nervousness. It was not necessary to stop the use of the drug orally in any case because of adverse reactions.

By parenteral route occasional nausea and vomiting with palpitation, weakness, and sense of fainting, if erect. In two patients there was rise of b. p. from 120 up to 160 for one to two hours. Should not be given to patients with considerable hypertension.

The drug was used in all types of recurrent headaches. No apparent deleterious effects noted.

1. Alvin Seltzer, Washington, in *Med. An. D. C.*, July.

Twelve cases of typical migraine with seven good effects and five questionable to poor. In four of these cases the drug was effective orally. Best effects were obtained in cases of typical migraine.

Octin has a place in the symptomatic treatment of some types of migraine and related headaches. Its effectiveness in some cases via the oral route makes it very convenient for the patient to use.

DENTISTRY

J. H. Guion, D.D.S., *Editor*, Charlotte, N. C.

HOW DOES DENTAL CALCULUS PROTECT AGAINST CARIES?

It is well known that areas of teeth covered with calculus are caries-free. The calculus-covered lingual surfaces of the lower anterior teeth are caries-resistant, even in a mouth with marked caries.

Yardeni[1] undertook a series of tests to ascertain in what manner calculus protects against caries, as a result of which he concluded that calculus' ability to prevent caries may be derived from some factors favorable to proliferation of a predominant gram-negative flora, or may be traced to the effect of inhibitory substances present in saliva and blood. Local alkalinity may play a part.

In a few tests of plates inoculated with both saliva and calculus, a clear-cut distinction in growth between the plate as a whole and the zone of calculus was demonstrated. On the one hand, lactobacilli, yeast, cocci and leptotrichia proliferated, all gram-positive; on the other hand, in smears from areas adjacent to the calculus, gram-negative bacilli predominated.

Picard studied bacteria of the healthy and the diseased mouth and found in diseased mouths gram-positive bacteria predominated, and in healthy mouths, gram-negative.

One more point considered significant is that almost no proteolytic bacteria—no proteus—could be cultivated from the calculus. This is surprising, since the oral cavity has a natural supply of these organisms, and since the nutritional requirements of the proteolytic bacteria were entirely satisfied by the media used.

Yardeni would not have his findings regarded as prejudicial to the removal of calculus.

1. Jacbb Yardeni, Jerusalem, Palestine, in *Journal of Dental Research*, Aug.

POINTS IN TOOTH PRESERVATION

It is common knowledge that ascorbic acid will rapidly dissolve calcium carbonate, with which it comes into contact, producing calcium ascorbate. The theory has been proposed that ascorbic acid is the normal vehicle for serum calcium in the body, and that the break-down of a complex of calcium protein ascorbate is responsible for the fractions of ionized and nonionized serum calcium.

An experimental investigation was undertaken[1] to determine whether the sodium and calcium salts of ascorbic acid would be free from the enamel-attacking action. It appeared from these experiments that the normal drinking of orange juice would not influence the enamel of the teeth *except* where cavitation has already been produced. Under these circumstances it would appear to be extremely important that all dental cavitation should be promptly filled, particularly in children. The use of ascorbic acid should also be replaced by a neutral salt of this acid, such as the sodium or calcium salt, both of which fail to show any involvement of the dental enamel.

1. S. L. Ruskin, M.D., *et al.*, in *Jour. Dig. Dis.*, Sept.)

INTERNAL MEDICINE

George R. Wilkinson, M.D., *Editor*, Greenville, S. C.

SOME LIMITATIONS OF ELECTROCARDIOGRAPHY

Electrocardiographs are now available which are compact and portable, nearly foolproof, and their operation may be accomplished after an hour's instruction. Improvement in the mechanical efficiency of the machine does not lessen the necessity for great care in the evaluation of the tracing. Some of the most serious cardiac conditions cannot be detected by the ECG and many normal individuals show changes which may be attributed to disease unless the limits of normal are thoroughly appreciated.

This according to Stewart[1] who goes on in the same vein.

The ECG is of assistance in only a small percentage of cases of congenital heart disease.

In diseases often accompanied by myocarditis, it may be of diagnostic assistance but usually in such cases the tracings are normal. In rheumatic fever in which myocardial involvement is presumed to be invariably present, the significant change is likely to be shown in only 30 per cent of cases.

Determination of the electrical axis of the QRS complex, and conclusions as to ventricular hypertrophy may at times be helpful but are subject to many possible errors. This method of determining cardiac hypertrophy requires familiarity with numerous variable factors and even in the most experienced hands is of limited value.

In coronary artery disease the ECG at times provides crucial information, but even in this condition its limitations may be great. Coronary sclerosis without myocardial degeneration cannot be detected by the ECG, which may return to normal after myocardial infarctions and tracings made

1. W. C. Stewart, Charleston, in *W. Va. Med. Jl.*, Aug.

shortly before death may show no abnormality; unless previous tracings have been made and are available the presence of the normal tracing may be very misleading.

The ECG is influenced considerably by the position of the heart. Almost any component of the tracing may be influenced also by various drugs, metabolic disorders and toxic conditions. These conditions or agents may produce changes in the tracing similar in all or many respects to those produced by heart disease.

Making an ECG may impress the patient but do him no good unless it can be properly evaluated. Two series of tracings made at appropriate intervals are always better than one, but neither one nor two relieves the physician from the necessity of a careful history plus examination by all other available methods.

CORONARY FAILURE

A GROUP of Boston physicians designate as acute coronary failure a clinical and pathologic syndrome showing a continuous gradation in severity between the limits of angina pectoris and acute myocardial infarction. Characteristic episodes, in their experience, consist of prolonged cardiac pain more intense than angina pectoris, unresponsive to glyceryl trinitrate and rest, and without diagnostic evidences of myocardial necrosis. Fever, if any, is slight and of brief duration, there is no leukocytosis, no elevation of sedimentation rate, no electrocardiographic evidences of infarction. These attacks of pain are presumed to be brought on by myocardial ischemia, not so prolonged as to cause permanent injury. On pathologic examination, no resultant myocardial infarction or extensive fibrosis can be found.

Coronary failure is said to be precipitated in many instances by a specific clinically obvious factor which causes either sudden increase in cardiac work or diminished coronary blood flow; on the other hand, it is admitted that the attack often occurs at rest, even during sleep.

Management recommended differs from that of angina pectoris and of acute myocardial infarction. Patients must not be advised, as in angina pectoris, to continue, or reduce only slightly, their usual activities; nor should they be confined to bed for long periods of time as in acute myocardial infarction. Patients having prolonged cardiac pain should be observed closely for several days to determine whether the manifestations will be those of the syndrome called coronary failure; if so, they may be permitted to assume gradually increasing activity, sitting up in a chair after several days, then becoming ambulatory, and increasing their activities with tolerance.

It seems likely that wide differences of experiences with, and opinions as to the advisability of, early return to usual activities of persons coming down with symptoms of coronary-artery disease, may be owing to inexact diagnosis of the amount of myocardial damage sustained in different cases. Many cases called coronary thrombosis may be only brief coronary failure.

1. A. S. Freedberg *et al., in Jl. A. M. A.,* Sept. 11th.

GENERAL PRACTICE

WILLIAM R. WALLACE, M.D., *Editor,* Chester, S. C.

NITROUS OXIDE, ETHER AND PROCAINE BEST FOR OFFICE ANESTHESIA

IT IS comforting to be told that the century-old nitrous oxide and ether are just as good anesthetics, and in many ways better, than any of the newcomers. Prickett[1] tells us that these two, with 50-year-old procaine for local anesthesia, are the agents that will serve most safely for present-day anesthesia in office practice.

Nitrous oxide induction is pleasant and recovery is prompt. It is not inflammable. Used mixed with O at least 20%, it is highly satisfactory for operations which require minimal relaxation, and for inducing ether anesthesia.

Ether provides satisfactory relaxation and is still our safest drug for long inhalation anesthesia. This vapor is inflammable; when mixed with O, highly explosive. The open-drop method, especially suited to infants and children, may be used on adults. Adults may also be given ether with nitrous oxide and O by means of a simple gas machine.

Procaine yields good analgesia and relaxation and requires little equipment. The technic of local infiltration and regional field block can be easily mastered. Prickett would limit the amounts to be injected to:

2%..... 50 c.c. (1 gm.)
1%.....150 c.c. (1.5 gm.)
½%.....400 c.c. (2 gm.)

Dangerous procaine reactions are rare. They demand artificial respiration, with O administration, *at once,* ephedrine sulphate (15 mgm.) *IV* at brief intervals until the b. p. returns to near normal. Convulsions require a short-acting barbiturate, given even to the point of respiratory arrest if necessary to subdue; artificial respiration should be continued in this event. A suitable barbiturate is of advantage in many cases, before the injection of procaine. To make sure that you do not inject procaine into a vein, after the needle has been introduced and one aspiration done, rotate the needle through 180°, and aspirate again.

Sodium pentothal anesthesia in office practice is regarded as extremely hazardous. To achieve surgical anesthesia doses are required which approach too closely the lethal dose.

1. M. D. Prickett, M.D., Little Rock, in *Jl. Ark. Med. Soc.* Sept.

Prickett advises that all patients be given preanesthetic morphine, with atropine or scopolamine. Anyone engaged in anesthesia should be skilled in performing artificial respiration with O and should have the necessary equipment at hand.

A simple and economical apparatus for this purpose consists of a small tank which can deliver O by way of a rubber tube to a rubber breathing bag, which is connected to a face mask to which is attached a rubber artificial airway, which should be inserted in the throat before the mask is applied. Once the airway is clear and the breathing bag and mask applied and filled with O, it is a very simple act to squeeze on the bag to inflate the lungs.

The Best Way to Treat Your Patient Who Has Pernicious Anemia

It is a satisfaction to have from so eminent an authority as Sturgis[1] a positive statement as to how so common and chronic a disease as pernicious anemia should be treated.

The most satisfactory method of treating patients with pernicious anemia, or any type of macrocytic anemia with a megaloblastic bone marrow, is by the intramuscular injection of 1 c.c. of refined liver extract, containing 15 units daily, for a period of two weeks. At the end of this time I would give 1 c.c. (15 units) three times weekly until the red blood cell count is at least 4,500,000 per cubic millimeter and the hemoglobin a minimum of 12 Gm. (83 per cent). The maintenance dose, in my opinion, is 1 c.c. (15 units) every two weeks, although some have stated that the blood may be maintained in a normal condition by giving such a dose once a month. There is one danger which should always be kept in mind. If an inadequate dose of liver extract is employed, the red blood cell count and hemoglobin may fall below normal limits. Although there may be only a slight reduction, nevertheless there is always the possibility that nervous manifestations may develop, or if already present they may progress, sometimes with alarming rapidity. In general, it may be said that when the blood is kept in a normal condition, the nervous changes, if present, may improve greatly, or at least that they will not progress. If they are not present before treatment is started, they will not appear during the course of adequate therapy.

In Berk's[2] patient with pernicious anemia in relapse and acute combined system disease, that developed during irregular treatment with folic acid, a hematologic remission and rapid and marked improvement in the neurologic picture followed treatment with crystalline vitamin B_{12}. The patient showed severe local and systemic sensitivity reactions to purified liver extracts derived from both pork and beef, but not to vitamin B_{12}.

The findings in this case suggest that vitamin B_{12}, like the presently available injectable liver extracts, should be effective against the neurologic as well as the hematologic manifestations of pernicious anemia. They also suggest that vitamin B_{12} is not responsible for sensitivity reactions to liver extracts.

1. C. C. Sturgis, M.D., Ann Arbor, Mich., in *Postgraduate Medicine*, June.
2. Lionel Berk, M.D., *et al.*, in *N. E. Jour. Med.*, Aug. 26th.

Brucellosis as a Cause of Sacroiliac Arthritis

According to some, brucellosis affects a large portion of our population and is among the commonest of the causes of debility. Others regard it as a negligible factor in our health problem. It will be news to most of us that it is a cause of joint disease, as Steinburg[1] says it is.

Brucella abortus infection can cause sacroiliac arthritis. The initial process is one of destruction of the joints, causing a local abscess and healing with joint ankylosis. Sacroiliac arthritis due to brucellosiss should be considered in studying early cases of so-called rheumatoid spondylitis in which the pathologic changes seen by x-ray are centered in the sacroiliac joints. Brucella abortus is not a factor in the cause of rheumatoid spondylitis. The treatment of choice in sacroiliac arthritis due to brucellosis is bed rest and a diet high in calories and in vitamins. This conclusion is drawn from the cases of spondylitis reported in the literature and this reported case of sacroiliac arthritis. Recent studies suggest that administration of streptomycin and sulfadiazine is the treatment of choice.

If brucella attacks the sacroilic joint, why not other joints?

1. C. L. Steinberg, M.D., Rochester, N. Y., in *Jour. A. M A.*, Sept. 4th.

MORTALITY OF SPECIALISTS

(L. I. Dublin, Ph.D., & M. Spiegelman, M.D., New York, in *Jl. A. M. A.*, Aug. 21st)

The death rate of specialists as a group is only 70 per cent of that of doctors in general practice. Pathologists live longest, their rate being less than three-fifths that of the G. P's.; and those specialists with the poorest record—in dermatology and tuberculosis—have a death rate only nine-tenths that of the doctors claiming no specialty. Only internists and pediatricians have a rate from coronary artery disease materially lower than the average for all physicians. Cancer mortality among general surgeons is well below that for any other doctors of medicine. Radiologists and dermatologists have a rate from cancer and leukemia far above that for non-specialists, probably from exposure to dangerous radiations.

Of the vitamins only C is essential to blood-making, and the anemia of scurvy will not respond to hematinics until ascorbic acid is given. The infections associated with deficiencies of other vitamins are, however, a very potent cause of anemia.

Payment to Preacher in Whiskey.—Dr. Rufus W. Sterns was born June 21st, 1809, in Meigs County, Ohio. His father, Rev. Asa Stearns, was a Free Will Baptist circuit riding minister who received part of his pay in barrels of whiskey.—D. M. Stearns, in *Ohio Med. Jl.*, Sept.

PROCTOLOGY

Russell Buxton, M.D., *Editor,* Newport News, Va.

Experiences in Primary Closure Following Excision of Anal Fistula

Primary closure following excision of the anal fistula was carried out by three Chinese surgeons[1] in 47 unselected cases. Thirty-six of the 47 patients had primary healing of their wounds while in 11 the wound broke down. The average duration of hospitalization was 15.5 days for the entire group. Follow-up reports were obtained in 21 cases, at from three months to two years after the operation. Recurrence of the fistula occurred in four cases while the other 17 patients remained well. During the same period, a parallel group of 29 patients with anal fistulas was treated by the conventional method of excision and packing. The average duration of hospitalization was 27 days in this latter group.

It was concluded that satisfactory results may be obtained from primary closure following excision of anal fistula in selected cases, but that the method can not be used indiscriminately.

1. Yun-Hsi, Tsui, *et al.,* in *Chinese Me. Jl.,* April.

Pelidisi—a Point in Diagnosis

A report of a case of Gaucher's disease, in the issue of the *Chinese Medical Journal* (Shanghai), which has just come to this desk, lists, along with temperature, pulse, respiration, etc.—pelidisi. Reference to our medical dictionary yields the information: "[Term coined from L. *pondus decies linearis divisus sidentis*]. The unit of Pirquet's index for determining the nutritive condtion of children, obtained by dividing the cube root of ten times the weight (in grams) by the sitting height in centimeters."

We would not have you to be ignorant.

New Analgesic Drug

(From the Clinical Laboratory, Royal Infirmary, Edinburgh, in *British Med. Jl.,* Sept. 18th)

Experimental studies in human beings recently compared the pain-relieving properties of C. B. 11 (4: 4-diphenyl-6-morpho-linoheptan-3-one hydrochloride), pethidine, and physeptone amidone.

A preliminary study suggests that C. B. 11 is a potent analgestic. In a short clinical trial it proved to be effective in the relief of some types of pain. There is no evidence at present that C. B. 11 is a drug of addiction. It seems worthy of more extensive trial.

Treatment of Abscesses With Aspiration and Penicillin

(H. J. Cohen, M.D., New York, in *Jour. A. M. A.,* Aug. 21st)

Penicillin is given for a few days 1M in oil and wax, or 1M in solution every three hours. When the abscess is soft, aspiration is done by means of a 20 c.c. Luer syringe and an 18-gauge needle. The needle remaining in situ, the syringe is detached and another syringe containing 25,000 units penicillin per c.c. of sol. is attached, penicillin injected into the cavity, causing it to be distended and become cystic again. The needle is removed and firm pressure applied for a minute. This method of treatment is specially recommended for abscess of infants and children.

PEDIATRICS

Albert M Edmonds, M.D., *Editor,* Richmond, Va.

Local Treatment of Carriers of Virulent Diphtheria with Penicillin

It is said that 1 or 2 per cent of any population harbor virulent diphtheria organisms. When an acute case of diphtheria occurs in a locality, the incidence is greater. Orphanages, camps, prisons, schools, hospitals, etc., facilitate the spread of diphtheria.

Levy[1] treated four carriers of virulent *C. diphtheriae* with penicillin locally. One patient, a carrier of nasal and pharyngeal diphtheria, was treated with 2 c.c. of penicillin solution, containing 10,000 units per c.c., administered by spraying with an atomizer every two hours for six days. The remaining three were given penicillin lozenges of 1,000 units each, q. 2 h. for six days—frequent administration for a continuous flow of penicillin on the mucous membrane. All the carriers were tested one day after treatment was terminated and again a week later. Subsequent cultures were also made at two-week intervals, and all were negative. Six months and one year after treatment, nose and throat cultures were taken in all four persons treated, and they were negative.

It is necessary to bring the drug in direct contact with the germ. It is believed that in acute cases as well as in the carrier state, the parenteral administration of penicillin is of little value. In the acute cases, the object is to neutralize the toxin liberated from the body of the *C. diphtheriae.* The antitoxin then is the best weapon for combating diphtheria. In the carrier state, C. *diphtheriae* seldom penetrate the underlying tissue of the mucous membrane (as do hemolytic streptococci) but remain on the surface of the nose and throat and are not affected by penicillin administered parenterally.

1. Levy, A. J.: Local Treatment of Carriers of Virulent Diphtheria with Penicillin, *J. A. M. A.,* 136:855, 1948.

Just How to Give Penicillin for Cure of Congenital Syphilis

Barker[1] describes in detail a method for treating early congenital syphilis with penicillin which he has found effective.

The total dose given is in excess of 20,000 units per pound of body weight. Best results have been attained with larger doses—50,000 units of the aqueous solution of sodium penicillin per pound of body weight. This is divided into 120 doses which are given at intervals of three hours over a 15-day period. In debilitated infants, the dosage on the first day is reduced by one-half.

For those who show no reduction in serologic

1. Barker, L. P., in *Jl. Pediat.,* 32:516, 1948.

titer within six months after treatment or whose titer increases or who relapse, a second course of penicillin is required, and dosage is doubled. If this is not effective, a third course, combining even larger doses with fever therapy, is necessary.

Reactions to treatment developed in 40 to 50 per cent of the cases. These were usually mild—one to three degrees of fever, which disappeared as treatment was continued. Gastro-intestinal disturbances appeared in some instances, and, in a few cases, Herxheimer reactions. In only a few cases was it necessary to interrupt treatment.

The serologic reaction of the blood should become negative in from three months to a year. The titer usually begins to decrease within a few months of treatment. In the majority of cases with serologically positive spinal fluids, reversal is observed within six to 18 months.

The usual clinical response begins in one to three days with disappearance of spirochetes on dark-field examination. The mucocutaneous lesions heal rapidly within two or three weeks. Rhinitis and snuffles clear in two to eight weeks. Lesions observed by x-ray disappear in two to six months. The large liver, spleen and lymph nodes subside.

THRUSH.—The fungous infection of the mouth called thrust, which causes patchy white membranous lesions of the gums, buccal mucosa, and tongue, is commonly caused by *Monilia albicans*, but it can be caused by a number of different parasites. A diagnosis is readily made by smears from the lesions. Scrupulous mouth cleanliness and local treatment with a mouthwash of an aqueous solution of boric acid or of gentian violet are usually curative. In chronic cases no treatment is very effective.

TONSILLECTOMY—PRO AND CON

(E. T. Gaddy, M.D., Indianapolis, in *Jour. Indiana State Med. Assn.*, Sept.)

There is hardly any other procedure where indications are so vague and the general attitude is so uncritical. Most authorities agree that one cannot tell by examination whether a tonsil is infected or not. Thus, one author claims that dilated crypts and caseous masses are evidence of infection, whereas another insists that abscessed crypts beyond the age of infancy are practically a universal condition. Even when the tonsils are removed and examined pathologically, there is no correlation between the infection found and the preoperative symptoms.

The history of repeated attacks of acute tonsillitis is a more reliable indication of chronic infection of the tonsil than is the appearance of the tonsil.

Personal observation of patients who have had tonsillectomy:

1. 30 per cent have been benefited by the operation.
2. 20 per cent have been made worse by the operation.
3. 50 per cent were unchanged by the operation.

PRURITUS.—Eighty to 90% of pruritus vulvae cases are caused by trichomonas vaginalis, according to many doctors who treat many women.

PROBLEMS—From P. 301

extent the mortality, of obstetric patients, as well as leading to prolonged periods of convalescence in those patients who do recover. It is meet that we pay earnest attention to this condition in every one of our cases in which the patient exhibits upon examination or questioning the slightest suggestion of thrombus formation.

SUMMARY

The intense and progressive action against hemorrhage, toxemia and infection in pregnancy and parturition has produced a relative increase in maternal mortality and morbidity from other sources. No complete consideration of risks and problems of pathology in pregnancy and labor would forego discussion of mid-pelvic arrest, face and occipito-posterior presentations, effect of abnormal fetation such as hydrocephalus, and many other threats to the maternal and fetal organisms. Covering such an assignment would carry me to the point of exhaustion and you past the limits of tolerance. I have, therefore, limited this presentation to a few of those risks and problems in the well-advised knowledge that from restless dissatisfaction with anything less than perfection, coupled with sound application of the best principles of presently known studies, will come much good.

PERSONS HAVING PEPTIC ULCER SHOULD RESTRICT USE OF CAFFEINE

(D. R. Wood, B.M., Sheffield, in *British Med. Jl., Aug.* 7th)

It is not justifiable to conclude from the experimental results in animals that caffeine can cause peptic ulceration in man. Our results support the conclusion that ulcer patients should restrict their intake of beverages containing caffeine, and also suggest that it is desirable to limit their consumption of foods and drinks containing theobromine and theophylline. These substances should equally be avoided by the patient with hyperchlorhydria but no ulcer.

TREATMENT IN PSYCHONEUROSES

(William Sargent, M.B., Durham, in *N. C. Med. Jl.*, Aug.)

Until a few years ago, psychiatrists were overoptimistic about various forms of psychotherapy for the neuroses. The war showed clearly that many neuroses, even those of recent origin, did not respond to theoretically correct psychotherapy.

Insulin shock is the best weapon available for the treatment of the early case of schizrophrenia.

Electroshock has revolutionized the treatment of depressions of middle and later life. Now the illness can often be terminated in a matter of weeks instead of months or years. Depression of later life, one of the most tragic things to befall a man during well earned retirement, often responds just as dramatically. The treatment is well tolerated by patients up to the age of 70 or more.

MANAGEMENT OF HYPERTENSION

(Meredith Mallary, Sr., M.D., and W. D. Steward, M.D., Orlando, in *Jl. Fla. Med. Assn.*, Sept.)

There is still no medical cure for hypertension. The judicious use of sedatives, a low-sodium diet, preferably the rice diet, and proper application of basic principles of psychotherapy seem to offer the most for alleviation of this condition up to the present time.

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As is true of most Medical Journals, all costs of cuts, must be borne by the author.

BROOKINGS REPORT AGAINST SOCIALIZATION OF MEDICINE

A STUDY made recently by the Brookings Institution at the request of Senator H. Alexander Smith, Chairman of the Sub-committee on Labor and Public Welfare, is the basis of the following report:[1]

The United States under its voluntary system of medical care has made greater progress in the application of medical and sanitary science than any other country. This progress is now reflected in low mortality and morbidity rates of infectious diseases and in increased life expectancy. There is every reason to believe that these trends will continue unabated under our present system of medical care.

The nonwhites in the United States have materially poorer health than the whites, but the evidence does not indicate that this condition is primarily or even mainly due to inadequacy of medical care.

The advances in health among both the whites and the nonwhites that have been made in the United States in the past four decades do not suggest basic defects in the American system.

The draft statistics are unreliable as a measure of the health of the Nation.

For those not able to pay for adequate medical care, in the future, as in the past, provision must be made through public funds or philanthropy. This item could not be covered by compulsory insurance because this group would lack the means to pay the premiums. The large majority of American families have the resources to pay for adequate medical care if they elect to give it a high priority among the several objects of expenditure.

Compulsory health insurance would necessitate a degree of governmental regulation and control beyond that of any field previously entered by the Government. It does not seem probable that politics should be eliminated from medical care supplied under a governmental system.

The administration of compulsory insurance would require thousands of Government employees for accounting, auditing, inspection, and investigation. The cost of medical care would increase because of administrative expenses, insured persons' unnecessary and unreasonable demands, and some practitioners and agencies taking advantage of the system for their own financial advantage.

Payment of practitioners would be under one or all of three methods: fee for service, per capita, salary. Fee-for-service payment involves a minimum of socialization but is administratively so difficult that the per capita system would probably be substituted—a higher degree of socialization, or even the salary system—complete socialization. *It*

1. Editorial, *Milwaukee Med. Times*, Aug.

is questionable whether a country which once embarks on compulsory insurance can turn back; rather it must attempt to remedy defects by more complete government control and administration.

Recommendations are that whether the provision of professional services is to remain free enterprise, undertaken by government, or be left to the individual States.

The National Government and many of the State governments may well devote their resources and energies to research and developments in the fields of public health; health education at the school level; teaching of preventive medicine; assisting in the acquisition of physical facilities and training of personnel; providing systematic care for the indigent and the medically indigent.

Leave adult educational campaigns for the control and prevention of disease to voluntary organizations. It must be remembered that good health is not exclusively a matter of medical care: among other important factors are costs of food, shelter, transportation, vice and crime, and many problems of industry.

WAR DIET BETTERED ENGLISH HEALTH AND BIRTH-RATE

In the past few years a number of reports have been published that most of our people are subsisting on grossly inadequate diets. Sensibly, little attention was paid to these reports.

Certainly we have an abundance of good foods to choose from and more and more are we learning to place main dependence on "the wisdom of the body" for this choice, once proper foods are made available.

Observe the evidence afforded by the English experience[1] during the recent war.

Severe food restrictions and rationing have played an important part in improving the health of England and increasing her birth rate.

Previous to the war, the diet of the pregnant woman in the lower-income group in England was poorer than that of the average adult, but during the war special food was made available to all pregnant women in the form of additional milk, eggs, supplementary vitamins and other extra rations when possible.

There was a sharp drop in the stillbirth rate in England and Wales after the rationing program was instituted, the decrease being greatest in the poorest economic districts, such as Wales, where it amounted to 35 per cent.

The investigators point out that "these conditions occurred at a time when all conditions of life other than nutrition had deteriorated."

In Holland it was found that during the "hunger months" of the war and right after, some 50 per cent of the women suffered from amenorrhea. This condition disappeared promptly with the return of food. In Holland the birth weights of full-term infants decreased suddenly during the hunger months and rose almost as abruptly as the country emerged from the severe starvation period.

In the United States, results of studies also show definite relationship of diet to pregnancy and birth. In a group of 216 cases, all of the stillborn infants, all except one who died in the early neonatal period, all except one of the premature infants, most of the infants with congenital defects, and all of the infants considered to be "functionally immature" were born to women in the poorest diet group. In contrast, the study showed that 94 per cent of the infants born to mothers on good or excellent diets during pregnancy were in good or excellent physical condition at birth.

All doctors doing obstetrics should exert themselves to improve the diets of all women coming to them for prenatal care, for it is established that women who have good diets during pregnancy are much more likely to bring borth well-developed, healthy babies.

To insure optimum nutrition during pregnancy, the authors recommend a daily diet of a quart of milk; at least four ounces of lean meat, including liver once a week; two servings of fruit, plus two oranges; at least two cooked or raw vegetables, plus a potato in its skin; at least four slices of whole-grain or enriched bread; two tablespoons of butter or fortified margarine; some form of vitamin D to supply 400 to 800 international units, and enough additional foods to supply the desired weight gain.

1. B. S. Burke and H. C. Stuart, of the Department of Maternal and Child Health, School of Public Health, Harvard University, in May 8 issue of *Jour. A. M. A.*

RESUSCITATION MUST BE BEGUN RIGHT NOW

Many a life is lost because a person rushes off to get a doctor, instead of pressing a thumb or finger on the bleeding vessel. When my own class in medical college was told to give white of egg in a case of mercury poisoning, an intelligent member asked if one should take time to separate the white from the yolk, and the teacher answered, "No, nor the shell either."

Many a life is lost because those who could save the life with their bare hands, rush off to find a pulmotor or some such apparatus. Even if such apparatus is right at hand normal compression should be instituted, without a second's delay, and continued to within a second of the time that the mechanical contrivance is adjusted *and working properly.*

A Joint Statement[1] by the Council on Physical Medicine and the American National Red Cross is in order.

A person who is not breathing should be given artificial respiration *immediately* by the most convenient method at hand, which in the great majority of cases is the prone pressure method. The lower part of his chest should be rhythmically compressed and released while he is being brought into proper position. Insert two fingers far back into the mouth and press downward and forward on the tongue. The victim prone, the tongue will remain in this position. Fluid or vomitus flows out quickly while artificial respiration is given, if the victim is prone. It may be necessary to wipe out the mouth, reaching far back with a handkerchief.

Use of the manual prone pressure method should continue while the resuscitator is being adjusted, so that the victim's lungs receive air. If a person has not been breathing for five to ten minutes, the chance of survival is slight, even if the most efficient inhalators or resuscitators are used. Artificial respiration should never be stopped when a pulse or heart beat can be felt. Recovery of normal breathing may be long delayed, especially in cases of electric shock. Most patients recover within one-half hour, but some have been resuscitated after several hours of artificial respiration.

1. *Jour. A. M. A.*, Sept. 4th.

Better Immunization of Babies

A new method of immunizing children against diphtheria and whooping cough gives better protection from diphtheria than immunizing against that disease separately, and confers substantial protection against whooping cough. The method, as reported by Bell,[1] consists of injecting an alum-treated mixture of whooping cough vaccine and diphtheria toxoid in two doses, four weeks apart and is effective against both diseases in babies as young as two to five months of age. To insure accuracy of the results, the children were divided at random into test groups, one being given the mixed product, and control groups which received the unmixed products.

Among the 407 children who received two doses of the mixed product, 48 cases of whooping cough occurred; among the 385 children who received two doses of the vaccine alone, 158 cases of whooping cough occurred. A year after receiving the first injection, 992 children in the diphtheria study were given Schick tests, the standard method of determining resistance to diphtheria. Among children who received the mixed product, only one-third as many showed Schick-positive reactions (showing susceptibility to diphtheria) as did those who received the unmixed toxoid.

At least one of the doses should be given after a child is six months old, whether the mixed product or only the toxoid is used.

1. J. A. Bell, M.D., Senior Surgeon, U. S. P. H. S., Bethesda, Md., in *Jour. A. M. A.*, July 17th.

NEWS

Medical College of Virginia (Richmond)

Dr. W. T. Sanger, President, reported to a meeting of the Board of Visitors, September 24th, a total of $91,865 in gifts to the institution since July 1st.

Leading the list of gifts was $37,900 from the American Cancer Society, and $3,840 from the National Cancer Institute for cancer research. The Commonwealth Fund was credited with $27,400 to be used for the development of a regional hospital program. Other gifts included $15,000 from the American Tobacco Company for research in pharmacology, $5,000 from the Virginia State Department of Mental Hygiene for neuropsychiatry, $2,500 from the Richmond Area University Center for research in education in medicine, and $100 for the Pastore Fund for the college and $25 for cardiac research, each from private sources.

The College will add to the list of degrees it may award that of Doctor of Philosophy degree in medical and related sciences. It will be the aim of the college to limit its selection of candidates for the degree to a few highly qualified persons interested in pursuing work in medical and related sciences.

Charles C. Haskell & Co. announce the affiliation of *William R. Bond, M. D.*, formerly Professor of Physiology at the Medical College of Virginia and more recently of the Medical Research Division of Schering Corporation, as Medical Director. Dr. Bond will actively participate in the determination and execution of the policies of the Haskell organization.

DIED

Dr. Ambrose M. Wylie, Sr., 62, died at his home at Chester, S. C., September 21st. He was a native of Chester County, a son of Dr. Samuel M. Wylie, and a graduate of the Medical College of the State of South Carolina. He was one of the founders of Chester Sanatorium which later became lessee of Pryor Hospital, of which he served many years as president. Dr. Wylie was one of Chester's most prominent, as a physician and as a citizen.

Dr. Philip William Hunter, 63, for 34 years a practicing physician in York, S. C., died at his home on September 29th. A native of York County, he attended the York schools and graduated in 1911 from the South Carolina Medical College, interned at Bellevue Hospital in New York, and was the first man to volunteer from York County when World War I started. He served with the British Army and was held prisoner by the Germans for nine months. He was awarded the British Military Cross, highest honor the British Army could bestow upon an American citizen.

Since World War I Dr. Hunter had conducted a large general practice in the town and county of his birth.

Dr. H. L. Price, 58, died at his home at Taylorsville, N. C., Sept. 21st. He had been in declining health for several months. He was born in Union County, and graduated in medicine from the North Carolina Medical College in 1914.

Sick Children

Sick children present a two-fold problem in respect to growth and maintenance of body tissue: (1) repair of the damage wrought by disease, and (2) provision of the nitrogen needed for the growth processes, which persist in their demands during periods of illness. Hence, the physi-

cian may wish to prescribe large amounts of protein. Protenum is a highly palatable high protein food—low in fat. In the form of a beverage or in various recipes, Protenum will increase the protein intake without adding appreciable bulk to the diet.

For literature and professional samples of Protenum, write Mead Johnson & Co., Evansville 21, Indiana.

ALTITUDE OF 8,000 FEET DOES NOT INJURE HEART.—Contrary to widespread belief, living at an altitude as high as 8,000 feet is not injurious to the heart. A study of 480 residents of Bogota, which is 8,016 feet above sea level, in none of these residents revealed enlargement of the heart out of proportion to the general build or abnormal variations in blood pressure, pulse, respiration, or number of red blood cells. Prolonged strenuous exercise can cause enlargement of the heart, but no more so at 8,000 feet than at sea level.—G. E. Gomez, M.D., Bogota, in *J. A. M. A.*, Aug. 7th.

GASTROINTESTINAL ALLERGY patients may be divided into two groups: immediate reactors, of whom the majority are children with reactions within the hour of allergen ingestion, usually exhibiting positive skin tests; and delayed reactors, largely adults, with reactions up to 72 hours, usually having negative skin tests. Adrenalin and antihistaminics (Benadryl) afford symptomatic relief.—R. Chobot, *Am. Prac.*

FIVE-YEAR MORTALITY in decompensated Laennec's cirrhosis was reduced from 80 per cent of 57 cases treated by older methods to 55 per cent of 86 cases treated with Patek regimen of high protein, moderate carbohydrate and moderate fat diet supplemented by vitamins and crude liver extract. Average life expectancy, both in survivors and fatalities, was doubled by Patek regimen.—S. Kimball & W. A. C. Chapple, *Gastroenterol.*

The three most frequently silent and masquerading intrathoracic lesions discovered during chest x-ray surveys are tuberculosis, lung carcinoma and mediastinal tumors.

Any child between the ages 9 and 15 who complains of pain in the hip, knee or anterior thigh should have an x-ray examination to rule out a slipped femoral epiphyssis.

ACNE ROSACEA, in most, if not all instances, may be directly related to a vitamin B complex deficiency. The author prescribes a well-balanced diet and a medicinal source of vitamin B complex factors in treatment of acne rosacea.—L. Tulipan, *Arch Dermat. & Syph.*

CLINICAL EVALUATION of Benadryl in 171 cases of allergy demonstrated this agent to be very useful for control of symptoms in hayfever, acute and chronic urticaria, perennial vasomotor rhinitis and some cases of asthma.—S. D. Lockey, *Ann. Allergy.*

TETRALOGY OF FALLOTT.—This developmental anomaly was first discovered and accurately described by Niels Stensen, Danish physician and anatomist, in 1671. Stensen is known to us as the discoverer of the duct of the paratid gland.—F. A. Willius, in *Proc. Staff Meetings Mayo Clinic.*

A pulmonary infarct may mimic almost any lung disease and is probably subject to a larger percentage of error than any other pulmonary lesion. Its area of localized homogenous, sharply demarcated, increased density on the roentgenogram, is usually explained as due to some other condition.

BOOKS

BRITISH SURGICAL PRACTICE, under the General Editorship of SIR ERNEST ROCK CARLING, F.R.C.S., F.R.C.P., Consulting Surgeon, Westminster Hospital, and J. PATERSON ROSS, M.S., F.R.C.S., Surgeon and Director of Surgical Clinical Unit, St. Bartholomew's Hospital; Professor of Surgery, University of London. In eight volumes (with index volume). *Butterworth & Co., Ltd.*, London, England. *The C. V. Mosby Co.*, St. Louis, Mo. 1948. $15.

This volume 3 consists of the contributions of no less than sixty-five British teachers and practitioners of surgery. Among the subjects dealt with authoritatively and comprehensively are cesarean section; cellulitis, lymphangitis and erysipelas; cervical ribs and the scalenus syndrome; chemical warfare—surgical aspects of; chemotherapy; chordoma; cisternal puncture; coagulants and anticoagulants; colon—abnormalities and diseases of, compensation, damages and pensions; contractures and deformities; diabetes in relation to surgery; diverticula; surgical conditions of the eye and ear; embolism; and endoscopy of the various hollow organs lined with mucous membrane.

The careful attention devoted to circumcision, colic, constipation, cicatrices, surgery of the carotid body, and disease conditions of the eyelids speaks for the completeness of the volume and, indeed, of the whole work. Nothing is too trivial or too rare to merit consideration. The excellent text is supplemented with nearly 300 helpful illustrations.

ESSENTIALS OF PATHOLOGY, by LAWRENCE W. SMITH, M.D., F.C.A.P., formerly Professor of Pathology, Temple University School of Medicine, and EDWIN S. GAULT, M.D., F.C.A.P., Associate Professor of Pathology and Bacteriology, Temple University School of Medicine. Foreword by the late JAMES EWING, M.D., Memorial Hospital, New York City. Third edition. *The Blakiston Company*, Philadelphia and Toronto. 1948. $12.

A astonishing advances in the medical field in the past two decades have been made in pathology commensurate with the advances in other of the sciences on which medicine is based. The total knowledge of pathology is now so great that only the essentials can be put into a book of reasonable size.

Contents of this book of Essentials of Pathology:

General Pathology

Retrograde Processes; Disturbances of Circulation; Somatic Death, Necrobiosis, Necrosis, Calcification; Avitaminoses; Inflammation; Specific Bacterial Infections; Diseases Caused by Animal Parasites; Oncology.

Systemic Pathology

Diseases of the Circulatory System; Respiratory System; Gastro-Intestinal Tract; Liver and the Pancreas; Hematopoietic and Reticulo-Endothelial Systems; Urinary Tract; Male Genitalia; Female

Genitalia; Ductless Glands; Nervous System; Organs of Locomotion; Teeth and Related Structures; Bibliography; Case Histories; Numerical Index.

One finds it easy to agree with Dr. Ewing that the authors have succeeded admirably in covering the field of pathology in a way to meet the student's needs. And it is pertinent to remind that all doctors should remain students.

SYMPOSIA ON NUTRITION of The Robert Gould Research Foundation. Vol. I. NUTRITIONAL ANEMIA, edited by ARTHUR LEJWA. *The Robert Gould Research Foundation, Inc.*, Cincinnati. 1947.

The volume is introduced by the Chairman of the Advisory Committee of the Foundation, Dr. E. V. McCollum, who traces the development of the knowledge of anemia. Among the subjects dealt with in the body of the book are the physiological implications of the anemic state, the physiology and therapeutics of folic acid, megaloblastic anemia in infancy, metabolism of iron and copper, the iron-binding capacity of serum, iron in anemia, the vitamins and anemia.

The papers here published are available to indiiduals and organizations especially interested in the development and dissemination of knowledge of nutritional problems.

All the contributors are men who have made valuable contributions to this knowledge and Volume I is quite worthy of them and of the objectives of the Foundation.

HANDBOOK OF ORTHOPAEDIC SURGERY, by ALFRED R. SHANDS, JR., B.A., M.D., Medical Director of the Alfred I. duPont Institute of the Nemours Foundation, Wilmington, Delaware, in collaboration with RICHARD B. RANEY, B.A., M.D. Associate in Orthopaedic Surgery, Duke University School of Medicine. Illustrated by JACK B. WILSON. Third edition. *The C. V. Mosby Co.*, St. Louis. 1948. $6.

In this students' text and physicians' and surgeons' reference work particular attention has been given to the valuable developments in orthopedic surgery from the medical experiences of the Armed Forces of ourselves and our allies.

The subject matter is divided, as before, into 24 chapters in agreement with the Committee on Undergraduate Instruction in Orthopedic Surgery of the American Orthopedic Association—to provide 24 class periods of one hour each for undergraduate orthopedic instruction. Sixteen of the chapters are on the basis of pathology: seven according to anatomical region.

The instruction is clear and in sufficient detail. One of the features especially praiseworthy is its detailed consideration of the less grave but nonetheless painful and disabling, everyday orthopedic conditions which so beset the general practitioner.

ORAL DIAGNOSIS AND TREATMENT. A Textbook for Students and Practitioners of Dentistry and Medicine, by S. C. Miller, D.D.S., F.A.C.D., Associate Professor in Charge of the Periodontia Department, New York University College of Dentistry, and thirty contributors. Introduction by A. T. Newman, M.S., D.D.S., formerly Dean, New York University College of Dentistry. Second Edition. 574 illustrations in black and white and 39 color plates. *The Blakiston Company*. 1948.

Rapidly increasing knowledge in this field necessitates a new edition with important revisions and additions. Aerodontia, an entirely new subject, is so important as to require a chapter to itself. Those chapters on bridge work, the bacteriology of the oral cavity, x-ray diagnosis, and many others have been entirely rewritten. A new chapter is given to penicillin.

The description is clear and the illustration ample. The author has done dentists and physicians a great service in arranging that this excellent book be kept up to the now, and, what is more important, has done a great service to our patients.

ANA PUBLIC RELATIONS WORKSHOP. A Manual of Practical Public Relations Techniques for the Guidance of the National Membership of the American Nurses' Association. 32 Pages, 39 Illustrations. American Nurses' Association, 179 Broadway, New York 19, N. Y. $2.50.

Prepared for the ANA, and now being distributed among nurses' associations with a membership of 166,000, it is claimed that this work can be of great help to all professional organizations.

Life Span of the Red Blood Cell

(Winifred Ashby, Ph.D., in *Proc. Staff Meet. Mayo Clinic*)

Healthy erthrocytes ordinarily survive 110 to 130 days. During systemic disease their existence is curtailed like that of other tissues. Transfused blood does not last the full span, since the cells are of all ages when transfused and the recipient's physical status is abnormal.

All donor cells will have disappeared 124 days after postoperative transfusion. The estimated life of erythrocytes during pernicious anemia is 110 days, malignant tumor 52 days, jaundice 46 days, aplastic anemia with smallpox 41 days, splenic anemia 44 to 55 days, and hyperthyroidism and severe chronic infection 52 days or less.

Erythrocyte longevity may be intimately related to the cortical and anterior pituitary hormones which influence protein and carbohydrate metabolism. Red cell oxygen consumption in rats falls within 48 hours after adrenalectomy and in five days decreases 42%.

Infectious Jaundice Not So Rare

(A. M. Snell, M.D., Rochester, Minn., in *Jour. A. M. A.*, Sept. 25th)

Jaundice is apparently increasing in importance as a disease seen by the general practitioner. More older persons are affected by serious and fatal types of jaundice in recent years and the uses of pooled blood plasma and other blood products has been causative in many instances.

It is believed that persons who have recovered from jaundice of the infectious type may carry the disease in their blood and that blood from these persons is a source of infection for homologous serum jaundice—the type transmitted in blood or blood products or by contaminated syringes and needles. Four to 5% of patients who receive pooled blood plasma may have this kind of jaundice within two to four months.

Infectious jaundice, whether transmitted naturally or through blood or blood products, is thought to be caused by a virus. The onset is usually abrupt, with nausea, vomiting and fever; relapses are frequent and apt to be severe.

Proctologic Examination of Small Children

(Saul Schapiro, M.D., Jewish Hospital, Brooklyn, in *Modern Medicine*, Aug.)

Position of the patient is the most important single factor for successful proctologic examination of children under five years of age. Schapiro uses a specially designed support, which may be placed upon an ordinary table. Adjustable straps are fastened with spring snaps and keep the child practically immobile. The top, padded with air-foam rubber, lifts the abdomen forward and off the table, a position with no pressure on the abdominal wall and in which the intestines and pelvic viscera fall forward without hindrance.

—485 Ocean Ave.

Adolph Ochs, later owner of the New York Times, first ran a daily newspaper in Chattanooga. On one occasion an irate subscriber stormed the Chattanooga office and demanded immediate redress because of a story carried in the paper which reflected upon his integrity. Sparring for time a member of the editorial department said, "I am sorry but Mr. Ochs, who owns the paper, is in Washington."

The injured subscriber retorted, "I don't care a damn about the ox that owns the paper. I want to get hold o' the ass that wrote the article."

When Samuel Johnson was asked by an acquaintance why he had, in his (the first) Dictionary of the English, defined the word pastern as the knee of the horse when it is actually the ankle, he answered, "Ignorance, Madam, pure ignorance."—*Bul. St. Louis Med. Soc.*

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The Present-day Treatment of Osteomyelitis

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THE TREATMENT of osteomyelitis has during the last ten years undergone considerable change, though many of the basic principles remain the same. When I was in medical school, we were taught that in the early stages of acute hematogenous osteomyelitis the most important early treatment was exposure of the bone and drilling of the cortex. During the last ten years, we have had the introduction of the sulfa drugs, and more recently, the antibiotics, of which penicillin is the most important, in the treatment of this disease. The Asheville Orthopaedic Home five years ago had many patients with chronically draining sinuses, who had been operated on many times and had remained in the Home for months and months. Now we have only a very few patients in the hospital with osteomyelitis, and these seldom remain more than a few weeks.

It is our routine now, as soon as the diagnosis of acute osteomyelitis is made, to institute penicillin therapy, usually in fairly large doses. Whether it should be given once or twice a day in oil and wax, or every three or four hours, I believe is yet open for discussion. Our practice has been in the very sick patients to give 30,000 to 50,000 units every three or four hours. Along with this, they should, of course, receive supportive measures of I. V. glucose and saline, transfusions when necessary, and warm saline compresses. However, the usual response to penicillin is quite rapid. The patient is much less toxic within 12 to 24 hours, can generally take food well by mouth, and does not need as much supportive treatment as formerly. There is very little need or indication today for staphlococcus toxoid. The temperature may take several days or a week or two to return to normal, but the rapid disappearance of general toxicity is generally dramatic. If, when the patient is first seen there is evidence of pus pocketing outside of the bone, then, in addition to the penicillin and the other measures, it is necessary to incise and drain the abscess. If, however, there is a cellulitis only of the soft tissues, it is seldom necessary to do any surgery.

The picture with exacerbations of chronic osteomyelitis, either in children who had the acute hematogenous type of infection, or patients where the infection results from a compound fracture, is also markedly improved. These patients should receive large doses of penicillin—probably the daily dose or doses every 12 hours is satisfactory. Nevertheless, many of these patients require surgery. They should all be x-rayed, and investigated for sequestra and cloacae. Frequently, these will not be in evidence until several different x-rays have been taken, either different views or at different times. In some patients, no sequestra will be seen. The drainage may decrease, but persist. Studies with injection of opaque media, such as iodochlorol, will frequently reveal large pockets within the shaft of the bone. If there is a sequestrum, of course this should be removed. If there are large dead spaces within the bone, the shaft of the bone should be unroofed and a saucerization carried out. Frequently, there is a pocket of pus and much necrotic granulation tissue filling this space. In theory, at least, a third of the cortex should be removed and

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the soft tissues allowed to fall into the dead space, being held there by pressure dressings.

In the majority of cases, the soft tissues are closed loosely with sutures to the fascia and skin. One or more small rubber tubes are inserted in the wound extending down to the bone. These are sutured in place with silk sutures through the skin. Post-operatively, then the patient is given penicillin systemically and dilute solutions of penicillin are instilled into the tube or tubes several times a day. The tubes are ordinarily left in place about a week. Usually, the wounds heal per primam, and the sinus tract where the tube has been inserted closes over shortly after removal of the tube. It is not, however, always feasible to close the wound. This is particularly true in the tibia, where there is frequently little more than scar tissue and unhealthy skin. When a saucerization is done in this area, there are frequently two problems which arise—one is to have sufficient soft tissue to close the wound, and the other is the problem of not removing so much bone in the saucerization as to cause a post-operative fracture. In such a case, it may be necessary to compromise, saucerizing the bone as well as possible, covering the dead space with skin and scar tissue as well as possible, then as soon as the granulation tissue has covered the bony defect, a split thickness skin graft may be applied to the open wound. Formerly, before the use of penicillin, these wounds would be allowed to granulate in, being covered with scar tissue. This would take weeks and months. Now, by secondary skin grafting, which is fairly simple with the clean wounds that are obtained with the use of penicillin, the open lesion can be completely closed within a few weeks with healthy skin, rather than with thin scar tissue, which ulcerates readily.

As all the literature indicates, the organisms most frequently present in osteomyelitis are the staphylococcus albus and aureus, but in about 10 to 20 per cent of the patients, the hemolytic streptococcus is present. This latter is more frequently found in very young children. In the cases of chronic infection, with prolonged drainage, there is generally a mixed infection. When this is so, it is often well to get cultures to determine the various organisms and their sensitivity to penicillin or streptomycin. Recently, we had an elderly man who was admitted to the hospital for amputation because of an old compound fracture of the leg, in which drainage persisted. A midthigh amputation was done, but the wound broke down. He was given large doses of penicillin, but the wound did not heal. The drainage was quite foul. Cultures were made and showed, in addition to the staphylococcus aureus, a proteus vulgaris. Sensitivity tests were made on this organism, with both penicillin and streptomycin. As might be expected, the penicillin had practically no effect on the growth of the proteus vulgaris. The streptomycin, however, inhibited its growth in fairly dilute solution. The wound was opened widely and the patient was given both penicillin and streptomycin. Within a few days, the drainage subsided, and the wounds filled in with healthy granulation tissue. In this case, the combination of streptomycin and penicillin was essential to arrest the infection. During the war, proteus vulgaris was frequently found as a secondary invader in the old compound wounds. It probably is present more often than we are aware in the chronic cases of osteomyelitis in civilian practice. Probably many strains of the staphylococcus build up a resistance to penicillin. Sensitivity test to the particular organism involved will frequently serve as an effective guide in the dosage.

Recurrence takes place still. It is our observation that we now see practically no recurrence in those cases of acute hematogenous osteomyelitis, who are treated with penicillin early, and who never have soft tissue abscesses or formation of sequestra. On the other hand, those old chronic cases whose onset antedated the penicillin era, or who were treated with penicillin late, do have recurrences—perhaps as often as they had formerly. Nevertheless the treatment of recurrences is much more simple, and they can be brought under control in a much shorter time, and much easier than formerly. Here again, if the patient comes in when there is only a cellulitis, perhaps an old sclerotic bone lesion, but no sequestra or cloacae, and no soft-tissue abscess, then the infection can be brought under control with penicillin alone. If, however, there are soft-tissue abscesses or loose dead bone, surgery is indicated.

One of the problems in managing the treatment in both the acute and chronic types is the length of time which the penicillin should be given. We strongly believe that the chief danger is in stopping the penicillin too soon and allowing the patient to resume his normal activity. This is particularly true in the old chronic, sclerosing type of infection. The sedimentation rate is far more sensitive than the temperature in this disease, as in many others, and we believe that it is a very important aid in determining both the duration of penicillin treatment and the amount of general activity the patient should be allowed. We have seen patients who apparently were getting well, from all the other clinical signs, but who maintain an elevated sed. rate. On several occasions, the penicillin has been stopped. In such children there has frequently been a recurrence of the active infection in a relatively short time. It is our opinion that penicillin should be maintained until the sedimentation rate has shown a very definite drop, though not necessarily until it has reached normal.

The patient, however, should be kept under observation and on very limited activity until this test is normal. For instance: A child may be allowed to return home with the sed. rate still elevated, but he should not be allowed to go to school until his sed. rate is below 10 mms.

The general principles of rest with traction to the extremity, immobilization in plaster, application of warm, moist compresses, I. & D. of abscesses, removal of sequestra, and saucerization of cavities are still applicable in the treatment of osteomyelitis. The duration of the need of all of these is much shorter than it has been in the past. Penicillin, given early and in large doses and maintained for long periods, has made the treatment of osteomyelitis much simpler and far more effective.

SPRAINS

Sprains are commonly treated too lightly. Pipkin[1] gives sound advice, without counseling that every case be "rushed" to a specialist.

A sprain is a wrench or strain resulting in stretching and/or laceration of the soft parts without external wound. The two large classes are: 1) articular, or those affecting the joints themselves, and 2) muscular, concerning with overstretching, or dislocation of muscles and their tendons. In the simplest sprain or strain the soft parts merely are stretched beyond capacity; there is no laceration, no swelling, only pain and stiffness with some loss of function. In the more severe forms of simple sprains there has been tearing of ligamentous structures and swelling occurs.

The common "wrist sprain" is a fractured navicular. In a large Army series 40 per cent of fractured naviculars were missed at the first x-ray examination; so wrist injuries require guarded prognosis and those not responding to treatment should be re-x-rayed in from 7 to 10 days. A fractured navicular can be diagnosed by Murphy's sign—with the wrist in neutral pain on pounding the knuckle of the index metacarpal will be more pronounced in case of fracture of the navicular. In case Murphy's sign is positive and x-ray report negative *treat as a fractured navicular—cast for 10 to 14 days, then x-ray again.* "Sprained" thumbs from fighting or changing tires are fractures of the base of the first metacarpal. Go over an injured extremity lightly digitally, asking the patient for the point of greatest tenderness, and having that point x-rayed—he will seldom be in error.

Most rapid swellings about the wrist are due to tearing of dorsal vessels. Splint, apply elastic bandage, elevation and cold, with continued active use of the fingers. These hematomas are collected in a fascial compartment and can not be aspirated, or incised.

1. Garret Pipkin, Kansas City, in *Jl. Mo. Med. Assn.*, Aug.

A workingman develops a catch in his back, by next morning is in severe pain and bent to one side; the commonest cause is fatigue, which produces "muscle spasm," pulling the spine out of alignment. Anything to relax this muscle spasm makes the patient happy, whether massage, heat, or injections of novocain or curare. Measures should be taken to remove the causes of excessive fatigue.

The knee joint belongs predominately to football. The initial knee sprain is a tear of the internal lateral ligament and rarely at first a dislocacted cartilage. Put in a cast three weeks, healing occurs, and the chance of a dislocated or torn cartilage developing later is remote. If the "sprain" is baked and taped, the lad plays the next week, a cartilage tears and a serious knee injury results.

For treatment of ankle sprains elevation, ice packs, and crutches are unsound economically. Taping is one of the worst forms of treatment as most physicians tape a nankle.

The novocain injection method is popular. Probably its greatest value is to distinguish major from minor injuries and sos favor each group being treated properly.

There are three principal lateral ligaments of the ankle, two short and one long, of which any combination of one or more may be torn. Tears of the short hinge can be demonstrated by x-ray with the foot in inversion, after blocking with novocain.

Convalescent sprains should have the lateral border of the heel wedged 3/16th inch at least three months. The patient should be instructed in heel cord stretching exercises for a short heel cord is why he sprained his ankle.

PREVENTION AND CARE OF PRURITUS ANI

(I. G. Larkey, M.D., in *Jour. Med. Soc. N. J.*, Sept.)

In taking the history, pay particular attention to possible allergies, worms, rectal and lower-pelvis disorders. In each case make a complete proctologic examination, and correct all ano-rectal disease.

Mild to moderate internal hemorrhoids (or even only a redundancy of the rectal mucosa) should be given sclerosing injection therapy, for relief of rectal congestion.

At each office visit, paint the involved area with a saturated solution of potassium permanganate.

Rectal hygiene includes proper cleansing, by the use of wet cotton, without rubbing, after each defecation. The area is then dried by patting with soft tissue and powdered with cornstarch or boric acid powder. Similar measures are used after bathing. Constipation is treated by the use of smooth bulk laxatives rather than by the oily laxatives.

A drying and healing ointment consisting of phenol, ichthyol and coal tar (in a suitable base) once or twice a day is a useful adjunvant. In severe cases start with compresses of dilute Burow's solution or a solution of Linit starch applied several times a day until the acute reaction has subsided.

All instructions are written so that nothing can be forgotten or left to the imagination.

Retinal Vessels in Hypertension

Clarence B. Foster, M.D., Charlotte, North Carolina

HYPERTENSION may be defined simply as an abnormal rise, usually exceeding 90 millimeters of mercury on the sphygmomanometer, for a long period of time. According to Boyd, there are three groups of conditions in which hypertension is found. They are:

1. Acute glomerulonephritis and the closely related toxemias of pregnancy.
2. A symptomatic group in which disorders of the thyroid, pituitary and adrenal glands are evident.
3. The type with which we are particularly concerned, essential hypertension, or hypertensive vascular disease.

Hypertension in this group shows, quoting Bradley, "a fairly uniform natural history, and distinctive anatomic changes."

Arteriosclerosis is an all-inclusive term — what Sir Clifford Allbutt called "an omnibus term, including several main divisions, the anatomical result of several morbid processes."

Atherosclerosis is a nodular form seen most often in the aorta, frequently in small arteries such as the coronaries and cerebrals, and to a lesser extent in vessels of medium size. The pathology is that of fatty deposits in the deep intima, which gradually thicken, become more hyaline and soften. They may may break through the intima causing thrombosis, with the possibility of emboli. Lime salts may be deposited in plaques. Secondary degeneration of the media (atrophy) may occur, but there are no adventitial changes.

Retinal Vessels in Hypertension

The senile type of arteriosclerosis consists of medial degeneration of medium-size arteries, followed by calcification. There is no usual relation between this type and hypertension.

Diffuse hyperplastic sclerosis, arteriolosclerosis, is the type associated with hypertensive vascular disease. It affects the arterioles. The pathology consists of hypertrophy of the muscular layer of the vessel wall, which later may show degeneration and eventually become fibrosed. There is subendothelial thickening of the intima, first hyaline, then becoming fatty. Narrowing off and frequently obliteration of the lumen is produced. There is also a splitting and reduplication of the internal elastic lamina.

According to Page and Corcoran, the arterioles of the organs chiefly affected in diffuse hyperplastic sclerosis are the kidney, spleen, liver, pancreas, brain and retina.

Duke Elder says: "Most are agreed that arteriolar sclerosis is distributed regularly with great uniformity throughout all the organs. Moreover, while retinal sclerosis can give no safe indication of the degree of sclerosis elsewhere, its occurrence in the eye almost certainly indicates its presence generally."

Let me quote from Friedenwald: "The most important aspect of ocular, and especially retinal arteriosclerosis, is its diagnostic value in relation to general vascular diseases."

And so, we have associated, arteriolosclerosis and hypertensive vascular disease of the bed of arterioles throughout the body, and quoted authority for the idea that a study of the retinal vessels can be used as an index of the condition of the arteriolar bed elsewhere. It must be remembered also, that the retinal arteries and arterioles are the only ones available for the study in the living.

A Brief History of the Study of the Retinal Vessels

Until Bright, in 1836, noted the relation to visual loss of the disease bearing his name, no one had thought of correlating studies of the eye and kidney. The presentation by Helmholtz in 1851 of his ophthalmoscope made this idea a reality. Mauthner, in 1868, produced the first classical work on the subject. Hirschberg, in 1882, noted the occurrence of atheromatous changes in the eye vessels. Raehlman, in 1888-89, showed that ocular sclerosis was a part of a general disease. Marcus Gunn, in 1898, did a rare job in covering the whole subject with accuracy and detail. It was at about the same time (1896) that Riva Rocci came forth with the sphygmomanometer as we know it, and from then on, fundus studies began to be compared with measurements of the circulatory pressure.

The first sixty years, beginning with Bright, were spent in establishing a relationship between the vessels of the ocular fundus and general diseases. The next thirty were characterized by the supremacy of fundus studies in the realm of clinical investigation of hypertensive ailments. We are now in a third period, in which a correlation between the microscopic pathology of the retina and internal organs on the one hand, and the ophthalmoscopic picture and retinal microscopy on the other, is being sought.

Retinal Pathology Pertinent to the Study of Hypertensive Vascular Disease

This falls into two parts: first, that of the vessels themselves, which present rather definite ophthalmoscopic changes; second, that of the retinal

tissue, suffering secondarily from the vascular disease, and producing the ophthalmoscopic picture of hemorrhage, anoxemia and degeneration. This picture is termed retinopathy. To it may be added edema of the optic nervehead.

The retinopathy and papilledema are the results of added pressure and toxins to an already overburdened vascular system. They carry a grave prognosis when superimposed upon an existing arteriolosclerosis. As their general appearance is better known perhaps than some of the changes peculiar to the vessels, it will not be necessary to discuss them at this time.

Our aim should be to present a clear-cut picture of the vascular changes found in arteriolosclerosis alone. The accomplishment of this aim is difficult, because arteries as well as arterioles are present in the eye-grounds. In Friedenwald's words: "The histological character of retinal vascular disease resembles that seen in vesels of similar size in other organs. In the larger branches, atheromatous changes in the intima and thickening of the media are frequently seen, both separately and together. In the smaller arterioles, the hyaline thickening and lipoid infiltration of the walls characteristic of arteriolosclerosis in other organs is seen."

Because of the existence of more than one disease pattern in the retinal vessels, a tendency has grown up to group them under one term—retinal arteriosclerosis. From the standpoint of usage alone, it would be difficult to give a clear-cut picture of arteriolosclerosis in the retinal vessels. However, a reasonably clear conception of the tensive arterial branches can be obtained by analyzing the chief deviations from normal, as seen with the aid of the ophthalmoscope.

The normal vesels are usually gently curving in their course, arteries lighter in color than veins and with a wider reflex stripe longitudinally—in the ratio of eight to ten in diameter to the veins. The walls of both are translucent, arteries less so than the veins, and there is no appreciable disturbance in direction or shape at the crossings. The branches are usually at fairly wide angles.

Friedenwald considers straight, narrow arteries, branching at acute angles, a change of senescence. There is accompanying depression of veins at the crossings. With added hypertension the picture is exaggerated. The same changes may be found in middle age with atherosclerosis of the central retinal artery. The hypertension, if coexisting with this type of sclerosis, is a comparatively stable affair, provided no arteriolar changes supervene.

Atherosclerosis is found most often at, or behind, the disc. The only certain way to diagnose it at a distance from the disc is by finding a local constriction, coinciding with an opacity in the vessel wall (beading). Most patients with atherosclerosis are over sixty, few under fifty. That leaves an age group between forty and sixty, where some confusion between athero- and arteriolo-sclerosis might exist. In Friedenwald's experience "in the early stages of essential hypertension, without atherosclerosis, the visible portions of the retinal arterial tree are either normal, or in some cases of the severest form, dilated."

What, then, are the changes to be expected in diffuse hyperplastic sclerosis characteristic of hypertensive vascular disease? They are as follows:

A. 1. Increased light reflex of the arteries from medial hypertrophy and hyalinization. With progression of the disease this leads to
   2. Copper-wire appearance, and finally,
   3. Silver-wire arteries, when necrosis has followed hyalinization, and the lumina are nearly or entirely obstructed.

B. 1. Tortuosity (a) of arterioles is quite characteristic, and (b) of larger arterial vessels, together with increased reflex, is indicative of hyperplastic sclerosis, according to Duke Elder.

   These are clinical effects of the hyalinization of the vessel walls.

C. Disturbance of the arterio-venous crossings is caused by fibrosis of the common vascular wall at that point, and may be manifested by:
   1. Indentation of the vein
   2. Knuckling of the veins in crossing over the artery.

D. Variations in width of the light reflex usually indicate the presence of spasm more often than they indicate differences in progress of sclerosis:
   1. When spasm comes late in the development of vessel-wall changes, the light reflex may be increased, due to greater density of the medial element of the wall (Gans).
   2. When spasm occurs early, before sclerosis has begun, the light reflex may be reduced in size.

E. Sheathing, as manifested by a parallel white line on either side of the light reflex, may come from a perivasculitis, as well as from hyaline changes. This may sometimes be seen in atherosclerosis also.

These are, then, according to authority, the more dependable manifestations of retinal arteriolosclerosis.

They may occur, in any degree, together or separately, and may be followed by retinopathy, by papilledema, or by both.

In describing the fundus findings it is desirable, while retaining the grouping of Keith-Wagener in

mind, to go a bit farther as Gans has suggested, and describe each finding more in detail. My own idea would be to describe the retinopathy and papilledema apart from the vascular degenerative changes, and to list each of the sclerotic manifestations separately, grading them 1, 2, 3 and 4, much as Page and Corcoran do.

How can we take advantage, clinically, of knowledge of these fundus changes in retinal vascular disease?

First, by every physician, be he engaged in obstetrics, internal medicine, or general practice, making routine use of his ophthalmoscope, taking the necessary time to dilate the pupils, in preference to examining through a small opening.

Second, by making liberal use of consultation services of oculists, requesting specific information as to the type of the sclerosis present, its manifestations and grading.

This information, then, should be used, not as an ultimate diagnostic point, but rather to be laid side-by-side with other items of information, such as reports on laboratory and general physical examinations, in order to establish a broad basis for making an all-inclusive and satisfactory diagnosis and prognosis.

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The Drop-I-Mizer for Improved Nasal Medication

The Drop-I-Mizer is a device for the introduction of atomized medication into the nasal cavity. The therapeutic agent employed should have the proper stability and surface tension. Penicillin and streptomycin solutions do not require the addition of glycerin to ensure a stable spray. Most of the epinephrine solutions and vasoconstrictor solutions employed for nasal use contain up to 10% of glycerin. An agent to lower the surface tension should be added for smoother flow through the device.

The Drop-I-Mizer is the same cost as a good dropper. It is simple, convenient, safe and free from contamination. It ensures the uniform delivery of therapeutic agents of the proper particle size to the nasal cavity and its recesses with a simple sniffing technique.

This device may be employed effectively for the introduction of vasoconstrictor, chemotherapeutic and antibiotic drugs, alone or in combination, into the nasal cavity.

1. M. S. Segal, M.D., & J. F. Beakey, M.D., in *Current Med. Digest*, Oct.

Black Hairy Tongue

(G. C. Saunders, Portland, Ore., in *Northwest Medicine*, Oct.)

The condition known as black or hairy tongue has aroused sporadic interest for a hundred years. It is seen as a black mass of tapering or pencil shape extending forward in the midline from the angle of the circumvallate papillae suggesting a tuft of black hairs. Its major interest lies in the fact that, with our increasing publicity on cancer, the patient noting this condition may be unduly concerned.

Black or hairy tongue is not as infrequent as is generally supposed. Because of the absence of symptoms the condition is not readily brought to the attention of the physician.

It is due to a metaplasia and is not caused by bacteria or fungi. Local or systemic treatment is without permanent avail. As the hairy mass is an excellent ground for decomposition of debris, daily scrubbing might be of some benefit in reducing oral contaminations and bad breath.

Positive Diagnosis of Poliomyelitis Impossible in Many Cases

(A. F. Abt, Chicago, in *Jl.-Lancet*, Oct.)

Only a rapid method for virus identification could positively indicate whether many of the cases seen in Illinois this fall were actually due to the poliomyelitis virus or to such other known viruses as that of St. Louis encephalitis, equine encephalomyelitis, a different strain of poliomyelitis, or to a new and unknown virus.

Until such time as we obtain a rapid method for virus culture, all the clinical acumen and knowledge at our disposal will only allow us to make a presumptive and not a positive diagnosis of such cases.

Extragenital Chancres

(F. K. Albrecht, M.D., in *Current Digest*, Sept.)

A series of 219 cases of chancre, in males, 5.8% were extragenital, in females 12.2%. Only 4.5% of the Negroes had extragenital chancres as compared to 11.9% of the whites.

Forty-two per cent of the clinic patients and 60% of the private patients were married and apparently living with their marital partners. Possible extramarital infection was admitted in only 19 records. Information as to source of infection was fragmentary and apparently unreliable in most of the cases. The majority of the patients who named possible methods of infection attributed their chancre to immediate sexual contact.

Clinical findings which should arouse suspicions of chancre are: induration, indolence, and unilateral and usually solitary adenopathy. Even all three were not enough to lead to the correct diagnosis in the absence of a high index of suspicion. The records clearly indicate that the diagnosis of early syphilis is a laboratory, not a clinical, procedure.

Blood banks are unheard of in China. A few of the larger teaching hospitals have donors' registries but, where money is so scarce, care has to be used to exclude imposters who will try to replace the registered donor in order to get the money. This happened so often in Chengtu that we finally had to photograph our registered donors.—*Schaufler*.

DEPARTMENTS

HUMAN BEHAVIOUR

James K. Hall, M.D., *Editor*, Richmond, Va.

All our readers will rejoice to know that this Department is to be continued under the editorship of a member of the Westbrook Staff.

Next month Dr. Rex Blankenship will announce his acceptance of the important assignment, and beginning with the January issue, he will make regular contributions, to our gratification and edification.

—*The Editor.*

UROLOGY

Raymond Thompson, M.D., *Editor*, Charlotte, N. C.

THE RETROPUBIC APPROACH IN PROSTATIC SURGERY

Different investigators report a 5 to 30 per cent incidence of cancer of the prostate found at autopsies of men over 50 years of age. Of the seventeen million men over 50 years of age in the United States, there are probably as many as eight million (certainly over five million) who have cancer of the prostate. Prostatic cancer is often present even when the examining finger in the rectum can find no evidence thereof. Professor Vernet of Barcelona, Spain, made serial sections of hundreds of prostates removed as non-malignant, found malignancy in 85 per cent.

These startling facts are stated by Stratte[1] who goes on to present a cogent argument for the use of a new operation in the great majority of prostatic removals.

In cancer of the prostate there may be no history of bladder-neck obstruction. If so it will be of only *months'* duration, while in benign hypertrophy the obstructive symptoms have been troublesome *for years*. A man who has cancer of the prostate without coexisting benign hypertrophy usually comes complaining of pain (backache and sciatica) and not of urinary symptoms. The growth is then apt to be too far advanced for cure by radical surgery.

Hinman is quoted as having found that only 5 per cent can be classified as "early."

Young's radical prostatectomy, for many years the only hope for cure of prostatic cancer, is a formidable procedure with an operative mortality of from 8 to 10 per cent. Added to this is the large chance of incontinence resulting. Conceivably, many old men have been killed by being kept in the extremely uncomfortable and exhausting position necessary in the performance of the Young operation.

In the spring of 1947, Stratte went to London to see Millin's work. In the first case he witnessed—an early cancer of the prostate — the diagnosis could not be made until the gland had been exposed, and the decision was then made to perform a radical prostatectomy. The writer was impressed with the ease with which this could be done, in comparison with Young's radical operation. Of greatest importance is the fact that in the retropubic operation a much more thorough examination can be made of the gland. If any nodules (which could be missed by rectal examination or while doing a conservative perineal operation) are felt, the radical removal can be done, the only departure from the regular Millin retropubic prostatectomy being the removal of the gland with its capsule intact, together with the vesicles and a portion of the trigone; also the passing of a catheter through the urethra with traction toward the pubis to facilitate the suturing of the bladder to the cut end of the urethra.

Terence Millin brought forth the retropubic prostatectomy, and now, H. S. Souttar suggests *removing the whole prostate in every case* and suturing the bladder to the cut end of the urethra and to the triangular ligament, thus eliminating the prostatic cavity and many dormant cancer growths. Although for some years yet, it is predicted, there will be controversy about how a *benign* prostatic enlargement should be treated, there can be no difference of opinion as to which operation is the one of choice for the cure of *early cancer* of the prostate.

Before seeing Millin do this radical operation for cancer of the prostate, Stratte had difficulty in deciding how to advise a patient in the early stages of this disease. Because of the high rate of malignancy found by many upon making serial sections of the glands removed which were diagnosed as nonmalignant, it may be that the future will bring radical prostatectomies by Millin's method or some modification thereof as the operation of choice in all cases of prostatism in which there is any considerable life expectancy.

1. Jos. J. Stratte, M.D., Grand Forks, N. D., in *Jl.-Lancet*, Minneapolis, Sept.

It seems clear that, for the reasons given, Millin's operation will soon almost entirely replace prostatic operations now popular. Surgeons from this country who have journeyed to London to see Millin's work report him as taking great pains to demonstrate each step in his operation, and Stratte says any general surgeon who is dextrous can learn the procedure quickly.

SHORT-WAVE DIATHERMY EFFECTIVE IN SULFONAMIDE RENAL BLOCK

Short-wave diathermy has been used for sulfonamide renal block at the Miami Valley Hospital, Dayton, Ohio, since 1941.[1] The excellent results of this therapy are thus convincingly explained.

The solubility of the sulfonamides and their acetylated compounds rises rapidly with moderate increases in the temperature of their menstruum. The deep "heat" of short wave diathermy raises the temperature of the sulfonamide crystals in the kidney and the fluids in contact with those crystals. This heat dissolves their surfaces sufficiently to allow the resulting smaller crystals to pass on down the tubules, and so relieve the block to the urine passage.

Although sodium bicarbonate was used in every case but one, and the daily fluid intake varied from 1350 c.c. to 4330 c.c., the scarcity of secretion or complete suppression had persisted an average of 34 hours before the short-wave diathermy was employed. A "significant volume" of urine was voluntarily voided an average of 5.9 hours after its use; an average of 2200 c.c. was voluntarily voided the next day after diathermy.

Wiley believes that greatly diminished urinary secretion, even anuria, may be caused by simple ureteral spasm. Ureteral spasm may occur after some surgical procedures, after ureteral catheterization, the passage of calculi, or the instillation of an irritating substance incident to the making of retrograde pyelograms. In these cases short-wave diathermy has proved extremely effective in relaxing the spasm and restoring the normal flow of urine quickly.

Diathermy treatment is said to be contraindicated in all cases of nephritis not sulfonamide-induced.

Results here reported of the use of short-wave diathermy over the kidney area of patients suffering from sulfonamide renal block indicate that this method deserves to be given first trial, in this common condition, having in many cases very serious complications. Indeed, one might well go further, and use short-wave diathermy concurrent with the sulfonamide as a preventive of the deposit of crystals in the kidney.

1. B. C. Wiley, M.D., in *Ohio State Med. Jour.*, Sept.

TUBERCULOSIS

STREPTOMYCIN IN TUBERCULOSIS

The Veterans Administration has undertaken a large scale investigation into the clinical and toxicologic effects of streptomycin in the treatment of human tuberculosis. The results of treatment of 650 cases of carious types are reported.[1] In some types of sinuses with cutaneous drainage, tracheabronchial, laryngeal and pharyngeal ulcerations, ulcers of the tongue and enteric tract and peritonitis, streptomycin has proved adequate and effective therapy when given by the intramuscular route. In genito-urinary tub. streptomycin has favorably altered the course of the infection in a majority of the cases.

The most beneficial effect in pulmonary disease occurred in exudate lesions. Less benefit was observed in fibrous, caseous and cavernous lesions. No case was cured. The mortality of meningeal and miliary tuberculosis has been lowered. Bone and joint, ophthalmic and pericardial tuberculosis do not appear to be benefited.

Toxic reactions upon the eighth nerve, kidney and organs of blood formation, and the delayed anaphylactic complications caused by streptomycin, preclude its further use in all patients with tuberculosis. Its long-term use must be accompanied by frequent and accurate laboratory procedures, and the prognosis in any case must be grave enough to justify the hazard of toxic effects from the drug.

Tubercle bacilli exposed to streptomycin eventually develop an overwhelming resistance to the antibiotic. Maximal therapeutic benefit will probably have been obtained within 90 to 120 days.

The precise indications for its use and the optimal dosage regimen have still to be learned in pulmonary, genito-urinary and bone and joint tuberculosis. The dosage schedule for treatment of respiratory, enteric and cutaneous ulcerations and disseminated tuberculosis is better defined.

1. Paul A. Bunn, M.D., Syracuse, in *Diseases of the Chest*, Sept. Oct

Nasal Reconstruction An Old Practice

(Ronald Ru-Yao Sung, Graduate School of Medicine, University of Penn., in *Chinese Med. Jl.*, May, 1948)

Reconstruction of the nose was done by the Tilemakers, a very low caste of the ancient Hindus, long before the Christian era. Their interest in nose reconstruction grew out of the custom at that time of cutting off a person's nose as a punishment for crime. Lost noses were rebuilt by utilizing flaps from the cheek or forehead, fundamentally the same procedure as that employed at the present. However, since they generally failed to provide an inner epithelial lining and bony support for the reconstructed nose, a nose even well formed at the completion of the surgical procedure, sooner or later became a shriveled mass of distorted tissue.

Not until the middle of the nineteenth century was the necessity of lining the flap with epithelium and supporting the new nose with bony structures recognized; from then on the procedure began to produce gratifying results.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

MOST EFFECTIVE USE OF DIGITALIS

An Iowa internist[1] summarizes the means of administering that invaluable drug, digitalis, for best therapeutic effect.

Perhaps three-fourths of all prescriptions for digitalis preparations now call for digitoxin under one trade name or another. Digi*toxin,* from *d. purpurea,* a crystalline substance of constant potency, is completely and rapidly absorbed from the digestive tract, and so has the same dosage, whether used orally or parenterally. A digitalizing amount can be given by mouth in a single dose of 12 mg. to patients who have had no digitalis recently. Digitoxin is more expensive than whole leaf and is the most slowly excreted of the digitalis glycosides, so that once nausea or other toxic symptoms occur, they may require a week or more to disappear; 0.1 mg. daily often serves for maintenance. Digo*xin,* from *d. lanata,* thought to be the active principle in lanatoside C., is near ideal for rapid digitalization by the oral route—aver. dose 3.0 mg. in 24 hours—because of its rapid dissipation by the body in three or four days rather than in one or two weeks as with digi*toxin.* Since the intravenous preparation is soluble only in a strongly alcoholic solution, it must be diluted before administration.

Both the physician and the pharmacist must guard against confusing digo*xin* with digi*toxin.* A common maintenance dose is two 0.25 mg. tablets of digoxin daily, whereas the continued daily administration of two 0.2 mg. tablets of digitoxin might prove disastrous.

Lanatoside C, more rapid in action than digitoxin and lasting three to six days, is one of the best for intravenous use in emergencies—aver. dose by vein 1.6 mg., which may be given in divided amounts at 2- to 4-hour intervals.

The fastest-acting cardiac glycoside is ouabain, from *strophanthus.* It is worthless orally and unsuited for maintenance therapy. A half mgm. by vein in a cardiac emergency, and 0.1 mg. every half hour thereafter to effect or until a total dosage of 1.0 mg., is effective.

Before digitalizing one must make sure the patient has had no cardiac glycoside in the preceding two or three weeks. An edematous patient may develop digitalis toxicity as he loses his edema fluid and absorbs its retained digitalis principles. Toxic manifestations may occur in advance of a satisfactory therapeutic result; when they develop the drug must be stopped even though congestive failure persists.

The physician's responsibility does not end when he prescribes digitalis; he must supervise the patient's activity and diet, he must administer diuretics and sedatives, he must censure and reassure. Science may spur the flagging heart, but it is the art of medicine that must bolster the faltering spirit.

1. H. J. Smith, M.D., Des Moines, in *Jl. Iowa State Med. Soc.,* Aug.

DIURETICS IN CARDIAC FAILURE

For removal of dropsical fluid, the daily intake of sodium must be reduced below 1.0 gm. This is difficult to maintain because meats, eggs, dairy products and bread are all rich in sodium. Diets that make free use of salt-free protein hydrolysates and dialyzed milk serve a good purpose.

The mercurial diuretics are the most certain and effective, the nonionized organic mercurials apparently acting by inhibiting reabsorption of salt in the renal tubule. Commonly xanthines and Vitamin C are given along with the mercurials to increase effectiveness and reduce toxicity.

The program followed[1] in case of massive edema in congestive heart failure is in general as follows:

Rest and digitalization, frequently with oxygen.

Salt is restricted by means of a skim-milk-and-fruit-juice diet, liberalized later as needed.

Water is given ad lib, the patients urged to take 3 to 4 liters daily.

Ammonium chloride 8.0 gm. daily for four to five days. If no contraindications, mercurhydrin 2 c.c. intramuscularly q. 24 h. Occasionally more frequent doses, need estimated by weight loss. Trial and error determine the need for continued use of diuretics; weekly doses for years have been used. Toxic effects are very slight with the newer drugs, and by avoiding the intravenous route hazard is virtually eliminated.

As sodium is washed out of the system, diuresis continues until equilibrium is achieved. It is often possible to discontinue mercurials after a few days. This same regimen may be best for very mild decompensation without visible edema, continued until the weight levels off.

Some argue that it is illogical to allow edema to form and then remove it at intervals. Patients may be taught to give their own intramuscular injections daily, reducing the dose 0.5 c.c. being a common daily dose for maintenance.

It appears that we are entering a new era of cardiac management in which salt restriction and mercurial diuresis will come into their own, along with effort restriction and digitalis.

1. J. E. McFarland, M.D., Ames, in *Jl. Iowa State Med. Soc.,* Aug.

TREATMENT OF RHEUMATOID ARTHRITIS WITH A BETTER GOLD SALT

Gold compounds previously used in the treatment of rheumatoid arthritis were water-soluble, rapidly absorbed and gave high plasma concentrations. The unsatisfactory results led to the use of a different compound of gold salt with encouraging results which are reported. The preparation used is aurothioglycolanilide (trade name Lauron), a suspension in sesame oil and contains 54.3 per cent of gold. It is insoluble both in water and organic solvents.

Wallace reports[1] a series of 91 patients with rheumatoid arthritis, whose ages ranged from 20 to 78 years and who had had the disease from a few months to 20 years, were treated with Lauron over a three-year period. Complete blood counts, urinalyses and sedimentation tests were made before treatment was commenced and repeated monthly during treatment. The drug was administered by deep intragluteal injection twice a week, 10 mg. at each of the first two doses, 25 mg. the two next doses and then a weekly increase of 25 mg. until 100 mg. was given at each dose. The earlier use of 150 mg. twice a week had given no better results. The 100 mg. doses were continued until there was satisfactory clinical improvement or a total of 5,000 mg. had been given. The patents were usually so improved that additional gold was unnecessary. More given if required after a rest period of two or three months. The greatest total amount given a single patient was 15,155 mg., the most without a rest period 5,720 mg. An acute exacerbation of symptoms usually followed the beginning of treatment in cases which finally improved. This lasted about two months after which the patients were free of pain.

In this series, 44 patients were entirely relieved symptomatically and 22 were markedly improved, a total of 73 per cent satisfactory results.

1. *General Practice Clinics*, April, 1948.

OBSTETRICS

H. J. Langston, M.D., *Editor*, Danville, Va.

GETTING BACK TO THE GOOD PRACTICE OF FORTY YEARS AGO

A Jersey specialist[1] offers ready means of improving materially the chance of survival of the newborn. He "stresses" the importance of *not* clamping the cord until ten minutes after delivery, or until the placenta separates, and he gives sound reasons.

The mortality is twice as high in prematures whose cords are clamped immediately after birth. One-fourth of the total fetal blood is in the placental circulation. The more premature the infant, the higher the ratio of placental blood. The principal iron reserve in the new-born is in the circulating blood; as much as 54 milligrams of this iron may be lost if the cord is clamped immediately after birth.

Many newborns have been subjected to an acute hemorrhage when from 100 to 200 c.c. of blood have been recovered from the cord blood to build up a "blood bank." If this blood is not drained off and the cord is not clamped until it has collapsed, about half the placental blood will flow into the infant during the first minutes after birth and 90 per cent will have been recovered at the end of ten minutes. The hemoglobin and red cell count are 10 per cent higher in the week-old newborn whose cord is not clamped until after the placenta has separated. This preventable cord hemorrhage makes the infant a poorer medical and surgical risk.

1. C. H. Evans, East Orange, in *Jour. Med. Soc. N. J.*, Oct.

It is astounding to learn that any doctor would need to be told that the cord should not be clamped or tied until it "stops beating." Certainly that was the teaching in these parts two-score years ago, and for the same reason—that the baby get all the blood possible from the placenta.

We were not given the comparative figures on mortality, with prompt clamping on the one hand and with delayed clamping on the other; but we were taught convincingly that the latter practice gave best results.

May it not be possible, even probable, that, as to some other particulars of treatment, it would be well for our patients were return made to the practice of sensible doctors of times back?

POST OPERATION VENOUS THROMBOSIS

Although getting patients out of bed a day or two after surgical operations, and having them exercise their legs even sooner, has greatly lessened the incidence of venous thrombosis, this serious sequela still occurs in a considerable number of cases.

Two Rochester University investigators[1] report encouragingly on a means of further reducing the occurrence of thrombosis following surgery.

The hyper-prothrombinemia which has appeared rather uniformly on the third postoperation day in patients who subsequently developed clinical evidence of thrombosis suggests that at this time the thrombotic process is just beginning in small veins. The increased prothrombin activity appears to be a transitory phenomenon, as the prothrombin time in untreated patients is often normal during the clinically recognizable phase of the disease. It is possible that the increased prothrombin activity occurs *just before* clotting begins, and is a warning that changes are occurring in the blood which will result in thrombosis. This seems the ideal time for the use of anticoagulant drugs.

In several cases on the day following operation a small thrombus has been palpable in an ankle vein used for intravenous infusion during the operation. A positive test appears to be a warning that the patient should be observed with unusual care, perhaps that prophylactic anticoagulants should be given. Two patients have had a sudden rise of prothrombin activity on their third postoperation

1. E. B. Mahoney and R. S. Sandrek, Rochester, N. Y., in *Bul. N. Y. Acad. of Med.*, Oct.)

day without developing clinical evidence of thrombosis. Both patients were under 30 years, one had an appendectomy, the other a herniorrhaphy, and both were out of bed and walking the day afterward. It is possible that the test is less significant in young people as the greatest variations in prothrombin activity occur in this age group. Older individuals have more uniform prothrombin activity curves following operation and the change suggesting thrombosis is more pronounced.

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

PRINCIPLES OF EARLY MANAGEMENT OF HAND INJURIES

Everyone realizes the importance of treating hand injuries so as to get best functional results. A spokesman[1] for an organization for hand surgery gives a guide.

I—*Protection against added infection*: Any open accidental wound of the hand is contaminated. It is important that no additional infection be added. This requires:

a. Protection of the wound at once with a sterile dressing.
b. Putting *nothing* into the wound, such as instruments, gauze, applicators, sponges, or any sort of antiseptic.
c. If any cleansing of the areas around the covered wound is done with soap and water only.
d. No efforts at exploration, debridement or repair of damaged structures until facilities are available for aseptic technic, adequate anesthesia, proper instruments, sufficient assistance, good lighting, and the provisions of a bloodless operative field.
e. Application of a sterile dressing, voluminous, firmly applied with moderate pressure, separating the fingers from each other, and should maintain the hand and fingers in the position of function.
f. Antibiotic drugs should be administered systemically, *not locally*, in full dosage. Tetanus antitoxin (or toxoid) when the conditions warrant.

II—*Protection against added tissue damage and deformity*: Immobilization of the hand is required in any major injury of the part, whether the wound involves skin, tendons, nerves, joints, or bones.

a. As soon as possible after receipt of the injury.
b. Following treatment of the injury, continued as long as may be required for healing.
c. In the position of function grasp in order to maintain optimum relation of bone fragments and of soft tissue structures.
d. To prevent disabling deformities, contractures, muscle weakness and joint stiffening, and to insure the earliest return of usefulness after healing.
e. Flat splinting of the hand or any of its digits must not be done at any time.

1. R. M. Zollinger, M.D., Boston, in *Ohio State Med. Jour.*, Oct.

PNEUMOCOCCAL MENINGITIS TREATMENT

The intrathecal administration of penicillin in pneumococcal meningitis has come to be considered by most authorities an essential part of the treatment. Recently several of the better known clinics have questioned the advisability of this means of treatment, since it has been quite conclusively shown that in some cases at least, the intrathecal administration of penicillin can be harmful. With the advent of each new form of therapy, e.g., serum and sulfonamides, intrathecal administration has been advocated and then later discarded. It seems probable that penicillin has reached that stage, at least that intrathecal administration may not be advisable in all cases.

It is generally accepted that penicillin does not diffuse well in the spinal fluid of normal meninges, but that diffusing is better in the spinal fluid of meninges experiencing an inflammatory process. Some question if it is necessary to have a certain level of penicillin in the spinal fluid; for here the meninges are the primary site of infection, and the spinal fluid is merely an exudate of these tissues. Therefore, when penicillin is administered intramuscularly only, adequate penicillin will reach the meninges, since the meninges are richly supplied with blood and lymphatic vessels.

Lowrey and Quilligan have recently reported[1] a series of 17 cases treated with penicillin and sulfadiazine without intrathecal administration. The recovery rate of this group was 82.3 per cent, which compares very favorably with the results of other series reported with intrathecal administration. Of the three deaths, two occurred within 18 hours of admission, the third after 184 days and at autopsy showed no evidence of active infection; however, marked cortical atrophy with hydrocephalus was found. Two of the 14 reported as recovering had severe mental retardation. The patients ranged in age from six weeks to 63 years. Nine were below two years, five between two and 14—which indicates that this series was comparable with other series reported with antrathecal administration. The use of penicillin *with* sulfadiazine has proved more satisfactory than the use of either one alone.

Lowrey and Quilligan give 1.5 grains sulfadia-

1. In *Jour. of Ped.*, 33:336.

zine per pound body weight each 24 hours, and penicillin 120,000 to 400,000 units per day, given on a three-hour schedule. Of the authors' cases those receiving larger doses had the best recovery rate. The authors also urge that the therapy be continued long enough to eradicate any quiescent foci of infection; in their series this was for a period of twelve days after the temperature had returned to normal. The authors do not believe that intrathecal administration of penicillin should be completely discarded, but that in many cases it may be completely unnecessary and very possibly harmful; for it may be that some of the residuals, previously attributed to the disease, were due to the intrathecal administration of the remedy. They advocate careful evaluation of each case, with frequent spinal fluid examination, before deciding to begin intrathecal therapy.

GYNECOLOGY

HOW TO CARE FOR GREAT MAJORITY OF GYNECOLOGIC CASES IN THE OFFICE

THE FAMILY doctor will more confidently undertake and pursue the treatment of his patients when an authority in that field encourages him to do so, and tells him just what to do, and how.

Hardy's advice[1] is in point.

Of women patients entering a doctor's office 50 per cent have a vaginal discharge. Common causes are the gonococcus and trichomonas vaginalis. The latter causes a thin, foamy, yellowish-green discharge, ecchymosis of the vaginal membrane and of the cervix, pruritus. A hanging-drop will demonstrate the presence of little-motile organisms in the discharge.

Treat trichomonas vaginitis by wiping the vagina dry and blowing floraquin powder in under slight pressure, not closing the introitus. The patent then is given a supply of suppositories of floraquin to insert one b.i.d. for a period of two weeks. Vaginal douches are being given less and less frequently. A douche of white vinegar 2 oz. to two quarts of water every five to six days will contribute to the patient's comfort. An acid jelly is available for supplanting the douche and is generally to be preferred.

Moniliasis (or yeast mould infection) of the vagina produces a thick discharge and the appearance of a mucous membrane of thrush. There is considerable pruritus. Painting the vaginal mucosa with gentian violet, 3 to 5 per cent aqueous, every three to four days is the most satisfactory treatment.

The treatment of chronic cervicitis is eradication of the infected glands of the cervix. In mild cases, cauterization is sufficient; severe cases require conization. Sulfa ointments have not produced satisfactory results. The use of tampons and of antiseptics applied to the cervix by means of tampons is a thing of the past.

Estrogen, the ovarian follicle hormone—either as natural estrogen under such names as theelin and estrone, or the artificial synthetics stilbestrol, hexestrol, dienestrol—is extremely useful in a number of situations. The principal use is in the menopause and there is only one portion of the menopause syndrome for which they are effective and that is the relief of the vasomotor symptoms.

1. Jos. A. Hardy, M.D., St. Louis, in *Jour. Mo. Med. Assn.*, Nov.

FORTY WAYS TO PREVENT CANCER

ADAIR,[1] of Cornell, has published a paper giving many ways to interfere with the development of cancer.

Counsel against long exposure of the skin to the sun's rays, particularly by persons past middle age.

Remove all "precancerous" skin lesions.

Apply only when indicated x-rays or radium.

Remove all melanomas, black or non-pigmented, by wide and deep excision.

Graft all large skin burns that do not heal properly, and all areas of severe dermatitis caused by irradiation or arsenicals.

Warn gas service station employees and oil workers to scrub tar, oil, gasoline and other irritating chemicals from their hands and arms frequently.

Remove all thyroid adenomata, also all fibroadenomata from the breasts of young women.

Excise, locally, papillomata of the breast.

Make sure, by surgical or aspiration biopsy that the lump in the breast is a benign cyst and not a malignant tumor.

Clear the breast ducts by gentle, mechanical means.

Remove persistent areas of mastitis in women over 35.

Repair lacerations and erosions of the cervix.

Use daily douches in cases of irritative materials forming on the cervix.

Electro-desiccate badly lacerated and infected cervices.

Perform complete hysterectomy, rather than a supracervical hysterectomy in removing a fibroid uterus.

Circumcise in infancy.

Make routine cytological examination of smears derived from the vagina, uterus, bronchial tree, and other mucus-secreting areas.

Reduce inhalation of smoke, dust, dirt and burned gasoline fumes to a minimum. Do everything possible to prevent inhalation of acrid in-

1. Adair, F. E., Prophylaxis of Cancer, *Bul. N. Y. Acad. Med.*, July, 1947, *via Texas Cancer Bulletin*, May-June, 1948.

dustrial fumes.

Provide good ventilation in chemical plants to help prevent bladder cancer.

Correct the undescended testis either by surgery in the adult or by androgen in the adolescent youth.

Correct avitaminotic diseases which cause chronic ulcerous areas of the tongue, mouth or pharynx.

Discourage the taking of very hot soup or beverages.

Encourage peaceful relaxation at meal-time.

Have patients keep their mouths clean.

Discourage the excessive use of alcoholic beverages and tobacco.

Have all sharp teeth and ill-fitting dentures corrected.

Cure lues.

Remove all rectal polyps.

Take complete histories of all patients.

Establish a routine set of examination procedures.

Biopsy all tissues removed at operation.

Regard leukoplakia in elderly persons as a precancerous condition.

Coöperate with your colleagues in diagnosing all suspicious lesions.

Each family doctor is obligated to constitute himself the first line of defense of his families against cancer.

GENERAL PRACTICE

WILLIAM R. WALLACE, M.D., *Editor*, Chester, S. C.

DIAGNOSIS AND TREATMENT OF NON-CALCULOUS GALLBLADDER DISEASE

HOW MUCH the treatment of gallbladder disease is a medical, and how much a surgical, matter, is discussed helpfully by Segal.[1]

If despite strict adherence to a medical regimen symptoms persist, and repeated duodenal drainages show crystals, surgical treatment is indicated. Cholecystitis caused by the abnormal concentration of bile salts and calcium will most likely require surgery. An acute cholecystitis patient must be in a hospital. If the symptoms do not abate rapidly or there are signs of peritoneal irritation, surgery should not be delayed.

Medical management is diet, bile salts and drugs for symptomatic relief. The old rule of a low-fat diet has been replaced by the use of fat as indicated by the effect of the fat upon the symptoms. Fat which melts at body temp. is more readily emulsified and absorbed. Thus vegetable fats are readily digestible and butter, cream and eggs are better tolerated than meat fats.

Sodium taurocholate and extract of oxbile are natural unoxidized conjugated bile salts. Bilron is an example of a natural bile salt containing iron. Ketochol represents an oxidized, unconjugated bile acid preparation. Decholin is an oxidized conjugated bile salt.

If merely a flushing action of the bile acids is needed, unconjugated bile salt; if an increase in the concentration of the biles salts is desired, then the unoxidized conjugated bile salts. If soluble bile salts disturb the stomach, the unoxidized conjugated iron bile salts which are insoluble in an acid medium should be administered. If bile salts relieve symptoms they have a place in the treatment of non-calculous gallbladder disease.

The history and roentgenograms are the two most important means by which the diagnosis is made. Duodenal drainage is necessary in many cases to determine the presence of stasis. The amount of fat used will mainly depend upon its effect on symptoms.

The selection of bile salt therapy depends upon the type of gallbladder derangement. Oxidized unconjugated bile salts are suggested for flushing. The unoxidized conjugated natural bile salts are recommended for a concentrated bile.

INSULIN AND DIET

TREATMENT of the previously untreated diabetic person is started with 100 Gm. of carbohydrate per day.[1] If at the end of a week it is obvious that insulin is needed, the diet is changed to include 150 or 200 Gm. of carbohydrate, and 10 to 20 units of protamine-zinc insulin are given. Protamine-zinc insulin in adequate amounts will usually control the fasting urine specimen.

When one gives the same total dosage in a mixture of 2 parts crystalline to 1 part protamine-zinc insulin, considerable improvement in urinary tests is likely, and these can be further improved, perhaps, by juggling the amounts of carbohydrate among the various meals.

Ordinarily it is not necessary to hospitalize a patient while stabilizing on diet and insulin.

In answer to the question: How would you treat a patient with mild diabetes who has a fasting blood sugar of 130 to 140 mg., with no symptoms?, Dr. Wilder, of the Mayo Clinic:

If it is an overweight person, probably without any insulin at all; probably without any insulin under any circumstances. If it is an early case, I would be much more inclined to rigid management, because in the earlier cases rigid management can be expected to do some good. After diabetes has lasted two or three years, it has reached a degree of severity that it is likely to continue on throughout life. It will be aggravated by infections but it

1. H. L. Segal, M.D., *et. al.*, in *Amer. Jour. Digest. Dis.*, Oct.

1. Henry T. Ricketts, M.D., Chicago, in *Jl. A. M. A.*, Oct. 2nd.

will come back after the infection is over to about the degree of severity it had before. Our patients starting diabetes at or before 20, with the typical triad of symptoms, nearly all require insulin.

PREVENT FISTULA BY PROPER TREATMENT OF ABSCESS

WAGNER[1] describes in a few sentences the way practitioners should manage a good part of their rectal practice.

A digitalis examination of every patient who has anal or perianal pain is indicated. This is not likely to be possible if the patient has an acute fissure but with a developing perianal abscess it can be done and a tender area in the anal wall, probably swollen or indurated, is palpated. There is usually slight fever. Penicillin may be employed for 24 hours.

Using some light general anesthetic, a finger should be inserted into the anal canal and the involved area located. With a scalpel in the other hand, make a slightly curved incision *following* the outer edge of the readily identified muscle bundle surrounding the anus, the guiding finger kept in the anal canal to keep the knife away from the anal wall. It is at times astonishing to find how deep the blade must be carried before the abscess is reached. The abscess opening is enlarged with a hemostat. The skin incision should be of generous size to achieve proper drainage without recourse to tubes, gauze, etc. The abscess cavity may be cleansed but nothing is inserted unless there is enough bleeding to warrant packing with gauze, saturated perhaps with azochloramid in oil. This packing should not remain more than 24 hours; after this, no packing. Sitz baths and keeping the wound open until all infection has disappeared is all that is required.

1. Jerome Wagner, M.D., New York, in *Medical Times*, Aug.

PEDIATRICS

ALBERT M. EDMONDS, M.D., *Editor*, Richmond, Va.

THE SURGERY OF INFANCY AND EARLY CHILDHOOD

SURGICAL CONDITIONS, congenital and acquired, are often problems to the family doctor. A West Virginia surgeon[1] covers many such situations in a way to help the physician decide wisely when surgical measures should be instituted, and to help the surgeon in carrying out these measures.

Studies of nitrogen metabolism have shown that nitrogen administered orally in the form of amino acids is utilized more effective than it is when administered intravenously.

The advantage of transverse incisions in intra-abdominal surgery in early life as well as in adults, has been well established. Better exposure is assured with less retraction and trauma to the soft tissues. Severance of both recti muscles is frequently done. The incisions close more easily and with less tension. The incidence of postoperative hernia is less than with the conventional vertical incisions. Interrupted sutures of fine silk are used to close the abdominal incisions except the peritoneum, in which a running suture of fine catgut is used.

It is regrettable that the rectal examination is not a routine procedure in examination of every patient suspected of having an acute abdominal condition.

In dealing with congenital anomalies in infants neither the family doctor, the pediatrician nor the surgeon should overlook the possibility of multiple defects being present elsewhere in the body.

In most instances drop ether is the preferred anesthetic. In pyloric stenosis, local anesthesia, ¼ per cent, using novocaine, has been found to be satisfactory in the majority of cases.

The loss of 25 c.c. of blood in an infant is equivalent to 500 c.c. in an adult. The loss of blood should be *immediately* corrected by transfusion. An indwelling cannula in an ankle vein for the administration of blood and fluids is an added safeguard for patients undergoing extensive surgery.

Appendicitis occurs rarely in the first year of life, infrequently in the second, but from then on it is common. Abdominal pain, vomiting and slight fever must be considered as appendicitis until proved otherwise. Acute appendicitis may occur during the course of other diseases, especially upper respiratory infections. More emphasis is needed on the harm of giving a cathartic to children with abdominal pain.

If, at operation, the appendix shows no abnormal changes, the terminal three feet of the ileum should be examined for a Meckel's diverticulitis or regional ileitis.

Intussusception occurs most often between the ages of four and ten months, and is ileocolic in 80 per cent of the cases. It is characterized by recurrent, colicky abdominal pain, early vomiting, pallor, sweating, dehydration and shock. A mass can be palpated in most of the cases. Rectal examination may detect blood and mucus. Many are reduced during a routine diagnostic study with a barium enema.

Congenital hypertrophic pyloric stenosis is the commonest condition requiring surgical treatment in the first few months of life. Males are affected in 85 per cent of cases. Vomiting unusually before the ninth or tenth day, occurring during and after each feeding, is always the first symptom. The vomitus never contains bile. The tumor is palpable

1. Bert Bradford, Jr., M.D., Charleston, in *West Va. Med. Jour.*, Nov.

in nearly every case, just to the right of the rectus muscle, midway between the umbilicus and the costal margin. It is best felt while the infant is nursing and especially just after vomiting. X-ray examinations are seldom necessary for diagnosis.

A hydrocele may be found with a congenital inguinal hernia. An undescended testicle is not infrequently found and care should be always exercised in palpating both testicles in the examination for inquinal hernia. The yarn truss is the only satisfactory type for the infant. Adequate surgery may be delayed until after the first year.

Congenital anomalies may occur at any point in the small intestine, but are most commonly found in the ileum. In obstructive cases operation should be delayed only long enough to overcome dehydration and correct the electrolyte imbalance.

DENTISTRY

J. H. Guion, D.D.S., *Editor,* Charlotte, N. C.

DENTISTRY AND ARCHITECTURE[1]

Now-a-days the profession of dentistry gives lucrative employment in our city to almost a score of practitioners. In the days of my boyhood, only one *Toothdrawer,* who probably never heard the word dentist, did all the work and all the mischief in the dental line.

Peter Hawkins was a tall, raw-boned, very black Negro, who rode a raw-boned, black horse, his practice being too extensive to be managed on foot, and he carried all his instruments, consisting of two or three pullikins, in his pocket. His dexterity was such, that he has been known to be stopped in the street by one of his distressed brethren (for he was of the church) and to relieve him of the offending tooth, gratuitously, without dismounting from his horse. His strength of wrist was such, that he would almost infallibly extract, or break a tooth, whether the right or the wrong one. I speak from sad experience, for he extracted two for me: a sound and an aching one, with one wrench of his instrument.

On Sundays he mounted the pulpit instead of black bare-bones, and as a preacher he drew the fangs of Satan with his spiritual pullikins, almost as skilfully as he did the teeth of his brother sinners on week days, with his metallic ones.

Opposite to the residence of "Peter Hawkins, Tooth-Drawer," on Brook Avenue, stood, or tried to stand, a most singular specimen of architecture, without form but not void. It was a hovel built by its sable occupant, of brick-bats nd mud, and as the ground on which it stood formed a trapezium, he adapted his edifice to it. Square and plumb and level had nothing to do with the lines of its wlls. The materials were gathered from the ruins of burned buildings, or the refuse of new ones, and as they were gathered, the structure progressed. The timbers were of all sorts of drift and refuse wood, and the partitions were adapted to them. The roof was of boards, or slates or slabs, which ever came to hand, and the chimneys were topped with headless barrels. A portion of the scrambling walls would fall, while another portion was being erected, and thus the industrious architect and sole workman and tenant, found incessant occupation for a score or more of years, and probably till his death; for his ruins (as they appeared to be when standing) have fallen to the ground.

1. Geo. M. West, in *Richmond in By-Gone Days,* 1856.

DERMATOLOGY

SCABIES: MUST HAVE DIRECT CONTACT FOR TRANSMISSION; *THE* TREATMENT IS BENZYL BENZOATE

Recently an increase in the prevalence of scabies has manifested itself. Some of the older British dermatologists predicted such an epidemic, the prediction based on experiences of scabies in cycles. War with its crowding and moving increased personal contacts and so afforded more opportunity for transmission, and these conditions persist since returning to civil life.

Recent studies on the life cycle of the acarus have yielded some astonishing results. The acarus eggs hatch, seven days after being laid, a six-legged larva which leaves the burrow to live on the skin surface where a series of moults take place, the first about the 16th day, releasing the eight-legged nymph, which lives in crusts on the skin surface. Other moults take place on about the 21st and 28th days, finally setting free pubescent males and females.

After mating the male generally dies within a few days. In the fertilized female, in the 6th week a final moult occurs and an oviduct is formed. The fertilized female buttows into the skin laying 40 or 50 eggs as she goes. The adult female lives at the end of the burrow.

Volunteers were put in contact with blankets and underclothing previously used by scabies patients; and bedding which had been in contact with the patients for several weeks, and for the last twenty-four hours before transfer the two inside blankets in contact with the scabetic patients —all these articles were subsequently put in contact with the naked volunteer, who never bathed for a fortnight after the beginning of the experiment. Bedding and underclothing were used by the volunteers for seven days, the underclothing worn continuously day and night.

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As is true of most Medical Journals, all costs of cuts, must be borne by the author.

THE COMING TRI-STATE MEETING

THIS editorial note is inserted to put Tri-State members in mind that the next meeting is only three months off, in order that they may complete their plans for attending, and make known their wishes for place on the program, while places remain open; and to remind our subscribers who are not Tri-State members and are eligible for membership that a cordial welcome into our ranks awaits them.

The program is being built on the lines traditional with the Association; that is, with a view to providing information of the most recently proved advances in knowledge of how to prevent disease in our patients, and, failing of prevention, how to recognize disease, and how to cure it most pleasantly, most rapidly, and most certainly, and with least risk of misadventure.

Write the Secretary-Treasurer for place on the program and/or application blanks.

The meeting will be held on the 21st and 22nd of February.

Write the Williamsburg Inn, Williamsburg, Virginia, for reservations.

THE PREVENTION OF HEART DISEASE AND DISABILITY

MUCH is being said and written about the tremendous increase in deaths from heart disease. Some careful medical statisticians say there has been no increase, as such. Life insurance figures show a probable slight actual increase.

Apparently most writers on the subject start with the assumption that, in the intent of Nature, man was to have lived forever. They ignore the patent facts that all things that come into life must go out of life, that all working mechanisms must wear themselves out, that in the first few weeks of intrauterine life heart muscle begins the contractions which are kept up night and day for the rest of that individual's life; and, finally, that if the absurd idea, seriously advanced by some high-placed persons, that the average of human life can and should be advanced to a hundred years, were put into effect, those capable of working would find it impossible to take care of themselves, the children, and the aged.

Sprague,[1] of Boston, has discussed before the College of Physicians of Philadelphia ways by which a few more might be kept from dying or becoming disabled of *heart disease* as distinguished from the *wearing out of the heart.*

1. H. B. Sprague, M.D., Boston, in *Trans. College of Physicians of Phila.*, June.

Beginning far back, this authority advises against reproduction of those with strong hereditary strains of congenital malformations. He says vitamin deficiency in the diet of the pregnant woman may be a cause of maldevelopment. Girls should all be encouraged to have German measles in childhood until such time as immunization methods become available; extreme precaution should be exercised to prevent exposure of women to this disease during the first three months of pregnancy; and pregnancy should be interrupted if German measles occurs in the susceptible period. Further study may show the serious nature of other virus infections during this period, but vaccination of the mother for smallpox has been shown to be a safe procedure for the fetus at any stage in pregnancy.

We are told that rheumatic fever and rheumatic heart disease have become steadily less frequent and less severe in the past 25 years. The voluntary limitation of reproduction at the lower economic levels leading to improved living conditions of children in smaller families, and the treatment of streptococcal injections by sulpha drugs and by penicillin may be important factors in this reduction.

Sulpha drugs Sprague regards as "very dangerous" in the *treatment* of acute rheumatic fever, and sulpha *prophylaxis* is advised only from October to June and should not be used in individuals exposed to sunlight, or other ultraviolet radiation, because of the dangerous sensitizing effect of the sulpha drugs to actinic radiation. Possible development of sulpha-resistant strains is a less important objection now that we have penicillin to combat the streptococcus.

Experience with penicillin prophylaxis is hopeful. Sprague now takes routine throat cultures and gives penicillin to every rheumatic patient having hemolytic streptococci in the throat. Goerner et al. are cited as having eliminated streptococci from the throats with 10,000 units every two hours for ten days. Tonsillectomy after such therapy has shown the deep tissues of the tonsil free from streptococci on culture. In five of six carriers 150,000 units in oil and wax given once daily intramuscularly for ten days eliminated B-hemolytic streptococci from the throat. This routine is repeated after every respiratory infection. Milzer et al. reported that 1,000,000 units of oral penicillin daily for five days is usually ample to rid the throat of hemolytic streptococci.

Coburn and Moore report no recurrences in forty-three rheumatic children in spite of streptococcus infections when two boiled eggs and two frozen egg yolks were added to the daily diet.

Occasional good results are reported by the use of streptococcus vaccination in preventing recurrences.

There are factors, as yet unknown, which determine cardiac dilatation, progressive valvular disease, and congestive failure in certain rheumatic children in whom no evidence of active or latent streptococcal disease can be demonstrated.

The control of rheumatic heart disease will be the most effective preventive for subacute bacterial endocarditis. Curiously the reverse of this is true, namely, that rheumatic heart disease which progresses to severe mitral stenosis and auricular fibrillation is practically a guarantee of immunity from subacute bacterial endocarditis.

Given a person with mild rheumatic heart disease, with mitral and aortic regurgitation, respiratory infections and dental extraction commonly initiate subacute bacterial endocarditis. Because of the bacteremia occurring with every dental extraction, even in normal individuals, the administration of penicillin to *every* rheumatic patient before and just after extraction is advised—either 200,000 units by mouth in two doses a few hours before extraction, *and* two doses a few hours before extraction *and* two 50,000 unit doses after it; or 300,000 units in oil intramuscularly before extraction.

Any individual with rheumatic heart disease who has any respiratory infection, surgical operation or injury, or an obstetrical delivery, should be given penicillin; throat cultures made, and penicillin continued so long as hemolytic streptococci are found. The development of many penicillin-resistant strains of bacteria should make us study the sensitivity of the streptococcus we may attack with antibiotics.

A multitude of agents which may injure the heart muscle must be guarded against—in addition to bacteria, the rickettsial bodies and trichinae; while virus diseases constitute the most important cause of hitherto unexplained diffuse myocarditis. The myocardium commonly participates in even mild infections.

Hypertensive cardiovascular disease is probably the greatest cause of cardiac disability. In comparison with "essential hypertension," other causes of high blood pressure are numerically insignificant. Such treatment as will maintain low diastolic pressure will, to a great degree, prevent hypertensive heart disease. Lumbodorsal sympathectomy has been the most successful treatment up to the present time.

Acute cor pulmonale is produced by sudden embolic occlusion of a major branch of the pulmonary artery. Repeated smaller emboli may cause chronic strain upon the right heart—chronic cor pulmonale Intrinsic disease of the smaller pulmonary vessels with pulmonary hypertension may rarely be the factor causing primary cor pulmonale. Other causes of chronic right heart strain—emphysema, pul-

monary fibrosis and infection. The greatest cause of isolated right heart strain is mitral stenosis.

Pulmonary emboli almost always originate in the deep veins of the legs and the incidence can be very much reduced by ligation and the anticoagulants, after the emboli have formed. The formation of emboli may be reduced by leg exercises while in bed, and getting patients out of bed as soon as possible—much earlier than is the custom.

Ligation of patent ductus arteriosus is to be done in all cases in which the diagnosis is made early in life.

The matter of prevention of coronary atherosclerosis is even more baffling than that of hypertension. The value of Walter Camp's exercises in keeping President Wilson's cabinet in fine condition was questioned. It is in point that Walter Camp died at sixty-four, and the only Cabinet member who refused to take the exercises, Josephus Daniels, died at eighty-seven.

Last year Sprague examined the oldest living Harvard graduate now almost 103 years of age. This centenarian said that in college his wind was never good enough to permit him to be an athlete, and he told his athletic friends he would bury them all. This he has done. He is a thin, frail-appearing individual, who has always smoked and used wine in moderation. His electrocardiogram is normal. He would not permit his blood pressure to be taken as he considered it an unpleasant ordeal. This man was a teacher. He retired in 1906.

Nowhere does this Harvard professor show more reasoning power than in the following sentence:

"What are called the stresses and strains of modern life are perhaps no more disturbing than the caveman's struggle with sabre-toothed tigers or the medieval terrors of famine and the Black Death." There we have at its best the understatement so characteristic of the English. He might have come down thousands of years to our own ancestors' struggle with the savage inhabitants and conditions of this country.

A few paragraphs of condensed wisdom:

As a practical procedure low-cholesterol diets are being advised for families with a high-coronary-disease inheritance, and thyroid extract, starting with ¼ grain a day to individuals having low B M R and high blood cholesterol. The most encouraging lead in the coronary problem seems to be the attempt to explain the aberrations of cholesterol metabolism and deposition.

Vitamine deficiency, especially of B, can produce severe heart failure with dilatation and is preventable or reversible.

Anemia of high degree results in myocardial anoxia, and dilatation. In treatment one must remember the relative lack of value of digitalis and the great importance of transfusion with washed red cells rather than whole blood.

Thyrotoxicosis and hypothyroid heart disease are clearly preventable and reversible.

In case of ecotopic rhythm, especially auricular fibrillation, in an otherwise normal heart, restoration and maintenance of normal rhythm by quinidine may prevent cardiac failure.

That most baleful word in diagnosis is the term "borderline." I plead for a definiteness in diagnosis and, wherever possible, the statement to the patient that there is nothing wrong with the heart, in order to prevent the crippling fears engendered by the terms "questionable" and "borderline."

Cardiac disability can often be prevented by foresight or by early therapy. Susceptible of alteration are: Infection, obesity, emotional crises, exposure to cold, overeating, prolonged fatigue, excessive and unusual physical effort, alcoholic excesses, sexual excesses.

One should continue his physical activities at a constant level if free from symptoms. He should avoid the hazards noted and, if fortunate, he may carry to a long-deferred grave a reasonably sclerotic coronary system as a companion to his silent gallstones, his healed tuberculous glands, and his mild cirrhosis of the liver.

THE EARLY DIAGNOSIS OF CANCER

For twenty years this journal has contended that the instillation of fear or cancer through public lectures and press does more harm than good. It is gratifying to find one surgeon speaking out strongly against this kind of propaganda.

Says Haagensen[1]: "I have before me as I write a leaflet distributed by the American Cancer Society. . . . . In bold red letters we read, 'No one is safe from cancer. . . . There is one chance in eight that you yourself will be a victim of this deadly killer.' " Haagensen believes such pronouncements unwise, and he gives his reasons:

Now this may be the propaganda line that is most effective in raising money. But it is not the kind of propaganda that is most apt to help the woman who has discovered that she has signs or symptoms suggestive of cancer. She is already frightened enough without being further terrified by what she reads. She may well be too frightened to face the fact that she may have cancer—too frightened to go to her doctor. Fear of consulting a physician is the next factor after ignorance in causing delay.

I should like to see the propaganda of the cancer societies written, not by publicity agents, familiar with the technique of raising large sums of money for general causes, but by whose physicians, aware of the forces that move sick human beings.

What our patient in the first act of our drama

1. C. D. Haagenen, College of Phyisicians and Surgeons, Columbia Univ., in *Bul. N. Y. Acad. of Med.*, Oct.

needs is not more *fear* but more *courage*. She needs to be told, and made to believe, that she can be cured. This is the kind of propaganda that will do the most to persuade her to go at once to her doctor. Let us not lose sight of this fundamental fact. What we are trying to do is to get the patient to go to her doctor at the earliest possible moment.

When the patient has done her part—conquered her fear and gone to her doctor, it is his turn to do his part. He takes his history and examines the patient. If he is to detect canver, he must *suspect* its presence, then carry out the diagnostic measures necessary to prove its existence or non-existence in this patient. Medical education at present fails to provide physicians with sufficient clinical training in cancer diagnosis. Practicing physicians must be instructed how better to diagnose cancer. Early cancer is diagnosed, in most instances, in a hospital where means of making various diagnostic tests are available.

In proving the presence of early cancer—we have only roentgen-ray studies and the microscopical interpretation of cells and tissues to rely upon. Many smaller hospitals can not provide adequately trained roentgenologists and pathologists, and their lack is one of the greatest handicaps that physicians face today in dealing with cancer.

A strong suggestion that the chief cause of epithelioma of the lip is sunlight is its frequency in out-of-door men, such as policemen, sailors and farmers. Among these persons any change in the epithelium should raise a suspicion of beginning epithelioma. A small wedge biopsy should always be done when any induration or ulceratian is discovered in the lip. This is a simple office procedure. best done with a sharp knife after a small amount of novocaine has been injected into the lip.

At an earlier stage, when the lesion consists only of piling up of keratin to form a scale, the best procedure is the excision of the involved segment of the lip surface. At this early stage, biopsy will not show fully developed epithelioma, yet the area of diseased epithelium is a constant threat and had best be removed.

SCABIES

My success at picking out the itch mite with a needle has been poor indeed. I am glad to find for the first time a description of just how to do the trick. On the assurance of two eminent eminent specialists[1] there's not much to it, although secondary infection or extensive excoriations occasionally made the recovery of Acarus scabiei difficult or impossible. Regardless of the intensity of the eruption elsewhere. these doctors have seldom found it necessary to look further than the fingers and hands.

A sharp Hagedorn needle is inserted under the epidermis at the beginning of the burrow, which is laid open along its entire length, painlessly if properly done. By teasing the blind end, the acarus may frequently be made to cling to the needle point and appears as a minute oval grayish speck. Placed on a glass slide and exposed to warmth, its activity will identify it to the naked eye. If the acarus does not cling to the needle, the burrow is scraped lengthwise with the edge of the needle, and the resulting debris placed on a slide. A drop of 10% NaOH and a coverslip gently pressed into place, the inanimate mite, larva, ova or detritus will usually be clearly revealed under the microscope. When typical burrows cannot be observed, the vesicles may be similarly examined.

I am going to try it—and hopefully. And all would be well advised to do the same—and to bear it in mind that, among respectable folks, scabies is the most commonly misdiagnosed of skin diseases.

1. A. B. Cannon and M. E. McRae, New York, in *Jour. A. M. A.*, Oct. 23rd.

SCABIES—From P. 343

In three instances volunteers and scabetics slept together for seven nights and mites were found on all three volunteers after periods of eight, nine and 12 days from the start of the experiment. In a fourth case the volunteer slept for two nights under the conditions described above and did not develop the disease.

In 63 experiments using underclothing and blankets scabies was transmitted twice only, although everything was done to favor transmission. In *none* of the 25 experiments using blankets alone was infection transmitted, justifying the assumption that under normal conditions blankets can seldom be responsible for the transmission of the disease. On the other hand, experiments have shown that transmission by *comparatively slight personal contact* may be readily accomplished.

Mellanby believes that "scabies is normally transmitted by personal contact either of a slight or of a venereal nature." He reports as 100-per cent effective treatment with an emulsion of 25 per cent benzyl benzoate, 35 per cent soft soap and 40 per cent spirit, equally satisfactory cures being obtained whether or not the patient was scrubbed. Another reports a clean, simple, non-irritating five-hour treatment of scabies in which the active ingredient was 25 per cent benzyl benzoate—not one recurrence in 189 cases.

Buchanan's routine is as follows:

A thorough bath, scrubbing briskly, using cloth, soap and water.

Application of the benzyl benzoate emulsion all over.

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HOSPITALS

R. B. Davis, M.D., *Editor*, Greensboro, N. C.

HOSPITAL PERSONAL CONFERENCES

There are two types of individuals with which we are here concerned. One is the type that says what he thinks, and to the person he thinks it about; the other type is the one that does not say anything but he mopes around with ill feeling toward someone until this feeling develops into a hatred or contempt. In neither of these do we find an ideal employee. Well, what can be done to help correct this?

As far as the employer is concerned, regular systematic personal conferences can and will go far into correcting the trouble. A good conference should have the following characteristics: First, it should be held at regular set intervals promptly at a stated hour. Each member should be one time. The employer or his representative should make it plain that each person present—and the head of each department in the hospital should be there—is present to give the others the benefit of his knowledge and experience.

Second, it should be understood that all department grievances are to be thoroughly aired. Each participant should state clearly and without exaggeration just what his position is and what he believes will make for better coöperation. Each should tell what his department is supposed to accomplish, how this can best be done and how much of a success is being made.

Third and last, but by no means least, is the *touchy subject of personal grievances and hurt feelings*. Here is where tact and adherence to facts without exaggeration is so very important. A good chairman is essential. A large number of hurt feelings arise from trivial things. Often the real cause was never put into words but some one had a supposition about the conversation of someone else this supposition being repeated soon becomes *gossip*.

Gossip therefore is the culprit. To overcome an evil the first step is to admit that one exists, the next to explain why you came to be certain that one does exist. When this phase is being discussed, everyone should take care to make no statement not easily understood by all participating parties. It is so easy to lose our temper and say what is dangerous even to think. Any person talking at such a meeting should say what he has seen, or what he has heard, and let others in the meeting make their own interpretation. If any further statement is necessary, simply state how you interpreted what you saw or what you heard. If your interpretation was reasonable, you may rest assured that others in the group will have had the same understanding. The one whose feelings have been offended knows if he or she has been unduly sensitive, or whether any one present under the same circumstances would have felt the same. If the offending party then is present, he or she can get a better picture of the whole matter. An apology may be in order. If so, it will not now be hard to make. No person really ever becomes strong and noble until he learns well how to apologize. No person ever felt so small as the one who is shown that he just goes around with a chip on his shoulder. Yet, without personal conferences, I know of no organization more apt to number among its members individuals of these two types.

If any hospital administrator is having difficulty with his personnel, the writer would strongly urge him to adopt the policy of weekly staff (personal) conferences. It will surprise anyone how many bits of gossip can be stopped in their infancy. Also it would be well for some member of the board of trustees or of the medical staff to meet occasionally with the group so that he may get something off of his chest.

At the end of each meeting, the chairman should impress on all present that the real rule is the Golden Rule and if all will live by it there need be no fear that the institution will not make a success.

Common Colds and Other Respiratory Infections Treated Successfully with Penicillin Dust

Inhalation of penicillin dust is a valuable treatment for the common cold, chronic sinusitis, bronchitis, bronchial asthma with acute or chronic bronchitis, and pneumonia, report three Chicago physicians.[1]

Of the 169 patients treated for the common cold, 42% were considered cured. Thirty-eight patients were treated for acute and chronic sinusitis, 41 for acute and chronic bronchitis, 24 for bronchial asthma with acute or chronic bronchitis. Of these, 13, 17, and four patients, respectively, were freed of symptoms. Four out of six patients treated for pneumonia were freed of symptoms. Other patients in the study were treated for various other infections of the respiratory tract.

Penicillin dust often relieved the stuffiness and congestion of a cold immediately. It also reduced the pain of an acutely sore throat within one-half to one hour in some cases.

Of the entire group, 134 patients (37.5%) were judged greatly improved, 129 (36%) moderately improved.

The treatment consisted of inhaling penicillin dust one to three times daily. Three to six minutes were usually required to inhale the amount used, and patients were not allowed to eat or drink for one hour after any inhalation.

Some of the patients used a plastic mouth inhaler. This type of apparatus reduces the possibility of allergic reactions from the penicillin dust as it keeps the penicillin from coming in contact with skin of the face.

It is claimed that this inhalation therapy with penicillin dust permits a patient to "go about his business without loss of time and with minimum expense."

1. Louis Krasno, P. S. Rhoads and Mary Karp, in *Jour. A. M. A.*, Oct. 2nd.

Tribute of Trustees of Rutherford Hospital to Dr. M. H. Biggs

Dr. Montgomery Herman Biggs, for 42 years a member of the staff of the Rutherford Hospital, died on August 28th, after an illness of several weeks. In his death the staff and trustees of the Hospital lost a distinguished associate and a valued friend.

Born in Hinsdale, Illinois, May 14th, 1870, Dr. Biggs was graduated in medicine from the University of Pennsylvania in 1897. He served an internship at the University Hospital and then was appointed resident physician at the Philadelphia General Hospital. In 1906, after gaining gaining experience and ataining high qualifications as a surgeon, Dr. Biggs came to Rutherfordton and was associated with Dr. Henry Norris in founding the Rutherford Hospital, with which he was connected for the remainder of his life. So thorough was the work of Dr. Biggs as a physician, surgeon, hospital administrator and educator, that his influence reached into homes in every section of the country. Being a man of the highest probity, whose life was devoted unsparingly to the service of his fellowman, his idealism was a source of inspiration to his medical colleagues and his passing leaves them with a sense of deep bereavement.

During the last few years of his life, in spite of ill-health, Dr. Biggs gave his time and energy to planning for an enlargement of the Hospital and its facilities.

At a meeting held on October 7th, the Trustees of the Rutherford Hospital, as an expression of appreciation of Dr. Biggs' services, incorporated in the records the following resolution:

Resolved, that the Board of Trustees record its deep sorrow at the loss of Dr. Montgomery H. Biggs, colleague and friend. Through his work and by his spirit and personality he endeared himself to all his co-workers, who had come to feel for him equally admiration, respect, and love. It can well be said of Dr. Biggs that he brought relief from suffering and the restoration of health to large numbers of our people and was influential in making our country a better place in which to live.

Cyanide Poisoning.—Death may follow almost immediately after taking a fatal dose of cyanide, or it may be delayed for more than three hours. The currently favorite treatment of cyanide poisoning consists of the immediate administration of amyl nitrite perles, followed by intravenous injection of from 0.3 to 0.6 Gm. of sodium nitrite and, finally, of intravenous injection of 25 to 50 Gm. of sodium thiosulphate. Treatment may be repeated if necessary using one-half of these quantities.

—*Current Medical Digest*, Oct.

NEWS

University of Virginia Department of Medicine

August 31st-September 11th, Dr. E. P. Lehman, Head of the Department of Surgery, attended the Pan-Pacific Surgical Congress held at Honolulu, T. H., presenting the following papers: "Intestinal Obstruction" by Drs. W. E. Becker, C. E. Davis and E. P. Lehman; "Cancer Research" and "Control of Cancer." During the business session of the Congress, Dr. Lehman was elected Chairman of the Council for the Mainland.

Dr. C. L. Gemmill, Department of Pharmacology, attended the Ninth International Congress on Industrial Medicine in London, England, from September 12th-17th where he presented a paper on "Altitude and Exercise."

On September 23d, Dr. Fletcher Woodward spoke before the General Assembly of the Michigan State Medical Society in Detroit. His subject was "Medical Criticism of Modern Automotive Engineering."

At the meeting of the Norburn Hospital Medical Conference held at Asheville, N. C., on October 1st, Dr. E. P. Lehman spoke on the subject "General Problems of Cancer."

Dr. Eugene R. Kellersberger of the American Mission to Lepers spoke to the Faculty and student body of the Medical School on October 8th on "Leprosy." Dr. Kellersberger was one of the five official representatives of the United States Government to the World Leprosy Conference in Havana, Cuba.

On October 11th, the Postgraduate program for House Officers presented as guest speaker Dr. Theodore Woodward of the School of Medicine of the University of Maryland. Dr. Woodward's subject was "The Clinical Uses of Chloromycetin."

In the week of October 11th-16th, Dr. Fletcher Woodward presented a lecture before the American Academy of Ophthalmology and Otolaryngology in Chicago, on the subject, "The Treatment of Bilateral Recurrent Nerve Laryngeal Paralyses."

On Octomer 18th, as part of the Postgraduate Program for House Officers, Dr. June C. Shafer of Arlington, spoke to the Faculty and student body on "The Clinical Application of Radiation Principles."

Ninth District Medical Society Annual Meeting
Statesville, North Carolina

Thursday, September 30th—Vance Hotel
(Ladies Auxiliary meeting and tea, Country Club, 2:30 to 5:30 P. M. All ladies invited to dinner meeting.)

2:30 P. M.—Call to order by Dr. I. E. Shafer, District Councillor, Salisbury.

Invocation—Rev. C. C. Holland, Pastor, Front Street Baptist Church, Statesville.

Address of Welcome—Hon. Robert A. Collier, Mayor of Statesville

Response to Address of Welcome—Dr. C. W. Armstrong, Salisbury.

Officers Called to the Chairs.

Election of Officers for meeting in Lenoir in 1949.

Memorial Service—Dr. J. L. Pressly, Statesville.

Surgical Problems of Interest to the General Practitioner—Dr. J. A. Valone, Lexington.

Early Signs and Symptoms in the Diagnosis of Poliomyelitis—Dr. W. H. Patton, Morganton.

Significance of Laboratory Data in the Diagnosis of Poliomyelitis—Dr. John C. Reece, Morganton.

Current Problems and Future Plans for North Carolina Health Work—Dr. J. W. R. Norton, Raleigh.

Practical Points in Pediatrics for the General Practi-

tioner—Dr. S. F. Ravenel, Greensboro.
Dinner—Vance Hotel, 7 P. M.
Toastmaster—Dr. James W. Davis, Statesville.
Presentation of Distinguished Guests.
Guest Speaker—Dr. Norman Q. Brill, Washington, D. C.

The Southeastern Allergy Association will hold its fourth annual meeting at the Washington Duke Hotel, Durham, N. C., on Saturday and Sunday, January 22nd and 23d, 1949. Dr. George Rockwell, president of the American College of Allergists, and Dr. Walter Winkenwerder, president of the American Academy of Allergy, are to be the guest speakers. There will be a panel on "Infectious Asthma" headed by Dr. Oscar Swineford and a panel on "Food Allergies" headed by Dr. Hal Davison.

For further information address the Secretary, *Dr. Katharine B. MacInnis*, 1515 Bull St., Columbia, S. C.

Seventh District Medical Society, Rutherfordton, N. C., October 6th, 2:30 P. M.

Call to order by Dr. Elias Faison, Councilor, Charlotte.

Cancer of the Cervix Uteri, Dr. R. H. Crawford, Rutherfordton.

Cancer of the Stomach, Dr. J. W. Harbison, Shelby.

Epithelioma of the Skin, Dr. D. G. Welton, Charlotte.

The Present Status of Cancer Diagnosis by Smears, Dr. Paul Kimmelstiel, Charlotte.

Carcinoma of the Head and Neck, Dr. Grant E. Ward, Baltimore.

Dinner meeting 7:00 P. M.

Invocation—Rev. Ralph K. Webster.

Address of Welcome—Woodrow W. Jones.

Response—Dr. Charles I. Allen, Wadesboro.

Address—Dr. James F. Robertson, Wilmington, President Medical Society of the State of North Carolina.

Address—"The Cancer Program of Today," Dr. Grant E. Ward, Baltimore.

The regular monthly meeting of the Carteret County Medical Society was held at the Morehead City Hospital November 8th. This was a supper meeting, the hospital acting as host.

Dr. Robert N. Creadick of Duke Hospital spoke on "Obstetrical Complications, and How to Treat Them." There was much discussion and it was generally agreed that the paper was the most helpful of the year.

Dr. Palumbo, Duke Hospital, was also a guest.

Every member of the Society was present.

Dr. N. T. Ennett moved that, for the December meeting, the Society invite Dr. J. W. Roy Norton, State Health Officer; Dr. J. F. Robertson, President, North Carolina Medical Society; and Dr. Roscoe D. McMillan, Secretary, North Carolina Medical Society, as guest speakers. Motion unanimously carried.

Dr. J. W. Morris, Morehead City, is president of the Society, Dr. F. E. Hyde, Beaufort, is Secretary, and Dr. N. T. Ennett, Beaufort, Corresponding Secretary.

Dr. John W. Corbett and Maj. A. Moultrie Brailsford have been presented with pins by the South Carolina Medical Association, in recognition of the fifty years that Dr. Corbett and Major Brailsford have represented the profession. Dr. Roderick H. McDonald of Rock Hill, president-elect of the Association, presented the pins and paid each a splendid tribute for his loyalty to the profession. Dr. Corbett has spent his life in the profession in Camden. Major Brailsford practiced at Mullins before he entered the Army.

W. L. Venning, M.D., and C. G. Watkins, M.D., announce their association in the practice of Pediatrics, with the opening of new offices at 1618 Elizabeth Avenue, Charlotte, North Carolina.

Dr. E. L. Potter, Charlotte, announces the removal of his offices to 1112-13 Independence Building.

The Lowrance Clinic, Suite 215 Doctors Building, 478 Peachtree Street, N.W., Atlanta, announces the association of Dr. Franklin H. Goodwin, recently of the Cleveland Clinic.

DIED

Dr. Stuart McGuire, 81, for forty years a distinguished surgeon, died at his Richmond home on the 27th of October. Dr. McGuire had been retired from the active practice of his profession for a dozen years, but retained the chairmanship of the board of the Medical College of Virginia to the time of his death. He was the tenth president of the Tri-State Medical Association, presiding at the meeting held at Charlotte in 1908.

Dr. Charles Russell Robins, 80, distinguished Richmond gynecologist, died on the 16th of October after two years of retirement. Dr. Robins was professor of gynecology in the Medical College of Virginia for many years, and was one of the group to build Stuart Circle Hospital, of which he was president for a great number of years. He was an active participant in the affairs of the Tri-State Medical Association.

Prolonged Use of Excessive Doses of Vitamin D Injurious

(Chester Keefer, M.D., in *Maine Med. Jl.*, Sept.)

If large amounts of Vitamin D are administered, and particularly if the patient is not very active or is kept in bed, or if the renal function is low, or if he takes these capsules in milk, he is likely to develop hypercalcemia. Symptoms of renal damage appear—nocturia, albuminuria and hematuria, maybe GI symptoms—anorexia, nausea, vomiting and diarrhea; and general symptoms—weakness, lassitude, headache and itching. This intoxication often causes weight loss, pallor, occasionally deafness and psychic disturbances; insomnia is reported very frequently. Deposits of calcium occur, particularly in the kidneys, stomach, lungs, arteries and muscles and the subcutaneous tissues. Deposits of calcium may be made in the cornea and conjunctivae. Commonly N retention, reduced PSP, and anemia. These patients get along well on a low-Ca, low-Vitamin D diet.

A New Method of Suspending the Cervical Stump Following Abdominal Hysterectomy

(L. K. Zimmer, M.D., Lawrence, in *Jour. Kansas Med. Soc.*, Sept.)

The technique of abdominal hysterectomy has become stereotyped and the operation is today a commonplace procedure even in smaller hospitals. There have been no significant changes in the method as described by standard texts on operative gynecology in the last 20 years.

A new method of suspending the cervical stump after abdominal hysterectomy is described which appears to have certain definite advantages. The principle is the suture of the anterior and posterior lips of the cervix around and over the previously united, overlapping round ligaments.

Pleuropulmonary Tularemia.—Two cases successfully treated with streptomycin are reported. The difficulty of exact diagnosis in the early stages of the disease is emphasized, and a therapeutic trial of streptomycin in similar cases of severe atypical pneumonia is strongly urged.—A. J. Draper, M.D., Charlotte, in *N. C. Med. Jl.*, July, 1947.

BOOKS

ABDOMINAL OPERATIONS, by Rodney Maingot, F.R.C.S. (Eng.), Surgeon to the Royal Free Hospital and the Southend General Hospital, London. Second Edition. With Contributions by Lester R. Dragstedt, M.D., Ph.D., University of Chicago, Ill., U. S. A.; A. J. Cokkinis, F.R.C.S. (Eng.), St. Mary's Hospital, London; Harold R. Dew, F.R.C.S. (Eng.), F.A.C.S., University of Sydney, Australia; R. C. Brock, M.S., F.R.C.S. (Eng.), Guy's Hospital and Brampton Hospital, London; Stuart W. Harrington, M.D., F.A.C.S., Mayo Clinic, Rochester, Minn., U. S. A.; Cuthbert E. Dukes, C.B.E., M.Sc., M.D., St. Mary's Hospital, London; O. V. Lloyd-Davies, M.S., F.R.C.S. (Eng.). Hampstead General Hospital, London; Norman C. Tanner, M.B., F.R.C.S. (Eng.), St. James Hospital, London. *Appleton-Century-Crafts, Inc.*, New York, $16.00.

This new book was conceived and executed with the end in view of serving well the abdominal surgeon, the general surgeon, the surgical resident and the interne, as a description in detail of the techniques of the abdominal surgery of today for diagnosis and treatment. Choice of operation in the individual case, preoperative care, difficulties and dangers which may be encountered during operation, results to be expected, details of postoperative care—all these are covered in a painstaking manner.

It is evident that the author and his collaborators have called upon their large experience and on other authorities in their field for the latest and best for inclusion in this edition of this monumental work. There has been thorough revision, much re-writing, new chapters have been introduced and a new surgical knowledge developed in the decade since the appearance of the first edition, and several hundred new illustrations have been included.

PSYCHIATRY IN GENERAL PRACTICE, by Melvin W. Thorner, M.D., D.Sc., Assistant Professor of Neurology, The Graduate School of Medicine, University of Pennsylvania. *W. B. Saunders Company*, Philadelphia, 1948. $8.00.

Within the past twenty years it has become increasingly evident that the greater part of the diagnosis and treatment in psychiatry must be done by the General Practitioner. In that time there has been a great change in the attitude of the specialists in psychiatry as to the part of the practitioner in dealing with this class of diseases. Formerly the whole idea seemed to be that only the psychiatrists could accomplish anything beneficial in such cases. Now it is rather freely conceded that, of the little or much that can be done for a patient sick in his mind, a very large percentage can be done by the family doctor—and outside of hospitals, general or special. Such is the theme of this volume, and it is well developed. Illustrative cases are given in sufficient detail to afford valuable instruction.

MEDICAL RESEARCH IN FRANCE DURING THE WAR (1939-1945). Thirty articles gathered and presented by Jean Hamburger, Professor agrégé à la Faculté de Medicine, Medecin des Hopitaux de Paris. Foreword by Professor Pasteur Vallery-Radot, Member de l'Institut. Editions Médicales Flammarion.

Certainly most of us assumed that research in medicine was at a standstill during the years that the nation was over-run by the German armies. This volume presents evidence that this work did not cease even in the darkest of those times and that the accomplishment was by no means negligible. Important advances were made of our knowledge of the neuro-edematous syndrome, of septicemia due to Funduliformis bacillus, of vaccination against typhus, of the early radiological diagnosis of cancer of the stomach, of digestive allergy, of treatment of endometriomas with the male hormones, of the treatment of Graves' disease by aminothiazol, of the mercurial treatment of syphilitic aortitis, of hunger osteosis, of haptoglobin and its clinical significance, of a rapid method for the titration of penicillin, of the antisulphamide activity of peptones, of intravenous use of novocain and of the role of phosphatase in the calcification of bone and observations on 800 lumbar gangliectomies.

The work here reported had important bearings during the war and even more important consequences since its close. It is truly amazing that so much could have been accomplished of prime practical value under such difficulties.

URINE AND URINALYSIS, by Louis Gershenfeld, B.Sc., P.D., Ph.M., D.Sc., Professor of Bacteriology and Hygiene and Director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Third Edition, thoroughly revised. Illustrated with 42 engravings. *Romaine Pierson Publishers, Inc.*, New York City. 1948. $5.00.

This latest edition follows the method of presentation suggested by a third of a century of practical experience in the teaching of students of the medical sciences. The techniques, interpretations and practical applications of the results of analyses of the urine are presented in a most practical and useful manner.

A. M. A. INTERNS' MANUAL. *W. B. Saunders Company*, Philadelphia. 1948. $2.25.

It is claimed for this Interns' Manual that, though considerably smaller than its predecessor, "Hospital Practice for Interns," it contains twice as much information. Besides serving the needs of interns especially, it is a handy textbook of clinical and laboratory data of great usefulness in future practice.

Every treatment is an experiment and every potent remedy is dangerous.—L. T. Witts, M.D., Professor of Clinical Medicine, Oxford University.

THE 1948 YEAR BOOK OF PEDIATRICS, edited by HENRY G. PONCHER, M.D., Professor of Pediatrics, University of Illinois College of Medicine, Chicago. ISAAC A. ABT, M.D., Editor Emeritus. *The Year Book Publishers, Inc.*, 304 S. Dearborn St., Chicago. $4.50.

One needs only to say that the Yearbook of Pediatrics for this year maintains under the editorship of Dr. Poncher the high quality which was given it for so many years by Dr. Abt. For the most part articles dealing with diagnosis and treatment have been selected for abstract and comment, a fact that will prove highly pleasing to pediatricians and general practitioners alike.

AN INTRODUCTION TO SURGERY, by RUTHERFORD MORISON, M.D., F.R.C.S., Edin., F.R.C.S., Eng., M.A., D.C.L., LL.D., Formerly Professor of Surgery, Durham University; and CHARLES F. M. SAINT, C.B.E., M.D., F.R.C.S., F.R.A.C.S., Formerly Professor of Surgery, Cape Town University, South Africa. Fourth edition. *The Williams and Wilkins Co.*, 1948. $10.00.

The declared object of this book is to aid the student in thinking out for himself the problems presented in office, hospital and textbook. By the inculcation of general principles and instruction in their applicability it is said that the student may be brought to the place where the masses of surgical detail presented to him no longer overwhelm him, and to feel a real interest in the subject which before seemed to present insurmountable difficulties.

The book is reminiscent of Nicholas Senn's "Principles of Surgery." It would be difficult to give higher praise than to say it is Senn brought up to date.

LIVES OF MASTER SURGEONS, by RICHARD A. LEONARDO, M.D., Ch.M., F.I.C.S. *Froben Press, Inc.*, 1776 Broadway, New York City. 1948. $6.00.

A feature of this book which will greatly interest many readers is the inclusion of the sketches of a good many surgeons, ancient and modern, domestic and foreign, of whose accomplishments a great many medical men are almost or entirely ignorant. These sketches, as well as those of surgeons already well-known, are written in an entertaining and instructive fashion.

ACUTE INTESTINAL OBSTRUCTION, by RODNEY SMITH, M.S., F.R.C.S., Assistant Surgeon, St. George's Hospital, London. With a chapter on Radiological Diagnosis by ERIC SAMUEL, M.D., F.R.C.S., late Radiologist, The Middlesex Hospital, London. Foreword by RUPERT VAUGHAN HUDSON, F.R.C.S. *The Williams and Wilkins Co.*, Baltimore. 1948. $5.00.

All of us were taught in medical school that in case of intestinal obstruction in the infant, one's first thought should be of intussusception; in an older person, of strangulated hernia; in a very old person, of volvulus. This is still a good working rule, but there is a lot more to it. The authors note the wave of progress which has in recent years brought new knowledge of the pathology, biochemistry and treatment of intestinal obstruction; that the fatality rate of the early 1930's, unchanged for 20 years, has since then been reduced by 50 per cent or more. How this has been brought about, and how knowledge of this condition can be further improved and even a larger percentage of such patients be saved, makes up the text.

THE SURGERY OF ABDOMINAL HERNIA, by GEORGE B. MAIR, M.D., F.R.F.P.S.G., F.R.S.E., Surgeon, Law Junction Hospital, Lanarkshire. *The Williams and Wilkins Co.*, Baltimore. 1948. $7.00.

The author expresses a desire to clarify many points in the etiology and treatment of herniae. Certainly, after hundreds of years of study of this extremely common developmental condition, a great many points still stand in need of clarification. It would seem to the reviewer that his figures for recurrence for "most operating surgeons" of five to 25 per cent is a bit high, but certainly it is higher than anyone would like it to be. In the view of the author, this high rate of recurrence is due in large measure to the treatment being based on false premises, and he believes that understanding of the factors involved will be rewarded by a very material improvement in operative results following a simplified technique.

From this book the general physician may obtain a new viewpoint for his guidance in counseling his patients and the operating surgeon may learn a good deal that is new to him in the way of technique, all of which will redound to the patient's benefit.

SCABIES—From P. 346

After five minutes a second thorough application of the emulsion.

Twenty-four hours later a repetition of the process, omitting the bath.

Thirty-six to 48 hours later a thorough bath and clean underwear and bed sheets.

It is not thought that changing underwear and sheets is at all necessary, but when convenient nothing is to be so lost and perhaps the likelihood of dermatitis is diminished.

1. Robert N. Buchanan, Jr., M.D., Nashville, in *Jour. of Tenn. Med. Assn.*, Sept.

CHEWING GUM AND VITAMIN K AND DENTAL CARIES (L. S. Fosdick, Ph.D., Chicago, in *Jl. Dent. Research*, April) On the basis of theoretical considerations, prewar gum should increase caries activity in some individuals, have no effect on others, and be beneficial to some, if not used in excess. Postwar gum should be beneficial to many but under certain conditions may be harmful. In any case, gum would be less harmful than sugar in other forms. On the basis of theoretical consideration and actual experiments, vitamin K shows promise of controlling caries. More evidence is needed before either gum or vitamin K should be recommended to the general public as a control measure.

DIAGNOSIS IN DAILY PRACTICE. An Office Routine Based on the Incidence of Various Diseases, by BENJAMIN V. WHITE, M.D., Assistant Clinical Professor of Medicine, Yale University School of Medicine; and CHARLES F. GESCHICKTER, M.D., Professor of Pathology, Georgetown University Medical School. 360 Illustrations. *J. B. Lippincott Company*, Philadelphia. 1947. $15.00.

This book is written as a guide to the physician in discharging his responsibility for the management of the illnesses which cause most disability and death, and for the recognition and proper referring of the minority of cases. The authors' aims are to emphasize in terms of prevention and salvage the importance of prompt recognition of diseases, and to evaluate the clinical findings which serve as indications for further diagnostic tests, for the purpose of confirming the presence of the diseases in early or pre-symptomatic stages. A second aim is to provide a compendium of these clinical and diagnostic findings, and to outline a routine examination which will enable the physician to recognize and differentiate them.

A survey of mortality and morbidity statistics as a basis for the selection of the major diseases dealt with in the text is included. The etiologic classification of these diseases and their regional distributions are discussed. Chapters are devoted to diagnostic abnormalities according to their pathological physiology, the measures required for their demonstration and their diagnostic implications.

One could hardly find words to praise too highly the practical value of this unique work.

This little book has arrived at its fifth edition and at great popularity by carrying out the intention expressed when it was begun—to briefly, clearly and comprehensively summarize diagnostic procedures which every physician must have quickly available. Its descriptions of common clinical and laboratory tests suffice for diagnosis in the vast majority of cases encountered in practice.

FOR ROUTINE USE OF TETANUS TOXOID
(E. Press, in *Current Medical Digest*, Nov.)

Tetanus antitoxin when given at the time of injury is usually effective in preventing tetanus, and every 10 or 14 days until complete healing has taken place. In the majority of cases only a single dose is given which more than likely results in a false sense of security. *Tetanus toxoid*, however, when properly administered provides almost complete protection and almost complete freedom from adverse reactions.

Tetanus toxoid should be given routinely to children, combined wtih diphtheria, with pertussis vaccine, or with both. In addition, children who have been immunized for diphtheria and pertussis, but not for tetanus, should have tetanus toxoid. Adults with increased accident hazards, such as manual laborers in both rural and urban areas, should also be immunized.

THE HISTORY is of paramount importance, for it is the ability to withstand the stress and strain of daily life, the carrying on of one's occupation, walking and stair-climbing, and other mental and physical activities that are the most helpful evidence of the heart's functional condition.
—O. O. Meyer, in *Wis. Med. Jl.*, Oct.

FELLOWS OF THE TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA

1948-1949

North Carolina

Allgood, R. A. ..... Fayetteville
Andes, McT. G. (Hon.) ..... Gastonia
Anderson, E. C. ..... Wilmington
Anderson, R. S. ..... Whitakers
Angel, Edgar ..... Franklin
Angel, Furman ..... Franklin
Armistead, D. B. ..... Greenville
Ashby, J. W. ..... Raleigh
Ashe, J. R. ..... Charlotte
Aycock, E. B. ..... Greenville
Barefoot, S. W. ..... Greensboro
Barrier, H. W. ..... Concord
Barron, A. A. (Hon.) ..... Charlotte 2
Baxter, O. D. ..... Charlotte 2
Beale, S. M. ..... Elkin
Beall, L. L. ..... Greensboro
Beam, H. M. ..... Roxboro
Bell, S. A. ..... Hamptonville
Bender, J. J. ..... Red Springs
Bender, J. R. ..... Winston-Salem
Bennett, B. S. ..... Asheville
Bennett, J. W. ..... Burlington
Benson, N. O. ..... Lumberton
Bentley, J. G. ..... Moravian Falls
Billings, G. M. ..... Morganton
Bishop, W. R. ..... Greensboro
Black, G. W. ..... Charlotte 3
Blackwelder, V. H. ..... Lenoir
Blair, James L. ..... Gastonia
Boice, E. S. (Hon.) ..... Rocky Mount
Bolt, C. A. ..... Marshville
Bonner, M. D. ..... Jamestown
Bost, T. C. (Hon.) ..... Charlotte 2
Brabson, John A. ..... Charlotte 2
Bray, T. L. ..... Plymouth
Brenizer, A. G. (Hon. and Ex-Pres) ..... Charlotte 2
Bridger, D. H. ..... Bladenboro
Bridges, D. T. ..... Lattimore
Brooks, R. E. ..... Burlington
Broughton, A. C. ..... Raleigh
Brunson, E. P. ..... Albemarle
Bunch, Chas. ..... Charlotte 2
Burns, J. E. ..... Concord
Butler, L. J. ..... Winston-Salem 7
Callaway, J. L. ..... Durham
Camp, Horton ..... Pittsboro
Cardwell, Willard ..... Greensboro
Carroll, R. Charman ..... Asheville
Cherry, J. H. ..... Asheville
Clark, H. S. ..... Asheville
Cobb, D. B. ..... Goldsboro
Cogdell, D. M. ..... Fayetteville
Cooke, H. M. ..... Charlotte
Corbett, J. P. ..... Swansboro
Cox, G. S. ..... Tabor City
Craig, S. D. ..... Winston-Salem
Crawford, R. H. ..... Rutherfordton
Crisp, S. M. ..... Greenville
Crowell, L. A. (Hon.) ..... Lincolnton
Crump, C. L. ..... Asheville
Cutchin, J. H. ..... Roanoke Rapids
Dalton, B. B. ..... Asheboro
Dalton, Wm. B. ..... Greensboro
Daniels, R. E. ..... West Asheville
Davidson, J. E. S. ..... Charlotte 2
Davis, J. F. ..... Greensboro
Davis, J. W. (Hon.) ..... Statesville
Davis, R. B. ..... Greensboro
Davison, W. C. ..... Durham
Dawson, J. N. ..... Lake Waccamaw
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Ditmore, H. B. ..... Marshall
Dixon, G. G. ..... Ayden
Donnelly, G. L. ..... Asheville
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Ellington, A. J. ..... Burlington
Elliott, J. A. ..... Charlotte 2
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Fearington, J. C. P. ..... Winston-Salem
Ferguson, R. T. (Hon.) ..... Charlotte 2
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Finch, O. E. ..... Raleigh
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Fox, D. B. ..... Albemarle
Fox, P. G. ..... Raleigh
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Griffin, M. A. ..... Asheville
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Dunavant, R. B. ..... Edgefield
Durham, R. B. ..... Columbia
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Evatt, C. W. ..... Charleston 16
Fennell, W. W. ..... Rock Hill
Finger, Elliott ..... Marion
Finklea, O. T. ..... Florence
Finney, R. P. ..... Spartanburg
Funderburk, I. S. ..... Cheraw
Ghent, T. D. ..... Great Falls
Gibbs, W. R. ..... Buffalo
Glennan, T. L. ..... Denmark
Graham, C. M. ..... Clio
Green, J. T. ..... Columbia
Griggs, D. C. ..... Pageland
Guyton, C. L. ..... Columbia
Hanna, C. B. ..... Charleston
Harrelson, M. C. ..... Charleston
Hart, W. A. ..... Columbia
Hayne, J. A. ..... Columbia
Hendrix, W. T. ..... Spartanburg
Herbert, W. C. ..... Spartanburg
Hiott, J. T. ..... Charleston
Hook, M. B. ..... Columbia
Jennings, Douglas, Jr. ..... Bennettsville
Johnson, F. B. (Ex-Pres.) ..... Charleston 4
Johnson, J. A. ..... Marion
Jordan, Fletcher (Hon.) ..... Greenville
Kane, J. J. ..... North Charleston
Kinder, E. C. ..... Columbia
Kirmey, C. A. ..... Florence
Kelley, E. T. ..... Andrews
Kennedy, G. L. ..... Ninety Six
King, W. W. ..... Batesburg
Kinney, P. M. ..... Bennettsville
Kitchin, J. W. ..... Liberty
Kredel, F. E. ..... Charleston
Laub, G. R. ..... Columbia 49
Lee, D. L. ..... Florence
Linton, I. G. ..... Charleston 16
Lippert, K. M. ..... Columbia
Lominack, R. W. ..... Newberry
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Lyles, W. B., Jr. ..... Spartanburg
MacInnes, Katharine B. ..... Columbia 49
Madden, Ethel M. ..... Columbia 49
Madden, L. E. ..... Columbia
Maguire, D. L., Jr. ..... Charleston 4
Mays, W. C. ..... Fair Play
McAlhany, Howard ..... Great Falls
McCants, C. S. ..... Winnsboro
McDaniel, W. P. ..... Walterboro
Melcher, W. A. ..... Iva
Miles, L. S. ..... Summerville
Mims, C. W. ..... Greenville
Moore, A. T. ..... Columbia
Moore, E. H. ..... Newberry
Morrow, S. J. ..... Inman
Mosteller, Malcolm ..... Columbia
Nachman, Mordecai ..... Greenville
Nelson, J. D. ..... Spartanburg
Owens, F. C. ..... Columbia
Owens, J. K. ..... Bennettsville
Peeples, H. L. ..... Scotia
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Pringle, Duncan ..... Charleston
Prioleau, W. H. ..... Charleston
Ravenel, W. J. ..... Charleston
Rawls, A. E., Jr. ..... Charleston
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Rhame, G. S. ..... Camden
Rhame, J. S. ..... Charleston 7
Richards, G. P. ..... Charleston 28
Riley, Kathleen A. ..... Charleston
Rogers, R. S. ..... Meggett
Rogers, W. C. ..... Hemingway
Rogers, W. K. ..... Loris
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Settle, H. G. ..... Fort Mill
Sheppard, G. C. ..... Fort Mill
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Siegling, J. A. ..... Charleston
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Smith, C. C. ..... Charleston 6
Smith, D. H. (Hon.) ..... Spartanburg
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Stanley, R. R. ..... Greenville
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The Surgical Aspect of Congenital Heart Disease*

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IN THE not too distant past the diagnosis, "congenital heart disease," was considered an adequate diagnosis by many physicians. Thereafter the child was known as a congenital cardiac. The specialist in the field of cardiac anomalies, as a matter of academic interest, would make more detailed diagnoses such as auricular and ventricular septal defect, patent ductus arteriosus, pulmonary stenosis, or single ventricle. These diagnoses were seldom questioned and were found to be correct or incorrect only at the autopsy table.

Within the last few years it has become of the greatest clinical importance to have an accurate diagnosis of the patient with congenital heart disease. Doctors Master and Pendergrass have already pointed out the tremendous advances in diagnostic technique which have helped to make this possible.

While there are many types of congenital cardiac anomalies, there are only three for which surgery has been widely used and accepted. I shall confine my discussion to these three problems.

Patent Ductus Arteriosus—

The ductus arteriosus normally becomes obliterated at, or shortly after, birth. When it fails to close spontaneously, it would seem most logical to do by surgery what nature has failed to do. Although a surgical attack on this problem was suggested by Monroe[1] in 1907, the first successful operation was performed by Gross[2] in 1938. Since that time the obliteration of a patent ductus arteriosus, either by ligation or division, has become a widely accepted procedure.

Before referring a patient with a patent ductus arteriosus to the cardiavascular surgeon the practitioner naturally asks himself two questions: 1) what is likely to happen if the operation is not done?, and 2) what is the risk of operation?

It is difficult to be certain of the life expectancy of a patient with a patent ductus arteriosus, but the statistical data in autopsy series studied by Bullock et al.[3] and Shapiro[4] indicate that the average age at death is under 35 years. Infants dying under three years of age were excluded from these series. The cause of death was usually cardiac failure or subacute bacterial endocarditis. Wilson and Lubschez[5] and Gilchrist,[6] on the other hand, have suggested that autopsy data may be heavily loaded with severe or complicated cases, and they believe that the life expectancy may be over 35 years of age. It is certainly true that the vast majority of reported cases of patent ductus arteriosus have died before the age of 35. There are few cardiologists who can recall more than two or three adults with the lesion whereas it is not uncommon in children. There have been only two patients over 35 years of age with a patent ductus arteriosus in the cardiac clinic of the Hospital of the University of Pennsylvania in the last 17 years.

What is the risk of operation? In a review of 643 cases operated upon by 46 surgeons, Shapiro[4]

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found the mortality to be 4.9 per cent. In our own series, we have had only one death in 40 cases or a mortality of 2.5 per cent. Gross[7] has had a similar mortality in a much larger series. It would seem that this is not too great a risk for an operation which changes the patient's life expectancy from 35 or under to the normal of about 65 years.

Following a successful operation the signs of the A-V shunt disappear, there is regression of the enlargement of the heart, and in young individuals there seems to be an acceleration of the body growth. The child who was underdeveloped and prone to infections and easy fatiguability prior to operation has, in our experience, often become in the course of a few months a robust, active individual.

Almost everyone will agree that the patient with a superimposed subacute bacterial endocarditis, enlargement of the heart, or beginning cardiac failure due to a patent ductus arteriosus should be operated upon. In view of our experience and that of others, we believe that one should not wait until these complications develop, but rather that one should operate prophylactically as an elective procedure. When one has a patient with hernia, operation is not deferred until strangulation occurs. No more should one wait for a patient with a patent ductus arteriosus to get into trouble.

We feel that the optimum age for operation is about six to eight years. Certainly as the individual gets older, especially after puberty, the technical difficulties of the operation increase. Atheromatous changes frequently occur in the vessels, and the ductus is more likely to be torn at operation. If there have been bacterial implants in the ductus itself, it is more likely to be friable. We feel that the mortality will undoubtedly be greater if we wait until the patient gets into trouble, when the operation is one of necessity rather than one of election.

Certain technical considerations in the operative procedure will be of interest to some members of this group. Gross[2] exposes the ductus by an anterior inframammary incision. This is quite adequate for the majority of cases. We have often preferred, as have Jones[8] and others, to use a posterolateral approach through the fourth interspace because we feel that it gives us better exposure in the event of trouble. An objection to this incision is that the scar is somewhat more conspicuous than the inframammary incision.

In early operations the ductus was obliterated by two ligatures of heavy silk—one placed at each end. More recently Gross[9] and others have been dividing the ductus completely between hemostats and closing the two ends by suture. Crafoord[10] has used noncrushing clamps on the aorta and divided and sutured the ductus directly without placing hemostats across the ductus. Those who practice division of the ductus have feared that the ligature might not be pulled tightly enough to obliterate the ductus, or that it might be pulled tightly enough to tear the ductus. We have felt that double ligation with heavy silk is to be preferred in most patients. We have had no fear of not completely obliterating the ductus by the heavy silk ligature. The ligature has been pulled as tightly as possible with the thought that if it tears, it can then be divided and sutured. Certainly one should be prepared for such an event. We ligate the pulmonary end of the ductus first so that if it should tear the aortic end can be clamped more easily.

In the 40 patients operated upon we have not been convinced that any of them has had a persistence of the ductus. In four of our patients some observer thought a diastolic murmur was present at some time after operation, but in none of these did other observers hear the murmur or indeed was the same observer able to hear it persistently.

The ductus has been torn in four of our operations. One of these was early in the series when we were not prepared to recover from this complication, and it constitutes our only mortality. In one patient the ductus was clamped with hemostats, divided and sutured by the technique Gross uses routinely. In another patient not only did the ligature cut through the friable ductus, but the hemostats also cut through, so that the aorta was clamped with noncrushing clamps and sutured by Crafoord's technique.

We feel then that ligation is satisfactory for routine use but that one should be prepared to divide and suture the ductus if the occasion demands. In the older age group with a large short ductus ligation is most likely to fail, and division may be preferable. Special clamps have been devised by Freeman[11] which allow the blood flow through the aorta to continue as the vessel is clamped during suture of the ductus.

Tetralogy of Fallot—

The first operation for the Tetralogy of Fallot was performed by Blalock[12] in 1944. Since that time the "Blue Baby" operation has been widely used.

The fundamental defect in the Tetralogy of Fallot is the shunting of venous blood from the right to the left heart without passing through the lungs. Thus there is mixing of venous and arterial blood in the systemic arteries and the patient is cyanotic. This is brought about by a high interventricular septal defect with an overriding aorta, which allows right ventricular blood to go directly into the aorta. Because of the associated stenosis of the pulmonary artery a great part of the blood may leave the right ventricle by way of this abnormal shunt, and very little may pass through

the lungs. When no pulmonic stenosis is present a greater volume of blood can go through the lungs even though enough passes directly into the aorta to produce cyanosis. This condition is known as the Eisenmenger Complex.

When one is dealing with a child with non-cyanotic congenital heart disease, the parents usually have to be sold on the advisability of an operation. When dealing with cyanotic children, however, we have found the parents anxious and asking for an operation. This may be an index of the remarkable publicity given to the "Blue Baby" operation and of the fact that, in these children, the cyanosis is an ever present reminder of their cardiac lesion.

The cardiologist must, therefore, face the problem of which of his patients with cyanotic heart disease have conditions amenable to surgery. By and large he tries to pick those patients with inadequate blood flow to the lungs because of pulmonary stenosis. Whether cyanotic patients with certain other conditions, for example the Eisenmenger Complex, may be improved by a left to right shunt is still questionable.

As has already been pointed out, fluoroscopic examination of the chest by a competent observer is probably the most helpful diagnostic procedure. Cardiac catheterization is helpful in questionable cases, particularly if direct readings can be made of the pulmonary artery pressure. The angiocardiogram may be helpful but is often difficult to interpret.

The surgeon can take the pulmonary artery pressure at the time of operation. If it is below 300 mm. of water he can be reasonably sure of helping the patient by shunting more blood into the lungs. It seems probable that some patients have been helped even when the pulmonary artery pressure was higher than that. It is likely, however, that if the pulmonary artery pressure is normal, indicating the absence of pulmonary stenosis, little is to be gained by an anastomosis.

Indications for Operation:

The life expectancy of the average "Blue Baby" is certainly not great, although an occasional one does reach adult life. Unfortunately, the operation does not make the "Blue Baby" a normal individual. It merely produces a second anomaly which, it is hoped, will counterbalance the one which already exists.

There can be no doubt that these patients are greatly improved; but it is important to emphasize to the parents before operation that the child will not become a normal individual. It is impossible to say at this time what the end results for these patients will be.

One fundamental problem of the greatest importance is—what happens to the site of anastomosis? If the anastomosis grows as the patient grows, then it would seem reasonable to suppose that the patient will maintain his improvement as he grows into adult life. If, on the other hand, the site of anastomosis does not grow as the patient grows, one would expect the patient's condition to deteriorate as he increases in size.

For this reason, it would seem wise to delay operation until the child has grown to a reasonable size. Furthermore, the technical difficulty of performing a functioning anastomosis in the infant is much greater than in patients with larger vessels. By choice, then, one would like to wait until the child is six to eight years of age. Below the age of three or four years, especially in children below twenty to thirty pounds in weight, the hazard of operation may be increased.

If is well and good when one sees a "Blue Baby" in infancy to say that we prefer to operate upon these cases at six to eight years of age, but often it seems obvious that the child will not survive to that age without operation. The cardiologist must make that decision — basing his judgment upon the arterial oxygen saturation, the degree of polycythemia and the evidence of cardiac failure. Blalock has pointed out that the mortality is greatest below three years and above thirteen years of age.

Pre- and Post-operative Care—

The chief problem which is peculiar to these patients in the period of surgical treatment is related to polycythemia. They usually have polycythemia and may have a hemoglobin of 150 per cent or more. This increases the tendency to thrombosis which is one of the serious complications of the operation. It is important to use plasma transfusions rather than whole blood during the operation. We have used whole blood only in the event that the patient did not have polycythemia or that the loss of blood was excessive at the time of operation.

One might think that it would be advisable to use heparin after the completion of a vascular anastomosis of this sort, but experience has shown this to be unnecessary. This doubtless is due to the difference in pressure between the two vessels which allows a rapid blood flow to be maintained. If there is evidence that thrombosis at the site of operation has occurred post-operatively or that cerebral thrombosis has occurred, heparin should be used.

In doing the Potts operation there is a real danger of making the anastomosis so large that the patient may go into acute heart failure. In such a situation we have digitalized the patient promptly. Occasionally the patient may be digitalized preoperatively if there is evidence of incipient cardiac failure.

Every effort should be made at the time of operation to get the wound as dry as possible Careful attention is necessary post-operatively to avoid a collection of blood or fluid in the pleural cavity. In infants, it is especially easy to overlook an effusion sufficient to considerably decrease the patient's respiratory efficiency.

Operative Technique—

The problem is to perform an extracardiac left-to-right shunt by anastomosing a systemic artery to a pulmonary artery. Blalock[13] usually uses the subclavian branch of the innominate artery. In his early cases he frequently used the innominate or the carotid but now uses those vessels very seldom because of the greater incidence of cerebral complications. The operation may be done through an anterior incision in the second or third interspace on the right. If the patient has a right-sided aorta, the incision is made on the left. Holman[14] and Paine and Varco[15] have preferred to operate on the same side as the aorta and use the subclavian branch of the aorta for the anastomosis. They feel that, since this subclavian is longer before it branches and because the left pulmonary artery is longer, the anastomosis can be more easily done on that side. With this we are inclined to agree.

Blalock feels that the angle made by the subclavian coming off the innominate makes it the preferable one to use. In the older age group, however, especially in tall individuals, he favors operation on the side of the arch because of the increased difficulty in bringing the systemic vessel down to the pulmonary artery.

Potts, Smith and Gibson[16] have suggested that the left-to-right shunt can be more easily performed by a side-to-side anastomosis between the left pulmonary artery and the descending aorta. By designing a clamp which allows the blood to flow through part of the aorta while the anastomosis is made, they have been able to accomplish the anastomosis without fear of a paraplegia due to inadequate blood flow to the lower part of the body.

In our hands we have found the Potts operation to be simpler than the Blalock operation, especially in infants. In children below twenty to thirty pounds the subclavian arteries may be quite small so that when the Blalock operation has been done by us we have frequently been fearful that the size of the anastomosis was inadequate to produce the desired result. With the Potts operation, on the other hand, the chief hazard has been the danger of making the anastomosis too large. For example, in an eleven-pound baby upon whom we did a Potts operation, using a lateral anastomosis about one-quarter inch in length, the baby developed acute heart failure shortly after operation and was apparently saved by emergency phlebotomy and digitalization. Certainly, if we had made the anastomosis any larger the child would not have survived.

The Potts operation has two theoretical disadvantages. If one should get in trouble with the Blalock operation, one could ligate the subclavian artery and get out, whereas if one got in trouble with the aorta tearing, it might be catastrophic. And second, the thicker wall of the aorta is more difficult to suture without tearing than is the subclavian.

The Potts operation is more difficult to accomplish in the patient with a right-sided aorta, because the distance between the two structures is greater than on the left. I believe that Dr. Potts has been able to accomplish the procedure, however, and so have we in the two instances in which we have tried it. It is our feeling at present, however, that the Blalock operation is probably preferable in patients over thirty to forty pounds with a right-sided aorta.

Blalock[13] has pointed out that one always has a systemic artery to use for the anastomosis but occasionally may not have a pulmonary artery. Upon several occasions we have been worried for fear that the subclavian artery was not long enough to reach the pulmonary artery. One can, of course, overcome this difficulty by using the carotid artery but we have been hesitant to do so because of the greater risk of cerebral damage. Blalock[13] and Crafoord[17] have overcome this problem by dividing the pulmonary artery close to its bifurcation and lifting it upward for an end-to-end anastomosis with the short subclavian. This is not as desirable as the end-to-side anastomosis since the systemic blood goes only to one lung, but it has been a successful maneuver.

In two patients in whom we could not bring a very short subclavian artery to meet the pulmonary artery, we have done a vein graft to fill the gap between the end of the short subclavian artery and the side of the pulmonary artery. Both of these were successful although one patient died subsequently from a pulmonary embolus, probably from the site from which the vein graft was taken in the superficial femoral vein. Autopsy showed that the vein graft was viable and functioning. The other patient has had an excellent clinical result.

Gross[18] has used arterial grafts from fresh cadavers to fill this gap rather than the vein grafts as we did. He has been able to refrigerate arterial grafts up to thirty days before use, if necessary. This would seem to be a simpler procedure if the arterial graft were available, but if not, we believe that a vein graft can be used from the patient himself.

Coarctation of the Aorta—

Coarctation of the aorta is a congenital anomaly in which there is a constriction of the aorta, usually just distal to the ligamentum arteriosum. In the commonest variety there is an abrupt constriction and this is known as the adult type. Occasionally there is an elongated narrowing of the aorta and this has been known as the infantile type, according to the classification of Bonnet.[19] This is obviously an arbitrary classification and it may be difficult to know how to classify some of the patients.

The patient with coarctation of the aorta may reach the late teens or early adult life without symptoms, but the life expectancy is not great. Maude Abbott[20] reported 200 cases which came to autopsy at the average age of thirty-three years. Of these, thirty-nine died as the result of spontaneous rupture of the aorta, twenty-six died as the result of cerebro-vascular accidents, and sixty-seven died of myocardial failure. The associated hypertension and atheromatous changes in the vessels were the obvious cause of death in sixty-six per cent of this group. It would seem obvious, therefore, that some effort should be made to increase the life expectancy of these patients.

The first operation for coarctation of the aorta was done by Crafoord[21] of Stockholm in 1944. He reported two successful operations in which the constricted segment was excised and an end-to-end anastomosis done. Gross[22] shortly thereafter did the first operation in this country.

The operative technique has not differed greatly. Crafoord uses the Carrel method of suture whereas Gross has used the continuous everting mattress suture. Gross has sacrificed enough intercostal arteries so that the aorta could be turned over to suture the posterior row. Crafoord has preserved the intercostal vessels and sutured the posterior row without rotating the arota. We have used both techniques but at the moment prefer that described by Crafoord.

When the vessels are elastic and pliable and the segment to be excised is not too long, the hazard of operation is very small indeed. The danger lies in suturing an aorta which has already undergone atheromatous changes and may be easily torn or in excising such a long area of constriction so that it is difficult to approximate the two ends.

There can be no doubt that the greatest mortality will be in the older age group because of degenerative changes in the vessel wall. It has been contended by some that one should not attempt the operation on patients past eighteen years of age. There have been successful operations performed, however, on patients as old as forty-one years.[13]

The other difficulty has been a long constriction of the aorta which may be classified as the infantile type of coarctation. In many instances there will be some question as to how much can be resected and still bring the ends together. If the vessels seem young and elastic and the anastomosis can be completed, there seems to be almost no fear of separation thereafter in the absence of infection. In a few cases, however, the defect obviously will be too great. We have on two occasions[23] turned the subclavian artery down and anastomosed it to the aorta as originally suggested by Blalock[24] and first done in the human by Claggett.[25]. The difficulty here may be that the subclavian does not carry sufficient blood. One of our patient's blood pressure returned to normal indicating that the subclavian was adequately substituting for the aorta. The other patient's subclavian was smaller in proportion and his blood pressure did not return to normal.

The chief objective of the operation is to increase the blood flow to the lower aorta sufficiently so that the patient's hypertension will disappear. The actual cause of this hypertension is not known. It is of interest that the blood pressure does not return to normal immediately, but usually after two to three weeks. Normally, the blood pressure is 20-30 mm. Hg higher in the lower extremities than the upper. If this is true after completion of the anastomosis one probably may be assured that the anastomosis is large enough and that the blood pressure will fall in due time.

There can be no doubt that this operation can be most safely done in young children when the vessels are elastic and pliable. On the other hand, we do not know whether the site of anastomosis will grow as the child grows, so that if a child's coarctation is corrected at the age of four, it may recur by the time he is sixteen. This is all conjecture on our part, but because of this possibility, we have felt that the proper age for operation should be about twelve to fourteen. Certainly the hazard of degenerative changes in the vessels increases greatly after sixteen to eighteen years of age. Our only fatality was due to rupture of the aorta in a twenty-four-year-old man whose entire aorta was yellow with atheromatous plaques.

Summary

1. The life expectancy of the patient with a patent ductus arteriosus is thirty-five years or less. Following a successful operation that patient becomes a normal individual with a normal life expectancy. The operation mortality is less than five per cent. Operation should be recommended as a prophylactic elective procedure before complications develop.

2. The patient with the Tetralogy of Fallot does not become a normal individual after operation, but is usually materially benefited. Operation

should be delayed if possible until after the third or fourth year.

3. The life expectancy of the patient with coarctation of the aorta is about thirty-five years. Death is incident to the associated hypertension and its complications. The operation for the relief of this condition can be done with reasonable safety if the aorta has not yet undergone degenerative changes. It is felt that operation should be recommended as a matter of election at about the age of twelve to fourteen years. After this age the operation becomes increasingly hazardous.

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Accidents in Spinal Anesthesia

(L. C. Guzman & T. Quitco, in *Philippine Jour. of Surgery*, May-June, 1948)

Spinal anesthesia should not be given to a patient dehydrated from disease, dieting or preoperative preparation.

The two most important points in the treatment of a high spinal anesthetic accident are to give artificial respiration and to retain one's presence of mind.

Venous fluids should be on hand whenever spinal anesthesia is to be given.

Although adrenalin is good in raising the blood pressure in a spinal anesthetic shock, caution should be used in giving it.

In case of a high intercostal paralysis resulting from the anesthetic, the best position for the patient is the horizontal.

It is better to begin artificial respiration first, then the medicines by injection.

A Clue to Greater Frequency of Coronary Disease in Males

(H. M. Marvin, Yale U. School of Medicine, in *Bul. N. Y. Acad. Med.*, Nov.)

Dock examining the epicardial coronary arteries of newborn infants found that the intima was much thicker in males than in females and he believes this establishes the basis for the sex difference in the incidence of coronary thrombosis. The average intima in newborn males was 26.5 per cent the thickness of the media, while in females it was only 8.2 per cent. Dock is careful to point out that hypertension and faulty cholesterol metabolism are the most important immediate causes.

Some Diagnostic Booby Traps

(H. S. Reed, in *Jour. Med. Soc. N. J.*, Nov.)

Our responsibility as to *carcinoma of the lung* is primarily to think of it as a diagnostic possibility. In addition, he must require "check films" in aging individuals convalescent from viroid pneumonia. In suspicious cases he must request auxiliary aids such as bronchoscopy with lavage.

Heublein, of Hartford, asserts that, stated in percentages, urinalysis "pays off" in something to the right of the decimal point, routine blood counts in 3 per cent, and routine chest x-ray in 10 per cent. Doctors should include routine inspiratory and expiratory chest films in the annual physical inventory.

Epilepsy and Pregnancy

(A. E. Thomas, M.D., & J. W. Perry, M.D., Montgomery, in *Jour. Med. Assn. Ala.*, Oct.)

There is no real evidence that pregnancy has a deleterious effect on epilepsy. Some advocate therapeutic abortion because of the likelihood of the disease being transmitted to the child. DeLee stated that there was only 1 chance in 40 of epilepsy being inherited if one of the parents is normal. The treatment of a pregnant woman with epilepsy is no different from the treatment of the same woman when not pregnant except that closer observation and more intensive treatment are required.

Some Favorable Results In The Radical Surgical Attack Upon Advanced So-called Inoperable Abdominal Cancer

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A Feature of the Post-Graduate Seminar held at the Medical College of the State of South Carolina, Charleston, November 1st-3d

RECENT advances in the supportive treatment for the surgical patient have made it possible to extend surgical attack upon advanced carcinoma in the abdomen under conditions which heretofore would not have been thought feasible. Two cases illustrating the extent to which radical surgery now can be carried are as follows:

CASE 1: A young man in his late twenties who was unable to ingest food because this caused severe obdaminal pain, retching and vomiting. Physical examination revealed a large mass bulging out from the upper left quadrant of the abdomen. Roentgenograms showed the stomach lumen markedly reduced by obvious tumor masses in the stomach wall. The patient was extremely insistent that something be done. X-ray therapy previously had been given to this mass without regression. Operation was performed at which time a large sarcoma involving the entire stomach and infiltrating the abdominal wall in the left upper quadrant and anteriorly, and the diaphragm superiorly, adherent to the left lobe of the liver and to the body of the pancreas posteriorly, and to the transverse colon inferiorly. A massive resection was performed in which the entire stomach, spleen, body and tail of the pancreas, transverse colon and half of the left lobe of the liver together with a small portion of the diaphragm and of the muscle and fascia of the abdominal wall were excised en masse. Convalescence was essentially uneventful and although the patient survived only a few weeks he was able to eat and enjoy his food. He died of fulminating metastases which manifested themselves over the entire surface of the body and in the lungs. Histologic examination of the tumor revealed a large round-cell sarcoma.

CASE 2: A young man in his middle thirties who complained of severe upper abdominal pain. Physical examination was essentially negative except for obvious emaciation. He had lost twenty pounds in recent months. Roentgenograms of the chest showed two distinct masses, spherical in outline, 3 cm. in diameter, typical of metastatic malignant tumor. He stated he would go to any length in order to obtain relief from pain. The nature of this pain and its high girdle distribution suggested a tumor primary in the pancreas. He was insistent that all tumor tissue be taken out at one operation and that he would be responsible for the outcome. Accordingly the patient was anesthetized with ether by intratracheal administration, and through an upper abdominal incision the abdomen explored and a fusiform tumor mass involving the body of the pancreas was found. There was no other evidence of metastases, so the body and tail of the pancreas and spleen were removed. The abdominal incision was closed. The patient was then redraped and a transverse incision over the left anterior portion of the left fourth rib with extension of the incision along the left border of the sternum was made to enter the thorax. A total pneumonectomy was then performed. Pathological study showed the tumor of the pancreas to be a fibrosarcoma and the lesions in the lung to be metastases from this. The patient was relieved of pain and lived to return to part-time work in the research laboratory of an electrical appliance manufacturing company.

While both these patients received a certain measure of palliation and one survived several months, the extension of surgery to the performance of massive resection of what ordinarily would be considered an inoperable carcinoma would not be justified perhaps if more could not be accomplished than just a brief period of palliation as indicated above. That more can be accomplished by this type of surgery is illustrated by the following case histories:

CASE G. J.: A 42-year-old man who previously had had massive hemorrhages from the gastrointestinal tract. He had had three previous laparotomies—a cholecystectomy for gallbladder disease, a splenectomy for splenomegaly, a general exploratory laparotomy in the course of which a small node was removed and found to contain sarcoma However, not much attention was paid to the latter situation and the patient's abdomen was closed. He continued for several months, lost weight, had severe abdominal pain and had two or three severe bouts of vomiting in which considerable blood was lost. At the last admission roentgenograms showed

what seemed to be an ulcerating lesion in the third portion of the duodenum and a palpable mass now was present in the upper abdomen. At laparotomy a massive tumor was found involving the third portion of the duodenum, and extending backward to infiltrate the lower portion of the head of the pancreas to form a mass the size of a double fist in the retroperitoneal space behind the pancreas. The mass was excised together with the lower half of the duodenum and inferior half of the head of the pancreas. Histologic study revealed spindle-cell sarcoma. The patient, permitted to return to work four weeks after operation, continued in his normal occupation gaining 45 pounds in weight. His life was normal in every way for three and one-half years when generalized abdominal metastases manifested themselves and he died of sarcomatosis.

Case E. R.: A 42-year-old white housewife who presented herself complaining of dyspeptic symptoms and mild jaundice. There was no upper abdominal pain and as a result of clinical examination the diagnosis of carcinoma of the ampulla of Vater was made. A laparotomy was performed and a small carcinoma was found in the head of the pancreas just beneath the ampulla of Vater. A pancreato-duodenectomy was carried out. Convalescence was uneventful and now, four years following operation, the patient persists in showing no evidences of recurrence and in following a normal existence, attending to her household duties, indulging in the usual pleasures, etc. While this tumor was not a very large one, yet until a very few years ago it would have been classified as an inoperable growth by virtue of position. A cholecyst-gastrostomy would have been done, and I can not believe that she would have survived in good health for four years had the side-tracking procedure been carried out. Patients usually die within twenty-four months after such an operation.

Case M. A.: White man 68 years of age, admitted to the hospital in May, 1941, complaining of severe dyspepsia of eighteen months duration, forty pounds loss in weight and a palpable mass in the left upper quadrant. Roentgenograms were interpreted as showing carcinoma of the stomach. At laparotomy a massive carcinoma involving the lower two-thirds of the stomach was found, with extension directly to the under surface of the left lobe of the liver. The cancerous stomach had attached itself rather firmly to the under surface of the left lobe but apparently had not penetrated into the liver parenchyma. There were no evidences of metastases elsewhere. Accordingly four-fifths of the stomach was resected, together with the entire left lobe of the liver en masse. Convalescence was uneventful. Seven and one-half years later the patient remains well and continues to enjoy all the activities of a person 75 years of age.

Case H. S.: A man 50 years of age admitted to the hospital in December, 1941, complaining of constant epigastric distress, fatigue and loss of weight, of one month duration. Roentgenograms showed a large polypoid mass in the fundus of the stomach. At operation a papillomatous carcinoma was found involving the entire fundus. There were nodules in both the greater and lesser omentum, some of which were biopsied and frozen sections obtained which revealed metastatic carcinoma. As the liver was not involved and there was no peritoneal spread beyond the greater or lesser omentum, a total gastrectomy was done. The transection of the esophagus was no more than 1 cm. from the gross margins of the tumor. The procedure was done merely as a palliative measure. However, at the present time, seven years after operation, the patient continues to be well, has gained thirty pounds since operation and is working full-time at his usual occupation as switchtower operator in a railroad freight yard and in addition part time as a concrete contractor on week-ends.

Case J. C.: An elderly white man operated on because of a large mass palpable in the upper abdomen apparently invading the deeper portions of the upper abdominal wall and presenting small nodules in the skin about the umbilicus biopsy of which showed metastatic carcinoma. When the abdomen was entered it was found that there was a large carcinoma of the transverse colon that had not only extended into the upper anterior abdominal wall but had progressed upward and backward to become adherent to the great lower portion of the greater curvature of the stomach. Accordingly the lower two-thirds of the stomach was mobilized, half of the colon extending from the ileocecal valve to the splenic flexure was mobilized, and the portion of the abdominal wall invaded by the tumor was freed. All these structures with the large carcinoma were excised en masse. A Polya gastrojejunostomy was performed and ileo-splenic flexure colostomy. The patient survived to live a normal life for exactly five years when he was readmitted to the hospital in a state of collapse, it was impossible to make a diagnosis and when necropsy was performed after he had died a generalized peritonitis was found due to rupture of a stoma ulcer. There were no evidences of carcinoma, so this was indeed a five-year cure of cancer.

Case L. R.: An operation such as the one described above was performed on a man 42 years of age. The carcinoma of the transverse colon instead of infiltrating the abdominal wall anteriorly, however, infiltrated backward to involve the body of the pancreas as well as the lower portion of the stomach. The entire transverse colon was mobilized with the tumor, the body and tail of the pancreas, the spleen and the lower half of the stomach. The

colon was transected at the junction of the descending and sigmoid segments. Following excision a gastro-jejunostomy was performed, of Polya type, and a double-barrel colostomy — hepatic flexure to sigmoid. The colostomy later was closed. The operation was performed four and one-half years ago and the patient remains at his usual work as a machinist in a factory. There are no evidences of recurrence.

Case Zar: This Mexican woman was admitted to the hospital in June, 1941, complaining of intermittent upper abdominal pains, periods of distention, alternating diarrhea and constipation. Roentgenograms revealed a filling defect in the hepatic flexure which was interpreted as carcinoma. At operation a large carcinoma of the hepatic flexure adherent to and infiltrating the under portion of the right lobe of the liver over an area of 10 cm. The lowest long loop of jejunum also was adherent to the mass. A radical right hemicolectomy, removing the lower two and one-half feet of jejunum, all the mesentery and glands of the right side of the abdomen and a slice of the right lobe of the liver adherent to the cancer measuring 12 cm. in length, were excised en masse. An ileo-transverse colostomy was performed. The patient survives in good health, except for her diabetes, seven and one-half years after operation with no evidences of recurrence.

Case Helf: A forty-one-year-old woman, complaining of periods of diarrhea at intervals for two years. There was secondary anemia. Roentgenograms revealed a large filling defect in the lower portion of the duodenum. This was in November, 1937. A diagnosis of carcinoma of the lower portion of the duodenum was made and operation performed November 26th, 1937. A papillomatous tumor was found where the roentgenograms indicated, in the lower portion of the duodenum. It was excised together with the ampulla of Vater and underlying portions of the head of the pancreas. The lower stump of common duct and main pancreatic duct were reimplanted into the duodenum and the abdomen closed. It is now eleven years since the operation was performed and the patient continues in normal health with no evidences of recurrence. While this neoplasm is not as large as some of those we have mentioned, its position in the third portion of the duodenum was such that, in 1937 it was considered inoperable by virtue of location.

Case L.: White man, 36 years of age, admitted to the hospital in April, 1942. This patient had had an exploratory operation eighteen months previously for what was diagnosed a tumor 20 cm. in diameter, arising in the region of the left adrenal gland and inoperable because of its size. The abdomen was then closed. In another institution he received x-ray therapy which did not alleviate the severe pain from which he was suffering. At operation a large, rounded tumor mass arising in the left suprarenal gland was discovered. To expose it directly it was necessary to transect the transverse mesocolon, push the stomach upward, the transverse colon downward. The body and tail of the pancreas were stretched tightly over its anterior surface. The neck of the pancreas was transected, the spleen mobilized with the mass and pushed to the diaphragm split away adherent to the mass in order to remove it. In its removal it was necessary to take the entire left kidney also. Histologic examination revealed this to be an adrenal cortex carcinoma without endocrinological activities. The patient did very well for five years and then was readmitted to a hospital where one of my former residents explored and excised a solitary metastasis in the liver. Since that time this patient has been doing fairly well.

Case M. G.: This man upon admission in May, 1943, exhibited a mild degree of jaundice, no abdominal pain but recent loss of twenty pounds in weight. At operation, performed under the diagnosis of carcinoma of the ampulla of Vater or head of the pancreas, a large fungating cancer was found in the ampulla, and lymph nodes about the head of the pancreas in the porta hepatis were enlarged, firm and obviously involved with metastatic carcinoma. The liver exhibited a mild degree of scirrhosis. A pancreato-duodenectomy was performed, resecting at the same time the nodes of the porta hepatis involved by metastases. The neck of the pancreas was occluded without reimplantation into the small bowel. A cholecyst-jejunostomy and gastro-enterostomy were performed. The patient did very well for two and one-half years, then returned complaining of right abdominal pain, loss in weight and dyspepsia. A mass could be palpated in the region of the ascending colon and, although it was thought to be metastatic, re-operation was performed in order to determine if anything could be done. The upper abdomen, liver and peritoneal surfaces were all free from evidences of metastases, but what appeared to be a new primary growth was found in the ascending colon. Accordingly a right colectomy was performed with ileo-transverse colostomy. Lymph nodes corresponding to the segment of bowel at the site of the carcinoma were resected and were found to be metastatic. The patient is living and well five and one-half years after the pancreato-duodenectomy and three years after the right hemicolectomy.

Case J.: A thirty-four-year-old woman, greatly emaciated and having a markedly protuberant abdomen. At operation the abdominal cavity was found to be filled with a thick liquid in which floated flakes of yellowish tissue. The peritoneal

surfaces were studded with small excrescences, obviously surface spread from an ovarian carcinoma. Indeed a right ovarian carcinoma had extended to the left side secondarily. Both ovarian carcinomas were removed in the course of a panhysterectomy and as much of the thick liquid material in the abdomen as possible was scooped out. The patient was given x-ray therapy and did very well for two years, when on the occasion of a check-up which was a matter of routine and not occasioned by any complaints on her part, a mass was palpated in the cul-de-sac. This was regarded as a recurrence of her disease and she submitted to the recommended laparotomy. At this time metastases were individually excised from the surfaces of the small bowel and the free surfaces of the liver, from the pelvis and the anterior parietal peritoneum. Convalescence was uneventful. Following the operation x-ray therapy was continued and she did very well for three more years, finally returning with evidences of multiple masses half the size of a fist throughout the abdomen.

Case E. C.: This patient, 65 years old at the time, was admitted to the hospital complaining of marked weakness, and profoundly anemic. The internist's diagnosis, made by exclusion, was carcinoma of the small bowel. At operation September 11th, 1936, a carcinoma of the jejunum was found 8 cm. distal to the ligament of Treitz. This had extended backward into the short mesentery of the jejunum, and then upward to invade the distal portion of the body of the pancreas extending into the retroperitoneal tissues. The whole tumor mass was no larger than the closed fist, yet, because of its position and the fact that it extended directly into the mesentery and that segment of involved bowel to its root and into the pancreas and beyond, by the criteria of that day it was considered inoperable. A wide resection was made of the tumor, the involved segment of jejunum and the distal portion of the body of the pancreas. It was necessary to separate the superior mesenteric artery and vein with great care. A gastro-enterostomy was done beyond the repair of the excised segment of jejunum, which was an end-to-end anastomosis because it was thought that there would be a recurrence in situ and that the gastro-enterostomy would obviate symptoms of obstruction. That was twelve and one-half years ago, and this patient is living and well without evidences of recurrence of carcinoma; but now, at seventy-seven years of age, she is a patient in a cardiac clinic because of evidences of myocardial weakness.

Case J. L.: This patient presented a large, insulin-producing, islet-cell tumor of the body of the pancreas which was the cause of severe attacks of hyperinsulinism. He had been explored in another institution prior to admission January 1st, 1940, and a fist-size tumor in the pancreas described four months previously. At operation a tumor 15 cm. in diameter was found replacing the body of the pancreas, adherent to stomach above and first loop of jejunum below. The tumor mass, with adherent portions of stomach and jejunum and the spleen, was excised. This man survived four years, during which time he carried on a more or less normal existence before succumbing to generalized metastases.

In preventing some of these cases I have endeavored to show what can be done when one goes ahead and operates under conditions that on the surface would appear very unfavorable. Of course, when the liver and the peritoneal surfaces are studded with metastases there is no indication to do anything surgically, other than possible short-circuiting operations to relieve obstruction symptoms at one time or another. But when the neoplasm has spread from its site of origin to involve adjacent tissues and organs, or when the spread is even farther but such that it can be encompassed by incisions so that it can be excised, it would seem that something worthwhile can be accomplish for some of these patients. Of one hundred consecutive patients whose neoplasms were considered by usual criteria to be so advanced as to be inoperable by virtue of position or local spread, and in whom there was no generalized pulmonary or hepatic metastasis, or peritoneal spread, operation was carried out. In this initial group the surgical mortality, of course, was high. Death within a month of the operation, regardless of cause, was considered surgical mortality. None of the patients died on the operating table. All were returned to their rooms alive. Of this group of a hundred cases thirty-four are considered surgical mortalities, and their average survival was eight days following operation. Infection — peritonitis and pulmonary complications—and in a few instances coronary occlusion, accounted for most of the deaths. In seventeen of this group the palliation was nil or questionable, so it was considered the operation had been of no benefit. In thirty of the patients there was definite palliation and return to partial or full-time work for a while, with death from metastases or recurrences up to a year and a half after operation. However, in a group of nineteen there were six who survived for an average of thirty-three months, returning to normal life for varying periods before succumbing to recurrences or metastases. But more important still, there were thirteen who survived for a period of five years or more and remain to this day free from evidences of recurrence.

In addition to the patients whose cases I have described, and in which series sufficient time has elapsed to permit some impression as to what

might be accomplished, I should like to present a few cases of advanced gynecological cancer in which we are endeavoring to explore the possibilities of radical surgery where the usual criteria of inoperability or advanced nature of the disease obtains.

The standard method for treating cancer of the cervix in this country at present is by means of local application of radium and external x-ray therapy to the pelvis. This is not the occasion to discuss the relative merits of radiation and surgical treatment of cancer of the cervix. However, there is a very large group of women in whom a carcinoma of the cervix of small to moderate size has received what appears to be adequate radium treatment, but whose cancer persists or recurs. It is the general practice to consider the patient lost and to advise further applications of radium and x-ray in the hope that the progress of the disease may be slowed down. Many of these lesions anatomically are still localized to the cervix, and it would seem that they are amenable to operation. We have been operating on these patients, and now have a series of over thirty-five cases of radical panhysterectomy with lymph-node dissection for persistent or recurrent cervical carcinoma after failure of radiation, with no mortality. It is impossible at this time to talk in terms of prolonged or five-year survival, but suffice it to state that all of these patients having had radium did present recurrences of cancer and that they are now up to periods of a year free from evidences of recurring cancer. That in itself is a palliative measure which I believe is worthwhile. Then there is another group in which the cancer has failed of control by radiation or conservative operation and has invaded the bladder. In these cases one can perform a radical panhysterectomy with pelvic lymph node dissection and total cystectomy with bilateral implantation of the ureters into the colon. We have had some patients who have survived about a year now without evidences of recurrence and have adjusted themselves to the few bowel movements a day that obtain when the ureters are implanted into the colon and to all intents and purposes are living a normal life. Then there are the still more unfortunate women in whom the carcinoma has invaded the bladder and rectum. In these patients we have carried out a very extensive operation which envisages the removal of the rectal colon, vagina, uterus, pelvic nodes and bladder, with implantation of the ureters into the colon and colostomy. Although this might seem to be an extremely mutilating operation, yet these patients have suffered extremely and generally have been told that they have nothing to look forward to but death. Following these operations the patients wear a bag hermetically sealed to the skin and the stools and urine which form a liquid and semi-solid excretion are taken care of very well in this way. There is no odor or special inconvenience associated with this type of wet colostomy. We have operated upon thirty-four patients of this type and, in my opinion, the palliation which we have achieved justifies this procedure. There are patients who have survived for a year now, who have gained weight, who feel normal in every way and have returned to their usual activities. Some not only maintain a modest home but also work part or full time in factories.

Discussion

I realize that this meeting, the nature of which is a postgraduate seminar, is attended principally by general practitioners. The type of patient that I have presented during this discussion affords a very complicated situation and a problem which might best probably be classified as one for specialists. However, as the general practitioner maintains intimate contact with his patients, his opinion and his advice are sought in all manner of illness, which places him in the very forefront of the firing line in our fight against cancer as in our fight against other diseases. Cancer is prone to be symptomless in its early stages, and to manifest itself first by mild symptoms which do not excite the patient and for which, therefore, in many cases the alert family doctor has the opportunity to detect cancer in a patient who has come to the doctor because of some other disease condition, or because of symptoms caused by cancer, but for which the patient seeks relief as of quite trivial origin. At this time, when the disease is in its early stages, the present methods of local destruction are highly successful in many forms of cancer.

My purpose, therefore, in presenting these cases to those of us who are engaged in more or less general work is to show what might be accomplished by persistent effort in the face of most discouraging conditions. And to make the point that, before condemning a patient to going home and awaiting the end, one has to be doubly sure that nothing can be done even in the way of palliation that can add life in comfort to the span that might be already accorded to the patient and which might not be a very long one. And then who knows which will be the lucky one who might, as a result of a radical procedure under the most discouraging circumstances, survive not only a few months but for a much longer period, even for years as has been the case in some of the instances which were here reviewed today.

Since 1904 (the year the National Tuberculosis Association was founded) tuberculosis has been forced down from the leading cause of death in this country to seventh place.

DEPARTMENTS

HUMAN BEHAVIOUR

Rex Blankinship, M.D., *Editor,* Richmond, Va.

Doctor James King Hall

For many years Dr. James K. Hall edited this column, for which he chose the caption Human Behaviour; and for equally as many years this column has been the first to which many readers have turned. This fact was a signal tribute to the literary as well as the scientific ability of Dr. Hall. No one could hear him speak, or read his contributions, without being profoundly impressed with his vast store of knowledge and his mastery of the English language.

The following is quoted, in part, from an editorial by Dr. Douglas S. Freeman in the September 11th issue of *The Richmond News-Leader*:

"Professionally eminent, Dr. Hall had wide interests and cultural avocations. Had he not devoted himself to psychiatry he could have distinguished himself as a writer or as an editor and, most particularly, as a social historian. He had a memory of great accuracy and he possessed in all his hobbies the developed powers of observation that aided in his advancement as a medical man. Few men of his generation knew more about the lore of a great part of his native North Carolina: none preserved it more affectionately or with higher regard for the ethical values and the sound perspective of time. If he left any considerable volume of unpublished memorabilia, we know it will be worthy of permanent preservation. Certain it is, too, that his correspondence deserves careful sifting in order that his letters of reminiscence and of historical reflection may be made a part of the treasure of his alma mater, the University of North Carolina."

Dr. Hall's devotion to duty was a fundamental part of his religion and "work" was his motto. He was a profound man in every respect. Those who knew him well marvelled at his deliberate and tireless application to detail and interest in his objective. Half-truths and superficial knowledge, he deplored. He was a tenacious man, both as an ally and as an adversary.

Rare indeed was the occasion when he met an individual that he did not recall some historical fact associated with that person's locality or family background. Facts were meticulously recorded in his mind and one by one he drew them out in admirable association to serve his purpose. Dr. Hall died on the tenth of September. The immediate cause was rupture of a dissecting aneurysm of the abdominal aorta. This pulsating mass in his abdomen had been known to exist for several years prior to his death. He was aware of this threat to his very existence, yet in no way did he modify his behaviour or activity. He endured suffering in the same matter-of-fact way that he accepted the better things of life. Few of us, indeed, knew that for the past few years he had been in constant pain, a symptom that always seems to accompany a dissecting aneurysm.

It is with deep humility that I write these words, knowing that I cannot do full justice to the man whose pen has been placed in my hand.

DENTISTRY

J. H. Guion, D.D.S., *Editor,* Charlotte, N. C.

KOSTECKA'S OSTEOTOMY FOR THE CORRECTION OF THE PROGNATHOUS MANDIBLE

Many favorable accounts have been given of the results of the osteotomy devised by Kostecka for correction of extreme prognathism.

Before the Odontological Section in April, 1946, Henry[1] showed a patient on whom he had done Kostecka's closed method of bilateral osteotomy of the rami for the correction of mandibular prognathism, with variation of the form of fixation. Kostecka fixes the floating mandible by ligating the upper and lower teeth together with wires applied after cutting through the rami. In Henry's opinion the duration of operation could be markedly reduced and a better result, according to pre-operative planning, would be obtained if cast metal splints with a simple rapid interlocking device were to be cemented on to the upper and lower teeth previous to operation; so he modified Kostecka's technique accordingly.

The same patient was shown before the Section twelve months later. When shown originally he was still splinted and the sites of puncture for the needle and saw were clearly visible. Immobility was maintained for six weeks after which progressive function was allowed and within the next fortnight he was masticating ordinary food. The splints were left in situ so as to discipline the mandible for a further period of ten weeks. After they were removed the final occlusion was established by slight grinding of the cusps. Mastication became normal and there was no limitation of opening. The functional and aesthetic results are entirely satisfactory.

The demonstration of the final x-ray pictures in April, 1948, concluded the report of the case.

1. C. Bowdler Henry, L.D.S., Eng., M.R.C.S., L.R.C.P., in *Proc. Royal Soc. of Med.,* Oct.

GENERAL PRACTICE

James L. Hamner, M.D., Editor, Mannboro, Va.

PRIMARY ATYPICAL PNEUMONIA

Recent prevalence of virus infections and two cases of virus pneumonia in the writer's practice have made Horsfall's article[1] timely and interesting. While the prevalence of primary atypical pneumonia has greatly diminished since World War II the clinical diagnosis and treatment remain unsettled. The evidence indicates that most cases of the disease are not caused by either microbial or viral infectious agents definitely pathogenic for man, but the disease can be induced in man by bacteria-free filtrates from pooled throat washings and sputa from patients. It therefore seemed that the disease was at least initiated by some filter-passing agent, presumably a virus.

The symptoms are commonly fever, cough, headache and malaise. The cough is at first hacking and nonproductive. It is so constant that its absence makes the diagnosis doubtful. Most patients do not seem especially ill. The fever is variable, averaging 103 for ten days, but it may be 99 to 106 and last a day to seven weeks. The pulse rate is slow and respirations usually normal at rest. The physical signs are not significant but pneumonia is usually definitely indicated by roentgenograms. The sedimentation rate is increased, blood findings otherwise normal.

Cold hemagglutination and streptococcus MG agglutination are simple tests which aid in the diagnosis. Both tests are made with serum specimens obtained preferably at weekly intervals. A positive reaction from either test, especially if either type of agglutination titer is significant increased some weeks after onset, indicates that the diagnosis is quite probably correct. Negative tests do not mean that the disease is not present. It is extremely difficult under such circumstances to definitely establish the diagnosis.

The treatment continues nonspecific and unsatisfactory. Neither the sulfonamides nor penicillin is beneficial even in large doses. Convalescent human serum has not been effective. The mortality rate is fortunately low, about 0.5 per cent in previously healthy persons.

1. *General Practice Clinics*, January, 1948.

THE MECHANISM OF RECOVERY IN ACUTE BACTERIAL PNEUMONIA

The common forms of acute pneumonia are caused by encapsulated bacteria whose capsules make them resistant to phagocytosis. The sulfonamides and penicillin only act as bacteriostatic agents and do not kill the organisms, their ultimate destruction chiefly depending upon phagocytosis.

W. Barry Wood discusses[1] the pathogenesis of acute bacterial pneumonia and the effect of chemotherapy upon the lesions.

Animal experiments showed that morphologic changes indicating bacteriostasis develop in the organisms in the outer zone of the lesions within a few hours after chemotherapy is started. Phagocytosis is well advanced in 24 hours and all the bacteria are eventually destroyed by this process. Repeated examinations failed to show circulating or local antibody even when the phagocytic reaction was greatest.

Although phagocytosis does not occur with encapsulated bacteria in a fluid medium, it has been shown to occur upon rough surfaces or body tissues. Microscopic examination of thin sections of pneumonic lung show that the leukocytes entrap the pneumococci against the surfaces of the alveolar walls and phagocyte them. The bacteria cannot escape. Friedlander's bacillus, type III pneumococci, staphylococci and beta hemolytic streptococci are all destroyed by surface phagocytosis. An intercellular surface phagocytosis also occurs when sufficient leukocytes are present, the bacteria being caught between the surfaces of the phagocytes.

An edema fluid is poured out over the surface of acutely inflamed area. Leukocytes rapidly accumulate and eventually pack all the alveoli and small bronchi during successful chemotherapy, making it impossible for the bacterial organisms to escape surface phagocytosis. Chemotherapy controls the disease through its bacteriostatic action and the bacteria remaining in the lung are destroyed by surface phagocytosis. Some organisms escape to the liver, spleen, etc., and the method by which they are destroyed in the absence of circulating immune bodies is being studied.

Failure to sterilize abscess formations in the lung and elsewhere by phagocytosis with chemotherapy is explained by absence of normal tissue so that the leukocytes have no tissue to operate upon, and the sluggishness or death of leukocytes so that they become nonmotile and cannot phagocyte bacteria. Large doses of penicillin must therefore be given to obtain a bactericidal effect in pneumococcal empyema. Antibodies play a part in recovery from pneumonia but acquiring antibodies is a slow process and phagocytosis is prompt.

1. *General Practice Clinics*, January, 1948.

A few moments after the intramuscular injection of an insoluble drug (mercury, bismuth salicylate, penicillin in oil), the patient may experience shock, collapse and pain in the chest, plus a metallic taste in the mouth. Generally he survives but he may be very ill for several weeks. Such a development means that pulmonary embolism has occurred.

—A. F. Kraetzer, M.D.

OBSTETRICS

H. J. Langston, M.D., *Editor*, Danville, Va.

ELECTIVE INDUCTION OF LABOR BY ARTIFICIAL RUPTURE OF THE MEMBRANES

Over the last 20 years there has been much teaching for rather indiscriminate rupture of the membranes for hastening labor, that the old belief that a dry labor is extrahazardous to mother and child is erroneous. It is gratifying to see a report supporting the old teaching.

Many of the patients of Drs. Wallace and Antony[1] lived so far from the hospital that a trip after labor had begun was a greater gamble than either patient or obstetrician was willing to take. These obstetricians report on 359 consecutive private cases managed by rupture of the membranes. Early experience with primiparae in whom labor was induced by rupture of the membranes convinced them that the procedure should not be used except to meet definite indications. Endorsement is given to Eastman's three criteria for making this a safe procedure: The patient within 10 days of term; the vertex at or below the level of the ischial spines; the cervix effaced and sufficiently open to admit one finger.

These authors have found that a large number of multiparae will not have the vertex below the level of the ischial spines at term. They feel safe if the cervix is down far enough and sufficiently fixed in the pelvic brim to prevent prolapse of the cord. They add a fourth criterion that the baby be of adequate size for the vertex to fill the mother's pelvic inlet.

Early in the ninth month in 65 per cent of the senior author's multiparous patients who have been subjected to this procedure, the vertex was low enough for induction at that time. In only seven per cent of the remaining cases did the vertex descend before term. The fact that the vertex is well down in the pelvis a few days before admission to the hospital is no guarantee that it will remain so. Examination should be made just before shaving or other preparations. Several patients have been sent home with some embarrassment. Little success has atended forcing these "high heads" down sufficiently either by the use of castor oil or pitocin. On three occasions, vertices seemingly well down and fixed in the brim of the pelvis have drawn up and out of the pelvis after rupture of the membranes.

Through error in diagnosis, the membranes were ruptured with the breech presenting in three cases. Because of toxemia, membranes were ruptured in one instance to induce labor in a multipara with twins. Labor and delivery ensued and progressed normally.

Average time between the rupture of the membranes and onset of labor was 3 hours and 40 minutes; the longest 77½ hours. In 10 it was 18 hours or longer. The long delays were mostly in cases in which one or more of the criteria had been disregarded.

No oxytocic medication was used before rupture of the membranes and, ordinarily, only a hot enema immediately afterwards; no lifting of the vertex to allow escape of greater quantities of amniotic fluid, as it does not hasten labor and does favor the prolapse of the cord. If labor not begun small doses of pitocin four to six hours two or three doses at intervals of 20 to 30 minutes, the initial dose being .5 min. If not effectual increase to one and, finally, to two minims, but no more than a total of 10 doses in the entire series. Pitocin was used in 14 per cent of the cases. If the first series of injections of pitocin does not induce labor, a second series, given eight to 12 hours later will usually be successful.

The average length of labor in this series was 4 hrs. and 35 minutes, the average in a similar series of spontaneous, multiparous labors 10¼ hrs.

It is concluded that the induction of labor by artificial rupture of the membranes should be limited to multiparae, and that, when hedged about by safeguards as outlined, it is safe for mother and infant. Its greatest hazards lie in poor judgment as to when it should or should not be employed, and the constant temptation to take just a little chance when conditions are not quite right.

1. J. T. Wallace & A. T. Antony, *Brooklyn Hospital Jl.*, April.

FAVORABLE EXPERIENCE WITH A NEW OXYTOCIC

Hemorrhage being the commonest cause of maternal mortality, and oxytocics having an important place in the prevention and cure of this hemorrhage, a report of a newer and better agent of this class will be eagerly read.

During the past ten years, in a series of more than 10,000 deliveries Pannullo's[1] routine procedure has been to give pitocin or pituitrin intramuscularly when the fetal head was crowned, ergonovine intravenously after expulsion of the placenta.

Replacing ergonovine with methergine gave a more prolonged contractile effect with a definite reduction of blood loss. During the puerperium, one methergine tablet was given every four hours for 48 hours in one series of cases. In these patients the following results were obtained:

Uterus usually at level of the symphysis pubis on the fifth day.

1. J. N. Pannullo, in *Jor. Med. Soc. N. J.*, Nov.)

Marked diminution of lochia, almost complete cessation after the fourth or fifth day.

No afterpains in the majority of cases.

No bleeding or hemorrhages after return home, although the usual hospital stay was only seven days.

Methergine *appears to be a valuable adjunct in obstetrics because:

It causes no toxic or adverse systemic effect.

It diminishes blood loss by its prolonged contractile effect on the postpartum uterus.

It hastens involution and obviates the need for re-admission of patients, in order to deal with bleeding, to hospitals where early ambulation is practiced.

*Supplied by Sandoz Chemical Works, Inc.

INTERNAL MEDICINE

GEORGE R. WILKINSON, M.D., *Editor*, Greenville, S. C.

THE ANTIBIOTICS IN INTERNAL MEDICINE

THE ADVANCES of principal interest to the practitioner of medicine during the last year are, says a mid-west internist,[1] the results of the widespread clinical use of streptomycin for the first time, the newer applications of penicillin in the treatment of disease, and the introduction of procaine penicillin.

Further, on the same authority:

The procaine salt of penicillin, not being rapidly soluble, releases penicillin G slowly and steadily when injected intramuscularly. It is suspended in sesame oil, is less apt to cause urticarial reactions than is a beeswax preparation. The oily suspension is less viscid than the oil and wax preparation so that it may be injected through a 20-gauge needle. It does not contain sufficient procaine to serve as a local anesthetic. Somewhat higher blood levels are sustained than is the case with penicillin in oil and wax. A c.c. of the oily preparation contains 300,000 units of procaine penicillin. This amount is given every 12 to 24 hours, depending on the blood levels desired.

In offering penicillin to the respiratory tract by nebulizer, it is doubtful if the aerosols reach that part of the bronchial tree which is the seat of the infection. The beneficial effects may be due to absorption into the blood stream rather than to the topical application of the drug.

In case an infecting organism is susceptible both to penicillin and to streptomycin, penicillin is to be chosen because of the lesser cost and lesser toxicity. The reactions from streptomycin are frequent and severe and increase in incidence with the dosage. They are histamine-like reactions consisting of flushing and headache. Vertigo and deafness may occur from the toxic effect on the auditory nerve. Fever, skin eruptions, and eosinophilia are not uncommon.

In general, penicillin is more suitable in the treatment of infections due to pneumococci, staphylococci, streptococci, gonococci and meningococci, the anerobic bacilli, and the anthrax bacillus. The drug is at least partially effective in syphilis, leptospiral infections, Vincent's infections, rat-bite fever, and actinomycosis. It is a useful adjuvant to antitoxin in the treatment of diphtheria.

At present the use of streptomycin is reserved for the treatment of infections caused by Hemophilus influenzae, B. coli, Proteus vulgaris, Friedlander's bacillus, B. pyocyaneus, B. aerogenes, and Bact. tularense. It also has an effect against the tubercle bacillus which remains to be evaluated fully. Streptomycin is also used against strains of organisms which prove resistant or fast to penicillin.

Pneumococcus pneumonia is best treated by the intramuscular injection of aqueous penicillin 25,000 to 50,000 units q. 3 h. When empyema develops, 50,000 units should be instilled into the pleural cavity q. 12 h. until resolution occurs or drainage seems indicated.

Pneumonia caused by Friedlander's bacillus seems to be benefited by 250 to 300 mg. of streptomycin intramuscularly q. 3 h.

Tularemia, highly refractory to penicillin, is satisfactorily treated by streptomycin 60 to 125 mg. q. 3 to 4 h. for five to seven days; for severe infections 250 mg. q. 3 h.

Meningococcus meningitis is treated by intramuscular injection of 25,000 to 50,000 units of penicillin q. 3 h.; but there is much evidence to show that penicillin is no more effective than sulfadiazine or sulfathiazole.

Meningitis caused by B. coli, Proteus vulgaris, Friedlander's bacillus, and B. pyocyaneus is best treated by the intramuscular injection of 60 to 125 mg. of streptomycin q. 3 h. and concurrent intrathecal instillations of 50 to 200 mg. once daily.

Blood-stream infections caused by penicillin-sensitive organisms should be treated by intramuscular injections of 25,000 to 50,000 units of penicillin q. 3 h., or by 120,000 to 200,000 units daily by continuous intramuscular drip.

For bacteremia from bacteria resistant to penicillin and susceptible to streptomycin, the latter drug should be given in doses of 250 to 500 mg. q. 3 h.

In subacute bacterial endocarditis due to penicillin-susceptible strains of Streptococcus viridans and hemolyticus 100,000 to 250,000 units q. 3 h., intramuscularly, or 800,000 to 1,200,000 units daily in continuous intramuscular drip. The treatment should be continued for a month or six weeks

1. E. L. DeGowin, M.D., Iowa City, in *Jour. of Iowa State Med. Soc.*, Nov.

and then the patient should be observed carefully for several months for signs of recurrence and the appearance of positive blood cultures. Very few reports are yet available of cases in which treatment was given with streptomycin. The advised dosage of streptomycin is 250 to 500 mg. intramuscularly q. 3 h. for at least one month.

Penicillin is beneficial to patients with intrinsic asthma during the acute respiratory infections to which they are prone. Some believe that the intramuscular injection of 25,000 units of penicillin q. 3 h. is the method of choice. Many rely upon the inhalation of aerosols of the drug produced and administered by various ingenious mechanisms. Dosage by inhalation is 30,000 to 50,000 units three or four times daily. Occasionally ammonium chloride, aminophyllin or sodium sulfadiazine is aerosolized along with penicillin.

THERAPEUTICS

J. F. Nash, M.D., *Editor*, St. Pauls, N. C.

AN EFFECTIVE ANTIVIRAL SYNTHETIC

Up to now no therapeutic agent specific against human or lower animal viruses has been available. Now come three Texas investigators reporting[1] successful use of a chemotherapeutic agent against a mouse virus.

Sodium phenosulfazole (Darvisul) is effective against as many as 11 LD_{50}'s of a mouse poliomyelitis virus when intraperitoneal treatment is instituted 24 hours after intraperitoneal infection.

Mice receiving treatment and surviving an initial infection are relatively immune to reinfection.

In two experiments more than half of the mice receiving a single dose of sodium phenosulfazole by mouth were resistant to a 10-6 virus challenge which killed all control animals. The survivors were immune.

Phenosulfazole in serum ultrafiltrate tissue cultures does not act directly on the mouse virus but appears to derive its antiviral properties by reacting with the cellular substrate. The drug has proved strikingly non-toxic in the two experimental hosts studies, mice and monkeys.

The effect of sodium phenosulfazole is being studied in monkeys infected with a human strain of poliomyelitis.

Detailed data on many experiments on thousands of mice and more than a hundred monkeys are promised for a later date.

We shall indulge a lively hope that the earnest, well-conceived investigations of these Texans will give us agents as potent against virus infections as certain chemotherapeutic products and antibiotics have proved against many other pathogenic organisms.

1. Murray Sanders, Y. SubbaRow and R. C. Alexander in *Texas Reports on Biology & Medicine*, Fall, 1948.

TREATMENT OF RAYNAUD'S DISEASE WITH NITROGLYCERINE

Every doctor will welcome news from an authoritative source that a simple treatment with a familiar drug is likely to prove of help in a case of Raynaud's disease. If the report[1] did not have the support of high authority it would be dismissed as absurd. However, as it is, we must credit it, and look forward hopefully to an opportunity to try it.

Two cases are outlined.

Case 1.—Mrs. S. R., 40, a housewife, in the winter of 1943-1944 went to a medical doctor because her hands became numb and "dead white" upon exposure to cold, gradually becoming purple and, upon exposure to warmth, fiery red, swollen and burning. The swelling was constant through the winter, exaggerated upon exposure to cold. An ulcer formed under the nail of the l. index finger. In summer all symptoms were minimized.

With the advent of winter the symptoms again became severe, with an ulcer under the nail of the r. second finger. In summer the ulcer healed and symptoms again diminished; but with cold weather in 1946, the pain, color changes, and swelling flared again, with an ulcer under the nail of the r. index finger. During the summer of 1947 this ulcer did not heal, and an area of black necrosis formed on the tip of the r. index finger. At the beginning of the cold season in 1947 the condition became progressively worse.

Since the onset of her illness the case has been thrice diagnosed—once at the Mayo Clinic — as Raynaud's disease.

In the course of the disease treatment has included vitamins, the parenteral use of papaverine, and the parenteral use of alcohol—the last giving fleeting relief.

In October, 1947, the patient came under the care of the authors. A right unilateral stellate ganglion block had been done with 15 c.c. of 1 per cent novocaine previously. This caused Horner's syndrome, and the right hand became pink and warm. Because of the alleviation of symptoms noted with this block, the patient was referred to the Mayo Clinic for a possible sympathectomy. There Dr. A. W. Adson suggested that surgical treatment be delayed and that the topical use of 2 per cent nitroglycerine in lanolin t. i. d. be tried.

Since using the nitroglycerine preparation, the patient's hands are now persistently pink. Swelling of the fingers has markedly decreased, the ulcer on the tip of the r. index finger has healed, and the

1. M. J. Fox, M.D., and C. L. Leslie, M.D., Milwaukee, in *Wisc. Med. Jl.*, Sept.

gangrenous area on the same finger has decreased to 2 mm. The fienger-tip tenderness has decidedly decreased. The characteristic response to exposure to cold has lessened in severity.

Case 2.—Miss A. S., 30, stenographer, in 1943-1944 had episodes of pain and color changes in her hands and fingers upon exposure to cold. Being warmed, the parts became swollen, red, and burned intensely. The feet were similarly affected but to a lesser degree.

During the summer there was regression of the symptoms, but with the onset of cold weather they recurred. The skin became darker, tight and glistening over the entire body. From 1944 until 1947 all of the symptoms were progressive, and the previously experienced relief during the warm months grew less and less. Many forms of treatment were tried out, including Benadryl, papaverine and thyroid extract and the parenteral use of Prostigmine and tetraethyl ammonium chloride. Histidine was instituted, but discontinued because of allergic side effects.

In December, 1947, there was diffuse increase in pigmentation, the skin tight and glistening most on dorsal surface of the hands and fingers, contracture deformity of fingers and hands, grayish blue and cool to touch. Exposure to cold caused color changes typical of Raynaud's disease. Topical application of 2 per cent nitroglycerine in lanolin t. i. d.Within ten minutes after the first application of the nitroglycerine, marked free perspiration was noted in the palms of both hands, not observed for the last four years. Slow improvement soon began in the motion of her fingers to touch the palms of her hands with her finger tips. She has long been able to do the ironing and other domestic duties which she had previously been unable to do. Miss A. S. had been told that therapeutic approaches had been exhausted. After several days of nitroglycerine treatment her hands were pink and much warmer. After ten days her hands began to itch and large red blotches appeared on them; veins on the backs of the hands were prominent and the finger tips tender. The drug was discontinued and symptoms disappeared in three days, and the nitroglycerine was again started, one application per day. To date there has been no repetition of this unfavorable reaction.

Experience in two cases is evidence that two-per cent nitroglycerine in lanolin applied topically is of value in the treatment of Raynaud's disease and deserves further investigation and clinical evaluation.

Postpartum hemorrhage is often due to too deep anesthesia, prior use of oxytocics and premature attempts at expression of the unseparated placenta. Intravenous and intramuscular injections of ergotrate (ergonovine) are more effective than pituitary preparations in controlling uterine hemorrhage. If not effective, give intravenous pitocin (not Pituitrin).

—*J. Iowa St. Med. Soc.*

SURGERY

William H. Prioleau, M.D., *Editor,* Charleston, S. C.

RADICAL EXCISION AND SKIN GRAFTING OF LEG ULCERS

Chronic leg ulcers constitute a major problem in every large clinic and in many private practices. Regardless of the etiology, the local tissue changes are essentially the same. The predominant factor is the dense scar tissue which prevents a circulation adequate to support an epithelial covering. This condition may remain even though the original disease process has been eliminated. Such is the case particularly with syphilis, burn scars, and varicose veins.

The treatment of such ulcers is the subject of a paper by Teplitsky et al,[1] who advise that proper attention be paid to the treatment of causative factors and the general condition of the patient. In their selection of patients, age of patient, and size and chronicity of ulcer were not deterring factors in treatment. Of prime importance was the arterial status of the affected leg. If this was considered adequate, treatment was instituted.

The treatment is based upon the excision of the ulcer and the surrounding indurated tissue until normally vascular tissue is reached. This may necessitate carrying the dissection to muscle, periosteum, joint capsule, or through sclerotic bone. The wound is then dressed with codliver oil ointment and placed in a cast. After 10 to 14 days a dermatome graft is applied. The results of this method of treatment were excellent except in some cases where there was persistence of the original cause of the ulcer, such as trophic factors and sickle-cell anemia.

1. Teplitsky, D.; Shapiro, N.; and Robertson, G. W.: Radical Excision and Skin Grafting of Leg Ulcers. *Plastic & Reconstructive Surgery,* 3:189-196, 1948.

Diphtheria in partially immune persons, and accordingly that of many adults. Less than one-third of the diseased throats were suggestive of diphtheria, while more than one-half the lesions were those of follicular tonsilitis.

—*M. Bull. U. S. Army.*

One should be on the alert for history of fatigue and anorexia, particularly for meat, associated with discomfort either before or after eating. In this way one has the opportunity of making an early diagnosis of peptic ulcer.

—*Jour. A. M. A.*

GENERAL PRACTICE

WILLIAM R. WALLACE, M.D., *Editor*, Chester, S. C.

GUIDE TO MEDICAL TREATMENT OF EPILEPSY

SPECIFIC drug therapy is now available for each type of idiopathic epilepsy, as shown by the following table:[1]

Type of Epilepsy	*Medication*	*Average Dose**	*Limiting Side Effects*	*Signs of Sensitivity*
Grand Mal Focal	Dilantin	1½ gr. t.i.d. p.c. Usual maximum, 6 gr. per day	Diplopia, staggering, may increase petit mal	Overgrowth of gums or body hair, itching rash on extremities. gastric irritation
	Phenobarbital	1½ gr., h.s. Usual maximum, 3 gr. per day	Sleepiness	
	Mesantoin	1½ gr. t.i.d. Usual maximum, 6 gr. per day	Sleepiness	Scarlatiniform rash** fever, lymphadenopathy
Petit Mal Myoclonic	Tridione, with monthly white count	1½ gr. t.i.d.	Inability to see in a bright light, drowiness	Hiccoughs, acneform rash, leukopenia
	Mebaral	6 gr.	Sleepiness	
	Ketogenic diet			Loss of weigbt
Psychomotor	Any and all anti-epileptic substances. Medical treatment generally unsatisfactory			

*Dose to be raised until seizures are controlled or limiting side effects of sensitivities develop.
**Requires omission of responsible drug.

The use of history, physical examination and laboratory methods to rule out organic epilepsy followed by an electro-encephalogram in the idiopathic type produces the highest percentage of correct diagnoses. A normal tracing in a patient with clinical epilepsy usually is an indication that the disease is not as widespread as if the tracing were positive and consequently the prognosis for stopping the convulsions is better.

The prognosis in idiopathic epilepsy is best for petit mal, next best for grand mal, and worst for combinations of the two.

So much has been written in the past 20 years on better and better drugs for epilepsy as to confuse the doctor in quest for best for his epileptic patients.

Here it is, plainly and positively set forth, not what you *may* do but what you *should* do.

1. R. B Tumor, M.D., Minneapolis, in *Jl. Lancet*, Oct.

RENAL PTOSIS

FEW of us have any enthusiasm for having a patient's "floating kidney" operated on. Braasch[1] fortifies us in this position, gives us his authority for passing on to our patients who have consulted or may consult a too-sanguine surgeon.

Most patients with nephroptosis will be benefited by *non*-operative measures. Even in cases in which the symptoms point directly toward a renal origin, urographic data, such as evidence of a borderline pyelectasis or delayed drainage, should be required before nephropexy is considered.

Nephropexy is advisable only when such evidence is presented, along with symptoms of definite renal origin.

The fact that the symptoms were relieved in less than 50 per cent of the patients subjected to nephropexy *after careful selection* would, in itself, make one hesitate before advising this operation. A conservative attitude is substantiated by the fact that many patients observed at the clinic had previously undergone nephropexy elsewhere without relief of symptoms.

1. Wm. F. Braasch, M.D., *et. al.*, Rochester, Minn., in *Jl. A. M. A.*, Oct. 9th.

UROLOGY

Raymond Thompson, M.D., *Editor*, Charlotte, N. C.

THE EARLY DIAGNOSIS AND TREATMENT OF CANCER OF THE PROSTATE

Although much has been written in recent years about cancer of the prostate, little progress has been made in early diagnosis or curative treatment.

Late figures given for carcinoma of the prostate is 14% of all males 50 or over; 46% in 50 consecutive cases in which the entire prostate was serially sectioned. The percentage incidence rises age age increases.[1]

The disease is frequently symptomless in its early stages, hence the patients do not present themselves for examination. The problem must be attacked by routine examinations, at the hands of the entire medical profession.

A hard circumscribed lump in the prostate of a man 45 or older is almost invariably cancer. Many early carcinomas do not produce a lump palpable on rectal examination, so that there must be further means of diagnosis. Punch, needle, and aspiration biopsies are not practicable as routine examinations.

The easiest and most practical method is the use of smears of the expressed prostatic secretion stained with the Papanicolaou stain. The material is obtained without discomfort, disability, or loss of time to the patient. Thus far, in an experience of 190 cases, 28 positive diagnoses have been returned, of which 22 have been proved to be cancer. The other six positive cases are still under observation, all with evident disease of the prostate, so that it is fair to say that there has been no case of a false positive with this test. A false negative may occasionally occur. The smears show the cancer cells, as proved by comparing with sections from excised prostates, and with smears made directly from the cut surfaces of operative specimens.

Davis strongly urges the attention of every physician to this matter. The prostatic examination must be *routine and thorough, never forgetting that a large number of all curable cases have no symptoms.* Once the diagnosis is suspected, it can be confirmed by exposing the prostate perineally and removing a block for biopsy. If there be no cancer, no harm is done; if cancer be found, radical operation, according to the method of Young, with removal of the entire prostate, both seminal vesicles, and a cuff surrounding the vesical orifice can be carried out.

There is reason to hope that, if the medical profession takes this subject to its heart, we may do as well as or better than in cancers of the uterus and breast.

In the discussion:

Dr. Walter I. Buchert: This operation is suitably only in the very early case, before there is any extension of the malignant process beyond the prostate. Last year I reviewed 135 cases of carcinoma of the prostate and in every case the disease was far advanced before the patient presented himself. There are no symptoms until urination is interfered with or pain produced by local extension; 75% are in the posterior lobe; most elderly men believe urinary difficulty inevitable in old age. The average duration of symptoms before physician is consulted is 21 months.

1. D. M. Davis, Philadelphia, in *Penn. Med. Jl.*, July.

PEDIATRICS

Albert M. Edmonds, M.D., *Editor*, Richmond, Va.

PHEOCHROMOCYTOMAS

Pheochromocytoma has always been considered a very rare tumor; however, in recent years with a better understanding of the symptoms and an increased awareness by the practitioner the diagnosis is being made much more frequently. It was formerly thought that this tumor—which is generally adrenal but may occur in any pheochrome tissue—was productive of symptoms of paroxysmal hypertension, with pounding headache, consciousness of beating of heart with epigastric distress, a sense of constriction of the hands and feet, and often a feeling of impending death, lasting a few minutes to several hours, followed by excessive perspiration and weakness.

In a recently published article, Cahill[1] brings knowledge of this disease condition up to date.

Headache is usually the symptom which causes the patient to seek medical aid. In the attack there is a decided rise of systolic and diastolic blood pressure with a fall to normal when the attack subsides. These attacks are precipitated by the sudden release of adrenalin from the tumor mass, which may be of large enough amount to terminate life. Occasionally the tumors are palpable. Palpation and massage of the adrenal areas may stimulate the release of adrenalin and precipitate an attack. Papilledema and blurring of the disc margin with fluffy exudate and hemorrhage have been described as typical of this condition.

In recent years several investigators have stated that this intermittent syndrome is not invariable, but that some cases present a picture of persistent hypertension which is due to a steady, rather than an intermittent, release of adrenalin.

These tumors are supposed to be rare in children; however, with increased diagnostic ability and awareness, they are being recognized more and

more commonly. Cahill reports three cases, all in children. Of these three cases two were unusual, in that more than one tumor was found at operation, and in one instance a second surgical exploration was necessary in order to find the second tumor. In addition to the adrenal areas, these tumors may be found in the cranium, thorax and pelvis and other locations. In one case the tumor was found at the bifurcation of the aorta.

There are several tests which may be of help in establishing the diagnosis: 1) If benzodioxan administered intravenously causes a prompt reduction of the blood pressure to normal the hypertension is due to excess adrenalin in the blood. Several plain cases of essential hypertension have given a negative response to the benzodioxan test, and have been followed by surgical exploration, at which time no tumor has ever been found. The test seems quite specific, and it is generally believed that essential hypertension will consistently give a negative test. 2) The administration of histamine will precipitate an attack, but this is not without risk and is not generally advocated. 3) Roentgenological evidence of the presence of a tumor, with or without perirenal air insufflation, or by renal displacement with pyelographic medium, may be adduced; however, caution is needed against the danger of perirenal air insufflation.

The surgical removal of these tumors is not without danger; by the tumor manipulation necessary for its removal large amounts of adrenalin are liberated and occasionally death results. If possible, all vessels of the tumor are ligated before it is handled. The use of benzodioxan at the time of operation has been suggested. Occasionally, the removal of the tumor produces a fall in blood pressure severe enough to necessitate adrenalin administration in small doses.

Most of these tumors are benign, only nine per cent having been found to be malignant, occasionally with metastases.

1. Cahill, G. F., in *Jour. A. M. A.*, 138:180.

CHILDREN WET THE BED BECAUSE THEY SLEEP TOO SOUNDLY

Among parents of enuritic children the one common impression found[1] was that such children sleep so soundly they can hardly be awakened. During the past ten months one to two dram doses of elixir d-desoxy-ephedrine hydrochloride have been given at bedtime to children aged five to fifteen. In a series of 15 patients, 10 discontinued bedwetting completely and five are still under treatment. Improvement has been noted in nearly all cases within the first week, and the majority of children have been kept on the medication from three to four weeks, no other means of treatment being employed.

The results lead to the belief that, by using a stimulant to make the child sleep less soundly, he will become aware of his bladder distention and either awaken upon the desire to urinate or else will exert enough control to check micturition.

1. V. B. Lombardini *et al.*, in *Northwest Med.*, Nov.

As to intranasal medication[1] the method which probably gives most immediate and lasting relief is nebulization, but this is suitable only for office use. For self administration the spray method is favored over the dropper by all patients. The preferred atomizers are DeVilbiss No. 251 for its fine spray and No. 114 for its size. Both of these atomizers are suitable for any type of solution since they are non-metallic.

1. A. H. Persky, Philadelphia, in *Medical Record*, Nov.

Pain which awakens the patient at night is almost always on an organic basis. Functional pains do not awaken.

Minnesota Med.

SKIN TESTS OF LITTLE VALUE IN DIAGNOSIS OF FOOD ALLERGIES

(Leon Babalian, Portland, in *Jl. Maine Med. Assn.*, July)

Neither in eczematous dermatitis nor in urticarial lesions are scratch and intradermal tests of *any* value in food allergy.

Cases of infantile eczema, in spite of positive skin tests to milk, seem not to be related to a milk allergy, but to a deficiency in unsaturated fatty acids. Senile dermatitis exfoliativa has been mistakenly attributed to food allergy, on account of positive skin tests for food, and then patients with this condition have been put on a dangerous elimination diet. These persons suffer chiefly from a poor diet low in protein and vitamins.

The importance of contact offenders is recognized more and more every day, and this conception is, little by little, replacing the one of food allergy. Many "eczemas" of adults and many infantile eczemas are now recognized to be nothing but contact dermatitis—and that in spite of the results of skin "tests" for food allergy.

The mistaken confidence in the reliability of the skin tests for food allergy has led to the belief that food allergies are uncommon. On the contrary, while they are highly important in special cases, they are uncommon in adults and in children after the sixth year.

Some infectious skin diseases can be reactivated by ingestion of some foods. A latent herpetic virus infection can be reactivated by ingestion of fruit juices, or nuts, or sharp cheese, and give a flare-up of canker sores in the mouth. This reaction has nothing to do with a food allergy. It is a phenomenon called Biotropism, according to which a latent infection can be reactivated by another infection, or by a physical or chemical agent.

The following conclusions are arrived at:

The technique of scratch or intradermal tests for food allergies is based on very questionable hypotheses.

The practical results of these tests are unreliable.

After the age of six years, food allergy is rare.

To attribute the majority of our skin troubles to food allergy is to restrict out of all proportion the field of dermatology and run the risk of becoming a public danger.

These abuses are liable to discredit skin tests in general, which, however, are of the utmost help in other fields of allergy.

SOUTHERN MEDICINE & SURGERY

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VACCINATE YOUR FAMILIES AGAINST PNEUMONIA

Two methods of attacking the problem of prevention of acute respiratory diseases have been given much study. The first method aims to develop specific defenses against each individual disease condition by the use of immunizing agents.

Results obtained in our own country and abroad are such as to encourage further use of vaccines for protecting against infections with the influenza viruses A and B. Results of the use of a mixed antigen prepared from the polysaccharides of types I, II, V, and VII pneumococci—the types responsible for the bulk of the cases of lobar pneumonia —indicate a specific effect in reducing the number of cases.[1]

The second method of attack, which aims to prevent contagion by checking droplet and other infection of the air, has attained a fair success in preventing cross infections in hospitals and barracks.

In an investigation confined to elderly persons in this country over a period of six years,[2], 5750 persons were given type I, II, and III pneumococcus polysaccharide, while 5153 served as controls. During the period, among the immunized the incidence of pneumonia was 17.2 per 1,000, that among the controls 44 per 1,000; and the number of deaths from pneumonia among the immunized was 6.2 per 1000, among the controls 19 per 1000.

Many subsequent investigations into the prevention of serious acute respiratory diseases have borne out the conclusion that such vaccination is life-saving, and the vaccination material is readily procurable.

Despite the sulfonamides and penicillin, many still die of pneumonia. It seems clear that family doctors would do well to have their families avail themselves of this protection.

1. C. H. Seuart-Harris, London, in *The Lancet*, Feb. 8, 1947.
2. Paul Kaufman, New York, in *Arch. Int. Med.*, 79-518, 1947.

ABOUT INJECTION ANESTHESIA

ALL LOCAL anesthetic drugs are esters of aromatic acids. The mechanism of onset of local anesthesia depends upon the alkaline buffers present in the blood and tissue fluids. The liberated anesthetic base then dissolves in the lipoids of the nerve cells, thereby interfering with the transmission of sensory impulses. Gradual restoration of the blood circulation in the anesthetized area sweeps away the anesthetic substance, detaching it from its temporary union with the nerve cells, and this restores sensation.

So, Albert[1] lays the foundation for an informative discussion, which goes on:

1. Harry Albert, D.D.S., New York City, in *Anesthesia & Analgesia*, Sept.-Oct.

Since all local anesthetics are protoplasmic poisons, we should employ the least anesthetic solution that will give adequate anesthesia. No onset of anesthesia may be expected while the solution injected remains acid in reaction, or while the anesthetic agent remains in the form of the original salt. It is only the anesthetic base that produces an anesthetic effect, since only the base is lipoid-soluble. The base may be set free from its salt only by the action of alkaline substances supplied by the blood. The addition of adrenalin to an anesthetic solution renders the anesthetized area practically bloodless.

It is obvious that a larger amount of anesthetic salt deposited in the tisues will require a larger amount of blood and lymph. With the volume of the blood diminished through action of the vasoconstrictors, a smaller amount of active anesthetic salt could be more completely neutralized by the available buffers. With smaller dosages of anesthetic solution more rapid anesthetic effect may be obtained, with fewer systemic disturbances, and ample anesthesia developed to complete the operation, and fewer postoperative complications expected. This is the experience of thousands of cases in which the operation could be completed with only 3 or 4 minims of anesthetic.

For conduction anesthesia a few drops of anesthetic solution is enough to produce adequate anesthesia, for here only a section of a main trunk is being anesthetized.

In cases of acute inflammatory processes the disturbed biochemical factor of the tissues impedes the neutralization process esential to the liberation of the anesthetic base. Therefore it is not advisable to infiltrate the tissue with anesthetic solution, but to make a nerve-block injection instead.

FOR REDUCING THE KILLINGS ON OUR HIGHWAYS

A MEMBER of the medical faculty of the University of Virginia has made a careful study of the causes of killings on our highways and makes practical, sensible recommendations.[1]

SINCE in 15 per cent of all accidents mechanical defects are involved frequent spot checks of automobiles should be made by the state police. Since drivers with physical defects are involved in eight per cent of the fatal accidents, we should urge periodic and careful reëxamination of all drivers at least to help in the reduction of this smaller percentage.

Speed was a factor in two out of five fatal accidents, and in many of our most serious accidents it was the main factor. The problem of high speeds could be solved simply by the use of governors on all cars, limiting the top speed to 55 miles per hour, but in no way interfering with acceleration at lower speeds. The following question was asked of a large segment of the American Automobile Association: "If a simple device were developed to limit the top speed without affecting acceleration at lower speeds, would you fvaor its incorporation in new passenger cars?" Of the 4,102 replies received, four persons answered "yes" for each three that answered "no." The top speed in the group favoring governors was 55 miles per hour.

Studying the reasons for and mechanics of these accidents makes it obvious that redesign of the automobile can prevent many of them.

Frame and body of welded "unit construction" would be helpful. Such structure should also include "crash struts," as found in aircraft. Windshield and windows and headlight lenses should be made of a plastic material. Both windshield and rear windows should more nearly revert to the vertical, for better visibility—particularly important in rain, sleet and snow. Single doors should be standard, with windows large enough to serve as escape hatches and high enough to prevent passengers from riding with their elbows comfortably protruding. Door latches should be operated both from rear and front seats, with the safety lock on the front latch, to prevent the opening of the door by children.

The front bumper should be mounted on oleo shock absorbers, similar to the landing gear of airplanes, which quickly and efficiently absorbs the shock of the heaviest planes on landing, even when the landing is poorly executed.

Tire treads should be designed to give maximum traction and to provide the best antiskid qualities, on the basis of actual tests by some capable disinterested body. Blow-out proof tubes should be used exclusively even at the expense of some riding comfort if necessary.

Interior devices: A glare-proof rear view mirror, for night driving; a latch to lock the backs of front seats in position in the coach type cars, to prevent the added impact of them to the front seat passengers in sudden stops. Safety belts—standard equipment in aircraft—might well be one of the most effective single factors in preventing serious injury; also a hydraulic steering column which will move forward under a force of 100 foot pounds to prevent chest injuries of the driver, and sponge-rubber padding on the dash and back of front seats. All projecting handles, knobs, buttons, etc.—interior and exterior—left off wherever possible.

Exterior lighting: Should include red reflectors at corners of fenders and top; blinking turn indicators front and rear; large stop light and dual tail lights and luminous paint on outside margins of trucks, trailers and busses and consideration of its use for strip marking on highways.

1. F. D. Woodward, M.D., Charlottesville, Va., in *Jour. A. M. A.*, Oct.

The provision of the largest possible visual field. Top-supporting columns reduced to a minimum compatible with safety in the event of turning over. Front supporting columns should be moved further to the rear.

Lowering and shortening of the hood would give a much better view of the roadway, especially on sharp hills.

Shiny, reflecting surfaces should be eliminated from the driver's visual field, by using no chromium trim and by painting the top of the hood and dash a nonreflecting dull black.

The speedometer should be placed at the top of the instrument panel, directly in front of the driver, since it is his most important instrument. In addition to the miles per hour, it should include the stopping distance in feet under average driving conditions, as a constant reminder. The speedometer and other dials should be illuminated by means of a "Navy red" light to maintain the driver's dark adaptation at night. A flashing red light or auditory signal should be provided to indicate the maximum safe speed of 55 miles. The light switch should be placed on the driver's side of the panel and designed to be easily operated by feel.

A polarized windshield to minimize glare from the highway, in conjunction with oppositely polarized headlight lenses, would eliminate "blinding" in night driving.

Defrosting and wiping equipment should be installed at both windshield and rear windows, and wipe a larger area than at present.

The issue of *Southern Medicine & Surgery* for December, 1935, in its leading editorial, under the caption "This Journal's Christmas Present" stated:

Whatever other contributing causes may be operative in wrecking automobiles and killing their occupants or others; in nine instances out of ten, if the car or cars had been going at a speed within the legal limit, no wreck would have occurred. Dealers in such parts tell me that efficient governors can be sold and attached for from $2.50 to $6.00, and that a car so equipped can not possibly go at a rate of speed beyond that at which the governor is set.

(We may assume that the cost has been trebled in the past 13 years.)

Can anybody offer a valid objection to this plan? *It is cheap and it will work.* Then, only the cars of law enforcement officers would be allowed on the roads without this eqipment, and these allowed to exceed the speed limit when in pursuit of law violators, and then only. Then, any one seeing an automobile go by traveling at an excessive speed would have good reason to believe it to contain desperate criminals, and could call officers further on to block the road. In this way the hold-ups of banks and others with large sums of money, and dashing away in high-powered cars would be largely done away with in our State.

There is no reason why ambulances should be exempt from the general speed limitation. Races to see which ambulance can get first to the injured or dead will destroy many more lives than they will save. Lives have been destroyed right here in Charlotte in just that way.

There are a good many sitting under the wheels of automobiles who really believe that they are entitled to use all that part of the road to the right of the white line, that if their left wheels are running squarely on the white line they are entirely within their moral and legal rights. Running two lines, 30 inches apart, each 15 inches from the midline, would correct this impression, give drivers in each direction information as to just what area of roadbed they are entitled to, and save many a life.

The construction of paths for pedestrians would cost next to nothing, and such construction would right a great wrong that was done walkers when, in making hard-surface roads, the good paths alongside red-clay roads were destroyed, and prevent children being slain, men and women being run down while walking over to visit a neighbor, or on their way to their worship, as was done in Cleveland County last year.

Who would be injured by making and enforcing these laws? It might be well to raise the speed limit on pasenger cars to 50 or 55 miles and on trucks to 35 or 40. Most wrecks come from speeds of 60 to 90. If a passenger car is driving under 50 miles per hour, any truck that does not pass it may be confidently set down as in such poor condition that it will not make 50.

It will be noted that the word, accident, is not used to define these wrecks. The vast majority are not accidents any more than the explosion resulting from looking for a leak in a gas pipe with a lighted match is an accident.

These laws are urged on the attention of the public. Doctors and others who read this journal are earnestly requested to interest their newspapers, their clubs and their candidates for office.

This plan is this journal's Christmas present to its readers. Here are the seed from which may readily be grown a means of solving this urgently serious problem of slowing down these Juggernauts and making them stay on their own side of the road, and keeping them from maiming and slaying those who love to or have to walk our highways. Here are offered suggestions for planting and cultivating these seeds.

If it so be that they find good ground, this journal's Christmas gift for 1935 will be the most valuable in the metes and bounds of Tarheelia.

May you stay at home and have a Happy Christmas. In the New Year may these changes be

brought about, so that by the coming of next Christmas you may travel the roads in safety.

Within the present month a young father driving madly down East Avenue with his horn "pleading" for right of way, "rushing" his child to a hospital, killed the child and its mother. Why was he driving madly? In imitation of the ambulances when they are taking patients to hospitals.

The Greensboro *News'* issue of Monday, December 13th, carried this story:

Russell Walter, 22, of Gibsonville, was injured fatally near here at 2:20 a. m. Sunday when the car he was driving was struck by an ambulance at a road intersection. James Hilton, 26, of Madison, the ambulance driver, suffered a broken nose and minor cuts. Walter, who suffered head injuries and various lacerations about the head and his hands, died at 8:45 p. m. today without regaining consciousness. His car was demolished. Damage to the ambulance was estimated at $2,000.

G. D. Dodson, highway patrolman, who investigated the crash with Rockingham County deputy sheriffs, said that Walter, coming from the direction of Leaksville, entered the Reidsville-Wentworth road and moved right into the path of the ambulance, which was going east toward Madison.

The investigating officers exonerated Hilton and no charges were lodged against Walter.

Considerate of the officers not to charge poor dead Walter with, at the very least, obstructing the highway! Not a word said about the reckless speed at which the ambulance was being driven. We city folks, used to ambulances, generally manage to get out of their way; but poor Walter was a country lad, driving peacefully along the Guilford County roads, as his ancestors had for two centuries—thinking no evil, saying no evil, doing no evil; and he couldn't dodge the Juggernaut.

The issue of *Southern Medicine & Surgery* for May, 1931, stated editorially: All of us know with what wild abandon ambulances dash through the streets, whether going for a patient or a coca-cola, whether taking a patient to a hospital or returning to the garage for a ten-day stay.

In the past few weeks an ambulance which was being driven in utter disregard of speed limit and through the red light wrecked a car and seriously injured its driver.

Everybody knows this is dangerous folly. Sound sense directs that ambulances be driven in accordance with the laws that apply to all other vehicles, and that this "rushing" cease. It is doubtful if one life has ever been saved by "rushing" a patient to a hospital.

It is gratifying to see that Dr. Woodward places his finger accurately on the prime cause of these wanton killings—speed. All the rest of his recommendations are hereby heartily endorsed; but most of them involve expensive changes in the making and equipping of automobiles. Governors are cheap, could readily be obtained in sufficient quantity to meet all need in six months, and would reduce the fatal wrecking by 60 to 70 per cent. Other measures could be carried into effect as rapidly as possible.

Leg Ulcers

Many doctors have been impressed with the frequency of sclerosis of the legs in leg ulcers, and believe the primary and important factor to be degeneration of tissue resulting in an inability of the skin to withstand trauma. The common association of pigmentation . . . has been ascribed to vitamin E-deficiency.

In a series of 24 cases, Burgess and Pritchard[1] found vitamin E therapy "of undoubted value in the treatment of sclerosis of the legs with associated leg ulcers." The specific effect on collagenous tissue may be due to inhibition of enzymes within the cell body or to the well-known antioxidant activity of vitamin E.

In moderate cases, 100 to 300 mg. of tocopherol was given daily by mouth; in advanced cases, a daily dose of 600 mg. was given, preferably on an empty stomach and with a low-fat diet. For maintenance therapy, a daily dose of 50 to 100 mg. of vitamin E is recommended. Parenteral administration of vitamin E was used in some patients.

1. *The Canadian Med. Assn. Jl.*, 59:242, 1948.

Pregnant Abdomen Marked Like Ripe Fig—Lack of Vitamin C

That the striae are produced by rapid and extensive stretching of the skin in the presence of decreased elasticity of the involved tissues has been accepted for centuries. Based on the recently established knowledge that deficiency of vitamin C decreases the tensile strength of tissues generally, the hypothesis is advanced that C-hypovitaminosis is the primary cause.[1] Other obstetrical complications involving the tensile strength and elasticity of tissues, including cervical and perineal laceration, abdominal hernia, rupture of the uterus, and hemorrhage (pre- and postpartum) may be similarly related.

1. W. J. McCormick, M.D., Toronto, in *Medical Record*, Aug.

Chilblains.—Nicotinic acid orally 50 mg. t.i.d. p.c. relieves most cases of chilblains. The dose may need to be increased to 300 mg. daily, before pain in the hands and feet is relieved.

—*Brit. Med. Jl.*

NEWS

University of Virginia

As a member of the visiting faculty of an "Orientation course in Clinical Allergy," given by the Northwestern University Medical School, under the sponsorship of the American Academy of Allergy, on October 25th, Dr. Oscar Swineford, Jr., lectured on "Bacterial Allergy," and "Physical Factors in Allergy." Dr. Swineford has received information that the Ciba Pharmaceutical Products has renewed its grant of $2,500 for continued experiments in Bacterial Allergy in 1949.

Dr. Edward Tuohy, Professor of Anesthesia, Georgetown University, lectured to the student body and faculty October 25th on the subject, "What Anesthesiology Embraces."

Dr. H. B. Mulholland spoke to the Goochland Home Demonstration Club, Goochland, Virginia, on the subject, "Health in Virginia," at a meeting on October 26th. On October 31st, Dr. Mulholland spoke at a meeting of the Chesapeake & Ohio Railway Surgeons at White Sulphur Springs, West Virginia, on "The Diagnosis and Treatment of Liver Disease with Especial Reference to Cirrhosis."

On November 9th, at the Annual Meeting of the American Climatological and Clinical Society, held at Hot Springs, Dr. J. Edwin Wood, Jr., presented a paper on the subject, "Urinary Sodium Excretion Following the Use of Certain Diuretic Substances."

On November 10th, the Postgraduate Program for House Officers presented as guest speaker Dr. Hans Selye of the University of Montreal. Dr. Selye spoke on the subject, "General Adaptation Syndrome; Diseases of Adaptation."

On November 9th, Dr. Edwin J. Palmer of Roanoke, Virginia, lectured to the faculty and student body on the subject, "The Private Practice of Psychiatry."

Duke-Sponsored Medical Course for Next Spring

The North Carolina Medical Postgraduate Course, sponsored by the Duke University School of Medicine, will be held March 21st-24th. Dr. William M. Nicholson, associate professor of medicine at Duke, who is in charge of arrangements, makes the announcement.

Some 300 physicians from North Carolina are expected to attend the four-day course. Further details of the meeting will be announced later.

Duke University Adds Wing to Medical Research Unit

Plans have been completed for a new four-story addition to Duke University's medical research building, at the rear on the north side of the present structure at an estimated cost of $120,000, including services and equipment. The cost is being borne by sources other than university funds.

The addition is the first of several which were contemplated when the medical research building was constructed.

Medical College of Virginia

Rear Admiral Clifford A. Swanson, Surgeon General of the United States Navy, was guest speaker at the Founder's Day program of the Medical College of Vriginia on November 30th. Speaking on the subject, "A Physician's View of the World," based on a recent round the world trip, Admiral Swanson stated the progress of American medicine against disease abroad is building up good will for this country throughout the world. The program honored the founding of the college 112 years ago.

Dr. Harry Gold, Professor of Clinical Pharmacology at Cornell School of Medicine, spoke at the College December 14th under the sponsorship of the Phi Delta Episolon medical fraternity on "An Optional Routine for the Treatment of the Failing Heart."

Bowman Gray School of Medicine of Wake Forest College

Dr. Lloyd J. Thompson, head of the department of neuropsychiatry, was elected president of the N. C. Neuropsychiatric Association at a meeting in Raleigh on Nov. 19th.

Dr. Howard H. Bradshaw, professor of surgery, has been elected a member of the board of governors of the American College of Surgeons for a term expiring in 1951.

Dr. Virgil H. Moon, professor emeritus of pathology, Jefferson Medical College, Philadelphia, has been appointed visiting professor of pathology at Bowman Gray School.

Dr. C. C. Carpenter, dean, was elected vice-president of the Association of American Medical Colleges at the annual meeting held at White Sulphur Springs.

Thomas A. Will, Sr., of New Baltimore, Pa., was elected president and Dr. David Cayer, assistant professor of internal medicine, was elected secretary of the Beta chapter of Alpha Omega Alpha, honor medical society, following installation of the chapter at Bowman Gray School on Nov. 19th. Initiates included six seniors, 15 alumni, and nine faculty members. Dr. Walter L. Bierring of Des Moines, Iowa, national AOA president, conferred the charter, and Dr. Wilburt C. Davison of Duke Medical School delivered the principal address.

Catawba Valley Medical Society held its regular dinner meeting November 29th, at 7 p. m. in the Recreational Center at Lincolnton, N. C. Program:

Recent Developments in Penicillin Therapy—Dr. E. H. Ellinwood.

The Diagnosis of Neurosurgical Problems in General Practice—Dr. Barnes Woodall, Duke University School of Medicine.

Election of Officers.

A White Cross Hospital has been established at Salem, Virginia, for the care and treatment of alcoholism, emphasizing conditioned reflex therapy. The hospital will be under the personal management of A. J. Russo, M.D.

Family Doctor of Year Feted

For the evening of December 11th, the home folks of Dr. W. L. Pressly, of Due West, S. C., the American Medical Association's "Family Doctor of the Year," arranged a party for paying tribute to their distinguished fellow-townsman. Medical colleagues and patients alike gathered to do honor to him as a man who treated minds as well as bodies.

Dr. J. R. Young of Anderson recalled that the "Downtown" baseball team in 1895, of which he and Dr. Pressly were members, had on it three other players who became doctors. a sixth who became a dentist, a seventh who became a pharmacist, an eighth who became a preacher and a ninth who became a college president. Doctors and patients spoke at a testimonial meeting in Erskine College's Memorial Hall. Some 400 whites and 150 Negroes participated in the meeting, followed by a banquet in a college dining hall for 200 guests. Mrs. Strom Thurmond, wife of the Governor, represented her husband, who was attending a meeting of the Gridiron Club in Washington.

Dr. Hugh Smith, of Greenville, South Carolina representative of the Council of the American Medical Association, said that the award made for the first time last year to a Colorado doctor had been instituted to encourage more young doctors to devote their efforts to becoming good general practitioners rather than specialists.

Mrs. Ernest Murdock, wife of the Anderson County

Supervisor, E. J. Wright, farmer of the Saylors Crossroads community, and Noggie Vause, representing Negroes of this section, also spoke in behalf of Dr. Pressley's thousands of patients, including the 4,200 whose birth he has superintended.

THE SOUTHEASTERN ALLERGY ASSOCIATION will hold its fourth annual meeting at the Washington Duke Hotel, Durham, N. C., on Saturday and Sunday, January 22nd and 23d, 1949. Dr. George Rockwell, president of the American College of Allergists, and Dr. Walter Winkenwerder, president of the American Academy of Allergy, are to be the guest speakers. There will be a panel on "Infectious Asthma" headed by Dr. Oscar Swineford and a panel on "Food Allergies" headed by Dr. Hal Davison.

For further information address the Secretary, *Dr. Katharine B. MacInnis,* 1515 Bull St., Columbia, S. C.

DR. ROBERT P. MILLER announces the opening of new offices at 1425 Elizabeth Avenue, Charlotte, N. C. Practice limited to Surgery.

LAIRD F. KROH, M.D., announces the opening of offices for the practice of General Medicine at 2201 McClintock Road, Charlotte 4, North Carolina.

DR. JOE M. VANHOY announces the opening of offices, Suite 715 Professional Building, Charlotte, N. C., for the practice of surgery, in association with DR. THOMAS D. SSARROW.

DR. AUSTIN T. MOORE, Columbia, S. C., is back from a 16,000-mile trip; he was a member of the American Hospital Medical Association team of "Flying Doctors" inspecting health conditions in Alaska.

DR. HOWARD P. STEIGER announces the new location of his offices, 211 Hawthorne Lane, Charlotte, N. C.

DIED

Dr. Josiah C. Trent, assistant professor of surgery in the Duke University Medical School, died Dec. 10th. Dr. Trent, a native of Okmulgee, Okla., was chief of the division of thoracic surgery at Duke.

Before coming to Duke he was a teacher in the Department of Surgery in the School of Medicine of the University of Michigan.

TUBERCULOSIS.—It is now generally accepted that what the tuberculin test is to the establishment of the presence of infection, and the x-ray to early case finding, bacteriological examination for tubercle bacilli is to the determination of clinical activity.—F. J. Weber, *Pub. Health Rep.*, Sept. 3d.

IN 1670 a bone from a dog was used to repair a cranial defect in a man. The graft was successful, but it was removed because of the opposition of The Church to the use of an animal's bone in "marring God's image."—*Annals of Surgery,* 1939.

ETHYL ALCOHOL is effective as a local antiseptic against many bacteria, almost equally in any strength from 60 to 90%.

ISOPROPYL ALCOHOL differs from ethyl in that its bactericidal effects increase steadily as its concentration approaches 100%.

A YAWN may be bad manners, but it's an honest opinion.

BOOKS

SURGICAL PATHOLOGY, by Peter A. Herbut, M.D., Professor of Pathology, Jefferson Medical College, Philadelphia. 710 pages, 410 illustrations. *Lea & Febiger,* Washington Square, Philadelphia 6. 1948. $12.00.

Written in a basis of work in close collaboration with operating surgeons, this new book is a completely up-to-date surgical pathology in which each part of the body is discussed separately. It is of special importance to physicians whose practice makes them have a more than ordinary interest in surgery, especially those preparing to take certifying surgical board examinations; to surgical pathologists who want salient facts without the need of wading through a mass of irrelevant detail; and to medical students. The author's two aims have been to treat the subject from a regional viewpoint and to summarize the newer ideas as expressed in current literature.

Dr. Herbut's book has been made available with a view to the needs of candidates for certification by the various specialty boards. The major surgical specialties—ear, nose and throat, general surgery, urology and gynecology—are adequately covered. There is a brief consideration of the embryology, anatomy and histology of each system because of their importance in gaining a thorough understanding of pathology. For usefulness in gaining entrance to practice, and in daily ministering to patients, this book is hearty commended.

TEXTBOOK OF GENITO-URINARY SURGERY, edited by H. P. Winsburg-White, M.B., Ch.B., F.R.C.S. (Edin.), F.R.C.S. (Eng.), Surgeon, St. Paul's Hospital for Genito-Urinary Diseases, London; Lecturer, Institute of Urology and (in Urology) Institute of Child Health, University of London. With 451 illustrations, many in full colour. *The Williams and Wilkins Company,* Baltimore. 1948. $20.00.

The preface tells us that the need for an up-to-date work by British urologists has been felt for a considerable time and that this volume represents the meeting of this need by two-score authors working as a "well chosen team." The work deals with the whole of the urinary tract and the male genital system from the surgical point of view. The important controversial subjects, as the comparative advantages and disadvantages of the various methods of dealing with prostatic obstruction are fully discussed. The chapter "Commentary on the Various Surgical Procedures for the Relief of Prostatic Obstruction" is a superb dealing with a subject of the first importance to us all. The chapter on the medical treatment of infections of the urinary tract is especially helpful. Indeed, there is a great deal more of medicine, as distinguished from surgery, than one would expect to find in a textbook of surgery in this country. The dealing with the whole subject of calculous disease of these organs is thorough. The authoritative text is supplemented by a profusion of well-conceived and well-executed illustrations. The work constitutes a first-class coverage of the subject of genito-urinary surgery.

Lectures on THE LIVER AND ITS DISEASES, comprising the Lowell Lectures delivered at Boston in March, 1947. H. P. Himsworth, M.D., Professor of Medicine in the University of London; Director of the Medical Unit, University College Hospital, London. *Harvard University Press,* Cambridge, Mass. 1947. $5.00.

The time seemed opportune for an extended review of knowledge of liver diseases, this particularly because of the great increase in the prevalence of infective hepatitis, a condition which has for some two hundred years been recognized as increasing many fold in times of war. Types of liver injury described are necrosis, fibrosis, injuries consequent upon degeneration, and injuries consequent upon inflammation. Regeneration following injury, splenomegaly as a consequence of liver injury, and factors producing liver damage are given due consideration.

There are chapters on the vascular factor in liver injury, nutritional factors, noxious factors, the syndromes of hepatic failure, infiltrations of the liver, parenchymatous hepatitis, cholangio-hepatitis, circulatory disorders, focal lesions, and cancer of the liver.

The author concludes that we have reached a position in regard to knowledge of liver diseases where we can begin the grouping of related phenomena into categories, and that progress in the accumulation of knowledge may be expected to accelerate.

CLINICAL UROLOGY, Essentials of Diagnosis and Treatment, Lowrain E. McCrea, M.D., F.A.C.S., F.I.C.S., Clinical Professor of Urology, Temple University Medical school; Attending Urologist, Philadelphia General Hospital. With 265 illustrations, seven in color. Second edition. *F. A. Davis Company,* Philadelphia. 1948. $6.50.

For the second edition a great amount of the text has been re-written, following the plan of the first edition, to make all the description as concise as might be without loss of teaching value. It is remarkable how well the whole matter—history, examination, diagnosis and treatment—is covered in so few pages of large type. The doctor doing general work will here find an invaluable, authoritative guide in this field of practice.

Stilbestrol in Bladder Cancer.—Stilbestrol gives relief in many cases of cancer of the bladder, by reducing vesical irritability.—Lich & Grant, in *Jl Urology.*

Infected Cancer.—Cancerous tissue is less resistant to infection than in normal tissue. Treat such infections with penicillin; if penicillin-resistant, with sulfa.

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