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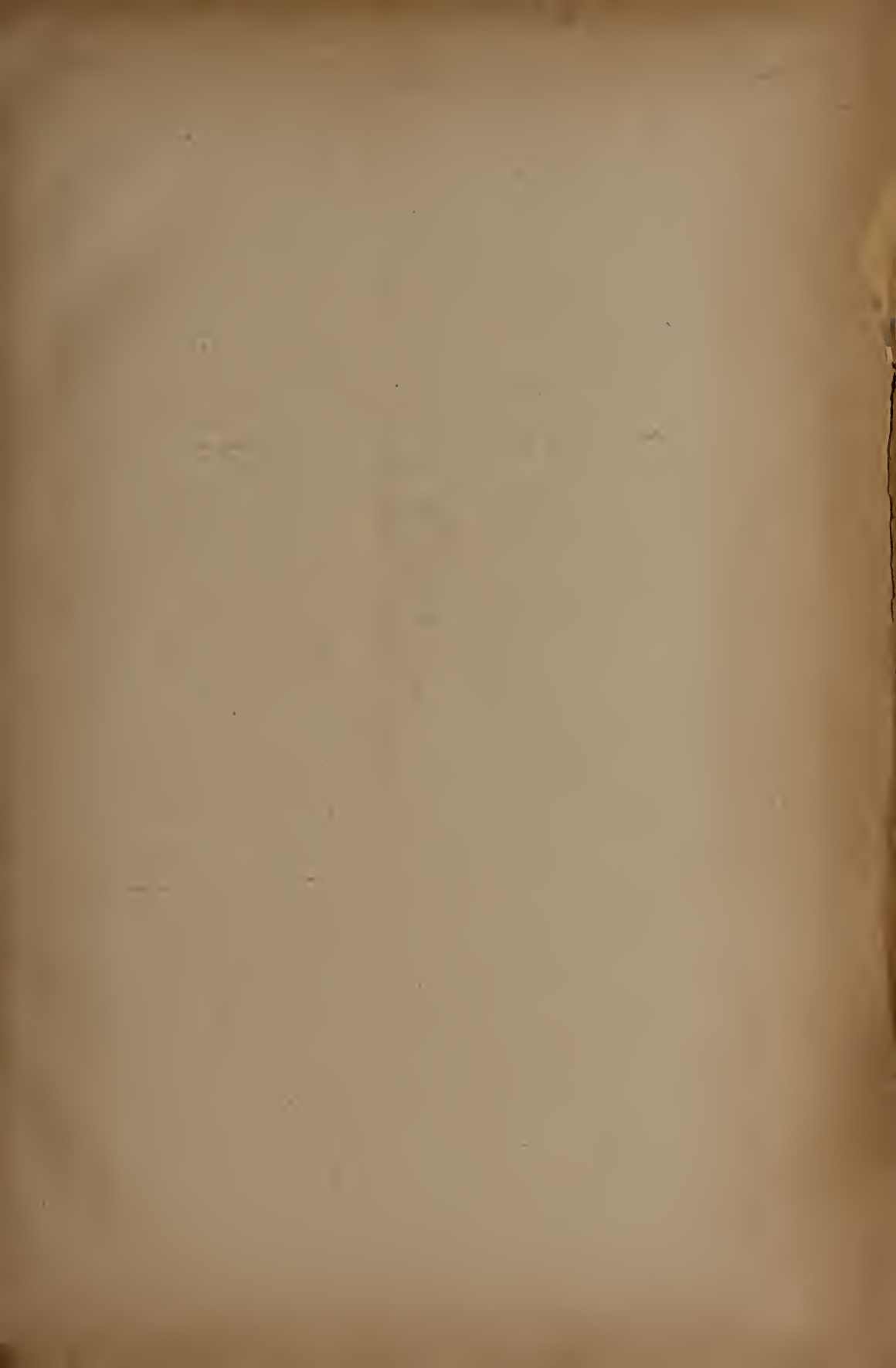


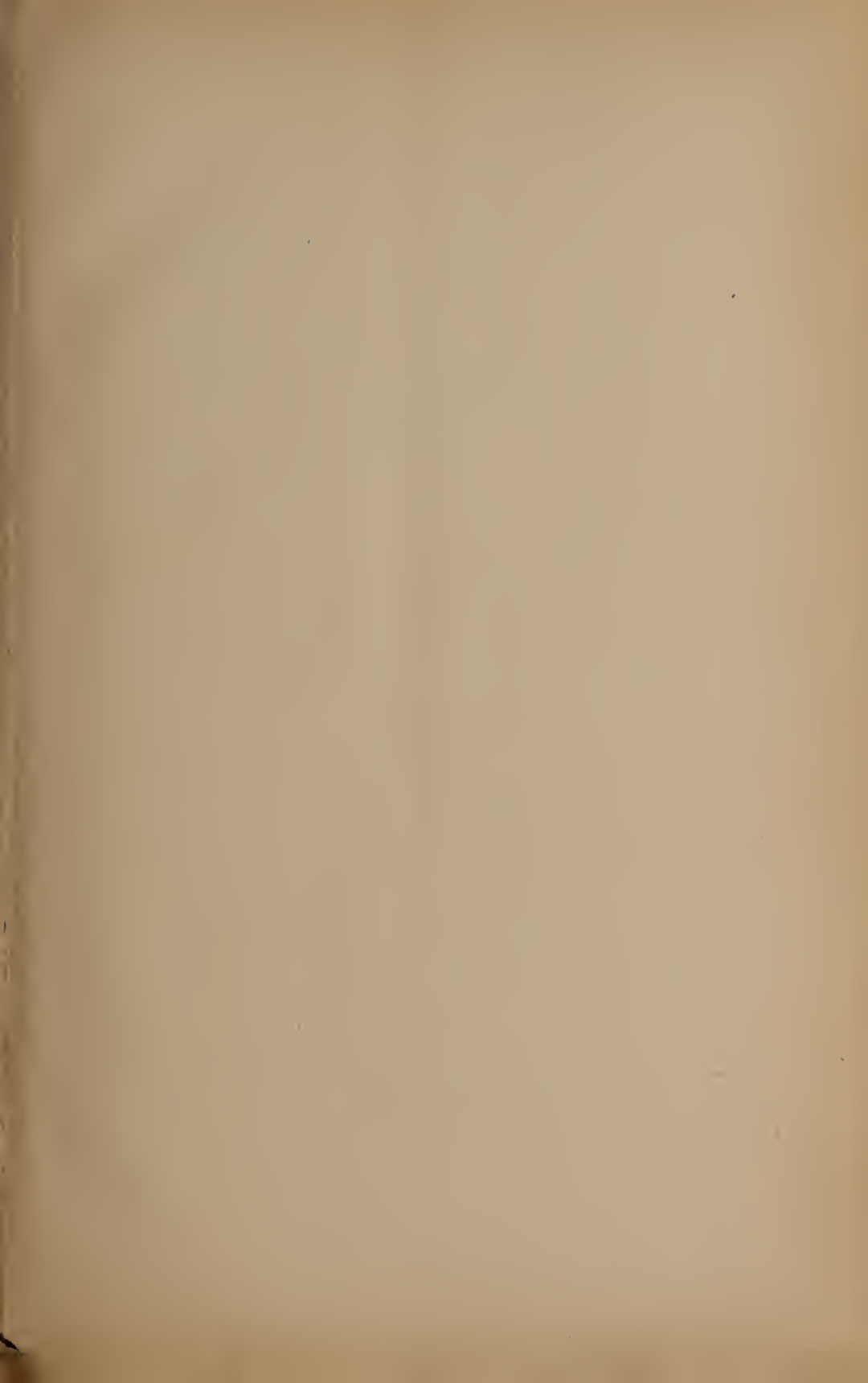
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January, 1896.

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CONTENTS.

	PAGE
The Prostate: Some of its Acute and Chronic Conditions and their Treatment, by L. Bolton Bangs, M. D., N. Y. City,	I
Preliminary Education of the Professional Man, by Prin. S. W. Landon, Burlington, Vt., - - - - -	14
Rational Treatment of Pertussis, by Francis T. B. Fest, M. D.,	17
Editorial, (The Intrinsic Value of Athletics), - - - - -	20
Medical Abstracts, - - - - -	23
News, Notes and Formula, - - - - -	27
Book Review, - - - - -	30
Publisher's Department, - - - - -	31

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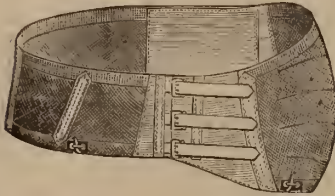
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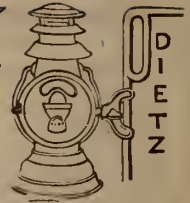
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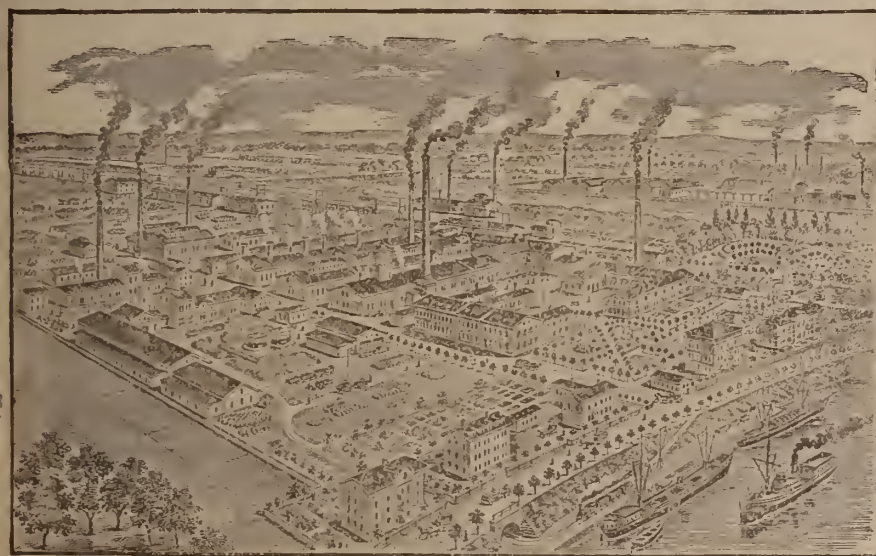
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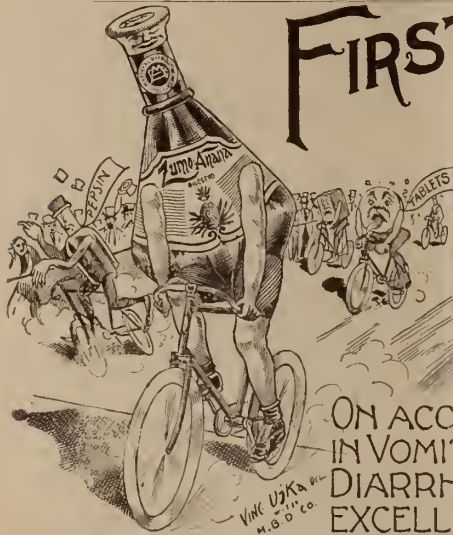
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The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
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Official organ of the Vermont State Medical Society.

Vol. II.

JANUARY, 1896.

No. 1

(Original Papers)

THE PROSTATE: SOME OF ITS ACUTE AND CHRONIC CONDITIONS AND THEIR TREATMENT.*

BY L. BOLTON BANGS, M. D. New York City, Consulting Surgeon to
"St. Luke's," the "City" and "Methodist Episcopal" Hos-
pitals; formerly Professor of Gluito-Urinary Diseases
in the New York Post Graduate Medical
School and Hospital, Etc., Etc.

A man with prostatic disease is in a plight. Although the prostate is a sexual organ, its relation to the urinary bladder is such that it is more or less acted upon by the act of urination. There is no back-door for the escape of urine. This *must* come through the prostatic portion of the urethra, and the more the latter functionates, the more the diseased prostate suffers.

Moreover, congestion of this organ stimulates the sexual nerve centres, which in turn react upon the prostate, and sexual activity becomes an additional aggravation. Also, in some individuals a certain irritability of temper is produced, which no amount of good sense or philosophy can fully control. Brain and prostate reciprocate in their effect upon each other. Therefore, the prostate has no rest, and is heavily handicapped when nature undertakes its repair. From the age of puberty onward it is liable to lesion, and the man who escapes without some damage may well rejoice. Consider how simply and easily it may be injured, and for illustration, take a common case. A lad, either from the teaching of companions, or from natural tendency and without the restraint of sensible and proper instruction, becomes a masturbator. He repeats the act frequently or infrequently, according to his temperament or opportunity; but no matter, even infrequency is *too often* and

*Read before the Eighty-second Annual Meeting of the Vermont State Medical Society, at Burlington, October 10 and 11, 1895.

before long he is in a state of chronic sexual erythism. Remember the anatomy, function and situation of the prostate and the subsequent effects of chronic congestion are readily understood. The prostate, then, participates in each erection, it becomes congested in response to each erotic thought, and sooner or later its vessels remain dilated. Even at this stage evidences of disturbance of function and of tissue change are present. The act of urination, although not increased in frequency, becomes lame or hesitating ("stammering," Sir James Paget long ago called it) and in the urine, if examined carefully, may be found flocculi or shreds of epithelium from the prostatic urethra. The whole urethra is hypersensitive, the prostatic portion especially so, and were an instrument now passed into the lad his sufferings would be severe and possibly induce syncope. At this time his attention is arrested, his conscience aroused, his innate manhood asserts itself, he stops the unnatural habit, and some of his local hyperaemia disappears. But his mind is not at rest sexually. He is alive to every erotic suggestion, a partial erection is excited by trifling things; his prostate remains in a state of erythism, and his lame urination persists. Involuntary emissions now disturb him. Each one is like a prick of conscience to him. He would rather walk the floor all night long than have one, and he now readily falls a victim to the "remedial institutions" and quacks of all kinds. In the meantime, he has fallen in with a young person of the opposite sex who is responsive to him and a sort of virtuous calf-love begins. He seeks her society constantly and remains with her by the hour, all the time in a state of partial or complete erection. They go on from step to step, and ignorant of the results, excite each other most wofully. He caresses and fondles her. She permits everything but the sexual act, and to him the effects are disastrous. From some of them he never recovers. His symptoms are now aggravated and increased. Besides the lame or hesitating urination and the flocculi of epithelium, which have multiplied, he has a shorter interval between the acts of urination, and in some individuals even at this period of life, I have seen a few drops of blood follow the urine. He has an aching or sense of heaviness in the perineum, which is irrespective of an associated ache in the testicles, etc., and in regard to which I prefer to say nothing in this paper. His garments are frequently moistened by urethral fluid or thin mucous, and this is especially and copiously so when in the company of young women.

Mentally, he is irascible, morbid, and at times in a state bordering on sexual frenzy. Sexual intercourse now seems to him the only relief and to be the cure-all of his miseries. If the prostate be now examined by the rectum a distinct increase in volume will be appreciated. The organ has lost the sense of firmness and vigor which are characteristic of its normal state, and which are distinctly appreciated by the skilled finger. Even soft pressure upon the lateral lobes will provoke a peculiar sensation, as if the glans penis were being hammered or pounded, and in some cases an outcry of pain will be caused by the gentlest manipulation.

Here let me remark, that in presenting this subject to you, I am not drawing upon my fancy. The facts presented are the results of many confidences drawn out by careful questioning, and minutely recorded at the moment. I have adopted this narrative style not only to lay before you causes and symptoms, but to emphasize more strongly, if possible, the relation which I believe exists between the prostatic disease of mid-life and of old age and ignorance and errors of youth. You, as scientific men, will readily make the practical and clinical application.

From this point onward there is a divergence in the course of these cases, according to the moral status of the individual.

Let us take the case of a boy, who, restrained either from good morals, timidity, or for want of opportunity, does not fornicate. He is among those who in after life come to you with prostatic disease, and says, "Doctor, I don't understand it. I never had any venereal disease. I never even had intercourse till I was married, and now look at me." The doctor himself does not understand the etiology, unless he has been able to follow such cases as I am now describing to you. But when, by your questioning you remind him of his youth, of that period in his *development* when by repeated excitation (whether he had previously been a masturbator or not) over-activity of his prostate had been caused and finally certain symptoms had resulted, he does come to understand, with you, the relation of cause and effect. To proceed, the indulgences which I have been describing are persisted in, but college or business life intervening they are forcibly (happily) restricted in number and duration, and the boy gets freedom from the acuteness of his symptoms. If now he remains continent in thought and deed, the congestion gradually subsides, the swollen prostate reduces, and even the lame urination disappears. But, unfortunately, the reverse is

too often the case. A habit, easily gratified, has been formed and in vacation times or hours of social relaxation, it *is* gratified, at least, enough to maintain prostatic hyperaemia, and from time to time its effects are aggravated by alcohol and tobacco. Now he really becomes engaged to be married, and happy is the one of these subjects whose circumstances permit speedy marriage. For during the period of engagement (or "keeping company") many of the foregoing circumstances, with their accompanying conditions are renewed, the prostate loses its vital resistance, and tubercular or other infection may readily take place. He is now married and the presupposition would be that this physiological state would gradually relieve the hyperaemia and cure his symptoms, and so it does to many who either through good advice or by the application of common sense, arrive at a suitable sexual hygiene; but even these go through a period of feeble erection, premature ejaculation and urethral irritability before sexual equilibrium is attained. Or, the measure of *sexual rest* which the advent of a child brings both parties (to the husband as well as to the wife) may be the quieting and curative agent, and in the presence of comfortable health these individuals soon forget the distresses of boyhood. But let us follow the man whose marital relations are either excessive or unnatural or both. Excessive, in the sense of too frequent, is usually the rule and not the exception in early married life, and if the individual starts in with a hyperaemic prostate, it requires very little argument to show that the latter is easily maintained and even augmented. Normally, the intervals between the acts of coitus should be long enough for the dilated vessels to recontract; for the nervous system to recover from the reaction which follows such a demand upon the vital forces, and for a sense of general well-being to be maintained. This healthy interval will vary with the individual, i. e. according to his age, temperament, nervous susceptibility and his recuperative power at the time. After collecting the experiences of a large number of men, with healthy minds, I am led to believe that for the *average* man (certainly, among what is termed "the higher classes") the act should not take place oftener than *once a week*, possibly twice in that period may not be injurious, but oftener than this there is no season of rest for the sexual apparatus, including its allied parts of the nervous system, and the blood vessels remain dilated. Thus, in response to an increase of function there is increased nutrition and growth of the anatomical elements

of the prostate. This begins, insidiously, advances according to the activity and persistency of the cause, and may not manifest itself by symptoms for several years. But the prostate, because of its relation to the testes (the latter in turn, being related to the sexual centres of the brain), being especially liable to variations in its circulation, only a moderate additional irritation is required to produce those changes in the tissues which we call "inflammation." The latter may take place at any time, may subside or moderate, or be chronic from the outset, and all the time growth may be going on.

Suppose the man whom we are now considering does not wish children; or, his wife being one of those women, who, having learned that "only fools bear children," or one, who, thinking only of the responsibilities and not of the joys of motherhood, requires him "to do something to prevent conception." In response to these requirements he establishes the custom of "withdrawal," or "pulling out," or "conjugal onanism." Coitus is therefore unphysiological and never satisfactory. He is in a perpetual state of hanker. Hence the act is frequently repeated, always under the same circumstances, and presently the evidence of damage to his prostate make their appearance.

The same result comes to the man who is married to a woman with some nervous or physical impediment to coitus, which she positively refuses to have removed; and, also to him who is married to one of those ethereal souls who have been taught that sexual desire is "*lust*," who marries with the idea that children are generated by man and wife simply occupying the same bed, and that the physical contact of coitus is "carnal and sinful," which she therefore refuses. (I am quoting from a case in my own practice, gentlemen.) This unfortunate man, with normal, healthy, *honorable* reproductive craving, which is continually aroused and stimulated by the presence of his wife and by her demands for his love and caresses, is tormented by ungratified desire, by prolonged but useless erections, and sooner or later by an overloaded, heavy, aching prostate. This may go on for years with very little disturbance of the individual's general health excepting when some more acute intercurrent exciting cause supervenes. But later on in life, this middle-aged man becomes aware of the fact that his urination is not as easy as formerly; perhaps he urinates oftener, but there is no pain or distress associated with the act and he pays very little attention to it. It is possible even at this period, that he gets up

once or twice at night to empty his bladder, as he thinks, but he has no particular distress, and considers himself as well as ever. Still later, he observes that at times there is an urgency to urinate; that when he undertakes it, the stream will not start at once, but after waiting and straining a little, and pumping with his abdomen, the urine begins to dribble, the stream sometimes annoying him by curling up on his penis or by simply falling down between his feet, wetting and spattering his clothing. After a few seconds, however, the stream becomes established and he may urinate as freely as ever. Thus he goes on till after some trifling accident, such as wetting his feet, or unusual ardor in the sexual act or after a long railroad journey, he may be alarmed to find that he cannot make any urine at all. He does not understand it, and as hour after hour goes by and the urgency to urinate increases without his being able to pass a drop of urine, a new terror is added to his misery. Now the doctor is summoned, who passes a catheter and makes the diagnosis of an "Enlarged Prostate."

Another individual who is getting on in life and who also finds himself urinating with greater frequency than in youth, flatters himself that because he is urinating a great deal he must be having an "abundance of health" for a man of his age. But after a while he is mortified to find that the urine passes away from him at night, continually wetting his clothing and bed, and he is a nuisance to himself and his family. Some one tells him that he has "incontinence of urine," and administers to him Lithia water or sweet spirits of nitre; or, perhaps he consults some friend, who recommends Warner's Safe Kidney Cure or any of the vaunted diuretics, which he faithfully tries; but, the result is not to reduce the obstacle, but simply to increase the volume of fluid in his already overloaded bladder.

Another individual, besides the frequency, has positive dysuria early in the course of his mid-life, and suddenly finds blood in his urine.

So, one might go indefinitely multiplying cases which, varying in their manifestations according to the degree and form of growth, and to the amount and degree of inflammation present, are but types of the protean disease which we call "*Enlargement or Overgrowth of the Prostate.*"

Now, I am not prepared to take the absolute position that *all* cases of prostatic enlargement (of course, leaving out tumors) are due to a preceding life of sexual hyperaemia; nor am I ignorant of the fact that this

form of cause has been discussed long ago; but, I have enough cases on record, carefully examined, and from whom I have got a clear and positive history from boyhood upward, to warrant me in suggesting to you a line of observation which in the future I hope may lead to clearer ideas in regard to the etiology of this disease.

There is another and large class of cases to which reference should be made, because in it we may easily overlook the important factor of sexual hyperaemia. In these persons the inflammatory element predominates; the posterior urethra participates strongly in the symptomatology, and gonorrhœal infection pervades the history. They are generally young men, say 40 or under, and, satisfied by the history which they frankly give, we are apt to neglect the questions which would develop their sexual habits. Many of them suffer extremely. Usually in the best of general health, they are tormented and *angered* by their local malady. (They remind me of a skittish horse with a chestnut burr under his tail.) They complain of a dull, aching heavy pain over the pubes or along the perineum. Sometimes they are startled by a sharp, darting, neuralgic pain in the perineum or in the pelvis. A persistent, unceasing, burning sensation they locate vaguely "at the neck of the bladder," in the perineum or at the anus. They rarely urinate with comfort, often too frequently and urgently, and at times the end of the act is accompanied by an aggravation of the dull, perineal ache. Coitus produces this aggravation, and may be accompanied by a sharp pain at the time of ejaculation. Generally there is no urethral discharge, but flocculi will be found in the urine and long after—years after—the disappearance of all infection the individual is being reminded of old times. Sometimes, not often, a little blood will follow an act of urination, especially if there has been sexual indulgence within a short interval. The posterior urethra is excessively sensitive to exploring instruments, and when the mucous membrane is inspected by the endoscope, it will be found hyperaemic and bleeding easily. Per rectum, the physical conditions of the prostate will be found to vary somewhat with the individual. In a typical case, it will be felt evenly and smoothly (no nodules) enlarged in all directions with its conical apex full and more rounded than normal, near to the inner edge of the anus. The central fissure is almost, if not entirely, obliterated. The lateral lobes are distinctly tender to pressure, and the latter may provoke and intensify the aching, or fullness, or peculiar sense of discom-

fort in the penis or perineum, of which these subjects complain. Pressure at the extreme posterior border in the median line may also cause an aggravation of the sense of burning to which they are subject; and, as the exploring finger is drawn from behind forward along the median line, the patient may not only complain of the usual desire to urinate, but of an impending seminal ejaculation. It is possible that associated with the damage which has resulted to the prostatic parenchyma and urethra there may be an inflammation of the seminal vesicles as well. But it should be remarked that many of the local and neurotic symptoms which have been enthusiastically referred to inflammation of the seminal vesicles cannot reasonably be attributed to the latter organs alone. They belong to the sexual apparatus; are appendices to the prostate, may participate in the lesions of the latter, and must not be overlooked. In some of these cases sterility results from occlusion, perhaps of the seminal ducts, but the difficulty, in my opinion, is chiefly in the prostate, for I have treated the prostatitis without any regard to the seminal vesicles, have obtained cure of the symptoms and impregnation followed.

When we come to the question of treatment, it naturally subdivides itself into two parts: First, a consideration of that which is applied to acute or subacute conditions of the prostate; and, second, a consideration of that chronic condition, with its complications, denominated Hypertrophy or Overgrowth of the Prostate.

Even did time permit, the reviewal of methods of treatment must necessarily be very general. Each individual must be studied and treated according to the conditions present, and these will vary from time to time. Of course, if the cause can be ascertained, it must be stopped. If the patient is a celibate, I believe continence is essential and should be insisted upon. In the married natural, physiological and satisfactory sexual intercourse may be allowed. In my observation, it is better for these men, unless the act is painful, to have regular, systematic sexual intercourse than to compel them to abstain entirely.

For the local conditions in the acute stages, as well as for the various reflex sensations, such as pain referred to the ankles or feet, pains down the thighs and in the back, and for the itching of the perineum and sometimes an intolerable itching of the scrotum, much relief may be obtained by the application of heat, such as hot sitz-baths and injections of hot water into the rectum. The water should be as

hot as can be borne and should be retained in the rectum as long as possible. In my experience, heat is more beneficial than cold. Years ago cold was applied in various ways, as you may remember, either by a double-current catheter and by the introduction of cold into the rectum. Within a year a very ingenious and cleanly method of using cold in the rectum has been recalled to the attention of the profession by a Dr. Wiener, of New York. If you will analyze his cases you will find—at least, in my opinion—that more benefit was derived from the urethral measures, which in every case he was obliged to institute, than from the cold applications in the rectum.

In the majority of these cases, there is more or less urethritis associated with the prostatic inflammation. Local treatment, both to the urethra and prostate, is necessary. The careful, gentle introduction of a sound in the prostatic urethra, preceded by hot irrigation of the urethra, and sometimes accompanied by iodoform emulsion, or aided by a solution of cocaine, is usually my first step. Subsequently, applications of silver nitrate applied directly to the prostatic urethra may be instituted. If gonorrhœal infection is added to or is the cause of the prostatitis, it requires in its declining stages, the use of strong solutions of silver nitrate carefully and persistently applied.

Here let me caution you that your object is to produce an alterative effect, not a cauterizing one, and, therefore, the solution should be weak. More benefit will be derived from a solution 1-1000, applied not oftener than once in five or six days, than from any of the more cauterizing solutions.

Another and very important aid is massage of the prostate, of course, through the rectum. I find that alternate pressure and relaxation upon the body of the prostate certainly aids in emptying the over-dilated vessels, and with the other methods produces a gradual alterative action. But massage should not be instituted until the more acute symptoms have subsided. I may say here that this massage of the prostate was suggested to me by the effects which were obtained in the female by massaging the uterus and its appendages. This, in my hands, bears no relation to the so-called "stripping" of the seminal vesicles of which we have all heard so much within the past year or two.

The treatment of Enlarged Prostate properly resolves itself into two forms, the palliative and the radical. Here again I am met by the

dilemma of either making this paper too long, beyond the bounds of propriety for such an occasion as this, or of speaking in the most general way of the treatment of this condition.

It should be observed that beside the large number of men with enlarged prostate who give no symptoms, another proportion may go through life with only palliative treatment and perhaps never require any operation whatever. Such a statement may be modified by the condition of the individual, and by the stage of the disease at which he presents himself, and by its progress. There are men whose tissues are immune and indifferent to the inroads of microbic bodies. For example, I know a man eighty odd years of age, strong and active, who never makes a drop of urine spontaneously, who carries his catheter in his hat, and in the absence of any more suitable lubricant, spits upon his catheter when he wishes to urinate. But such men are the exceptions, and constant, minute care is required as to the details of palliative treatment or catheter life. This is especially true when you are called for the first time to the middle-aged or old man with retention of urine or with an overloaded bladder which is relieving itself into his trousers or the bed-clothing, and where for the purpose of diagnosis or for the purpose of immediate relief, it is found necessary to pass the catheter. Under these circumstances it should be steadily kept in view, that a bladder which contains residual urine is more likely to become infected than a bladder which habitually and naturally obliterates its own cavity. Therefore, every antiseptic precaution which is known to surgery should be instituted, and the patient and his friends should be informed that the passage of a catheter, under these circumstances, is an important surgical procedure.

At this point, there is a method which I would suggest to you, which has proven in many cases,—not in all, I will admit, very useful in my hands; so much so, that when on duty at St. Luke's Hospital, my House Surgeons understood it perfectly and always tried it before passing a catheter. That is, the patient being in bed, with the pelvis elevated, a high enema should be given and then the urethra irrigated by way of the meatus, with hot boric acid solution and this repeated in an hour or two. Sometimes, in some of these individuals, you will see a fine spurt of urine follow the irrigation, with evidence of relief on the part of the patient. This does not succeed in all cases, but

should be tried first ; subsequently, the catheter may be used and regular systematic catheter life entered upon, if necessary.

It may be well to say a word or two in regard to emptying the bladder at the first sitting. Although so high an authority as Dr. Keyes of New York, does this with an antiseptic procedure of his own, I am inclined to agree with those who object, and recommend a gradual, systematic emptying of the bladder by taking a few more ounces from the bladder at each succeeding sitting. I believe that this is less liable to produce a condition of shock, that the relief to the pressure upon the bladder wall is gradual and not sudden, and that the back-pressure upon the kidneys (which are doing their work under tension) is also relieved gradually and not suddenly. In these elderly men, trifling things are apt to produce acute congestion or attacks of prostatitis in this chronically enlarged state. These conditions may be treated as I have indicated to you when speaking of acute or subacute prostatitis.

Now, when we come to the question of operative or radical treatment, I am obliged to premise that there should be a discrimination made between the men who belong to the higher classes, and those of the lowly and poor and uneducated. If you look through your experience with prostatic cases you will find that a large proportion of those who have been forced upon catheter life and get along comfortably, have that comfort because of their *comfortable* surroundings, because of their training and education, which has given them intelligence and a certain amount of tactile skill. They are able to pass the catheter and to understand your minute directions as to asepsis and the care of the bladder, and as long as these conditions can be maintained, any operative procedure is contraindicated. But, even among the intelligent and well-to-do, cases will arise which demand some operative relief. It is very different with the men who have no education, no continued home, who rely upon a day's labor or who are the parasites upon the community, and who resort from one hospital or dispensary to another. These individuals are of no use to themselves or to society ; they are unable to care for themselves, and upon them we must attempt radical relief by operative procedure. This, I think, is the experience of all men who do hospital work.

Heretofore, the choice was generally between drainage, either temporary or prolonged, and some form of prostatectomy. Drainage

certainly presents a means of easy and speedy relief to present suffering. The individual has no violent or dangerous attack made upon his pelvic organs, the shock is not very serious, and in some cases,—after prolonged drainage, there is a certain amount of spontaneous urination. In those acute, serious cases, which are showing symptoms of uraemia because of the back hydrostatic pressure upon the kidneys, I would commend it to you rather than repeated aspiration of foul, purulent infectious urine. It can be done with local anaesthesia, and on several occasions, *in extremis*, I have simply made use of a long trocar introduced quickly and easily behind the pubes, left it in place, and run a bistury down by the side of it until an opening was made through which a drainage tube could be inserted, from which purulent urine flowed quickly, and the use of an antiseptic solution followed at once.

PROSTATECTOMY, or the operation of cutting out the whole of, or portions of the gland, needs but brief mention. The subject has been ably presented from time to time, and the cases in which it shall be selected will have to be decided by the good sense, skill and experience of the surgeon.

My earlier operations were done by means of scissors and prostatic rongeurs, but of late the operation has been modified, and I think greatly improved by Dr. Nicoll of Glasgow, and by Dr. Samuel Alexander and Dr. Eugene Fuller of New York. I have not yet had an opportunity to do this modified operation, but I have witnessed it and seen its results, and it seems to me in every way commendable. Although a number of operators have had a few successive cases of prostatectomy, which resulted successfully, when the cases of all operators are put together, the death-rate is still very high,—from 20 to 25 per cent.

We have now another operation of choice, and to an American surgeon, Dr. J. William White, of Philadelphia, we are indebted for its suggestion and its organization. His experimental and clinical work have been recently laid before the profession, and although its results are not yet positive, I think it is but fair to say that enough testimony has been advanced for me to believe that there are many cases which will be benefited by the operation of double castration. Being one of those who have taken a conservative and critical position in regard to it, I take this opportunity to pay a tribute to my friend,

Dr. White, and of saying to you that at the last meeting of the American Association of Genito-Urinary Surgeons, over which I had the honor to preside, he presented the whole subject so thoroughly and in such a candid manner, that I believe it entitled to the most careful and discriminating consideration. He reports an amelioration of symptoms in 83 per cent. of the cases operated on; but, the death-rate which he gives, namely, of 7 per cent., I confess surprised me. No doubt this will be reduced as experience is gained. But the question which will be presented to us as practical men, and which we will have to consider with great care, is this: Which will be the cases to be benefited by the operation of double castration? And before deciding in a given case, it is well to bear in mind that there are still some doubtful points in regard to the relation between the testes and the prostate, some of which were brought out in the discussion upon Dr. White's paper. I agree with Dr. Cabot of Boston, that the operation is so easy and the relief following it has been so enthusiastically stated, that it becomes very seductive, and we are liable to be placed in the same position as the profession was placed in during the early days when ovariectomy was too frequently resorted to, as we all know.

In conclusion, let me again call your attention to the statements which I have made, that enlargement of the prostate begins earlier than we have supposed. That in many men it bears a distinct relation to sexual hyperaemia, and although I can only suggest this method of observation to you, I believe that if the profession will carefully observe their cases, obtaining an accurate record of each man's sexual history from boyhood up, we will be able to arrive at a *prophylactic treatment* of Enlargement of the Prostate which will settle the question for future generations of men.

PRELIMINARY EDUCATION OF THE PROFESSIONAL MAN.

BY S. W. LANDON, PRINCIPAL OF BURLINGTON HIGH SCHOOL.—
REGENTS' EXAMINER FOR THE UNIVERSITY OF VERMONT.

An Address Delivered at the Opening Exercises of the University of Vermont, Medical Department, January 16, 1896.

When your worthy dean did me the honor to ask me to occupy a few moments of the time at this opening exercise of the work of the College year, I was very reluctant to accept. It was extremely difficult for me to select any subject in which I could reasonably hope to interest a body of prospective doctors. I accepted, however, and will attempt to speak for a few moments in a very informal way upon the "Preliminary Education of the Professional Man, or the Standard of Requirement for Admission to a Professional Course of Study." The theme is an interesting one, vitally important, and lies at the very foundation of professional work. It has also much to do with its ultimate success. The previous education and training required by any institution of those who knock at its doors for admission, is a matter of great significance to the public at large, to the institution, and especially to those students who enter it. Throw wide open the doors, admit all who apply for admission without inquiry as to their qualifications, and it is true you may for a time swell the numbers, but in time just as surely will you see the results of this course, the degradation of the institution, the contempt and loss of its students. It may not be out of place to make a local application of our theme. In fact presumably for my speaking to you to-day is found in the fact of my relation to this institution in connection with the entrance examinations. A brief history of the establishment and growth of these may have something instructive in it regarding the worth of the examinations themselves.

Some time ago it was decided by the Board of Control of this institution to fix a standard of requirements for admission and insist that every candidate meet these requirements. An examiner, not a member of the Faculty, was appointed and these were his instructions: Give a fair

examination, insist upon a reasonable standard and let the entrance of the student depend upon that. The decision of the examiner shall be final in the matter. The progress and improvement in the work done in these examinations has been marked, the last being a vast improvement over the first. To-day students in selecting a college in which to pursue the study of medicine turn *from* this College to others because entrance there is easier and the examinations less severe. The incorporation of the regents' examinations of New York into the system here has done much to strengthen it. The work done is exceptionally good as tested by the examiners in Albany, where the papers are finally passed upon. The first year not one-fifth of the papers were considered of high enough standard to forward to Albany. The last year less than one-fifth were considered below the standard and of all the papers sent to Albany only one has been rejected by the examiners. To-day the entrance examinations and the regents are identical, the same questions, those furnished by the regents, being used in both.

The question is naturally asked, What are the purposes of the examination, and what good do they accomplish? Surely they are not merely to keep men out of the College, although this may be a legitimate purpose, but they are to stimulate students about to enter, to make a proper preparation, to secure at least the beginning of a liberal education. In this age of competition and rapid progress it is admitted that men must specialize their work in order to be in the highest sense successful. It is an age of specialists, but it is also true that no professional man, or in a narrower sense any specialist can reach the highest success in his calling without a range of knowledge far beyond it. There are apparent exceptions but they usually resolve themselves into some special shrewdness, stroke of good fortune, or bold venture. The different apartments of knowledge have boundaries so indeterminate and so borrow means and methods from each other, that the conceptions even in his own department of a man who knows nothing of the others must be very small and vague. Suppose a specialist can reach the highest success without a liberal culture, he belittles himself in his training and work.

If the division of labor enters into the profession as it necessarily must, they will soon lose, and that deservedly, the name of liberal professions if the men and women in preparing for them exclude from their training everything that does not directly bear upon them. The coun-

try doctor in Vermont, if a liberally educated man, can in the leisure time of his profession, become a light and power for the whole community. The reverse of this is equally true. No profession has been more honored than the medical, by members rich in all that dignifies and ennobles work. The glory of the so-called liberal professions will be sadly dimmed if the work of their members is wholly specialized. It is true that the individual members of any profession must be identified with and absorbed in their calling, but it is even more true that there must be a manhood, a personality, both intellectual and moral, which embraces and exceeds the special calling.

The frequently urged objection to securing a liberal education, the cost of time, is more imaginary than real. A mature and well trained mind can give odds to number of years and come out ahead in the race of life. The standing and reputation of the professional man depends more on the power and strength of mind he brings into it, than from the number of years he has spent in it. The value of a liberal education to professional men as the leaders of thought and action is one of the most important phases of the whole question. Our educational institutions are in a large measure what our professional men demand they should be. Lower the standard of the professional schools and you will lower the standard of education all along the line. The last man that can afford to make broad the road to a medical diploma is the doctor. He, if any, is bound to insist on the high standing and integrity of his profession. Never were men of liberal culture more needed than now, especially if to their intellectuality are added the will and capacity for moral influence. Character to do its full work must be weighted with intelligence and training to make itself most deeply felt. We must know much of what others know in order to impress them with those vital and eternal truths which they may have disregarded or utterly rejected.

RATIONAL TREATMENT OF PERTUSSIS.

By FRANCIS T. B. FEST, M. D., Plank Road, Mich.

Published by The Journal of the American Medical Association, Chicago, August, 1895.

With every disease its etiology shows us the way for its treatment. Therefore it is necessary to recapitulate the etiology of every disease for which we wish to outline the therapeutics.

Pertussis or whooping cough is a contagious disease, which manifests itself in spasmodic cough. Although some bacteriologists have found in the sputum-bacilli, we are unable so far to determine their role, whether causing, accompanying or only accidental. It is a local disease of the larynx, acting upon the nerve supply, and causing spasms of this organ. The course of the disease shows three distinct phases: the catarrhal, paroxysmal and declining.

The first stage shows only symptoms of mild catarrh of the bronchi, nose or conjunctiva. Pathognostic for pertussis is only the excessive watery secretion from the affected regions. This phase lasts from two to seven weeks, with infants often a few days longer.

The paroxysmal stage affirms the diagnosis by its characteristic "whoops." The expectoration is watery, sometimes bloody. In many cases vomiting follows the paroxysms by mechanical irritation. The vomiting in return can cause disorders of the digestive apparatus. The whoops at times occur as often as every half hour, and as thereby the cyanotic condition which accompanies the whoops occurs too frequently. they lead to asphyxial convulsions and even death.

In the respiratory apparatus the irritation causes, in many instances, capillary bronchitis and catarrhal pneumonia. After duration up to ten weeks the paroxysms are less severe, show themselves more rarely and the disease goes over into the declining stage. At this time the sequelæ or secondary lesions mainly demand our attention.

As we have seen, the disease is a local one. It primarily affects only the larynx; all other symptoms are secondary. The circumstance forms the basis of our treatment. The disease is local—ergo, we treat

it locally ; it is of neurotic character—ergo, we give a drug that acts upon the nerves.

With contagious local diseases, rational local treatment consists in destruction of the contagion by antiseptics—the most powerful is the most rational. Therefore every local application of any antiseptic improves to a certain degree pertussis. If we cast a glance at the literature, nearly everything was tried ; phenol, boracic acid, thymol, resorcin, naphthalin, creasote, benzol, bromoform, mercurials, etc., but they all more or less are of irritating action upon the surface they are brought in contact with, or if not irritating, their action is so mild that their therapeutic effect is as mild too. The experience of the last few years proved the superiority of peroxide of hydrogen over all other antiseptics, except when we have to handle metallic instruments. An exception which interferes not in pertussis.

In pertussis, I used the peroxide with great success for local applications in this way : the child's head is leaned backward and held firmly, another person pulls out and depresses the tongue to bring the glottis into good view ; then by means of a bulb atomizer consisting of glass and rubber only, I direct a spray of peroxide of hydrogen solution towards the larynx and if possible through the glottis. This is much facilitated if the child is old enough to pronounce the sound a.

I always prefer the 30 volume peroxide of hydrogen (hydrozone) and dilute it in the following manner : hydrozone, one part ; distilled water ten parts ; glycerine one and one-half parts.

If the parents are docile they can be instructed to repeat the application twice or thrice a day. If the physician has a chance to apply it himself, he does well to make the solution fresh every time. At all events it should be made fresh every other day on account of this mixture being unstable.

Of all drugs only one has a really aborting influence upon pertussis, the old reliable, often abolished and always restored belladonna. The only secret of its right administration is the circumstance that we have to give such doses to get the belladonna action ; the flushes, (Jacobi) ; otherwise the administration is without value.

A child of two years requires 6 drops of the tincture, three times a day ; with the age the dose has to be increased to the proportion of 1.00 as a maximum single doses for an adult (gtt. xxv).

The root, the extractum alcoholicum fluidum can be given to infants of six to eight months in doses of 0.01 t. i. d., children of three to four years require of the same 0.3. Atropin may take the place of belladonna, beginning in a child of two years with 0.00065 t. i. d. and increase proportionately.

All complications must be abated in time, else our patient will be emaciated. If vomiting occurs at the paroxysms, give menthol. If there be gastritis and catarrh of the bowels, give calomel, bismuth, or still better glycozone. Often we meet gastralgia; then I prescribe for a child over two years:

R Belladonnæ tinct. 2.00
 Mentholis 2.50
 Spir. frumenti 10.00
 Glycerini 20.00

M. D. S. Teaspoonful every two hours.

Glycozone administered in the proportion of two teaspoonfuls, diluted in a wineglassful of water, gave me the most gratifying results in acute cases.

Are the paroxysms severe, we can easily control the spasms by an application of cocain to the larynx.

For the general treatment we shall advise fresh air, good nourishment, tonics and inhalations of ozone. With such treatment the disease can be cut off to a period of only a few weeks.

UNIVERSITY OF VERMONT MEDICAL DEPARTMENT.

The Medical College opened January 16th, with a very large class of students. Principal S. W. Landon delivered the Introductory Address, which is given on page 14 of this issue. President Buckingham also made a few remarks, and the 43d course of lectures was duly inaugurated. Regular lectures commence the 20th inst.

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EDITORIALS.

THE INTRINSIC VALUE OF ATHLETICS.

There are many people who are inclined to look on all forms of athletics as a special dispensation of the Devil. "Exercise and games which require training," quoting their argument, "develops only brawn and brutality, and so the better parts of a young man's life are made subject to vicious tendencies."

That this is a very narrow and illiberal view, no person of thought can deny. It is freely admitted that athletics have not been as pure as they should in the past, and even now there is much which still needs eliminating, but the pertinent fact that every other civilized institution has had ITS element of dross during the process of evolution, should also be considered.

All things must pass before the censorious gaze of several generations before their true value can be determined. Athletics have passed through the fire of bigoted opposition; have been weighed in the balance and NOT found wanting; and stand to-day an important factor in the development of men physically and morally sound.

The temperance cause, the world over, owes a share of its success to athletics. No amount of tracts or temperance lectures will bring home to a young man the deleterious effect of liquor and tobacco, like the simple fact that they are prohibited him while in athletic training. If they endanger his physical condition for engaging in athletic competition, he will certainly refrain from indulging in them, and before long an honest pride in his physical body will establish total abstinence when nothing else would. Young men cannot be moulded into good moral citizens by simply appealing to their principles; their minds are too plastic and their environs have too great an influence on them.

But nearly every boy possesses one vulnerable point and that is an admiration for muscle and athletic skill. Even Grammar school boys honor the one among them who can run the fastest, or jump the farthest, and the boy who so excels is pretty sure to be their leader. All through his school life his prowess inspires others to reach his standard, and unconsciously they avoid that which stands in their way to success. Thus we see hundreds and thousands of young men abstaining from liquor and tobacco because to use them would thwart their athletic aspirations.

Reasoning from these facts, that grand institution for scientific Christian work, the Young Men's Christian Association, has made the gymnasium a part of its organization. The result of so doing is patent to all observers. Young men are being taught that the perfect physique is the result of keeping the "Temple of God" pure and free from pernicious habits; that the man who expects to be strong and manly must be his own master; and that to defile the "Temple," MEANS FAILURE. These teachings are making clean men. Besides this result, healthy competition in athletic exercise and games, arouses enthusiasm for the work. Enthusiasm, if it be in the right direction, has a psychological effect on a young man's character which will make him more earnest and thorough in all his undertakings. By striving to excel in one direction he will soon form the habit of throwing his energies into all that demands his will and "nerve." This makes successful men.

These things form the intrinsic value of athletic exercise and outdoor sports. What harm does arise comes from the abuse of common sense, as in every thing else. Therefore it is the extreme of narrowness to condemn the whole subject without taking all things into consideration. People are too prone to look at things through the large end of the telescope, which do not appeal directly to themselves. Only those who are looking for good can expect to find it.

Medical men have come to recognize the benefits to be derived from judicious exercise and are lending their influence for the advancement of all healthy sports, believing that they will produce a better race.

God bless any thing that will lead young people to health and a more efficient life.

NOTICE.

On receipt of \$1.50 we will credit you with a year's subscription to the VERMONT MEDICAL MONTHLY and send you, post paid, a certified clinical thermometer.

MEDICAL ABSTRACTS.

MALIGNANT TUMORS.—Gonley in *N. Y. Med. Journal*, Dec. 21, '95, says:

“That benign and malignant tumors—inomata, sarcomata and carcinomata—do sometimes exist in the same individual as distinct growths has been repeatedly demonstrated. Mr. Bryant of London, records a remarkable example of this occurrence in a woman sixty four years of age, who was affected with a “lipoma” over the left hip, a carcinoma of the left breast, and a sarcoma of the right breast. He removed the right breast, and in about six months the disease recurred in the scar. In the course of four years and a half from the first operation sarcomatous growths recurred sixteen times, and sixteen operations were performed for their cure. At last accounts the patient's general condition was good. The “atrophic” carcinoma of the left breast and the “lipoma” of the hip were not excised.”

MUSTARD AND SUGAR AS ANTISEPTICS.—Dr. Roswell Park (*Philadelphia Medical News*) mentions the fact that essential oil of mustard has long been known as a deodorant. He has used it himself to disinfect the hands after post-mortem examinations, etc., and finds it very effectual. In a case of malignant diphtheria, where hydrogen dioxide and alcohol failed to remove the odor from his finger, he found ordinary flour mustard acted perfectly. He recommends it in all cases where foul wounds or discharges may have been touched, and especially in an emergency where other disinfectants can not be obtained. He also suggests that the preservative properties of sugar should be applied to surgery, and states that compound fractures may be treated with powdered sugar with good results. He remarks that while dilute solutions of sugar form culture media for bacteria, pathogenic forms will not grow in concentrated solutions of syrups. Hence he regards sugar as another useful antiseptic, especially when others can not be obtained.—*Med. Brief*.

GONORRHOEA IN WOMEN.—In gonorrhoea urethral and vesical irrigation should be made with a solution of potassium permanganate, 1 per 1,000 to 1 per 2,000, according to the case. The quantity at each irrigation should be at least one litre. The irrigation should be practised every day, the usual duration of treatment being from ten days to two weeks or thereabout.—*Cumston in Medical Record*.

BISMUTH SUBNITRATE AS A DRESSING FOR THE NAVAL.—Dr. G. A. Stuart (*Medical News*) writes that for several years he has used bismuth subnitrate as a dressing for the umbilical cord in the newborn. The method of application is as follows: Cut a piece of lint sufficiently large to fold over and prevent the bismuth

from being dispersed. Through this a hole is made small enough to fit tightly about the cord and prevent dispersion at that point. The abdomen about the cord is dusted with the bismuth, the cord is passed through the hole in the lint, and the lint pushed well down upon the abdomen. Bismuth enough to completely bury the cord is applied. The advantages claimed for this mode over all others are as follows: (1) Convenience. It has to be applied only once, as the cord immediately dries up, and does not need to be disturbed until it has dropped off. (2) Cleanliness. There is absolutely no odor, and the addition, at the time of the bath, of a little bismuth to places showing evidences of moisture will keep everything dry and sweet. (3) Safety. Mothers and nurses are not meddling with the dressing, since everything goes on satisfactorily. There is left no sloughing, no discharging stump to corrode the surrounding tissues and bring on hemorrhage or predispose to hernia. (4) The cord drops off sooner than by any other method. For small cords, three days; for larger ones, five—rarely exceeding six—constitute the usual time. (5) A better and firmer cicatrix is left than by any other method.

SUBCUTANEOUS TREATMENT OF ABSCESS.—Abscesses frequently form at a point where the scar following free incision is very objectionable. With chronic or "cold" abscesses the method of aspirating and injecting an antiseptic solution has been practiced for long. Recently Dr. Riechaud, of Bordeaux, has adopted this procedure with success in acute abscess: Instead of the time-honored free incision of the most dependent part, the abscess is aspirated, after which a solution of carbolic acid, one to twenty, or of ten per cent iodoform emulsion, is injected. This method has been practiced for several months with marked success. The advantages claimed are, that it is less painful, leads to a more rapid healing, and leaves no traces of scar.—*Med. Herald*.

THE PREVENTION OF INFLUENZA.—*British Medical Journal*, 1895, No 1783.—With regard to the prevention of this disease, something has been learned during recent epidemics. In the first place, we know that it is an infectious disease, conveyed directly, as a rule, from the sick to the healthy. Isolation, therefore, of every case at the beginning of the attack is the first necessity. The infection does not appear to be able to travel far, and confinement to one room of the first case will often prevent the spread through a household, and it is also the best thing for the patient. In the second place, though we fear it must be admitted that the healthiest may catch the infection, yet there are good grounds for believing that they are less liable to do so than those who are debilitated, and if they are attacked, they, as a rule, suffer less severely and are better able to combat the depressing effects. A regular life, plenty of open-air, exercise short of fatigue, a proper number of hours in bed, and regular meals of good, simple food, are among the best prophylactics. In the third place, it is highly probable that the infection is contracted through the mouth, throat and respiratory passages. The use of an antiseptic mouth wash several times a day would seem to be a reasonable precau-

ion, and cleansing the nostrils with a similar solution, either with a small syringe or by the simpler method of drawing a little of the solution into the nose from a hand basin, should also be practiced. In the fourth place, the advice so often given not to despise, or attempt to fight down the disease when once it has begun, must be repeated and insisted upon. It was said last year by many experienced physicians that the best cure for influenza was two days in bed in a warm and well-ventilated room. We do not think that this recommendation can be improved upon.

MEDICO-LEGAL POINTS IN REGARD TO INFANTICIDE.—1. It is possible for a woman to be unconsciously delivered, but not likely that she should go through the full term without being conscious of her pregnancy. 2. If the child was suddenly and unexpectedly born, and dropped accidentally on the floor or into a water-closet vault, the cord would be found torn and broken off and untied, and not cut and tied in the ordinary manner. 3. In order that a child shall be live-born within the meaning of the law, it must show some sign of life after being completely separated from the mother. 4. If a mother prepare no clothing for her child, and the child be found dead shortly after birth, this would be considered very strong evidence that the woman intended to destroy it. 5. It is possible that a child may be born living, yet so badly deformed as to render the prolongation of life, after the separation of the cord, impossible. 6. If the child has food partly digested in the stomach and intestines, and the meconium all passed away, the child has lived at least twenty-four hours, and has been fed. 7. If the septum ovale of the heart is found closed, making a four-cavity heart, the child has lived as much as four days. 8. If the navel cord has withered and come away, and the navel healed completely, the child has lived as long as a week. 9. It is a fact worthy of remembrance, that a child will stand a great amount of exposure, and they have been found living for days after neglect, under the most terrible circumstances.—*Medical Summary.*

TARTAR EMETIC IN TEDIIOUS LABOR.—In the *Medical Record*, Dr. De Mund, of Ringold, N. J., says:

“Tartar emetic is positively oxytocic, a something long looked for. It almost usurps the place of forceps—is a great aid to them when necessary; it casts into oblivion dilators—instruments of torture; and the inhalation of chloroform or ether may also be numbered with the things of the past. The emptied bladder, the wash-out rectum, are two cardinal points in delivery; and third, the emptied stomach enables a certain stage of labor to progress rapidly, as well as favorably.” In case of rigid os or rigid perineum, he advises the use of tartar emetic, given in the following manner: Ten grains of the drug are dissolved in one-half tumbler of water; of this solution two teaspoonfuls are given every ten or fifteen minutes, until free emesis is produced. This, he claims, is followed by perfect relaxation, without any diminution of the expulsive efforts; in fact, he says these are intensified without any unpleasant effect either on the mother or the child.—*Medical Brief.*

THE AFTER TREATMENT OF OVARIOTOMY.

— Montgomery in the December Charlotte Med. Journal, says :

“ The after treatment of ovariectomy often demands as much skill and care as are required in the operation. Every precaution is exercised during the performance of the operation to insure the patient against subsequent hemorrhage, but in spite of every precaution, post-operative hemorrhage, due possibly to slipping of the ligature, sometimes occurs. Hemorrhage will be recognized by increasing shock, by a thin, wiry, or absent pulse, an anxious countenance, the skin covered with a clammy perspiration, a sighing respiration, and the restless patient moves her limbs and throws her head from side to side. The lips become blanched and pale, and she complains of intense thirst. Such symptoms demand an immediate effort to secure the bleeding vessels, as only prompt arrest will afford the patient a chance for life.

In ordinary shock, the plan of treatment would consist in the application of bottles of hot water, wrapping the patient in a hot blanket, and thus maintaining the body heat by artificial means. The use of diffusible stimuli, such as coffee, whiskey, brandy, or champagne, given by the rectum. Apply bandages to the limbs in order to increase the blood supply to the more vital organs ; elevate the foot of the bed so as to decrease the heart force necessary to send blood to the brain. Probably one of the most efficient methods in overcoming shock is the introduction of ice suppositories into the rectum. This procedure is the only one of those named that is applicable where internal hemorrhage is occurring prior to ligation of the vessels. Strychnine given hypodermically in doses of one-fortieth to one-fifth grain, according to the amount of depression. (Atropine) also, is frequently a beneficial agent.”

NEWS NOTES AND FORMULA.

The U. V. M. Medical College opens January 16, 1896. The regular lectures commence January 20.

Dr. A. P. Grinnell has gone to Chicago on business. He will return before the Medical Department lectures begin.

CHLOROFORM IN LABOR.—Do not be afraid to use chloroform all through. The heart of the woman at full term is peculiarly adapted to stand it, and extreme pain produces nerve exhaustion, prevents proper recuperation, damages the quality of the milk, retards the removal of debris from the pelvis and produces susceptibility to disease germs.—*Med. Brief.*

CYSTITIS.—By Dr. E. T. Cook, Houston, Texas.

R Balsam of copaibæ, oz. j.

Tr. cubebæ, oz. ss.

Solol, dr. j.

Syr. acaciæ, q. s. oz. iv.

Sig. Teaspoonful three times a day.—*Ill. Med. Journal.*

HABITUAL CONSTIPATION.—The sphincter ani should be examined in all cases of habitual constipation, for a very tight sphincter is no uncommon condition; the rectum bags and sacculates above it, and until the sphincter be freely stretched, no douches or other remedies can restore the due relations of the parts.

CATARRHAL CROUP.—Upon a plate pour a mixture of :

R Tar: 2½ oz.

Creasote, 3-6 dr.

and place over a night lamp throughout the night in the sleeping room of the infant.—*Prescription.*

Dr. Aulde of Philadelphia, claims that all cases of typhoid, no matter in what stage of their history, can be broken up by the use of arsenite of copper.

A writer poured the bisulphide of carbon on cotton in an open mouthed bottle and held it against the forehead of several patients with nervous headache, relieving every case.

The addition of a small amount of sugar greatly increases the solubility of borax. It will also rapidly liquify a solution of gum arabic which has become gelatinous from the presence of borax.

FOR FLATULENCY.—By Dr. Stephen Macenzie.

R Sp. cajuputi.

Sp. ammon. arom.

Sp. chloroformi, aa oz. ss.

M. ft. mist. "The antispasmodic mixture." One teaspoonful in a wineglassful of water every half-hour or every quarter of an hour, until relief is obtained.

BOILS.—Tincture of iodine of double strength, or one drachm to the ounce of ninety-five per cent. alcohol, when thoroughly applied by means of a feather, or better by a camel's hair pencil, to boils, etc., will relieve all pain and shorten the stages of suppuration more than one-half.—*Amer. Med. Compend.*

Knives should never be placed in carbolic lotion, for even a diluted solution of the acid quickly impairs their edges.

The compound tincture of benzoin is recommended in cases of injuries about the hand, especially those by machinery.

Cocaine and bromide of sodium are incompatible, and serious consequences might arise in case they were administered together.

Five-drop doses of the fluid extract of eucalyptus are recommended for the distressing cough which accompanies measles in young infants.

NEURALGIA.— R Antikamnia (genuine), dr. iss.

Ext. gelsemii, gr. vj.

Ext. hyoscyam, gr. xvij.

Ext. aconiti, gr. ij.

Mx. ft. Caps. No. xvij. Sig. One capsule every three or four hours.

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BOOK NOTICES.

MATERIA MEDICA AND THERAPEUTICS.—A practical treatise with especial reference to the clinical application of drugs. By John V. Shoemaker, A. M., M. D., LL. D., professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital, Philadelphia, etc., etc. Third edition, thoroughly revised. Reset with new type and printed from new electrotype plates. Royal octavo, pages ix, 1108. Extra cloth, \$5.00 net; sheep, \$5.75 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry St.

Without any doubt this book is one of the most complete and systematic works on Materia Medica in the English language.

To the student who desires the highest degree of accuracy, in regard to dosage, etc., it will at once recommend itself. The classification is faultless and the pharmacology and therapeutical application of drugs is thoroughly up to date.

Already the book through its first and second editions has acquired a national reputation, and now the third edition, coming as it does revised and reset, will place it at the very front of treatises on this branch of medical science. We commend it to all in search of a good Materia Medica, not only because of its reputation, but for its very evident worth.

DR. KING'S MEDICAL PRESCRIPTIONS, by John H. King, M. D.; Second Edition: Published by Bailey & Fairchild Co., New York. Price, postpaid, \$1.00.—This book contains the favorite formulas of the most eminent Medical authorities collected from their published writings. As a reference book for the busy physician it will prove of untold value, bringing to his immediate notice the best of authority and experience. The typographical work is fine and the binding attractive and neat. It is a book worth five times the price asked for it.

Bailey & Fairchild Co., of New York, take pleasure in announcing to the Medical Profession the establishment of the **DOCTOR'S STORY SERIES**, to be issued quarterly at \$2.00 a year, 50 cents a number. Each number will consist of a complete work of fiction by medical authors. Only such works as are of established value will be reproduced in this popular form. King's "Stories of a Country Doctor" will be issued January, 1896, to be followed in March by Dr. Phillips' wonderful novel, "Miskel," and later by a new novel now in preparation by the same author.

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Providence, R. I., May 1, 1895.

TO PREVENT OOZING FROM GUM MARGINS IN CROWN OR BRIDGE SETTING.—Apply ethereal pyrozone to root and gum margin, sufficient to blanch the tissue to the extent of a narrow band around the root end. Will absolutely cleanse the parts from adherent mucous or blood serum; sealing the surface of the mucous membrane; preventing oozing of fluids to interfere with the adhesion and setting of the cement. Used in setting crown or bridge.

E. C. KIRK.

Dr. Grossmann (*Iowa Medical Journal*) considers that the misfortunes of Ophthalmia of the new born depend in a large measure in the negligence of midwives. A bill for the prevention of blindness was presented to the last Legislature it makes "the mid-wife or person having charge of an infant liable to a fine, imprisonment or both, if within two weeks after the birth of the child the eyes becomes reddened and swollen they neglect to report to the board of health or procure competent medical treatment," the midwives will soon learn that by cleanliness of themselves and their patients before the birth of the child, and proper attention to it in the same direction after birth will obviate the possibility of their being liable to such a punishment.

By the free use of a Borine solution to their hands and the maternal parts the risk of septic infection is much lessened if not completely prevented. Again Borine being non-toxic and non-irritating can be used (one part to ten of water) as a cleansing prophylactic eye-wash in the new born child.

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BATTLE & Co., St. Louis.—Some time ago you sent me specimens of your preparations of Bromidia, Papine and Iodia. Unlike many who send out specimens you sent an amount large enough to really make a trial with. I had used the two first named a little, but having them more forcibly brought to mind, and recognizing the fact that I had them on trial, I watched their action more carefully. I can say that they are both elegant and health bearing. Bromidia I

used on a man verging on Mania a Potu. Papine on a nervous typhoid woman, and Iodia on a young man, who had carried boils for three years as the result of ivy poisoning. The preparations were a decided success in every instance.

Yours truly,

E. C. ADAMS, M. D.

Watertown, S. D., Dec. 10, 1895.

HOW TO TREAT A COUGH.

In an able article under the above heading in the *New York Medical Journal*, Edwin Geer, M. D., Physician in Charge of the City Hospital Dispensary; also Physician in Chief, Outdoor Department, Maryland Maternite Hospital, Baltimore, writes:

"The object of this brief paper is not to try to teach my colleagues how to treat a cough, but simply to state how I do it, what good results I get, and to call their attention to those lighter affections of the throat and chest the principal symptom of which is an annoying cough, for which alone we are often consulted. The patient may fear an approaching pneumonia, or be anxious because of a bad family history, or the cough may cause loss of sleep and detention from business. What shall we do for these coughs? It has been my custom for some time to treat each of the conditions after this general plan: If constipation is present, which is generally the case, I find that small doses of calomel and soda open the bowels freely, and if they do not, I follow them with a saline purgative; then I give the following:

R Antikamnia and codeine tablets, No. xxx.

Sig.—One tablet once every four hours.

"The above tablet contains four grains and three-quarters of antikamnia and a quarter of a grain of sulphate of codeine, and is given for the following reasons: The antikamnia has a marked influence over any febrile action, restores natural activity to the skin, and effectually controls any nervous element which may be in the case. The action of the codeine is equally beneficial, and in some respects enforces the action of its associate. The physiological action of codeine is known to be peculiar, in that it does not arrest secretion in the respiratory or intestinal tract, while it has marked power to control inflammation and irritation. It is not to be compared with morphine, which increases the dryness of the throat, thus often aggravating the condition, while its constipating effect is especially undesirable."

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In **Nasal, Pharyngeal and Laryngeal Catarrh**, FIRWEIN given internally and used topically by means of an atomizer, vaporizer or inhaler, will give you satisfactory results. Try it!

DOSE—One or two teaspoonfuls three to six times daily. For Spraying, add one part of vaseline or petrolatum oil to three parts of Firwein, and use warm. For Persistent Coughs: One dram Opil. Deod. to four ounces of Firwein.

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Girl six years old. Marked prostration. Membrane covering arches creeping up posterior nares with nose bleed, and had so invaded the larynx as to threaten strangulation, her doctor had talked of intubation. Almost incessant vomiting and complete anorexia. I gave friends no encouragement and undertook the case reluctantly.

Supplementary to my favorite treatment, I gave freely of your Wine. The general condition improved so quickly that the friends were sure in twenty-four hours she was getting well. Vomiting ceased and she began to call for food. The arches and nares cleared quickly. No more nose-bleed or difficulty in swallowing. The laryngeal condition, which of course was my terror, remained stationary for several days, the child meantime sitting up in bed, playing with her doll and dominoes and wanting to get out of bed, but croupy cough, paroxysms of dyspnea and whispered talking warned of danger. Then the larynx gradually cleared and one week from the time I first saw her, I ceased visiting her.

Have given facts tersely. I do not "jump at" conclusions, but intend to try it again. You will have to look a long time to find my recommend of a proprietary medicine, but if part or all of this is of any service to you, you are welcome to it.

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Formula.—Iodia is a combination of active principles obtained from the green roots of Stillingia, Helonias, Saxifraga, Menispermum and Uromatics. Each fluid drachm also contains five grains Iod. Potas. and three grains Phos. Iron.

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Borine possesses a fragrant odor and a very agreeable pungent taste. It mixes with water in all proportions, and is compatible with most of the preparations of the pharmacopœia. It does

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Borine is highly recommended as a *Mouth Wash*, as a *Gargle*, *Spray* or *Lotion* in inflammations of the throat, nose and mucous membranes; for *Inhalation* in croup, diphtheria and whooping cough; as a soothing and antiseptic application to wounds, burns, etc., and internally as a sedative, antifermentative and carminative in digestive troubles and in intestinal disorders.

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The special indication of this combination of Phosphates in Spinal Affections, Caries, Necrosis, Ununited Fractures, Marasmus, Poorly Developed Children, Retarded Dentition, Alcohol, Opium, Tobacco Habits, Gestation and Lactation, to promote Development, etc., and as a *physiological restorative* in sexual debility, and all used-up conditions of the Nervous System should receive the careful attention of the good therapeutists.

Dose.—For an adult one tablespoonful three times a day after eating; from seven to twelve years of age, one dessertspoonful, from two to seven, one teaspoonful; for infants, from five to twenty drops, according to age.

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CONTENTS.

	PAGE
Intestinal Indigestion : Its Dieletic and Rational Treatment, by William Henry Porter, M. D., N. Y. City - -	33
Thrombo-Chlebitis, by G. W. McGeorge, M. D., Littleton, N.H.	47
Empyema : Remarks at N. Y. Academy of Medicine Meeting, Jan. 16, 1896, - - - - -	51
U. V. M. Medical Department Notes, - - - - -	53
Editorial, (That Cathode Ray), - - - - -	55
Medical Abstracts, - - - - -	58
News, Notes and Formula, - - - - -	61
Publisher's Department, - - - - -	62
Book Review, - - - - -	63



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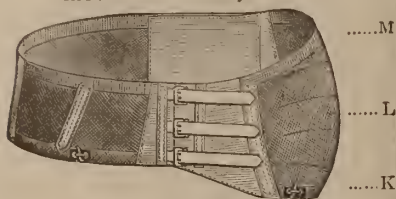
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The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
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Official organ of the Vermont State Medical Society.

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(Original Papers.)

INTESTINAL INDIGESTION; ITS DIETETIC AND RATIONAL TREATMENT.*

BY WILLIAM HENRY PORTER, M. D.

Professor of General Medicine and Pathology in the New York Post-graduate Medical School and Hospital, Etc.

This subject has been chosen because there is very little attention paid to the discussion and treatment of intestinal indigestion in our modern works upon medicine, and also for the reason that the malnutrition consequent upon intestinal indigestion is largely responsible for almost every disease that occurs in the human organism. In many text-books this subject is entirely ignored, and at best it is only given a passing notice. In one of the recent and standard works upon the theory and practice of medicine, eleven lines only are devoted to this important problem.

To perfectly understand intestinal indigestion necessitates a clear conception of the chemical composition of the common food-stuffs and the transmutation processes that they must undergo before they can be absorbed and assimilated. This accomplished, the abnormal is quickly and accurately detected.

Briefly stated, all food-stuffs when minutely studied chemically are found to be composed of three distinct classes of compounds.

*Read before the eighty-second annual meeting of the Vermont State Medical Society, convened at Burlington, October 10, 1895.

First, the inorganic substances, or those which enter the system under their own form, pass through unchanged, and come out in the same shape that they entered. They assist the economy physically rather than by chemical activity.

Second; the carbohydrates and hydrocarbon compounds, such as the starches, sugars, and fats. All of this group act primarily through chemical action, being oxidized into carbon dioxide and water with the production of heat.

Third, the proteids, of which there are two grand classes: the vegetable proteids, or those existing in a polymeric state, and the animal proteids, which are in the form of single molecules. Out of this class alone can all the proteid structures of the body be formed, either by a process of isomeric transmutation or by physical anabolism.

It matters little how complex the meal, the starches and sugars of all kinds have to be transmuted in part by the ferment ptyalin, but chiefly by the amylopsin, in the intestinal canal into a definite molecular form called glucose.

This accomplished, certain epithelial cells lining the small intestines have for their special function the absorption of this particular molecular form, which we call glucose, into their protoplasmic structure. In the substance of the cell, the molecule is isomerically transformed, so that when it is discharged, as it is eventually, into the entero-hepatic circulation, it no longer responds to the common tests for glucose. From the entero-hepatic blood this carbohydrate compound passes into the substance of the hepatic cells, together with active oxygen brought to the liver by the oxyhemoglobin. Within the hepatic cells the oxygen attacks this compound and oxidizes it into carbon dioxide and water with the production of heat equivalent to 1657 kilogram-meters of work for each gramme of the carbohydrate thus consumed.

Thus this oxidation process with its heat production becomes one of the prime factors in maintaining nerve action, and, by being applied to the peripheral nerve endings, is, through the centripetal nerves, brought into direct relation with the central nervous system. It is by this constant heat production in the glandular organs of the body that nerve action is set in motion and maintained in action. Through this reflected nerve impulse from the periphery to the cerebral nervous system, and from the center back to all parts of the animal economy, a

harmonious balance of activity is developed and sustained throughout the whole system. All nerve action, therefore, takes its origin in the oxidation processes which are constantly occurring in the epithelial cells which constitute the coating of the body. These surface cells, when bunched together, as they are in the liver and the salivary, pancreatic, and renal glands, etc., are found to be the chief oxidizing zones of the body.

The animal and vegetable fats, like the starches and sugars, are transmuted chiefly in the alimentary canal by the action of the ferment bodies found in the pancreatic, biliary, and intestinal secretions.

The animal fat is transmuted in part into a fine emulsion, and in part into its components, a fatty acid and glycerin, the former joining with a soda compound to form a soap. The emulsified fat is drawn into the protoplasm of those epithelial cells which have for their particular function the taking up of fat. From the substance of these cells the fat-globules are discharged into the underlying lymphatics in the villi that support the epithelial cells. From this terminal lymphatic, which is a slight bulbous expansion ensheathed with muscle fibers, the fat is driven on to the deeper lymphatics, on through the thoracic duct, and finally enters the blood-stream at the point of origin of the left brachiocephalic vein. Having gained access to the blood-stream at this point, the fat passes on with the blood to the right heart, through this organ to the lungs. From the pulmonary capillaries the fat appears to be taken up, together with active oxygen, into the epithelial cells that line the air sacs, and, by a process of oxidation, the fat is here converted into carbon dioxide and water, with the production of heat. Thus, for each gramme of fat consumed in this manner in the lungs, the heat equivalent 3841 kilogram-meters of heat is produced. This heat stimulates the peripheral nerve-endings in the lungs with the same concomitant phenomena as were described in connection with the heat production in the liver by the oxidation of the carbohydrate compound.

The soap and glycerin produced by the action of the ferment steapsin are a part of the laxative mixture which the system must produce each day to keep the bowels in motion and prevent constipation. The vegetable fats being less perfectly emulsified and more easily decomposed, are more likely to be cathartic in action and poor heat producers.

The proteids, or true tissue builders, all enter the alimentary canal

in the form of an alkali-albumin, either in the polymeric state, as found in the vegetable kingdom, or the "monomeric" form common to animal fluids and solids. In the alimentary canal the polymeric form must first be transmuted into the simpler form. This accomplished, the alkali-albumin is acted upon by the hydrochloric acid, and isomerically transmuted into acid-albumin, after which it is further acted upon by the ferment body pepsin and transmuted into a series of albumoses, and finally into a true peptone, which is the only form in which a proteid can be taken up by the epithelial cells of the alimentary canal. The larger percentage of the proteids in the food-stuffs, however, passes through the cavity of the stomach into the intestinal canal unpeptonized. Thus we find that the function of the stomach is chiefly a storage and macerating tank, the major portion of the proteids, as well as the starches, sugars, and fats being transmuted in the intestinal canal. The ferment body trypsin, secreted by the pancreatic gland, together with the protolytic ferments of the bile and intestinal secretions, complete the peptonization of the proteids. When they have all been converted into this particular form in which the proteid can be drawn into the protoplasmic substance of the epithelial cells, they are absorbed by these special cells. After the peptone has gained access to the protoplasm of these cells, of which there are three distinct sets as regards their function, it is further isomerically transmuted. One set of cells discharges the contained proteid into the entero-hepatic blood-stream as serum-albumin, another as serum-globulin, and a third as fibrinogen.

If the transmuting function of these cells is overtaxed, the peptone may be discharged as such into the entero-hepatic blood. The peptone being a toxic form of proteid, when it reaches the hepatic gland, the epithelial cells of the liver take up the peptone and transmute it into a non-toxic form, in a manner similar to that of the cells of the intestinal canal when they are performing their function normally, thus preventing general toxemia from the peptones.

After the proteid body has reached the entero-hepatic blood-stream in the normal manner and has been properly transformed, it passes on, in one of those three forms, from structure to structure, being changed from one form to another, thus giving a different physical character and function to the various organs and structures of the body without undergoing any decided chemical decomposition, a small portion being thus

transmuted to form the ferment bodies secreted by the glandular organs of the alimentary canal.

When the proteid has served its purpose to the body, it is again taken up into the protoplasm of the epithelial cells covering the body, chiefly into the cells which constitute the excretory organs, such as the liver and kidneys. At the same time that the proteid enters the cell, oxygen is introduced from the oxyhemoglobin of the blood into the protoplasm. This results in an active chemical decomposition, or oxidation, of the proteid with the formation of the katabolic products, which are common to the excreta. Each gramme of proteid oxidized in the body yields the heat equivalent of 1812 kilogram-meters.

With this understanding of the composition and utilization of the food-stuffs, if the food-supply is properly adjusted so that the constructive material is available and sufficient for the daily demands of the system, and if, at the same time, the heat-producing substances are of the right kind and quality, they can all be utilized perfectly without exhausting the oxygenating capacity of the system. In fact nature has allowed quite a wide margin for deviation. Were it not for this, it would be impossible to secure anything like a fair standard of health.

When these laws are observed and the food-stuffs kept well within the prescribed limits, the digestive functions will be perfectly performed, assimilation thoroughly maintained, and normal physiological phenomena only will be observed. Under these conditions the system as a whole will possess the highest possible degree of resistance against all disease processes. Lower this standard and the system is easily attacked by infections. Thus we see how it is that intestinal indigestion is a prime factor in producing all forms of disease.

The chief causes of intestinal indigestion are of two kinds: First, the presence of micro-organisms, and the fermentative changes produced in the food-stuffs in the alimentary canal by their presence; second, the taking of considerably more food than can be digested and perfectly oxidized, and also the taking of food of faulty composition. To these may be added, not as direct causes, but as conditions which influence perceptibly the perfection of digestion and assimilation, the kind of work which the individual has to perform, the lack of outdoor exercise, the peculiar conditions of the nervous composition, the mental state, climatic influences, etc., all of which play their part in influencing the digestive phenomena.

The micro-organisms are apt to excite the more pronounced lesions of the alimentary canal, such as true inflammatory conditions. Still, it must be admitted that most of the abnormal fermentative processes that occur in the food-stuffs in the alimentary canal have their origin in some form of micro-organism. While micro-organisms are always present in the alimentary canal, the normal secretions and digestive processes appear to be sufficient to prevent any deleterious influence from their presence, or any disturbances in the normal digestive phenomena. The most important factor, then, in the production of intestinal indigestion is the intake of too much food, and especially that which is faulty in composition (as the substituting of cows' milk for human milk in infant-feeding), or the use of vegetable or starchy foods in young children before the full development of the digestive organs.

The milk-sugar, the fat, and the proteids contained in the milk of the mother are in that condition in which the digestive apparatus of the infant can most easily transmute them into an absorbable state, while the chemical composition and the proportions of the sugar, fat, and proteid in cows' milk are differently arranged, consequently not available in its natural state for perfect results in infant-feeding. Consequently the use of cows' milk alone is prone to produce digestive disturbances and malnutrition: When properly diluted and modified by the addition of other substances, such as egg and barley-water, cows' milk can be made available for infant-feeding. The mother's milk, when of perfect composition, yields the highest degree of nutrition with the least tax upon the digestive powers of the child. All deviations from this fixed plan of Nature tends to lower the nutritive vitality, and ultimately excites intestinal indigestion.

In the adult, over-indulgence in food may be sufficient to cause intestinal indigestion. But when this is coupled with faulty composition a decided disturbance in the digestive process must follow sooner or later, depending upon the inherent chemical activity of the organism.

From a careful study of the normal process of digestion, it becomes apparent that a well-regulated mixed diet is the most desirable at all times, except in early infancy, old age, and in some diseased conditions, when a purely milk diet is the most desirable. A well-regulated mixed diet is one that contains the mineral ingredients common to the animal organism, the starches or sugars, the fats, and the proteids all so proportioned that the requisite amount of heat will be produced by the

carbo-hydrates along the line of the entero-hepatic system and by the fats in the lungs, and the full amount of constructive material supplied.

The animal and vegetable kingdoms both contain these three classes of substances. No one of them is perfectly adjusted, however; for the best results, although milk, so far as composition is concerned, comes very close to perfection. But milk, like every other single article of food, has its defects. Therefore to secure the most perfect results the animal and vegetable compounds in some form should be blended together in outlining a well-regulated mixed diet.

The vegetables, taken alone, contain an excess of the starches and sugars, and comparatively little fat. Their contained proteid, which often exceeds in percentage that found in the animal kingdom, is less available for assimilation than the latter, because owing to its highly polymeric structure it is less readily split up to meet the requirements of the organism and is much more difficult to convert into a peptone. In fact, the task is so great that from 15 to 60 per cent. passes through the alimentary tract without being so transformed, while with the animal proteids the loss is only from 2 to 10 per cent.

Therefore, when living upon an exclusive vegetable diet a large bulk of unavailable material must be taken into the alimentary canal to secure the absorption of the requisite amount of proteid substance. With this there is also an excessive amount of starch and sugar, and a deficient quantity of fat. If the individual has been blessed with a strong digestive apparatus, and can lead a comparatively leisurely and out-of-door life, many years may pass without material damage to the economy upon a purely vegetable diet. If, on the other hand, adverse conditions are imposed, as they frequently are with such a diet, intestinal indigestion and various forms of malnutrition will speedily follow.

The liberal use of fruits is another very potent factor in exciting abnormal fermentation of the food-stuffs in the alimentary tract. It is the irritation that arises from this disturbed action in the transmutations of the food-stuffs that makes them laxative in their nature. Many of the fruits in the market are plucked before they have had an opportunity to fully ripen; in their raw state they are often laden with micro-organisms, and at best are in a state of partial decomposition when they are introduced into the alimentary canal. Therefore, they should be avoided as laxative agents.

A meat diet alone is defective in that it does not contain any glucose compound; but when the term "animal diet" is used in its true meaning it includes milk, eggs, butter, cheese, and all the products that are obtainable from an animal source. Under these conditions, all the three classes of chemical compounds are fully represented in an animal diet, and can be secured easily in the required proportion.

On the other hand, when the term vegetable diet is used accurately it excludes the use of butter, lard, eggs, and milk, and every animal product, even in the process of cooking. When this is done it is found to be absolutely impossible to construct an exclusive vegetable diet in which the three classes of chemical compounds are properly proportioned. A near approach to perfection in composition, even if such were possible, would still necessitate the introduction and transmission through the alimentary canal of a large amount of waste and irritating material, owing to the great indigestibility of the vegetable proteids. Consequently, sooner or later, the system must suffer. It is for these reasons that the excessive use of the vegetable compounds and fruits is so prone to excite intestinal indigestion. In a similar manner an animal diet may result in intestinal indigestion, not so much from faulty composition as by the too liberal use of the animal food-stuffs.

These, then, are the essential conditions or factors that tend to, and do actually, cause the innumerable cases of intestinal indigestion which are constantly presenting themselves for treatment.

The clinical feature presented in connection with intestinal indigestion is an exceedingly complex and varied one. The symptoms may be acute or chronic in their nature. It is the chronic class, however, that are the most important and the most varied in symptomatology.

In the purely acute intestinal indigestion there are no primary gastric symptoms. The food taken has passed through the stomach without exciting gastric irritation. When the food-stuffs reach the intestinal tract, some two or three hours after the last meal, or even at a still later period, an abnormal fermentation is developed. Instead of the normal transmutation products of digestion, which give rise to no perceptible symptoms, abnormal products are developed, some of which are of a gaseous nature and cause considerable distention of the intestine, thus expanding the intraperitoneal cavity, and in some instances giving rise to actual and severe pain. This is especially true when the transverse colon becomes distended and crowded upward behind the stomach

and in front of the vertebral column. When this is the case, undue pressure is brought to bear upon the solar plexus, which may cause an intense pain located at the pit of the stomach, or the pain may be more or less diffused throughout the abdomen. In other instances the distention simply causes a sensation of intense discomfort. In either case the distress continues until the gases are absorbed or discharged from the alimentary canal by being passed through the rectum and anus, or by being regurgitated into the stomach, from which they are belched up and discharged *per os*. This localized pain and belching of gas often cause the false impression that the stomach is at fault. The distention of the abdominal cavity often crowds up the diaphragm, which, together with the reflex disturbance in the nervous system, causes embarrassed respiratory action, and a rapid and irregular heart action.

At the same time that the gas is formed, or even without much gas formation, toxic products, or ptomaines, are produced in the alimentary canal. These, when absorbed into the circulation, together with the peripheral irritation of the nerves distributed to the alimentary canal, cause marked constitutional symptoms and reflex nerve phenomena. The individual may have severe head-, heart-, and back-ache, and a sensation throughout the whole system as if he were under the influence of some toxic agent. There may be rise in temperature and a scanty elimination of urine. All these symptoms will rapidly disappear after free action of the bowels obtained through a mercurial; and what simulated strongly the beginning of an acute infectious disease will prove to be simply a case of intestinal indigestion, the normal state rapidly taking the place of the previously abnormal condition.

In the chronic cases it is much more difficult to exclude the stomach. In fact, in many instances it is impossible, because the long-continued imperfect intestinal indigestion has caused defective action on the part of the liver, pancreas, and all the organs which are concerned in digestion. A state of general malnutrition has been established, and the stomach has become weak and irritable in consequence. In other instances a primary gastric disturbance will lead to intestinal indigestion.

A careful study into the history usually shows that the stomach is not primarily at fault. The meals cause no primary disturbance or discomfort. There is no pain or vomiting upon taking food, the individual affected often declaring that he can eat everything, and that

nothing disagrees with him. Yet these same individuals will complain of great discomfort in the abdomen, coming at varying times after taking a meal. The intestines become greatly distended with gas, and the victims often experience intense attacks of pain, relief coming, after an hour or two of acute distress, by the regurgitation of the gas back into the stomach, from which it is finally belched up and discharged *per os*. Observing such cases closely, the tongue is found to be soft and flabby, often showing the deep imprints of the teeth along its margins. The dorsal aspect is more or less heavily coated with a dirty, brown fur. The conjunctivæ and mucous membranes in general are pale, and show a decidedly anemic state of the blood. Instead of the clear and ruddy complexion indicative of perfect nutrition, the skin has a dull, muddy appearance—one hard to express in words, but quickly appreciated by the well-trained eye. The sclera and conjunctiva are more or less tinged yellow, showing that the function of the liver is imperfectly performed. Depending upon the character of the faulty action of the liver there will be defective bile secretion of two kinds. The bile may be decreased both as regards quantity and quality. When this is the case, obstinate constipation is the rule. When the quality of the bile is altered, rather than the quantity diminished, it is often unduly irritating to the intestinal mucous membrane. This, together with the irritating products resulting from the abnormal fermentation of the food-stuffs contained in the alimentary tract, will, as a rule, produce a diarrhea. The diarrheal discharges often contain more or less mucus, without any inflammatory action in the intestinal canal. These discharges are also very irritating, and often produce considerable pain and tenesmus in the lower bowel and anus. The urine is apt to be scanty, high colored, and superacid. The elimination of urine is decreased, and the output of uric acid is abnormally large. The bile salts and pigments are usually found in such samples. Oxalic and lactic acids, albumin, and glucose may be found in some of the most aggravated cases. This super-acid condition of the urine, together with the consequent malnutrition dependent upon the long-continued intestinal indigestion, causes an unhealthy condition of the mucous membrane lining the genito-urinary tract, with a hyperæsthetic condition of the nerves which are distributed to this canal. The over-acid urine now acts as a constant irritant to this supersensitive membrane, thus causing considerable vesical irritation, painful and spasmodic action

on the part of the bladder similar to what occurs in connection with a true cystitis. There is frequent and painful micturition. It is often for these symptoms that the physician is first consulted, and the poor victim is vigorously treated for the local condition, while the true cause of all the trouble passes unrecognized and untreated. This continued absorption of toxic compounds from the alimentary tract, together with the reflex nervous irritation, keeps the liver continually overtaxed. The central nervous system is poorly nourished and unduly irritated. As a necessary sequence, we have a large and varied train of nervous manifestations. There may be : intense headache, continuous or intermittent in character ; mild or severe neuralgic attacks confined to single nerve trunks, or multiple in distribution, simulating in some instances a rheumatic attack. There may be insomnia, or a strong tendency to suicidal mania. There may be the opposite, or a stupid, sleepy condition, almost reaching semi-coma. In other instances all the symptoms common to the most aggravated neurasthenia are directly traceable to the prolonged intestinal indigestion, abnormal fermentation, and toxic infection.

All the non-parasitic skin affections are, in a large measure, only the symptoms of intestinal indigestion, and not independent disease. Thus we find the phenomena of intestinal indigestion presented in one great complex of symptoms, which are often misleading, and, by their local intensity at one point or another, often lead to absolute errors in diagnosis, followed by unsatisfactory results from the best efforts in the line of treatment. Accuracy in diagnosis in these cases can only be secured by a full comprehension of the physiological laws which govern the processes of digestion and assimilation by a careful study of the patient's habits, and of the method of the development of the symptoms, so that effects are not mistaken for causes.

The prognosis in these cases is good if they are recognized early and carefully treated upon a physiological and rational dietetic and therapeutic basis. The prognosis is less favorable when they have been allowed to go on for years, until some of the secondary effects become in themselves almost diseased processes. Then it becomes, in some instances, almost impossible to effect a cure.

The chief line of treatment to be employed in combating intestinal indigestion consists in regulating the diet in accordance with the well-known physiological laws that govern animal life. The physician must

be thoroughly conversant with the chemical composition and possibilities of the various food-stuffs. A careful study must be made of each case separately and every idiosyncrasy for or against all food products accurately noted. The urine must be carefully examined, not so much for albumin and glucose, as to determine the comparative output of urea and uric acid, and also to ascertain what other forms of incomplete katabolins may be present in the renal secretion. This accomplished, the diet must be regulated absolutely, both as regards quantity and composition. The particular kind of food must be prescribed with just as much precision as the medicaments that are used. At the same time the urine must be examined frequently and the exact modifications in the elimination of the katabolic products carefully noted. When this is done systematically, the exact changes in the system can be determined accurately from day to day.

In prescribing a special diet one principle should always be kept in mind, which is that a well-adjusted mixed diet, when it can be perfectly digested, is the height of perfection. It will secure the most complete transmutation of the food-stuffs, and in consequence absorption and assimilation will reach the highest standard, and perfect health will be established.

In almost every instance of intestinal indigestion the mixing of the various kinds of food-stuffs, as is commonly done, will not be tolerated by the enfeebled and already defective digestive apparatus. So long as this plan is pursued the case will not improve. In all cases of intestinal indigestion, from the mildest to the most intense type, it is absolutely necessary to limit the diet to a greater or less extent, both as regards quantity and the kind of food-stuffs taken. In many instances it may be necessary to limit the diet to a few articles of food, as milk, barley-gruel, or broths; very limited amounts, so much so that, at times, the patient may even lose flesh, while the defective digestive function is being slowly but surely re-established. The fancy of the patient must not be considered, but that form of diet must be chosen which will be most effectually digested and yield the largest amount of nutrition. It may be wise at times to take out in a large measure the fat or the sugar from milk. This can be accomplished by ordering an exclusive skimmed-milk or butter-milk diet, or, on the other hand, a diet of kunyss or matzoon, the former taking out the fat and the latter the sugar. When any one of these limited plans of dieting is resorted

to, the heat production necessary to keep the nervous mechanism fully in action falls to too low an ebb. When this is the case, a little alcohol must be added, as it can be oxidized and produce heat without expending any digestive energy, thus making up in a measure for the defective heat production. In other instances the plain milk diet will accomplish the best results. This is especially so when the milk is taken warm, or with a little lime-water, barley-water, or eggwater added. Other cases will do better by excluding milk in any form, and limiting the diet to broths, gruels, eggs, etc.

An important point, which must be kept always in mind when a patient is placed upon an exclusive animal diet of any kind, is the well-known chemical fact that all animal food-stuffs contain a very low percentage of the nucleo-albumin—not enough to produce the hemoglobin and lecithin as rapidly as they are decomposed in the animal economy. This being the case, even if the subject is not already anemic, there is a tendency for them to become so upon an exclusive animal diet. Consequently some hemoglobin-forming compound must be continuously administered to supply the deficiency. As the vegetable class of food-stuffs contain a large percentage of the nucleo-albumin, it should be our aim to introduce some form of vegetable compound in limited amount as speedily as the digestive system will tolerate their presence without exciting undue fermentation. By so doing we supply most effectually the natural and only compound so far known to physiological chemistry out of which the physiological economy can easily and rapidly increase the hemoglobin and overcome the anemia. Many of the succulent fruits and green vegetables contain the largest percentage of this nucleo-albumin. When they can be tolerated, they are valuable for this purpose; but, as a rule, they tend to excite so much abnormal fermentation of the food-stuffs in the alimentary canal that they must be excluded absolutely. The vegetable substances that furnish a full supply of nucleo-albumin without abnormal fermentation are barley, rice, wheat, and rye; barley and rye being especially valuable on account of the high percentage of the nucleo-albumin.

The mixed diet which most effectually meets the foregoing demands, as soon as it can be tolerated, is one composed of milk, eggs, meat, and toast, or stale bread and butter. Under the heading of meat is included fish of all kinds, game, and poultry. Beef and mutton are taken, however, as the standard from which all the other forms of meat

are calculated. If one particular form of meat cannot be tolerated, another kind must be substituted. In like manner, if milk or eggs cannot be utilized, some other form of food-stuff must be substituted. The same rule holds true in the selection of the vegetable substances. When these details are all observed carefully, a well-regulated mixed diet can usually be secured—One that will furnish the requisite amount of all the chemical substances that are required to sustain the animal economy and still keep well within the limits of the oxygenating capacity.

The medicinal treatment of intestinal indigestion consists in the use of a little dilute hydrochloric acid, either alone or in combination with some pepsin, preferably alone, to augment the transmuting peptonization of the proteids in the stomach. This accomplished, the amount of work imposed upon the intestinal digestive function is reduced to the minimum. Transmutation of the food-stuffs in the intestine can be greatly augmented by the use of a few grains of inspissated ox-gall and pancreatic extract three times daily before eating. The undue fermentation is also checked in part by these substances. To this may be added animal charcoal, resorcin, salicylic acid, naphthalin, phenacetine, or any one of the numerous intestinal antiseptics, so-called, that may suit the fancy of the prescriber. None of them will produce any profound and startling results, but they assist in a measure to subdue the abnormal fermentation.

When the liver is performing its function abnormally, and the tissues are stained with bile pigment, a mercurial of some form is in order, and is always followed by an improvement in the general and the local condition.

When constipation is a prominent symptom it must be overcome by some laxative agent, which acts upon the normal plan of nature.

Caffeine and strychnine are valuable agents in intensifying nerve innervation. They also augment the intestinal circulation and cause a more rapid and equable distribution of the blood throughout the body.

New York ; 1674 Broadway.

THROMBO-PHLEBITIS.

INFLAMMATION OF VEINS WITH FORMATION OF CLOTS.

By G. W. MCGREGOR, M. D., Littleton, N. H.

Read at the seventy-sixth annual meeting of the White Mountain Medical Society at Wells River, Vt., January 9, 1896.

The walls of the veins are, like the arteries, composed of three coats, viz.: from within outwards epithelial, fibro-muscular and connective tissue, the middle coat varying in its amount, both relatively and absolutely, of fibrous and muscular components, according to size and location.

Also there is a variation in arrangement of the muscular structure, whether longitudinal or circular, there being no definite order of relation as to which is internal, or which is external, the one to the other.

The inner coat, or lining, is pavement epithelium resting upon a basement membrane which is closely connected with the middle, or fibro-muscular coat; and external to this is the connective tissue, or external coat, in the meshes of which are contained the intricate vessels supplying the veins; also the nerves and lymphatic spaces.

In Phlebitis, the starting point is said to be in the middle and outer coats; and the process is typical of inflammations elsewhere; hyperaemia, swelling, migration of white blood corpuscles, proliferation of connective tissue cells, the extravascular spaces converted into sinuses which open communication with the capillaries and, as a result of increased vascularity, hypernutrition; causing a multiplication of the endothelia, forming granulations in which are developed new capillaries, anastomosing with the vasa vasorum, and some of which push into the already formed thrombus, absorbing and thus removing, or, more probably, organizing it into a permanent occlusion of the vein.

Such, in brief outline, is a succinct description of a Thrombo-phlebitis.

The causes are traumatic and idiopathic.

The former may be direct injury as from a blow, or solution of continuity; or from severe muscular action, or extension from a diseased part.

The idiopathic may depend upon some blood dyscrasia, as in infectious diseases ; in Pneumonia, Typhoid Fever, Syphilis, et al.

It may depend for its causation upon some change in the blood vessels whereby its inner coat is roughened, as in calcareous degeneration.

It might depend upon a slowing of the blood current, either from febleness of circulation or from obstruction.

The cause is oftentimes difficult of determining ; but the seemingly most plausible one is a change in the blood. And this leads to the query, what is the active agent or blood constituent that causes coagulation? 'Tis agreed, I believe, among physiologists that Fibrin, as such, does not exist in the blood, but that it is found at the site of the clot.

Then whence its source? Blood stasis, per se, does not cause coagulation, as witness the application of a tourniquet. Sever an artery and apply a ligature or pressure and a clot is formed. Pass a thread into the lumen of an artery and same result ensues. Septic absorption from varicose ulcers and puncture wounds may, and does, cause coagulation in veins.

Phlebitis is sometimes a sequela of a fever, but 'tis only in rare instances. It sometimes complicates varix, but oftener not.

Then what is the sine qua non to have a normal circulation. For it has been observed that many and diverse conditions favor coagulation.

In partially answering the question it is conceded that a normal relation between blood and containing vessel insures such a condition ; but what interests us as physicians and surgeons is, to what extent can the normal become abnormal and coagulation *not* ensue ?

Is there a vital, neutral relation between endothelia and blood current, whereby the former becomes protector of the latter, to guard and maintain its lines of communication intact, and when from assaults from without, whether from injury or disease, or from within, from changes in the blood, this endothelia is unable longer to perform such function and, because of disintegration the barrier is weakened, it yields to the onslaught of the disease and surrenders its vitality ?

In inflammations there is an excessive accumulation, both relatively and absolutely, of white blood corpuscles, with choking of vessels, and exudations into surrounding parts, more or less solid.

In coagulation there is also an excessive accumulation of white blood corpuscles and formation of a semi-solid mass.

Is it the same element in each instance that produces like results? And if the same element, must not its source be the same? And if the same source and the two conditions are the same in the one distinguishing preponderance of white blood corpuscles, what hinders the deduction that the white blood corpuscle is concerned in the production of Fibrin Ferment?

The white blood corpuscle, from its disparagement in numbers, compared to the red, in normal circulation (being about as one to four hundred) and its preponderance in blood coagula and inflammations, would seem to hold some office not held by the red, in producing these conditions.

Also, the red having no nucleus, and the white being nucleated, is evidence of the latter in functional activity, which, notwithstanding its paucity of numbers, brings it into excessive accumulation at the first sound of alarm.

Is the nucleus of the white blood corpuscle the source of, or concerned in, the production of Fibrin Ferment?

As previously stated, Fibrin, as such, does not exist as a separate entity in normal blood in circulation, nor in stasis in normal relation. But instantly normal blood is shed, and sometimes with abnormal blood in circulation, Fibrin springs into existence and coagulation ensues.

This brings us back to the leading thought of the essay; what is the source of Fibrin, and what determines Thrombo-phlebitis?

A CLINICAL PICTURE.

Mr. H. had had varicose veins for twenty years; had not suffered great inconvenience, it never having been necessary for him to bandage or to wear support of any kind.

One morning on his way to church and while descending a hill, his foot slipped, and, but for the support of his companion, he would have fallen.

The severe muscular strain in the effort to save himself gave rise to some uneasy feeling at the time, but no heed paid to it until two weeks, when medical advice was sought. Inspection revealed a mass, or bunch, of inflamed Varicose Veins below the knee on the inner aspect of the calf of the left leg. Appropriate treatment was prescribed and rest

enjoined. But the patient—thinking it a trivial matter—kept about. As a probable result, the process extended up the leg to a point about the lower third of the thigh where another mass formed.

Again rest was enjoined ; but the patient, thinking more about his parish than of his own immediate condition, still ignored the injunction except so far as the pain and impediment to locomotion forced a partial rest.

But no sooner had the acute symptoms subsided than he was again stirring about, and in a few days the third mass appeared at the sapheno-femoral junction.

At this time my patient became somewhat alarmed and my *patience* became somewhat exhausted ; and with a firmness born of *impatience* he was commanded to maintain a decumbent posture. Of necessity the command was respected (a negative virtue, inherent with some people), and the gravity of the case thus made apparent to the family by intuition, and to me by the prostration and unlimited possibilities of extension and complications.

Nor did the progress stop here, but extended up the iliac vein, and either by continuity or independently, involved the right leg where, at the sapheno-femoral junction, a mass formed as large and thick as a hand, attended with great swelling of the extremity ; a typical Phlegmasia Alba Dolens.

During the progress of the disease there was more or less fever, accelerated pulse, furred tongue, malaise, pain, amaciation and, later, night sweats.

The extension to the iliac veins was manifest by continence of urine, necessitating the use of the catheter for some days ; and obstruction to the bowels which was overcome with difficulty.

Both limbs were larger by several inches in circumference, oedematous below the knees, with the coppery-red streak over line of phlebitis, which line is distinct to-day.

Also, are the extremities now very much larger than before without apparent oedema, although this abnormal relative increase in circumference is gradually lessening, presumably commensurate with the restoration of normal return circulation by development of new veins.

Treatment can be summed up briefly ; rest and nutrition, anodynes to lull the pains, emunctories kept active, avoidance of movements and manipulations that might dislodge an embolus, elevation of the foot of

the bed, limbs oiled and wrapped in hot batting or flannel, an abundance of fresh air and good cheer, and last, but by no means least mentioned, the constant care and companionship of that priceless boon, a faithful and loving wife; ministering angel to a sick and helpless husband.

To-day Mr. H. is practically a sound man, and the main feature of his recovery, the grand sequela, is the *cure* of the varices. There is nothing to indicate their former presence, except the knotty cords of obliterated veins.

SOCIETY REPORT.

NEW YORK ACADEMY OF MEDICINE.

GENERAL MEETING, JAN. 16, 1896.

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EMPHYEMA.

The Bacteriology of Empyema in Children.—Dr. Henry Koplik said that the purulent pleurisies of childhood might be divided, according to their mode of infection, into [1] metapneumonic; [2] streptococcus empyemas; [3] tubercular infections, and [4] fetid empyemas. In fifteen cases of empyema occurring in children he had found in nine the diplococcus of pneumonia in pure culture. Where the streptococcus variety is associated with a severe septic infection, as scarlet fever, the prognosis is much more grave than in the other forms, although, of course, the tubercular empyemas almost uniformly present a bad prognosis. These tubercular empyemas were associated with very marked thickening of the pleura. The fetid empyemas should be subdivided into [1] those in which there is a streptococcus or pneumococcus infection, and [2] those in which there is a mixed infection. Those empyemas which seek to cure themselves spontaneously by perforating through a bronchus are particularly apt to be of the fetid variety. According to Gerhardt, most of the pleurisies occurring in children are purulent, and it has been estimated that fully two-thirds are metapneumonic.

The Diagnosis and Peculiarities in Children.—Dr. August Caille said that empyemas in children were usually secondary, and exposure to cold could only be looked upon as a predisposing factor in their causation. Out of 80 cases coming under his observation, 67 had been in children under five years of age. The quantity of pus was often very large—one to three pints. The physician should not rely upon the presence of peptone in the urine, or, indeed, on any sign or symptom, as indicative of empyema, except the withdrawal of pus by means of an aspirating needle. The constitutional disturbance is often very slight; thus, he had once seen a boy playing around in the street, yet his thorax was found to contain two pints of pus. One should always bear in mind the occurrence of hydrothorax as a sequela of disease of the lungs or of the kidneys. In a simple pneumonia, the child would cry readily, without giving evidence of pain; but, in pleuro-pneumonia, not only the cry, but the cough and the respiration would bear evidence that they were painful. The physician was thus enabled to note the change from a simple pneumonia to a pleuro-pneumonia. On inspection, the physician would observe in pleuritic effusion a bulging of the affected side, a bulging or retraction of the intercostal spaces on inspiration, dyspnea, and, possibly, displacement of the heart. It should not be expected, however, that all these signs and symptoms would be found in every such case. Lateral curvature of the spine might be observed in old cases, and particularly where there had been a sinus for a considerable time. The fever was apt to be irregular, and, as in cold abscesses in other regions, might not be present at all. Palpation should show bulging of the intercostal spaces and absence or diminution of vocal fremitus. The fremitus might only be diminished as compared with another part of the chest, and its detection could not be accomplished unless the child were made to cry—by pinching it, if necessary. If the layer of fluid between the lung and chest wall were sufficiently thick, auscultation would indicate an obscuration of the respiratory sounds, but tubular breathing might be heard all over the area of fluid effusion, being transmitted from inflamed or compressed lung. Diminished vesicular breathing and fremitus with dullness would indicate a thickening of the pleura. If the quantity of effusion were considerable, egophony might be heard in the axillary line. Bronchophony would be audible over consolidated lung, but not over fluid. Percussion would indicate flatness, and in addition to this would con-

vey to the finger a peculiar sensation of resistance; but very forcible percussion might reveal instead the resonance of the underlying pulmonary tissue. When there is sufficient fluid to compress the lung into the upper part of the thorax, the lower area will be flat on percussion, and the respiratory sounds will be absent, whereas in the upper portion of the chest the respiratory sounds will be augmented. The change of level of the fluid resulting from a change in the position of the patient is not very easily detected in small children. The crucial diagnostic test was the insertion of an aspirating needle, and this should be done with aseptic precautions. A serous exudate mixing in the syringe with a few drops of an antiseptic solution might assume an appearance not unlike that of pus, hence when at all in doubt as to the nature of the fluid drawn into the syringe, this should be examined with the microscope. After the withdrawal of the needle, the site of the puncture should be covered with a bit of adhesive plaster, or with a small piece of gutta-percha tissue which has been made sticky by moistening it with chloroform. If the precaution is taken not to puncture the chest on the right side below the eighth intercostal space, there will be no danger of injuring the liver. As regards treatment, it should be remembered that, although there may be a perforation into a bronchus, the pus might not find an exit until the intra-thoracic pressure had been relieved by an incision into the chest. The re-inflation of the lung after such an opening had been made into the chest was accomplished by the mechanical effect of coughing or forced inspiration, which causes the air to be driven in the direction of least resistance, which in this case is from the sound to the diseased lung.

U. V. M. MEDICAL DEPARTMENT NOTES.

Prof. F. R. Stoddard completed his course of lectures on *Materia Medica* Feb. 12, much to the regret of the students. Dr. Stoddard gave an excellent course and his lectures on *Electricity* were of great value both from a practical standpoint and his thorough familiarity with the subject.

Prof. Jenne began his course on *Materia Medica* Feb. 13, and was warmly greeted by the students.

The clinics this term are very important and cover a wide range of cases. There seems to be almost a super-abundance of patients. Medical clinics by Prof. Grinnell Wednesdays, and Surgical clinics by Prof. Wheeler Saturdays. Both clinics at 9 A. M.

A very pleasant reception was tendered the "Medics" Saturday evening, Feb. 15, from 8 to 10 P. M., by the Burlington Y. M. C. A. The students were entertained royally and wish to express their gratitude to Secretary Gibson and the Association for the pleasure accorded them by the reception.

Prof. Cushman begun his course of lectures on Medical Jurisprudence, Feb. 10. Mr. Cushman is a new member of the Faculty, but is proving a valuable addition.

SUBSTITUTIONS.

Dr. C. F. Tucker of Syracuse, N. Y., Jan. 9, 1896, writes: "Some time ago when I was doing a country practice at Jordan, Onondago Co., N. Y., I wrote Messrs. Battle & Co., that I could not get the uniform results from Bromidia that I had previously. They sent me a 4 oz. sample and that was all right and I still have on hand a little of that particular sample.

The party who had dispensed my prescriptions, after I had expressed my opinion very strong, confessed that *he had purchased a considerable quantity of of a Mixture at a less price, said to contain exactly the same ingredients, and had been dispensing that when Bromidia was prescribed.*

After that I had no more trouble, and I can truthfully say that you can find it in my emergency case, office, and in my regular "grip" always, and I have never seen anything but perfect satisfaction attending its use, and I have given it to patients of all ages and about every condition.

I have used it in the last stages of pulmonary tuberculosis, and in severe cases of chronic bronchitis, in delirium tremens, etc., and I always use it when I want a certain hypnotic.

I have used it in doses from 2 minims up to 2 and 3 drachms. It is one of the mixtures of so-called treacherous chloral that has never, thus far, caused alarm. I have been familiar with Bromidia since away back in the '80's when I was a clerk in a drug store, and since I have been practicing I still regard it as a reliable old friend, and so it has proved on many occasions.

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EDITORIAL.

THAT CATHODE RAY.

The columns of recent issues of the lay press and many of our contemporaries have been occupied by glowing accounts of the new discovery by Prof. Roentgen of the University of Würzburg referred to elsewhere in this number. If these accounts be true no one can grasp the importance of this discovery to medical and scientific progress, but we prophesy that there will ensue a complete reversal of what we now consider to be the natural order of things. The word opaque as now used will be passé and "we shall know as we are known." Adam and his good wife could appear in good society with their Sunday-go-to-meeting fig leaf on and feel no more delicate than shall we. Secrecy will be impossible and mind readers unnecessary.

Our internal anatomy will be apparent to our next-door neighbor whom we fear will criticise the proportions of our gall-bladder and draw unpleasant inferences therefrom. Perhaps the spleen, that long suffering orphan of our viscera will get a rest and the condition known as "spleneny" laid rightfully at the door of natural cussedness. Broken hearts will be visible to all and the man with wheels in his head will receive due allowance for his short comings. No man can wear simply the bosom to a shirt, or mend his suspenders with a nail and flatter himself that the secret is his own. The patch on our pants which thus far no man knows of, will be evident to all observers, and the bunch of keys which we carry in our pocket will no longer be taken for good coin. The "not in" dodge will avail nothing for it will be flying in the very teeth of Fate to lie against such fearful odds. In fact, our methods will necessarily undergo change and we apprehend confusion for some time, to say the least.

Incidentally we wish to remark that the 3 X's which are familiar sights on whiskey barrels, bear no relation to the "X" ray. We admit that many strange things are seen while under the influence of the XXX whiskey, but believe that the sign is only a coincidence.

Further developments will explain everything.

THE "X" RAYS.

At a meeting of the Berlin Physical Society, held January 2, Professor Roentgen described his apparatus and communicated his discovery. Through a sealed glass tube containing a vacuum he passed an electric current from a powerful induction coil. From the cathodal connection appeared visible rays of light, which, striking a sensitized photographic film, affected it as does the sunlight. Covering the tube with opaque black cardboard, and passing the same current through the tube, he ascertained that invisible actinic rays emanated from the cathode, and, at a distance of six feet therefrom, caused chemical decomposition of the sensitizer on a photographic film. He succeeded in receiving the rays upon a chosen object and then reflecting them upon a photographic plate, which, after this exposure, was developed and a negative of the object was obtained. The value of this new photographic process lies in the fact that these non-luminous actinic rays penetrate to a certain depth various opaque bodies, producing photographs of these bodies which show their interior construction. Professor Roentgen exhibited to the Berlin Society a photograph of the hand taken by the newly discovered process, in which the bones of the hand had been photographed

through the flesh. He exhibited also a photograph of the needle and graduated dial of a compass, which was taken through the metal case which inclosed it.

The tubes used are known as "Crooke's Tubes," and Professor Roentgen has given to the new imponderable the provisional term "X rays." He has discovered that they are not refracted.

Professor Roentgen's theory regarding the "X rays" is that they are produced by longitudinal vibrations of the ether. Whether this be true or not, the value of his discovery to medical science is prodigious. Location of bullets, of fragments of bone or of cloth within the anatomy; determination of the size, position, and condition of the viscera; or examination of the contents of hollow viscera, may be possible with the aid of the new radiant energy, if methods of control of the rays so as to focus them at a certain depth can be obtained, and if the opacity of bone can be overcome.—*From Am. Medico. Surg. Bulletin.*

CROOKE'S TUBE.—Practically speaking, this vacuum tube, as known by the inventor's name, is a vacuum bulb much like an ordinary electric-light bulb without the carbon filament in the centre. He has two platinum electrodes, one at the top and one at the bottom, just penetrating the glass. When it is ready for use the current is first passed through the induction coil and thus raised from a low to a high potential. A mechanical device, if attached for convenience, rapidly opens and shuts the circuit and gives a great number of alternations. The Crooke's tube must be placed in the circuit and the cathode or "X" rays are generated. While the current is making its high potential discharges in this vacuous tube a violent fluorescence is observed in the glass. This fluorescent effect is very much like that obtained by rubbing a sulphur match on a dampened hand.—*New York Med. Journal.*

As yet the full importance of this discovery is not known, but if the theories prove correct we are on the eve of a great uplift in medicine. It is not wise, scientific nor ethical to be too sanguine, but the experiments thus far give great promise.

All know the effect of light on life and organized matter and we can justly expect that these newly discovered rays will have some unique actinic effect on animal tissue. Whether this effect will be potent for clinical use remains to be seen, but we are confident that the "X rays" will be found to have some physiological or chemical action that will render them factors in the annihilation of disease.

MEDICAL ABSTRACTS.

GALL-STONES.—Dr. G. B. Johnston, in *Va. Med. Monthly*, says: In making a diagnosis of gall-stones, the history of the case is of great value. The age, the sex, habits and occupation of the patient are to be considered. After a variable period, during which the patient may have been entirely free from symptoms, but more commonly has been troubled with what appears to be a duodenal catarrh, he or she is suddenly seized with a violent colicky pain in the epigastrium, accompanied by nausea, vomiting and shivering. These symptoms are due to the entrance of a gall-stone into one of the ducts. The pain may be of any degree of severity from nil to that which causes profound shock and collapse. This pain, commonly designated gastralgia, may subside in an hour or two or last for a week or more. In many instances the agony is excruciating. The shivering and vomiting are of a reflex character, caused by the shock to the sympathetic system. The paroxysm of pain, which frequently radiates from the epigastrium up towards the right shoulder and down towards the umbilicus, ceases somewhat suddenly after a time, the cessation being due to the passage of the stone into the duodenum or its return into the gall bladder. In either instance, there is commonly an attack of violent vomiting, accompanied accompanied by almost immediate relief. If the stone is passed into the duodenum without prolonged detention in the duct, there will be no jaundice. If it is found in the dejecta and is faceted, it is plain that other stones remain. Should the stone not reach the ductus choledochus, but become impacted in the cystic duct, the symptoms will likely continue with greater or less severity, and, in addition, the gall bladder will become enlarged and tender from retention of its own secretion. Little or no jaundice will ensue. If the stone disengages and recedes into the gall bladder, the symptoms will abate. There will be some tenderness about the gall bladder, but jaundice does not ensue. If, however, the stone becomes impacted in the ductus choledochus, or if that duct is in any way occluded, and the stone forced back into the hepatic duct by the muscular action of the gall bladder and backward pressure, pronounced jaundice will ensue from within twenty-four to seventy-two hours. The jaundice is accompanied by intense itching of the skin, headache, and the presence of bile pigment in the urine. Soon after the appearance of jaundice, the stools assume a putty color. These attacks of biliary colic will recur time and time again with varying frequency whenever a gall-stone enters or changes its position in any of the ducts. It is now generally conceded that all gall-stones are formed in the gall bladder, and such as are found in the ducts have been forced there by the bile current. A diagnosis of gall-stones is not uncommonly made before an attack of biliary colic has ever occurred. Such a diagnosis is based upon the symptoms of cholecystitis, which frequently results from infection of the gall bladder, caused by the presence of stones. With infection there is nausea, loss of appetite, furred tongue, pain and tenderness, swelling in the region of the gall bladder, a temperature ranging from 99° to 102° F., with shivering and sweats. The pain, however, is of different

character from that accompanying biliary colic. If suppuration occurs, the aspect of the case is again changed, and the situation becomes more grave.—*Med. Brief.*

SPRAINS AND THEIR APPROPRIATE TREATMENT.—Primrose (*Canadian Practitioner*) holds that the aim of treatment for sprains is the early absorption of effused material and the prevention of adhesions. For the immediate treatment of a sprain pressure is of paramount importance. This should be applied as follows: The joint—say the ankle, for instance—is placed at a right angle (or, if possible, at less than a right angle) with the leg, then cotton-wool or ordinary cotton batting is applied evenly over the foot from the toes upward to the middle of the leg. The amount of wool must be considerable, loosely applied, it should be fully three inches in depth. Over this is applied the bandage from the toes upward, which is drawn as tight as possible. There is no danger of making too much pressure, provided there is sufficient cotton wool. This usually alleviates pain immediately by affording pressure to the blood-vessels and keeping the part at rest. The bandage and wool are removed at the end of a few days, a week at the longest, and carefully instituted passive movement is employed; then the dressing is reapplied to prevent further effusion. In ten to fourteen days cotton wool may be dispensed with and the support of an ordinary flannel roller substituted. The patient is able to use the injured joint for ordinary purposes after the lapse of about three weeks in the majority of severe sprains. In sprains of slight severity massage may be begun at once with excellent results, and in old sprains massage is by far the most appropriate treatment and indispensable in order to effect a cure. Heat and cold are at best temporary methods of relieving congestion, and do harm if employed too long.—*Peoria Medical Journal.*

INHALING CHLOROFORM.—Dr. A. Guerin, of Paris, says in the *Lancet* that death from chloroform may be avoided if inhaled exclusively through the mouth. When death occurs from stoppage of the heart, the cardiac muscular fibers cease to contract under the influence of a reflex action exerted by the nasal nerves on the pneumogastric, stimulating the inhibitory power of the latter on the heart. He further shows that when a rabbit is subjected to tracheotomy, and then made to inhale chloroform directly through the trachea, the drug has no effect whatever on the heart. On the contrary, when chloroform is held before the nose of the rabbit, the heart immediately stops. The trachea being cut transversely, it is obvious that the chloroform inhaled by the nostrils cannot reach the heart through the bronchi. Dr. Guerin therefore assumes that the anæsthetic agent exerts its injurious action on the movements of the heart through the intervention of the nasal nerves and the cardiac branches of the pneumogastric, the former acting reflexly on the latter.

Dr. Guerin, therefore, advises that the nose of the patient should be held by the fingers until general anæsthesia is produced, when there can no longer be any reflex action of the nasal mucous membranes anæsthetized like the rest of the body.—*General Pract.*

ELECTRO-THERAPEUTICS IN GENERAL PRACTICE.—(A. Laphorn Smith, *Medical Age*, Nov. 11, 1895). The most important use of the galvanic current, he thinks, is in the treatment of fibroid tumors. It will also cure most cases of subinvolution and endometritis, completely arresting leucorrhea. He has cured dysmenorrhœa many times by connecting the negative wire to a uterine sound, making six or more applications a month. The menstrual flow can be brought on in stout women by means of the negative galvanic current. The secret of success in these methods he has found to be most rigorous cleanliness of hands and instruments and abstinence from force in the manipulation of instruments.

THE TREATMENT OF GROWING NAIL.—Ingrowing nail, or *ongle incarné*, as the French call it, is, as is well-known, a very painful affection, and unfortunately the operation necessary for its cure is often dreaded by the patients, although local and general anesthetics are employed to render the evulsion as painless as possible. A very simple method has been frequently employed by a *confreere* with constant success. It consists in painting the offending portion of the nail with a warmed 40 per cent. solution of caustic potash. In a few seconds the upper horny layer is rendered so soft that it can be easily removed by a piece of broken glass used as a scraper. The application of the solution and the scraping is continued until nothing but an exceedingly thin portion of the nail remains, which can be easily removed by a small scissors. The patient can now be considered cured, without having lost a drop of blood nor felt any pain.—*Med. Press and Circular*.—*Am. Druggist*, 1895, xxvii, 351.

TYPHOID BACILLUS IN THE URINE.—Messrs. Wright and Semple, two English physicians, have recently called attention to the fact that typhoid bacilli may often be found in the urine of typhoid patients. They discovered the bacillus of Eberth in six out of seven specimens of urine examined. This fact is thought to explain the frequent occurrence of disease of the kidneys in connection with typhoid. They also direct attention to the importance of thorough disinfection of the urine, as well as the fecal matters, as a means of preventing the extension of the disease.—*Mod. Med.*

ICE APPLICATIONS IN ASPHYXIA.—Drs. B. Beer and A. Foges (*Sem. med.*, 1895, XV, p. cxxx.) In asphyxia, whether due to intoxication (as of morphine or chloroform), to loss of blood, or to purely nervous troubles, the authors recommend the application of pieces of ice to the lips and the nasal mucous membrane, to be repeated at intervals of from two to five seconds. This procedure, it is stated, exercises a strongly stimulating effect upon the respiratory center, and thus rapidly restores the respiratory movements to normal action.—*Am. Med.-Surg. Bulletin*.

NEWS NOTES AND FORMULA.

A SERVICEABLE RULE.—Dr. Goodell never passes a sound into the uterus without first demanding a full history of menstruations. Attention to this rule will often prevent your tendering the designing patient a cheap abortion. Even with a clear history, he repeats the rule of the elder Dr. Goodell: "Cervix hard as the tip of your nose, no pregnancy exists; cervix soft as your lips, pregnancy almost certain to exist."—*Medical World*.

FOR ECZEMA.—Do not wash the lesions with water, but keep the skin clean by wiping with sweet oil. The crusts should be carefully removed with an alkali or oil, and then the following ointment applied :

R Ung. picis.
 Ung. diach.
 Ung. zinci oxidi, aa oz. ii.

Mix. Sig. Apply externally.—*Pediatrics*.

THE TREATMENT OF EPISTAXIS —Gillette says that in epistaxis the use of hydrogen dioxide with any suitable syringe, will be followed by very gratifying results. Use a teaspoonful or more of the remedy, in full strength, and the relief will be immediate. In operations in the nasal cavity, when bleeding obscures the vision, inject the hydrogen dioxide, ask the patient to blow the nose, and the field is clear again.—*Med. Journ.*, 1895, lxii., 695.

Dr. Culley writes to the *Medical Record* that he has a method for the relief of enlarged prostate equal to castration. It consists in the injection of cocaine directly into the testicle twice a week for two months. The prostate, he claims, shrinks to its normal size, and the case fully recovers.

"Biliousness" is a contra-indication to the exhibition of iron. "So long as there is a foul tongue, a bad taste in the mouth (as if it could be any place else), and fullness of the liver, with disturbance of the alimentary canal, iron is to be prohibited? it is not only that it is of no service, it positively does harm.—*Med. Age*.

An incident occurred the other day in one of the bacteriological laboratories in Philadelphia, that is really too good to be kept. One of the students was asked the question; "What parasite frequently infests the vagina?" In all seriousness the rising young bacteriologist promptly and confidently answered: "Spermatozoa."—*Med. Age*.

REMOVAL OF BLOOD STAINS.—The best way to remove blood stains, says the *Centralblatt f. Gyn.*, is to soak the towels, etc., in warm water to which a teaspoonful of tartaric acid has been added. No soap is needed.—*Ohio Dental J.*, 1895, xv, 652.

BRONCHITIS.—Lack of secretion.

R Ammonii Chlor., dr. iv.

Liq. Potass, dr ii.

Syr. Aurantii, dr. iii.

Aquae q s ad, oz. iii.

M. Sig. Teaspoonful every three hours.

WARTS.—Chromic acid in strength of one hundred grains to the ounce of water is probably the best application we possess for the destruction of small warts or similar growths. This should be applied on a splinter of wood, match or tooth-pick, and the growth gradually saturated by frequent applications of the acid. In two or three days another application can be made if the first has not proved effective. It is especially to be recommended in venereal condylomata about the glans penis, vulva and anus. *Clinique.*

Carbolic acid in weak solutions is certainly preferable to the bi-chloride for immersing instruments, but even it will impair their edges.

PUBLISHERS' DEPARTMENT.

LAXATIVE.—Probably there is nothing so valuable under all conditions where gentle catharsis is desired, as the familiar preparation known as California Fig Syrup. It is reliable and safe.

J. W. Williams, M. D., Pickens, S. C., writes : Recently I have had an opportunity to test the merits of Tilden's Firwein in two cases of chronic bronchitis, with results far beyond my expectations in both. One of the cases, that of a female twenty-eight years of age, had a very troublesome leucorrhœa at the time, and to my surprise and pleasure was entirely cured of both ailments at once. Hereafter I will certainly prescribe Firwein in preference to the ordinary remedies in such cases.

PERNICIOUS ANEMIA.—This malady so troublesome to the practitioner is much benefited by the use of Ferratin in 5 or 8 grain doses three times daily. Combined with gentle exercise and good nutritous diet this treatment has been found efficacious in many cases.

Patch's Lencognon Tablets in the treatment of diseases peculiar to women will accomplish desired results.

BOOK NOTICES.

THE AMERICAN YEAR BOOK OF MEDICINE AND SURGERY.—A yearly digest of progress made in all branches of Medical and Surgical knowledge compiled from the writings of the leading American and Foreign investigations, under the editorial charge of George M. Gould, M. D. Published by N. B. Saunders, 925 Walnut St., Philadelphia.

It is a lamentable fact that only about 50 per cent. of medical practitioners keep abreast of the progress made in their profession.

They take no medical journals; the books on their shelves are anted and they almost resent the effort on the part of others to move on and "keep up with the times." We do not mean that a physician must buy every new book which appears in order to keep progressing, but he should make a careful choice and buy *some*. We thus far have seen no book which is a whole library of itself like unto this book edited by Gould.

It is a grand epitome of everything in Medicine and Surgery literature appearing during the last year, and we heartily recommend it as a most valuable work for constant reference.

"Practical Urethroscopy," by H. R. Wossodlo, M. D., Berlin, Germany, reprinted from the *Medical Record*.

"Urethroscopy in Chronic Urethritis," by Fred C. Valentine, M. D., New York, reprinted from the *Medical Record*.

"Hyperthermy in a man up to 148 F. (64.4 C.)," by A. Jacobi, M. D., New York, reprinted from the Transaction of the Association of American Physicians.

PRINCIPLES OF SURGERY.—By N. Senn, M. D., Ph. D., LL. D., Professor of Practice of Surgery and Clinical Surgery in Rush Medical College, Chicago; Professor of Surgery in the Chicago Polyclinic; Attending Surgeon to the Presbyterian Hospital; Surgeon-in-Chief to St. Joseph's Hospital; Ex-President American Surgical Association, etc., etc. Second Edition. Thoroughly Revised. Illustrated with 178 Wood-Engravings and Five (5) Colored Plates. Royal Octavo, Pages xvi, 656. Extra Cloth, \$4.50 net; Sheep or Half-Russia, \$5.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

Many of the present works on Surgery are so voluminous that the medical student and young practitioner is discouraged or appalled by the vast amount of detailed practical information which they contain. The right way to study Surgery, as everything else, is to begin at the fundamental principles, and after these have been thoroughly mastered, the task of learning to perform intelligently

the technicalities of detailed work is rendered much less difficult. This principle is well carried out in Dr. Senn's "Principles of Surgery." He discusses systematically the causation, pathology, diagnosis, prognosis, and treatment of the injuries and affections which the surgeon is most frequently called upon to treat. The work is of a size convenient to be handled by students and busy practitioners, and such a volume cannot help but facilitate the student's work in acquiring a thorough knowledge of the fundamental principles of surgery, and also serve as a useful source of information for the busy general practitioner. In this busy century where we pass through ages of experience in a single day, in all professions there is a demand for concise text books in every branch of science; and in the department of Surgery this valuable work of Dr. Senn's fulfils these requirements in every sense of the word. In short no better surgery has yet been published for the needs of the profession at large.

For sale at the U. V. M. by W. J. R. McFARLAND, Agent.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS.—A Manual for the use of Physicians, Surgeons, and Students. By Charles W. Purdy, M. D., Queen's University; Fellow of the Royal College of the Physicians and Surgeons, Kingston; Professor of Urology and Urinary Diagnosis at the Chicago Post Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys;" also of "Diabetes: Its Causes, Symptoms, and Treatment." Second, Revised, Edition. With Numerous Illustrations, including Photo-Engravings and Colored Plates. In one Crown Octavo volume, 360 pages, in Extra Cloth, \$2.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

At the present day when hardly any diagnosis is considered complete without an analysis of the urine, it is of the utmost importance that every medical student should be as thoroughly competent in this branch as in all others. The general practitioner who is not competent to examine the urine in a difficult case is greatly crippled when he has to send off his specimen to be examined by some brother practitioner who is more skilled in this work, and such a man cannot expect to ever become a peer in the profession. Dr. Purdy's Manual of Urinalysis is one of the clearest and most thorough works which have yet been published for assisting the medical student to acquire a thorough knowledge of this branch of medicine. In addition to all the ordinary tests, it gives a thorough treatise on the clinical symptoms and diagnoses of all urinary diseases. Then the appendix is devoted to urinalysis for life insurance, a branch of medicine which has become of no small value to many a practitioner. A thorough acquaintance with such a work will enable a practitioner to make a diagnosis of any disease in which the urine is implicated. The profession may rest well assured, that when they place this work upon the shelves of their medical libraries, they have the best and most complete work that has yet been published on Urinalysis.

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CONTENTS.

PAGE

Some Suggestions concerning the Examination of Blood, By Dr. J. H. Linsley, Burlington, Vt. - - - - -	65
Dr. Edson's Consumption Cure, - - - - -	81
Ferrofin in Anemia and General Debility, - - - - -	82
Gastric Ulcer, - - - - -	84
Editorials, - - - - -	86
Medical Abstracts, - - - - -	88
News, Notes and Formula, - - - - -	92
Book Notices, - - - - -	94
Publisher's Department, - - - - -	95



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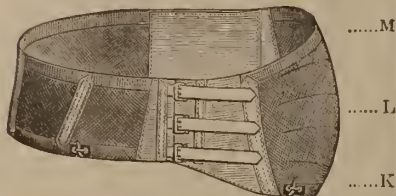
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Official organ of the Vermont State Medical Society.

Vol. II.

MARCH, 1896.

No. 3

(Original Papers.)

SOME SUGGESTIONS CONCERNING THE EXAMINATION OF BLOOD.*

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Members of the Vermont State Medical Society :—

Section I, Article I of our By-Laws, referring to the duties of the President, contains the following : “He shall deliver, or cause to be read, an address or dissertation on some medical subject at the annual meeting.”

In discharging this duty I desire to call your attention to a very few ethical matters before taking up the text proper of this address.

It is a cause for mutual congratulation that the proportion of attendance to the total membership is steadily increasing. Now while this is a very commendable condition, the fact remains that this proportion is still far short of what it should be, ought to be, and *would* be, if every member would feel the individual responsibility in the Society's success which his signing of the Constitution implies.

*President's Address before the Vermont Medical Society at the 82nd Annual Meeting

Another evidence of increasing interest is the greater willingness on the part of the members to prepare and read papers at our meetings. But a few years since it was a matter of some considerable difficulty on the part of the Executive Committee to secure papers enough to fill out the programme for two days, but considerable maneuvering is now necessary to see that all papers prepared shall have adequate time for their delivery and discussion. Indeed so pressing has become this lack of time, that I seriously advise longer sessions, preferably by having the meetings extend from 2 o'clock Wednesdays, instead of 10 o'clock on Thursdays, as at present. It may be said in this connection that those papers scheduled for presentation at the final, or Friday afternoon sessions, receive but scant attendance, a circumstance which is discouraging to their writers. I feel confident that this would be remedied by the establishment of longer sessions.

I would also suggest for your thoughtful consideration—in line with the matter of extended sessions—the desirability of the arrangement of the papers under the head of *sections*.

For instance: Having all papers on surgical topics read at one day's, or half-day's session, those on purely medical at another, gynaecological at a third, and so on. In this way those of us who were interested in any one line especially, would not be compelled to be in attendance during the entire three-days session in order to hear such papers of especial interest which might be scattered over the time of the whole meeting.

Again I wish to express my appreciation and gratitude for the efforts of those members of our profession who have come from abroad to entertain and instruct us in matters pertaining to their specialties, in the practice of which they are recognized authorities, and to call your attention to the great advantage, to most of us, in having several metropolitan physicians and surgeons with us at each annual meeting. I believe the adoption of such a course would prove of benefit alike to visitors and members.

* * * * *

I have selected as the text of this address, "Some suggestions concerning the examination of blood." This theme was chosen for three reasons: First, because I have given attention to the subject for some time; second, its great importance; and third, the very slight consideration given the matter by the average practitioner.

Many physicians are deterred from making blood-examinations by the supposed difficulty of technique in the work, and the instruments and paraphernalia necessary for its conduct.

I shall endeavor to show that this conception of the matter is incorrect, and that a vast amount of exceedingly valuable information concerning the condition of our patient can be obtained by the examination of a drop of blood, with no greater outfit than a good microscope, clean cover-glass and slide, a little vaseline, a slip of paper, and a steel pen.

First, a cover-glass and slide are carefully cleaned. A piece of ordinary writing paper is then folded into a triangular shape, and after taking up a small quantity of vaseline on the point of the paper, a narrow, thin film of the vaseline is placed around the edge of the cover-glass. The end of one of the index fingers is carefully cleansed with water (it is better to employ a nail-brush in doing this), and the finger pricked by a sharp, rapid movement of the arm of the operator, the instrument used being either a needle, which has been previously sterilized in a flame, or a new, sharp-pointed steel pen, one of the points of which has been broken off.

As soon as a small drop of blood has collected, the glass-slide is brought in contact with the same, the slide placed on a level surface, and, as soon as possible, the cover glass placed over the blood—vaseline side down—and sufficient gentle pressure made over the cover-glass to produce a contact everywhere between the border of vaseline and the slide. In this simple manner a most effective moist chamber is provided, which is completely sealed by the vaseline, and in which the blood will remain in a suitable condition for microscopical investigation for several hours.

Another method much employed, and especially useful where staining is desired, is the *dry* process. A clean cover-glass is brought in contact with the summit of the drop of blood, obtained in the manner I have described, quickly removed, and a second cover-glass—or the end of a glass-slide—is immediately drawn across the blood, producing a thin, flat layer which dries almost at once. The preparation is then kept for ten or fifteen minutes at a temperature of 110° to 120° C., and is then ready for whatever staining is desired.

Before proceeding, allow me to call your attention, briefly, to the composition of normal blood, and to suggest the absolute necessity of

familiarity on the part of the investigator, with the condition and appearance of normal blood.

For present purposes the chemistry of the liquor sanguinis and corpuscles, with the exception of haemoglobin, need not be considered, I prefer to deal only with the corpuscular elements.

As you all know, the cells of the blood are of two great classes,—the colored, or red, and the colorless, or white. I prefer the terms "colored" or "colorless" because none of the individual corpuscles are "red," but only a slight shade of amber, or yellow, while the others are devoid of color.

The normal colored blood corpuscle of man is a bi-concave circular disc, having an average diameter of $\frac{1}{3250}$ of an inch. This diameter is liable to great variations—at least $\frac{1}{3}$ in the same individual, and persons differ very much in the variance in size of their colored corpuscles. In some, the examination of thousands of cells will show no appreciable difference, while in others, the most remarkable variety of sizes is seen. I am not satisfied that this variability in size is of any pathological significance.

The same can not be said from a *medico-legal* standpoint. Given a suspected blood-stain, on or about the clothing of an accused, or implements, or utensils supposed to have been used by him at the time of an assault, and the investigator finds but a few colored blood-corpuscles, which are, apparently, of the same size as human colored blood-cells; *can the physician, however expert, go on the witness stand and conscientiously swear that they are even probably human blood-corpuscles?* In the light of our present knowledge of this subject, I say *he can not*. It may be said in opposition to this statement that with proper micrometers the exact size of the corpuscles can be measured. Now it is a fact that only a very expert microscopist can make such a measurement accurately, and even then there is the liability to error as was shown by Ewell.* This expert ruled a glass-slide with 15 lines, making spaces approximately of $\frac{1}{250}$ to $\frac{1}{125}$ of an inch, and caused the same to be measured by six well-known microscopists, who were instructed to take *the mean of at least 5 measurements of each space*. Using standard micrometers by the same maker, the result showed that the measurements of the same space by different observers varied from 0. to 1.9090. This is a *greater difference than that between the average*

*System of Legal Medicine, Allan McL. Hamilton, p. 175.

diameters of the blood-corpuscles of man, and any of the common domestic animals, except the sheep and goat, according to all observers.

Again it is not always possible to restore to corpuscles which have become dried in a stain, their normal diameter, after the most approved treatment of the same.

It is to be greatly regretted, in the cause of justice, that notwithstanding the facts just given, we often see medical men, with but a moderate amount of microscopical acumen, go on the witness stand and declare, with positiveness, as to the origin of a few colored blood-corpuscles which they had found in a suspected stain.

Nay,—I can go farther and point to the spectacle of a professional man, with but the most meagre knowledge of microscopical technique, posing as an expert, and giving testimony of the nature I have just indicated. The citation of a case in point may be pertinent.

“ In the case of *Commonwealth vs. Piper*, tried in Boston in 1875, the defendant, a sexton, was charged with the murder of a child in the belfry of his church. Certain articles having upon them suspicious stains, were placed in the hands of several local experts for examination. Among the specimens was about a half-pint of water found in a pitcher in the basement, in which it was thought that the prisoner had washed his bloody hands. A short time previous to the trial, the experts, four in number, made their report of the results of their examination to the prosecuting officers, and every one of the four stated that the water contained blood-corpuscles which measured on the average about 1-3300 of an inch in diameter. This evidence was not given at the trial, because the government decided not to introduce any testimony in relation to blood, but the results stated in the report would undoubtedly have been given if it had been called for. A portion of the water was critically examined by Prof. Wormley, and the bodies which had been confidently measured as corpuscles were proved to be merely the *spores of a confervoid alga*.” We could, therefore, find in stagnant water, in drainage, surface pools, some springs, and in many other places, these bodies which are of the same diameter as the human colored blood-corpuscles, and resemble them so closely as to have been mistaken for them by experts, as I have quoted.

The number of colored blood-corpuscles in man, is about 5,000,000 per cubic m. m., (or about one drop) in the male, and 500,000 less in the female.

The number is ascertained by the use of a Haemocytometer—that devised by Thoma and Zeiss being the most practical in use.

It consists, as you see, of a capillary tube of glass about 10 cm. long, expanding in its upper $\frac{1}{3}$ to a bulb in which lies a small glass ball. The lower end of the tube is furnished with a scale graduated in parts numbered 0.5 1., up to 101. With this instrument is used a counting chamber invented by Abbé and Zeiss. This is a glass receptacle cemented upon a glass slide—it is exactly 0.1 m. m. in depth, and its floor is marked out into microscopic squares. The space overlying each square—1.4000 m. m., and the squares are portioned out in groups of 16 by paliner parallel lines.

To use the apparatus a puncture is made in the end of the finger, in the manner I have already described. Blood from the top of the exuding drop is then sucked into the tube until it reaches the mark 0.5 or 10. The point of the tube is then wiped, and a 3 per cent sol. of common salt (or Hayem's Sol.*) sucked in until the fluid has risen to the point marked 101.

The contents of the tube are then thoroughly mixed, and the column of fluid in the capillary tube is removed by blowing into the tube, as the blood would not mix with the solution of salt.

This precaution is obviously imperative. The hollow cell of the slide is next filled with the mixed blood and salt solution, care being taken to guard against the admission of air bubbles, and the cover-glass accurately adjusted. The preparation is left to stand for some minutes, so as to allow of intimate admixture of its parts, after which it is placed under the microscope, and examined with a low power, to see if any air-bubbles or foreign bodies—such as epithelium, etc.—are present in it, and whether the corpuscles are pretty evenly distributed through the fluid. The latter are then counted under high power. In doing this the number in 16 squares is counted, and from this the average is estimated.

The estimation of the total number of corpuscles is conducted as follows: If the blood in the tube reached to the point 0.5, its proportion in the mixed solution will be 1.200; if to the point 1.0, 1.100. Multiply the number of corpuscles counted in all the squares by 4000 (1.4000 being the cubic contents overlying a square) and the result by

*Hayem's Solution:—1 grm. of chloride of sodium, 5 grms. of sodic sulphate, 0.5 grm. corrosive sublimate, and 200 grms. distilled water.

100 or 200, according to the degree of dilution, then divide the product by the number of squares taken, and the result gives the number of colored blood-corpuscles contained in a cubic m. m. of blood.

Soon after blood is shed, the colored corpuscles become adhered to each other at their broader surfaces forming rouleaux, or rolls.

The extent and rapidity with which this peculiar form of massing of the colored corpuscles takes place varies, apparently, according to the amount of fibrin present—the greater the amount of the latter the sooner and more rapidly will rouleaux be formed. The cause of this phenomenon is not yet accurately determined. After a short time, under ordinary conditions, the cells lose the roll-formation, and become more or less separated from each other.

The adult colored blood-corpuscles of the mammalia (with the exception of the camel family), have no nuclei. This is not true in very early life, and in some forms of anaemia, when a nucleus is observed in many of the colored corpuscles.

The presence or absence of a cell-wall is still a matter of dispute, although I believe the weight of authority is now in favor of considering the colored blood-corpuscle as simply consisting of a pale, transparent, plastic, and homogeneous stroma charged with coloring matter, or haemoglobin.

The colorless, or so-called "white" blood-cells are not peculiar to the blood, as their origin is the lymphoid tissues, from which they pass into the lymphatic circulation, and then into the blood. They are also called "leucocytes," "lymph-corpuscles," "lymphoid-cells," "leucoblasts," "amoeboid," or "wandering cells," and are nearly similar in structure—though differing in function from—the pus corpuscle.

Two chief varieties of the colorless blood-corpuscle are found in normal human blood; namely, the granular and the paler, less granular variety. Ehrlich describes five varieties of colorless blood-corpuscles, and Prudden relies upon the determination of an increase in number of one variety or another, in diagnosing the various morbid conditions accompanied by, or dependent upon, leucocytic hyperplasia.

There is a great diversity of shape, size and structure of these cells; much more so, in fact, than is the case with the colored cells. In every instance they are composed of living matter, or differentiated protoplasm, or "bioplasm," (Beale), or "bioplasson" (Heitzmann).

The active living matter of the colorless blood-corpucle is arranged in a more or less well-defined and compact delicate net-work, or reticulum. The appearance of the material composing these cells is liable to great variations, and, to the experienced eye, offers a very certain index to the general condition of the person from whom it came. In the healthy, strong, and robust constitution, these colorless corpuscles are comparatively small, the reticulation very slightly, if at all, perceptible, no nucleus is visible, usually, and the active living matter, or bioplasm, is very bright and highly refractive. On the other hand, in one of these corpuscles taken from a person broken down in health, or after long and wasting sickness, the cell is large, finely granular, one or more nuclei are present, the cell contains a greater or less number of vacuoles, and the living matter presents a dull lustreless appearance, very little refractive, and presenting a picture vastly different from the one first drawn. Between the two there are many grades, or conditions, depending, apparently, upon the general condition of the individual from whom they were taken.

The average size of the colorless blood-corpucle is usually given as 1-2500 of an inch.

To be sure my work in this line has not as yet been very extensive, but in the considerable number of specimens which I have thus far investigated, in every instance have I been enabled to form an intelligent opinion of the constitutional condition of the patient, and in selecting cases to examine, in order to verify this theory, (which is not at all my own), I have been uniformly successful in demonstrating the apparent relation between the person's condition and the appearance of the protoplasm of the colorless blood-corpucles.

The theory has been advanced that the activity displayed by the colorless blood-corpucles on a properly warmed stage, and surrounded by an appropriate medium, would indicate, more or less accurately, the vitality of the individual;—that the greater the vitality of the person, the more active the movements of the leucocyte. As so many conditions, such as pressure, electricity, temperature and probably bacterial ptomaines, etc., affect the cell, an intelligent opinion can not be formed from these premises.

The relative number of the colorless to the colored blood-corpucles in healthy human blood is about 1.350, although this is liable to great variation in different individuals, and in the same person at dif-

ferent times of the 24 hours:—the proportion of leucocytes being greater during digestion, and less during periods of fasting. The number of the colorless blood-corpuscles is determined by the use of the Thoma-Zeiss apparatus already described. Instead of diluting the blood with the salt solution, as in the case of counting the colored corpuscles, Thoma dilutes the blood with water containing $\frac{1}{3}$ per cent. sol. glacial acetic acid in the proportion of 1 to 10. In this way the colored corpuscles are destroyed, and the leucocytes alone remain in the field of vision.

The colorless blood-corpuscle usually contains a single nucleus, though rarely, this is multiple. The nucleus may or may not be visible. The addition of acetic acid has the same effect on this cell that it has on all other nucleated cells of the body,—namely that of making the nucleus prominent.

The action of the colorless blood-cell seems to be two-fold. Aside from being a reserve of active protoplasm, to be called upon to repair the normal waste of the body, as well as the destructive processes of disease, certain of these corpuscles, *i. e.* the *phagocytes* of Metschnikoff, seems to have an especially aggressive action against offending foreign substances, including possibly a successful combat with pathogenic microbes.

BLOOD-PLATELETS.

The blood-platelets, first described by Bizozzero, are small, irregular, more or less refractive masses of protoplasm, the nature of which is still a matter of dispute. They are very unstable, tend to disintegrate, and vary in size, having about an average diameter of one-third that of the colored blood-corpuscle.

Heitzmann believes that the blood-platelets are offshoots from the colored corpuscle, and that their presence, to any extent, is evidence of a below-par condition of the individual. So far as I have studied this matter I am inclined to agree with this observer.

Certain it is that one may see, in many a specimen of fresh blood, without the addition of any reagent, the separation from the colored corpuscles of little masses of protoplasm, which, when entirely divided from the parent-cell, and after parting with their color, present every peculiarity to, and are, apparently; identical with Bizozzero's blood-platelets. Then too, in those cases in which the structure of the color-

less blood-corpuscle was such as to indicate a condition of the individual below the average of health, I have observed an increase of these platelets.

The identity of these bodies with the so-called "microcytes," or "small haemoglobin-containing elements," found in many morbid states, is suggested. The greatest difference between the latter and the platelets, aside from that of size, is the presence of haemoglobin in the former, and yet the fragment that I have mentioned, which separates from the colored corpuscle, very soon parts with its haemoglobin after complete isolation from the cell.

In cases approaching death, the exceedingly rapid formation of these bodies can often—if not always—be seen, as I have demonstrated to one of our fellow-members.

According to Halliburton, the blood-platelets, or tablets, are only found in the blood of mammals. Gibson believes that these blood-plates which he calls *colorless microcytes*, are derived from the nucleus of young red blood-cells, or, occasionally, from the nucleus of white corpuscles.

The nature of these small blood elements is so little understood, that I am not aware that any considerable pathological significance has heretofore been attached to them.

HAEMOGLOBIN.

Haemoglobin is a crystallizable body which forms by far the greatest part of the colored blood-corpuscles. It is intimately distributed throughout the stroma of the cell, and must be dissolved out before it will undergo crystallization. Its most interesting properties are its power of crystallizing, and its attraction for oxygen and other gases. The haemoglobin of human blood crystallizes with difficulty.

The determination of the amount of haemoglobin, or blood coloring matter, is easily, and fairly satisfactorily obtained by the use of this instrument—Von Fleischel's Haemometer. The application of this instrument depends upon the principle that the color of the blood, diluted with water, may be compared with that of a glass wedge tinted with Cassius's golden-purple, or some pigment. Its essential part is the red glass wedge, which is mounted movably beneath a platform like that of a microscope, with a circular opening in its center. Upon this the light from a gas or oil lamp (daylight cannot be used) is projected, by a plate of plaster of Paris. Above the wedge, and exactly over the

circular opening in the platform, is fixed a metallic tube 1.5 cm. long, closed at the bottom with a plate of glass, and divided by a vertical metallic partition, so that one half of the metallic tube receives its light through the red glass wedge, the other directly from the white reflector. When the apparatus is in use, the former of these compartments is filled with pure water, the other with water mixed with a known quantity of blood.

To secure this known quantity, Von Fleischl has designed an automatic blood-pipette, of such a capacity that, when healthy blood is used the resulting mixture corresponds in color to that derived from the part of the red glass wedge which is marked 100. From this point to its sharp edge (where it stands) the wedge is graduated in 10 divisions which represent its diminishing thickness, the numbers 90, 80, etc., being marked on the apparatus. The instrument is employed thus: The blood is obtained from a puncture in the finger, and placed by means of the pipette in the proper compartment of the tube. Both compartments are then filled with water, and the red glass wedge is moved until the two fluids show an equal intensity of red color. The number indicated on the scale is then read off.

Suppose this should be 80, then the blood examined contains but 80 per cent. of the normal proportion of haemoglobin, or the quantity of haemoglobin to that of healthy blood is as 80:100.

The instrument is not an expensive one, can easily be obtained, and is of very practical utility.

SPECTROSCOPE.

The presence of haemoglobin, or of one of its derivatives can be positively detected by the use of the spectroscope *only* by an expert manipulator with this instrument, and I therefore will not dwell on this method for the detection of blood-coloring matter.

GUAIACUM TEST.

In applying this test for blood-coloring matter, a drop of the blood solution (or a solution of a suspected stain,) placed over a white surface, or in a porcelain dish, is first treated with a drop of fresh tincture of gum guaiac, and then a drop of ozonic ether added, when, even if only a trace of the coloring matter of the blood be present, a blue color will immediately, or very quickly, appear. A drop of 1 to 1000th sol.

of blood will thus immediately yield a decided blue coloration ; and a 1 to 5000th sol. a quite distinct reaction. If on a white fabric, the test may be applied directly to the stain, by first moistening the latter with a drop of water, before the addition of the guiac. This test will react even with very old stains, provided they are first well moistened with water ; and even when the stains have been washed, evidence of their nature may be obtained.

HAEMIN TEST.

When the blood is in solution, a drop of the liquid is evaporated to dryness on a thin glass slide, or in a watch-glass, the residue scraped together and pulverized, a trace of finely powdered salt added, and then a drop or two of glacial acetic acid. The heat of a small flame of a spirit lamp is now applied to the mixture, first around and slightly beyond the edges of the disposed liquid, until it has collected beyond the edges of the slide in the form of a globule. This is then heated until bubbles of gas appear and the liquid acquires a reddish-brown color, when the heat is gradually withdrawn until only a minute portion of liquid remains, this being allowed to evaporate by the heat of the slide.

The residue thus obtained usually consists of brownish-red lines or stains, more or less curved or circular in form. Under the microscope the haemin will appear as minute crystals, of a yellowish, reddish or brown color, more or less transparent, and frequently arranged in the form of stellate groups. When from only a minute quantity of blood, the crystals are single, and usually range in size from 1-1200th to 1-1800th of an inch in length, and from 1-6000th to 1-12000th of an inch in width.

With care, crystals may be obtained from even the 1-1000th of a grain of blood.

Regarding the relative merits of the two tests just described, Prof. Wormley, in answer to an inquiry made some time since, writes me :—
“I think it possible to have an old blood stain from which a certain maceration in water would fail to yield sufficient coloring matter to the fluid to react with the Guaiacum test, and yet the same stain, under proper treatment, might yield satisfactory results under the Haemin test. If the Guaiacum reagents are in proper condition, this test would, I think, give a positive reaction with a more minute quantity of blood-

coloring matter *when in solution*, than, perhaps, any of the other chemical tests used for this purpose."

I would submit the following propositions in summarizing:—

First—The medical expert can not state positively that a certain stain has been made by human blood.

Second—It can not be stated that a certain blood-stain was *not* made by the blood of any one of the lower animals, except the sheep and goat.

Third—That in measuring the blood-corpuscles at least 300 or 400 should be used in the determination.

Fourth—It is possible to determine that a given stain is of mammalian blood, (excepting that of the camel family).

Fifth—If the witness is able to say that "stains are of mammalian blood and that the diameters of the corpuscles are consistent with human blood," and if he expressly states that they may be of other blood, he is giving testimony which will doubtless be accorded the weight to which it is entitled, and which cannot be effectively contradicted by the defence. (Hamilton).

When I first began preparing this paper, it was my intention to treat my subject more exhaustively, but almost before a good introduction is reached, I find the time usually considered requisite for the president's address, consumed. The field which I have entered is a large and fertile one, and, I assure you, a rich harvest indeed awaits the patient laborer in its domain. To at all properly consider the subject of clinical blood-examination would require two papers, and it was the cognizance of this fact that led me to select the title of the present address.

I had hoped to be able to bring to your notice many valuable facts in connection with this subject, such as the condition of the blood in malaria, in appendicitis, anaemia, chlorosis, etc., etc., but time forbids. I might say, by way of parenthesis, that differential diagnoses between appendicitis and typhoid fever are being made in some of our hospitals, entirely by blood-examinations.

I am afraid it is often the case that many medical men look at the assertions and suggestions of a microscopist with more or less incredulity. That there has been some excuse for such skepticism, in the immoderate claims made by some over-zealous and unscrupulous investigators, I admit, but I also insist that I have an abiding faith in my

ability to convince the rankest unbeliever, by an hour's laboratory communication with him, of the great clinical value of an intelligent microscopical examination of the blood.

(I will now exhibit a few lantern slides of drawings made from preparations of blood demonstrating some of the points suggested in my paper. See below.)

263 So. Union St.

Burlington, Vt., Sept. 1895.

Note.—Reference to the following works has been made in the preparation of this address :

Clinical Diagnosis—von Jaksch.

Microscopical Morphology—Heitzmann.

System of Legal Medicine—Hamilton and others.

Micro-chemistry of Poisons—Wormley.

Normal Histology—Piersol.

Kirk's Handbook of Physiology, 13th edition.

Landois & Sterling's Physiology.

Text-book of Chemical Physiology and Pathology—Halliburton.

Pathological Anatomy and Histology—Delafield & Prudden.

SOME BLOOD CORPUSCLES.

I



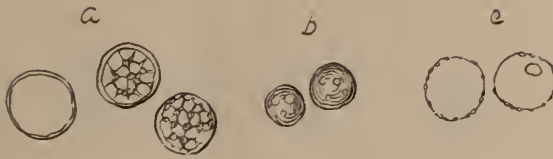
Fresh blood of Dr. A. D. W. kept in a moist chamber.

a—Colored corpuscles, smooth, crenated and on edge.

b—Haematoblasts, smooth and slightly thorny.

c—Colorless corpuscles—in amoeboid change—*no platelets.*

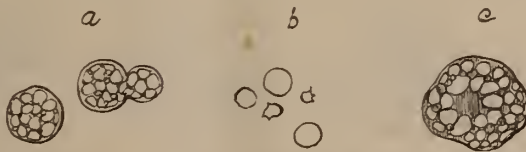
II



Fresh blood Dr. W. kept in moist chamber 48 hours.

- a*—Colored blood cells—hydropic—showing reticulation after extraction of haemoglobin by its own serum.
b—Haematoblasts; vacuolated.
c—Ghosts of colored blood cells.

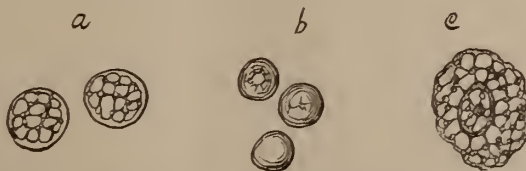
III



Fresh acid urine of Mrs. J. L. S. kept over night.

- a*—Colored blood cells—distinctly reticulated, partly budding, haemoglobin extracted.
b—Blood platelets.
c—Pus corpuscle.

IV



Sediment acid urine from haemorrhagic pyelitis due to calcium oxalate calculus, fixed with 1-5 of 1 per cent. chromic acid and preserved for 10 years in glycerin.

- a*—Colored corpuscle—distinctly reticulated.
b—Haematoblasts—abundant.
c—Pus corpuscles (poor constitution).

V



Fresh acid urine of Mrs. L. J. H. (Spec. grav. 1024) kept over night.

a—Colored blood cell.

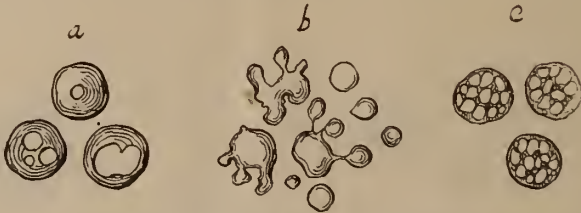
b—Pus corpuscles of excellent constitution (scarce).

c—Pus corpuscles of good constitution.

d—Pus corpuscles of middling constitution.

e—Pus corpuscles of poor constitution.

VI



Fresh blood of J. H. L. in moist chamber mixed with a 50 per cent. sol. (saturated) of bichlorate of potassium.

a—Vacuolation of colored corpuscles.

b—Crenation and formation of platelets.

c—Reticulation of colored blood corpuscles.

FOREIGN BODIES are frequently swallowed by children. They need cause no uneasiness. Pins, safety-pins, pebbles, jackstones, all will pass through, and the child will be unharmed. The only danger results as a rule from the castor-oil, with which the child is usually dosed. Instead, leave the bowels at rest, and give gruels, crackers, baked potatoes—sweet potatoes are best - milk; anything which will constipate the child and make a pultaceous mass, in which the foreign body will be embedded and thus carried through. Foreign bodies may stick in the throat. Coins are most frequently caught in this way. The child is unable to swallow after the accident. He should receive an emetic or the coin-catcher should be introduced. This is a basket-like affair easily used. I recall a case in which a one-cent and two-cent piece were at the same time removed by this instrument.—*Dr. Abbe in Nursing Record.*

DR. EDSON'S CONSUMPTION CURE.—ASEPTOLIN.

It has been known for some months that Dr. Cyrus Edson of New York, has been at work on a line of investigation with the object of developing a specific cure for tubercular consumption. He has now made public the results of his research and experiments.

The Doctor observed, by analyzing various physiological secretions, that when the system is invaded by disease germs the amount of phenol secreted by the organism is greatly increased. He also observed that the phenol seemed to be able to destroy the disease germs, in reasonable quantities.

The next step in the problem was to find a form of phenol and method of administering it that would destroy the disease germs without injuring the individual. After patient experimentation the Doctor finally found, as he thinks, a composition as follows to be entirely satisfactory, to which he has given the name of Aseptolin.

	Per Cent.
Water (H ₂ O).....	97.2411
Phenol (C ₆ H ₇ O).....	2.7401
Pilocarpine-phenyl-hydroxide (C ₁₁ H ₁₆ N ₂ O ₂ O.H.C ₆ H ₅).....	0.0188
Total.....	100.

The composition of pilocarpine-phenyl-hydroxide (C₁₁H₁₆N₂O₂O.H.C₆H₅), deduced by calculation, was found to be this:

	Per Cent.
Pilocarpine (C ₁₁ H ₁₆ N ₂ O ₂).....	53.92
Phenol (C ₆ H ₇ O).....	46.08
Total.....	100.

The solution is described as a colorless fluid, strongly refracting light, having the odor and taste of phenol. Injected under the skin, it causes a sharp, burning pain, not so severe as that following an injection of bichloride of mercury in solution. In the great majority of cases the injection is not followed by any local irritation. Of the effect of hypodermic injections of aseptolin Dr. Edson writes:

“The effect of the solution when injected into the organism of a patient suffering from disease caused by active germ infection is to directly inhibit bacterial development, and consequently to diminish the production of poisonous bacterial products. Its beneficial effects are so quick and positive, in the great majority of cases, as to convince anyone who uses it of the correctness of this conclusion. Phenol and pilocarpine phenate both stimulate glandular activity, and exert a physiological effect in this direction over the range of which they act synergistically. It follows, therefore, that the remedy stimulates the production of the leucocytes.

“Experience certainly has taught us that stomach derangement in cases of phthisis, if not speedily remedied, very quickly results in the death of the sufferer.

It is right here that I claim an enormous advantage for the treatment that I am using. It enables us to save the stomach for alimantal purposes alone, and by giving easily digested, rapidly assimilated and highly nourishing food, a very great factor in a favorable result is secured.

"The dosage, so far as I have been able to formulate it, in a case of phthisis, should begin with fifty to seventy minims daily, given in the abdominal parietes in a single injection. This dose should be increased about ten minims daily, until one hundred or one hundred and twenty minims is reached. Thus, commencing with a dose, say, of seventy minims on the first day of treatment, on the second day eighty minims should be given, on the third ninety, and on the fourth one hundred.

"This latter dose should be kept up daily until the patient has recovered or until some symptoms appear which indicate to the attending physician the discontinuance of the fluid. This would probably be the case if, for instance, albumen should appear in the urine, or, if unusual nervous systems should develop, or, if persisting nausea should be present, or if any symptom which was evidence of a personal idiosyncrasy against the remedy should show itself."

The new remedy has been used upon a large number of cases, not only of consumption, but also of malaria and other diseases of specific germ origin, with astonishing success. We shall report the progress that is made from time to time.—*From The Med. World.*

FERRATIN IN ANEMIA AND GENERAL DEBILITY.

BY J. S. PEREKHAN, M. D.

Attending Gynaecologist Lakeside Hospital, Chicago.

The writer's experience with ferratin in cases of anemia and general debility from malnutrition, and especially in one case of chronic malarial poisoning, has resulted most happily. The above mentioned favorable reports were confirmed, the drug was easily taken, and the improvement in weight, appetite and general state of health was most strikingly demonstrated. Excretion of urea and solids by the kidneys was increased under its influence.

In one case of malarial poisoning without chills, fever or distinct malarial paroxysm and in which the plasmodium malariae was found in the blood and confirmed by Dr. Frank A. Johnson, of this city, the patient suffered from excruciating neuralgic headache, hallucination, disturbed vision, ringing in the ears, diarrhea in the morning, disturbed and unrefreshing sleep, pain in the back, knees and along the sciatic nerve, tickling and burning of the hands and feet. After giving her quinine with a tonic of iron, strychnia and arsenic for nearly six weeks,

the above mentioned symptoms continued although in a somewhat milder form. Ferratin was substituted for the other tonics in half gramme doses three times daily, and 3 grain quinine capsules were given in the morning and sometimes at noon. The improvement after the use of ferratin for one week was apparent, and in two weeks all hallucinations and delusions disappeared.

The following case of anemia is reported because the improvement under the use of ferratin was so striking as to merit a special mention :

Miss S. G., aged seventeen, of good family history, had previous to April, 1895, enjoyed excellent health, and weighed 140 pounds. Menstruated at fourteen, always regular. April last, after an attack of grippe, she quickly became anemic, lost her appetite, felt languid and tired after the least physical exercise. Catamenia gradually diminished, and the last menstruation occurred nearly three months previous to her coming under my observation. Had received various treatments for over seven months without benefit. Her condition on November 15, was as follows : Face pale, of waxy color, lips and conjunctiva almost white, complained of headache, insomnia, constipation, shortness of breath on the slightest exertion, palpitation of the heart, bad appetite, etc. Physical examination of the lungs and heart, with the exception of anemic bruit in the neck and over the pericardia, was negative.

Ferratin was ordered in $\frac{1}{2}$ gramme doses, increasing to a gramme three times daily, with instructions as to hygienic regulations, nourishing food and moderate exercise.

The patient began to improve after the first week. Gradually her appetite returned, headaches and insomnia disappearing, and the red color was restored to her lips and face. December 23, menstruated but slightly, flow lasting two days.

The urine was examined for albumin and sugar with negative result. The sp. gr., urea and solids at intervals were as follows :

	Sp. Gr.	Quantity ounces.	Solids grs.	Urea grs.
November 16.....	1010	25	275	125
November 26.....	1014	30	462	200
December 10.....	1017	34	635	272
December 24.....	1020	37	814	340

The red blood corpuscle count showed the following results : November 16, 2,100,000 per ccm.; December 6, 2,800,000 per ccm.; December 25, 4,150,000 per ccm.

Ferratin can be safely recommended as a hematinic remedy, but suitable diet, hygiene and exercise are not to be neglected.

GASTRIC ULCER.

It is a disease of adult life, between fifteen and thirty being the most common age.

It occurs most frequently associated with some other trouble ; in the female with (*a*) chlorosis, (*b*) anæmia, (*c*) hysteria, (*d*) grave menstrual disturbances, (*e*) tuberculosis, and (*f*) diseases of the heart and blood vessels ; in the male with (*a*) neurasthenia, (*b*) syphilis, (*c*) tuberculosis, (*d*) endocarditis, endarteritis or atheroma.

Hyperacidity of the gastric juice invariably accompanies the disease ; determined by (*a*) acid eructations with heartburn, or more accurately by (*b*) the use of a stomach tube and examination chemically for excess of acid ; more than 0.24 per cent is an excess.

Pain almost invariably accompanies it ; of peculiar character ; (*a*) usually sharp or lancinating, or (*b*) rarely dull or gnawing—always localized ; as (*a*) at the ensiform cartilage and left parasternal line, (*b*) about the middle of the dorsal vertebræ, behind, (*c*) at the umbilicus or (*d*) at the angle of the scapula. Care must be taken not to mistake an intercostal neuralgia for the last named. The pain has a distinct connection with the taking of food ; no food, no pain. Pressure increases it—so women abandon corsets, men loosen their pantaloons.

Individuals who habitually feel pain only in lying upon the back or upon the left side, and who may be relieved by lying upon the face or right side, are probably subjects of gastric ulcer.—*Whittaker*.

Vomiting is almost universally a prominent symptom. It relieves the pain. Irritant food invariably causes pain and usually emesis.

Hæmatemesis of more than a teaspoonful of blood almost infallibly means ulcer or cancer. In ulcer the blood may be thrown up (*a*) most frequently in red fluid form or bright clots, (*b*) as reddish brown granular masses or (*c*) coffee-ground vomit.

Evidences of internal hemorrhage, viz : collapse, vertigo, faintness, etc., occurring in a case of supposed gastric ulcer, followed by blood in the stools (as demonstrated by microscopical examination of the dark, suspicious masses) in from twelve to seventy-two hours, may be taken as proof of the correctness of the diagnosis if not easily referable to other cause.

The urine shows an increase in its alkaline reaction and almost total absence of chlorides as shown by the nitrate of silver test.

Cirrhosis of the liver (and those very rare cases of ulceration into the varicose, venous plexuses of the esophagus) is the only other cause of marked hematemesis besides ulcer and cancer. It is easily recognized by (a) a history of the excessive use of alcohol, (b) the existence of dropsy, enlarged veins, etc., and (c) it is rare.

Care must be taken not to confound ulcer with (a) cancer of the stomach, (b) simple gastralgia and (c) gastric catarrh.

(a) Cancer is characterized by a complete absence or marked diminution of hydrochloric acid, instead of an increase; by a permanent loss of appetite instead of a variable one; by a tongue furred instead of red as in ulcer; by a pain which is not localized, and is less intense than in ulcer; by a late cachexia; by the age—forty to sixty years, and by the presence of a tumor easily felt when the patient is emaciated.

(b) Gastralgia gives a pale tongue; belching of much odorless gas; queer sensations at the stomach; a pain irregular in intensity, and variable in location; epigastric pulsation—nearly always present; a normal amount of hydrochloric acid; marked constipation, and the absence of hemorrhage and frequent vomiting.

(c) Gastric catarrh presents vomiting but no blood (except occasional streaks from much straining); mucus in great quantities spit up; vertigo a stomacho leso (stomachic vertigo) of Trousseau; distension of stomach with gas; marked palpitation of the heart (frequently but not invariably); fetid eructations; hypochondriasis; and reduced quantity of hydrochloric acid.—*Amer. Jour. Surg. and Gyn.*

The Vermont Medical Monthly,

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Medical Sciences.*

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EDITORIALS.

THE AMERICAN MEDICAL ASSOCIATION MEETING.

The American Medical Association will hold its annual meeting, beginning May 5, at Atlanta.

Considerable interest is felt in certain quarters as to the result of the meeting, and if straws tell which way the wind blows, it will be a stormy session.

For several years, according to one of our esteemed contemporaries, a feeling has been growing, to the effect that the present code was not liberal enough, nor consistent with true progress in the science of medicine. That this feeling does exist we cannot deny and the state of affairs in New York alone is sufficient evidence of its presence. We

believe, however, that the hatchet will soon be buried and all differences adjusted without the humiliation of either faction.

Sincerely do we hope so, for the medical profession has been long enough under the ban of inside turmoil. The science of medicine above all other sciences requires harmony, for no other is so completely under public surveillance. The diverse opinions of medical men have always been subjects of comment, and this necessarily has placed the profession as a whole in a bad light. But science is exerting its irresistible influence, and in the light of new discoveries, greater progress and the consequent growth of liberal ideas, we are sure to see more unity and greater fellowship. It must come in order that we as a profession may repulse the onslaughts from *without*, which are far more dangerous than those from *within*.

THE INSPECTION OF MILK.

This is a subject which is receiving a great deal of attention all over the country, and in our estimation very deservedly so. Greater importance is attached to the intelligent supervision of a city's milk supply, than the laity, or profession either, have thought up to the last few years. Anything which tends to prevent disease should be closely observed, and it has been conclusively proved that milk is an important factor in the communication of many diseases.

There are several facts involved in this question and in our April number we shall have an extended article in regard to the same.

MEDICAL ABSTRACTS.

WHICH IS THE QUICKER ANAESTHETIC, CHLOROFORM OR ETHER?—There seems to be considerable confusion among physicians as to whether chloroform or ether is the more prompt in producing anæsthesia. This want of positive knowledge extends even to distinguished writers on the subject. We have given the matter some attention and although our records are not completed we may safely endeavor to decide the question so far as our experience will allow. The reason of the dissonance is the many and divergent ways of administering them, and the want of thought before expressing an opinion. One remembers that chloroform is three times as strong and that it usually causes less coughing and choking and struggling than ether. He consequently concludes it must be more speedy in action. This would obtain could we push the administration of chloroform with as little regard to admixture of air as ether. We must remember that with the simple exception of Dr. Lewis A. Sayre the profession is a unit in the belief that the inhaled vapor ought not to contain more than three per cent. of chloroform. So that we are forced to make haste slowly. Given in this way it will generally take five to eight minutes to produce sleep. Ether may be given with the free admission of air or with closed cone and we have reported a series of 120 cases with closed method when time averaged $2\frac{3}{4}$ minutes. If given by open method it may consume seven to fifteen minutes or more. We think a little more concentrated vapor than three per cent. chloroform may be given with safety but should any accident happen the physician might be considered culpable because he went beyond the accepted rules of safety. We may say in conclusion that

(A) Ether when pushed, (closed cone) and chloroform given in the usual manner, the ether is the quicker.

(B) In children where 20 to 30 drops in closed cone may be safely given and in plethoric fighting cases chloroform is quickest and best.

(C) Ether given by open cone and chloroform by ordinary method there is not much difference in the time required.—*The Charlotte Med. Journal.*

• SENILE HEART.—(*The Sanitary Era*) Four cardinal rules with regard to diet : (1) There must never be less than five hours between meals. (2) No solid food is ever to be taken between meals. (3) All those with weak hearts should have their principal meal in the middle of the day. (4) All those with weak hearts should have their meals as dry as possible.

SODIUM BICARBONATE IN COLDS.—L. D. Bulkley (*Med. Record*, 1896, XLIX, p. 86.)

Dr. B. accidentally made the observation, on his own person, that sodium bicarbonate is capable in many cases of controlling a common "cold," especially in the early stage of the trouble.

On one occasion he had experienced the general symptoms of shivering, coryza, sneezing, etc., and happened to have at the same time some acidity of the stomach. For the latter trouble he took two doses of sodium bicarbonate within half an hour. About an hour later he noticed that not only had the unpleasant stomach trouble been relieved, but the symptoms of the "cold" had been lessened. A few more doses then completely cured the cold.

Since then—for over two years—the author has used this remedy professionally and in his family, and has become satisfied of its value. It is important that the salt be taken just rightly, in order to derive from it the full benefit.

He prescribes 20 to 30 grn. (1.3 to 2 gme.) of the bicarbonate to be taken in 2 or 8 oz. of water every half hour for three doses, and a fourth dose at the expiration of an hour from the last one. Two to four hours are then allowed to elapse to see the effect, and the four doses are repeated if there seems to be a necessity. After waiting two or four hours more, the same course may be taken again, although this is not often necessary.

To be promptly effective, the treatment should be begun with the earliest indications of coryza and sneezing. After the second and third day it acts less promptly, and more frequent repetitions are needed; but the author has seen very good results even much later in the trouble.

When the "cold" has more of the character of the grippe, this treatment is less efficacious, but is still often of service. In these cases he combines phenacetin, 5 to 10 grn. (0.3 to 0.6 gme.) with 10 to 20 grn. (0.6 to 1.3 gme.) of sodium bicarbonate, and gives one such powder with hot water every two hours continuously for a day or two. Dr. B. has had a large number of very striking instances of the benefit of this plan of treatment.

The *modus operandi* of this treatment is explained on the basis of the idea that there often exists an acid condition of the system which is sufficient to irritate the terminal endings of the nerves of the skin and mucous membranes, and thus to render them susceptible to impressions of cold by a derangement of the capillary circulation. As this acidity is neutralized, the normal conditions return.—*Med. Brief.*

THE TREATMENT OF NEVUS.—(*Medical News*, 1895. Vol. lxx., No. 23.)—The varieties of nevus most commonly met are the capillary, the port-wine mark, a form of the capillary of some size, and the venous nevus of purple or bluish color, and at times containing blood. All forms of vascular tumors in young children should be carefully watched, and if any increase in size be noted they should be operated upon. In cases of capillary nevus, cauterization with nitric acid by means of a match stick may answer. Electrolysis is also of service in the treatment of this form. The treatment of the port-wine mark is by multiple incision. In the treatment of venous nevus, various methods have been employed. The elastic bandage may be used to control the hemorrhage and the tumor be excised. If very large, harelip-pins may be passed under the tumor and a ligature applied. This is followed by sloughing, granulation, and cicatrization. Dr. Wharton has

used the subcutaneous ligature with good results. If ulceration has occurred the actual cautery or the galvano-cautery must be employed.—*The Archives of Pediatrics*.

EPITHELIOMA.—Dr. E. C. Goodman, in *N. C. Medical Journal*, regards phytolacca as a most valuable remedy in epithelioma. His method is to bruise the green leaves to a pulp, express the juice and evaporate to thick paste. Spread a portion on a piece of silk or cloth, and apply to the morbid growth; remove and reapply twice daily until the morbid tissue is destroyed. A band of cicatricial tissue begins to spread from the periphery, and, as this occurs, the plaster is made smaller each day to conform to the size and shape of the morbid mass. He states that he has seen large epitheliomatous masses destroyed in a few weeks, and nothing but a faint scar left, and in no case a recurrence. It is safe, and can be used fearlessly.—*Med. Brief*.

THE DECADENCE OF OPIUM.—Wendell Reber, A. M., M. D., Pottsville, Pa., Oculist and Aurist to the Children's Home, under the above caption in the *Buffalo Medical Journal*, writes: "We would not banish opium. Far from it. There are times when it becomes our refuge. But we would restrict it to its proper sphere.

"In the acute stage of most inflammations, and in the closing painful phases of some few chronic disorders, opium in galenic or alkaloidal derivatives, is our grandest remedy—our confidential friend. But here, the application should cease; and it is just here that the synthetic products step in to claim their share in the domain of therapy.

"Among the latter, perhaps none has met with so grateful a reception as antikamnia, and justly so; for among all the contributions of pharmaceutic chemistry, none so fully merits our confidence as this one.

"Given a frontal-temporal-vertical or occipital neuralgia growing out of an uncorrected ocular defect, it will almost invariably arrest the head pain, until such time as the ocular trouble can be corrected with glasses. In the terrific fronto-parietal neuralgia of glaucoma, or in rheumatic or post-operative iritis, it is of signal service, contributing much to the comfort of the patient; and, I have sometimes thought, exerting an undeniable influence over the ocular disease. In this last group of cases I have seen the most benign effects follow the hourly administration of ten grains of antikamnia until the pain is relieved. It will seldom be necessary to exceed sixty grains of the drug.

"Its range of application is wide. It is of positive value in certain forms of dysmenorrhoea; it has served me well in the pleuritic pains of advancing pneumonia, and in the arthralgias of acute rheumatism; on several occasions, I have been able to allay with it the lightning, lancinating pains of locomotor ataxia; but nowhere do I employ it with such confidence as in the neuralgias, limited to the area of distribution of the fifth nerve. Here its action is almost specific; surpassing even the effect of aconite over this nerve."

Maltine with Cod Liver Oil for treating wasting diseases is used with great success by some of America's best physicians.

Doctor, if you desire Lime water with little trouble and minimum expense, use Metcalf's Antacidine Tablets. Three tablets will make 4 ounces and cost less than three cents!

PREVENTION OF PUERPERAL SEPTICEMIA.—Certainly no more laudable work can be conceived than the warding off by each physician in his private practice of this malignant malady. The deaths due to this cause and the lifelong suffering entailed stand like a monument of black reproach against medical ignorance and incompetence. After touching on the origin of puerperal infection and comparing the present low mortality in hospitals with the appalling rate (some 13 per cent.) still prevailing in private practice, Prof. W. C. Day, in the December number of the *St. Louis Medical Era*, lays down the following measures of prophylaxis:

A light and airy room, with temperature from 65 to 70 degrees. A clean bed with a new mattress and wire spring, over which are spread clean comforts, and on these a piece of rubber sheeting previously scrubbed with bichloride solution of 1 to 2,000 strength; and over this a clean hip sheet folded four times and covered with another freshly laundered sheet, which is pinned at its four corners to the mattress. The over bedding should also be clean and light.

For a week before the expected confinement the woman is to have a warm bath every other day, at which time the genitalia and surrounding parts should be cleansed thoroughly with brush, soap and water.

At the beginning of the first stage of labor the pudendum and vagina should be carefully cleansed with soap and water, followed by a warm douche with a 1 per cent. creolin emulsion; after which an enema is administered and the patient is attired in clean flannel underwear and a light over-gown. Both physician and nurse should be dressed in clean clothes and wear white aprons. Their hands and forearms should be made aseptic by scrubbing for at least three minutes in soap and hot water and then immersing for five minutes in mercuric chloride solution; special attention must be given to the nails, which should be cleaned with a knife before washing. New hand brushes are best, but old ones may be sterilized by boiling in water containing 2 per cent. of washing soda.

Unless emergencies arise only a single, preliminary, vaginal digital examination is required or desirable, abdominal palpation furnishing sufficient evidence of the progress of the case.

After completion of the third stage the women should be cleansed with soap and bichloride solution. Any appreciable tear of the perineum is to be sutured and dusted well with iodoform. Clean dry sheets are now to be substituted for the soiled ones, a snug binder applied, to which is attached before and behind a clean napkin covering a pad of absorbent cotton, which has been squeezed out of

bichloride solution 1 to 2,000. The pad and cotton are to be changed at first every four to six hours. Subsequent vaginal or uterine irrigation, Dr. Day thinks, is unnecessary unless septic symptoms develop.—*The Denver Med. Times.*

NEWS NOTES AND FORMULA.

IN HONOR OF DR. CHARLES CARROLL LEE.—The directors of the Post-Graduate Medical School and Hospital have named one of their wards in memory of the late Dr. Charles Carroll Lee, who was for many years a professor in the institution. They have placed a tablet in the ward, giving the names of those who combined to contribute the ten thousand dollars, which was given for the purpose of the memorial. These names are as follows: Dr. Robert Abbe, Dr. L. Bolton Bangs, Mrs. James Beales, Dr. Stephen S. Burt, Miss Caldwell, Dr. Charles L. Dana, Dr. Bache McE. Emmet, Dr. George H. Fox, "A Friend," Dr. Horace T. Hanks, Mr. and Mrs. Eugene Kelly, Mr. and Mrs. Henry J. Lamarche, Dr. Daniel Lewis, Mr. and Mrs. William Lummis, Mr. and Mrs. Frank A. Otis, Dr. Clarence C. Rice, Mr. Eli K. Robinson, Mr. Nelson Robinson, Dr. D. B. St. John Roosa, Mrs. Eliza M. Sloan, Dr. Andrew H. Smith, Mrs. M. E. Sparks, Dr. Reynold W. Wilcox. It will be seen that the faculty of the institution participated largely in the memorial gift.

One drop tincture of aconite root in water will often control vomiting; if much nervous excitement, small quantities of belladonna combined will give immediate relief.

The fullness and choked feeling in middle and upper nasal passages, which often follows a cold, is speedily removed by hydrastine sulphate administered one-tenth grain every two or three hours.

LEAD POISONING.—

R. Sulphite Sodium, 2 drachms.
Syr. Lemon, 1 ounce.
Aquæ, 1 ounce.

M. Sig.: Three tablespoonfuls daily.

The sulphite of sodium very rapidly eliminates the lead from economy.—*Prescription.*

The American Medical Publishers Association will hold its third annual meeting in Atlanta, Georgia, Monday, May 4. Many papers will be presented on subjects of importance. Everyone interested in the progress of medical journalism should attend and take part in the discussions. A special invitation has been extended the medical profession by the management of Lookout Inn (a delightful resort-hotel, on the crest of Lookout Mountain, Tenn.) to visit this magnificent

and historic spot, en route to the meeting in Atlanta. Special rates to the profession and medical press. Members of the Publishers Association and all medical editors and journalists are cordially urged to rendezvous at Lookout on May 2 and 3, leaving for Atlanta on Sunday night. For information, address the Secretary, Charles Wood Fassett, St. Joseph, Mo.

THE REAL FACTOR IN THYROID TREATMENT.—Prof. Baumann, of Freiburg, claims that the good results obtained from the use of the thyroid extract in goitre are due to the iodine contained in this gland. He thinks the disease results from a deficiency of iodine in the system and that the drug alone is fully as curative as is the animal extract.—*Denver Med. Times.*

LA GRIPPE.—An English physician, Dr. Terry, calls attention to the diagnostic value in la grippe of the presence on the tongue of scattered dark purplish-red spots or elevations. These are rather larger than a pin-head and are probably enlarged fungiform papillae. They are most numerous on the tip and edges and the anterior half of the dorsum.—*Denver Med. Times.*

TREATMENT OF EPILEPSY.—A writer in a foreign exchange says that the only remedy of value for epilepsy is bromide of potassium, and the dose should never be stopped for a single day during the period of treatment. Give five grammes the first week, six the second, seven the third, and repeat in this order. Let the patient keep the number of his attacks in a book and compare this with the treatment. Give bromide so that two-thirds of the dose are taken two or three hours before the customary time for an attack. Always give in very diluted solution. Small doses of salol combined with the bromide are of value. The patient should never be allowed to sleep during the day. The dose of bromide may be diminished after a year and a half to two years.—*Jour. Prac. Med.*

PILOCARPINE IN ECLAMPSIA.—B. Grinberg employed hypodermic injections of pilocarpine in four cases of eclampsia, giving 1-6 gr. at a dose. One of the cases died of pulmonary edema. In the other cases the convulsions were stopped quickly and permanently. Pilocarpine is contra-indicated in all cases complicated by pulmonary trouble. The case that died was found to be suffering from pulmonary tuberculosis.

THREE MISTAKES.—Mothers adhere rather persistently to three mistakes in feeding babies: (1) They give the food too concentrated. (2) They give it too frequently. (3) They give it in too great quantities. These are mistakes of the head, certainly not of the heart, for their great fear is that the baby will starve.—*San Inspec.*

 BOOK NOTICES.

MISKEL, a novel, by L. M. Phillips, M. D., of Penn Yan, New York. Advance copy of No. 2 of the "Doctor's Story Series" to be issued March 1st, in paper, pp. 266. Price 50 cents. Bailey and Fairchild Co., New York.

This is one of the most interesting books that has fallen to our lot to read. The test of a novel is in the interest it can awaken in the readers and when one "hangs" to a book until the finish is reached, as we did to "Miskel," it is proof positive that it is a success from our standpoint.

"Orientalism" plays an important part in the story and the plot is unfolded with skill and considerable tact.

It is a book which leaves a feeling of satisfaction after it is read, a quality often absent in the books of the period.

SYPHILIS IN THE MIDDLE AGES AND IN MODERN TIMES. By Dr. F. Buret, Paris, France. Translated from the French, with notes by A. H. Ohmann-Dumesnil, M. D., Professor of Dermatology and Syphilology in the Marion Sims College of Medicine; Consulting Dermatologist to the St. Louis City Hospital, to the St. Louis Female Hospital; Physician for Cutaneous Diseases to the Alexian Brothers' Hospital; Dermatologist to Pius Hospital, to the Rebekah Hospital, to the St. Louis Polyclinic and Emergency Hospital, etc., etc. Being Volumes II and III of "Syphilis To-Day and Among the Ancients," complete in three volumes. 12mo, 300 pages. Extra cloth, \$1.50 net. Philadelphia, The F. A. Davis Co., Publishers, 1914 and 1916 Cherry St.

This book is a welcome contribution to an important subject and one that will prove of use to every physician. To those who are interested in the subject it will be of especial value and the student beginning his medical career can find nothing better on the subject.

The translation is excellent and reflects great credit on Dr. Ohmann-Dumesnil. It is tastily published and the typography is all that can be desired.

A MANUAL OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By Henry C. Chapman, M. D. Second edition, revised. With fifty-five illustrations and three plates in colors. Philadelphia, W. B. Saunders. Price, \$1.50.

This is the second edition of Prof. Chapman's valuable book and we do not hesitate in giving it our hearty commendation. Every physician has certain indisputable rights and bears a definite relation to society and he who remains oblivious to these rights and relations is unworthy of citizenship. As a class, medical men are inclined to neglect the things of life which do not bear directly on the cause, cure and result of disease, but they should not forget that they are amenable to the duties imposed on every citizen, and in their capacity as physicians at certain times these duties become doubly imperative.

Every medical library, no matter how modest, should contain some works on Medical Jurisprudence, and of the less voluminous works we have seen nothing better than this book by D. Chapman. It is clear, concise, and above all comprehensive. It is bound in a neat attractive manner and the numerous illustrations add greatly to its other merits.

Dr. Charles Wilson Ingraham, editor of the *New York State Medical Reporter*, has issued a book of 35 chapters under the title of *Dont's for Consumptives, or the Scientific Management of Pulmonary Tuberculosis*. The object of the author is to supply the physician with a practical work, and at the same time, by eliminating technical terms, to make it intelligible to the patient. He claims that "a good understanding of his condition is the best remedy for the Consumptive." Special attention has been given to those chapters pertaining to the destruction of tubercularly infected material.

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Dr. Carleton Simon, New York, writes: "I have tried Borine and find it a very efficient, safe and pleasant antiseptic, especially adapted for the nose and throat. I have used Borine in Ozoena and a number of cases of chronic rhinitis with very beneficial effects. It is soothing yet stimulating, and its fragrant pleasant odor renders it adaptable and acceptable to children."

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My patient was near three months gone and so weak she could not sit up longer than ten or fifteen minutes; her pulse was very weak, complained of being

BOOK NOTICES.

MISKEL, a novel, by L. M. Phillips, M. D., of Penn Yan, New York. Advance copy of No. 2 of the "Doctor's Story Series" to be issued March 1st, in paper, pp. 266. Price 50 cents. Bailey and Fairchild Co., New York.

This is one of the most interesting books that has fallen to our lot to read. The test of a novel is in the interest it can awaken in the readers and when one "hangs" to a book until the finis is reached, as we did to "Miskel," it is proof positive that it is a success from our standpoint.

"Orientalism" plays an important part in the story and the plot is unfolded with skill and considerable tact.

It is a book which leaves a feeling of satisfaction after it is read, a quality often absent in the books of the period.

SYPHILIS IN THE MIDDLE AGES AND IN MODERN TIMES. By Dr. F. Buret, Paris, France. Translated from the French, with notes by A. H. Ohmann-Dumesnil, M. D., Professor of Dermatology and Syphilology in the Marion Sims College of Medicine; Consulting Dermatologist to the St. Louis City Hospital, to the St. Louis Female Hospital; Physician for Cutaneous Diseases to the Alexian Brothers' Hospital; Dermatologist to Pius Hospital, to the Rebekah Hospital, to the St. Louis Polyclinic and Emergency Hospital, etc., etc. Being Volumes II and III of "Syphilis To-Day and Among the Ancients," complete in three volumes. 12mo, 300 pages. Extra cloth, \$1.50 net. Philadelphia, The F. A. Davis Co., Publishers, 1914 and 1916 Cherry St.

This book is a welcome contribution to an important subject and one that will prove of use to every physician. To those who are interested in the subject it will be of especial value and the student beginning his medical career can find nothing better on the subject.

The translation is excellent and reflects great credit on Dr. Ohmann-Dumesnil. It is tastily published and the typography is all that can be desired.

A MANUAL OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By Henry C. Chapman, M. D. Second edition, revised. With fifty-five illustrations and three plates in colors. Philadelphia, W. B. Saunders. Price, \$1.50.

This is the second edition of Prof. Chapman's valuable book and we do not hesitate in giving it our hearty commendation. Every physician has certain indisputable rights and bears a definite relation to society and he who remains oblivious to these rights and relations is unworthy of citizenship. As a class, medical men are inclined to neglect the things of life which do not bear directly on the cause, cure and result of disease, but they should not forget that they are amenable to the duties imposed on every citizen, and in their capacity as physicians at certain times these duties become doubly imperative.

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The only way I can explain this result is that a *digestive wine* was what was necessary; a digestive that was at the same time stimulative, the reflex action being of greater degree than the reflex action of the uterus, causing nausea. I hope it will be a long time, if ever, before I will have a patient so low from the same cause, but if such should be my fate, I hope to ever have the Zumo-Anana at hand.

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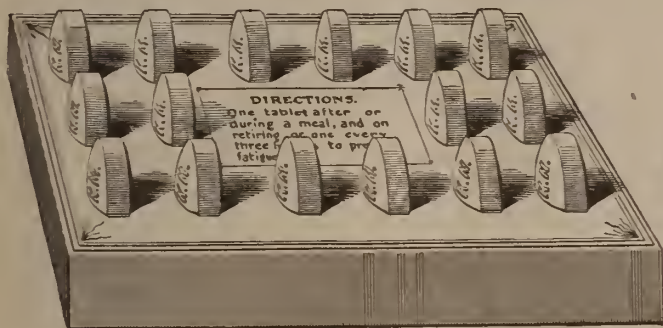
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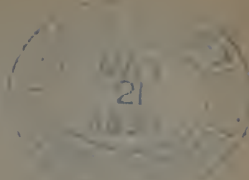
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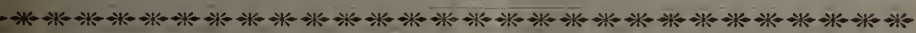
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
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CONTENTS.

	PAGE
Thoughts on General and Cardiac Therapy, By D. C. Hawley, A. B., M. D., Burlington, - - -	97
Antitoxin Treatment of Diphtheria, By E. R. Campbell, M. D., Bellows Falls, Vt., - - - - -	105
Cholera Infantum, By J. M. Duncan, M. D., Kansas City, -	111
Wayside Thoughts, - - - - -	113
Editorials, - - - - -	114
Medical Abstracts, - - - - -	117
The Surgical Treatment of Retro-Deviations of the Uterus, -	119
College Notes, - - - - -	120
News, Notes and Formula, - - - - -	121
Book Reviews, - - - - -	123
Publisher's Department, - - - - -	126



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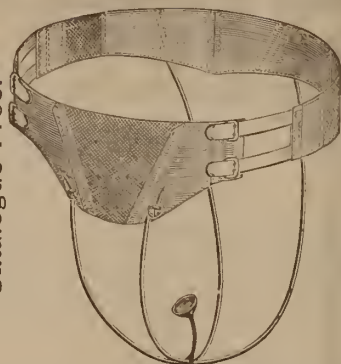
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THOUGHTS ON GENERAL AND CARDIAC THERAPY.*

PRESIDENT'S ADDRESS BEFORE THE BURLINGTON CLINICAL SOCIETY,
NOVEMBER 29, 1895, BY D. C. HAWLEY, A. B., M. D.,
BURLINGTON, VT.

During the last quarter century remarkable advancement has been made in every department of medicine. While in the realm of therapy, advancement toward scientific accuracy has perhaps hardly been in keeping with the general progress, still modern therapy is becoming one of the more exact branches of medicine. It is not based entirely upon empiricism, as was formerly the case, but is establishing itself upon a basis which may be called scientific or rational. In treating diseases empirically, a certain remedy is used because it seems to have been valuable in treating the same disease or conditions. I do not deny, or wish to under-estimate, the value or success of such treatment in many cases, but would emphasize the fact that the method is anything but scientific. A system of scientific medication must be founded upon a knowledge of the natural history of the diseases to be treated, and of the agents to be used. Or more accurately, scientific therapy must be based upon a knowledge of physiology, pathology and materia medica. This implies a knowledge of physiological effects of drugs,

*Reprinted from the Journal of the American Medical Association, February 29, 1896.

and their action upon healthy states and conditions, and of the indications for treatment, based upon clinical and post-mortem observations of the natural history, that is, the cause, course and results of diseased states and conditions, as well as a knowledge of the physical and chemical characteristics of remedies. I am aware that we are at present unable to base all our therapeutic methods upon this scientific basis. But as our knowledge of pathology and the natural history of disease advances, I believe there will be a corresponding advance in scientific therapeutics. Every physician possessed of the truly scientific spirit and equipped with all the knowledge available along the lines above indicated, will hardly be satisfied with what are known as shot-gun prescriptions, or with happy combinations, but will select his therapeutic agents with an eye to the good of his patient and the honor of his profession.

With a deeper insight into physiology and pathology we shall surely learn more of the value of what may be styled physiological remedies, and place more reliance on a proper application of air, food, water, rest and exercise. If we recognize our dependence upon the *vis medicatrix naturee*, and learn to make a more intelligent use of scientific and of physiological remedies, we ought certainly, as a natural result, to abandon any allegiance we may have formed with polypharmacy, and also in a great measure with symptomatic therapeutics. To illustrate, let me call your attention to the symptomatic treatment of typhoid fever by modern antipyretics, and by modern antiseptic remedies. With what enthusiasm has one and another physician lauded the use of antipyrin, phenacetin or acetanilid in reducing the temperature and ameliorating the symptoms in this disease! But to-day we are well awakened to the fallacy of considering hyperpyrexia the principal destructive agent or process, and the coal-tar derivatives are practically abandoned, as being not only useless, but actually dangerous. What is known as intestinal antiseptics is much in vogue at the present time. We are asked to believe that naphthol, salol, zinc sulpho-carbolate, bismuth, salicylate, hydrogen dioxid, sulphur, etc., administered at intervals of two to four hours, will disinfect or render aseptic the mucous membrane of the intestinal canal, and destroy the pathogenic micro-organism which is the cause of the disease, or the toxins which are generated thereby. This treatment is supposedly based upon the germ theory of disease. Suffice it to say that 'thus far none of its

advocates has done more than to advance their claims; they have proved nothing. The drug has not been discovered which shortens by a day the course of the disease.

Allow me to call your attention briefly, by way of contrast, and to illustrate the difference between empiric or symptomatic treatment and what I have called scientific treatment, to a remedy, a physiological remedy, which has established itself firmly in the therapeutics of enlightened medicine the world over. I refer to the Brandt method of balneo-therapy. I take pleasure in quoting the following from an eminent authority* as to its effects: "The rationale of the bath is so simple that it appeals to our best judgment at once. We have an overwhelming of the nerve centers by the products of infection. The shock and the subsequent stimulus to the cutaneous surfaces are conveyed to the nerve centers, and thence reflected to the heart, lungs and other organs. Observations at the bedside at once renders these effects patent. The first effect is a refreshment, an enlivenment of the cerebrum. The eyes are opened; the face loses its apathetic stare; consciousness returns after one or more baths; the inspiration is deepened; expectoration is facilitated; the widening of the peripheral vessels and the stimulation of their coats relieve the heart; blood pressure is increased and the laboring organ becomes as quiet as does a sea-tossed ship in the hands of a skilled mariner. The secreting glands are aroused to activity. Moreover, the temperature is reduced, not so violently as by medicinal agents, but more definitely, more in accord with normal tendencies.

It has been recently shown by Thayer, in the Johns Hopkins laboratory, that the leucocytes are more than doubled after a Brandt bath. On the other hand, the destructive effect of medicinal antipyretics on the leucocytes, their inhibition of excretion of products of tissue change and their effect on the heart have been again and again demonstrated." I believe that one of the greatest improvements in our methods of treatment, which may result from what I have styled scientific medication, will be the withholding of remedies of uncertain value, in other words, less medication. I do not say that scientific medication means no medication, but I believe that as our skill in diagnosis increases, our faith in polypharmacy will decrease.

*Simon Baruch.

With these remarks on therapy in general, I wish briefly to call your attention to a branch of the subject in which there seems to have been considerable advancement toward scientific precision, viz., cardiac therapy. I venture the statement that there is no department of therapeutics in which knowledge is so exact as in that relating to cardiac disease. Our knowledge of the action of the heart in normal as well as in pathological conditions, ought to tell us why and under what circumstances a given remedy may be useful, provided we know its physiological effects. The principal remedies which directly affect the heart and blood vessels are digitalis, strophanthus, strychnia, spartein, convallaria, caffein, glonoin, aconite, veratrum viride, opium, bromids and ergot. Let us briefly review the physiological action of some of these remedies, when administered in medicinal doses.

Digitalis stimulates the motor ganglia of the heart, increasing the force of the ventricular contractions. By stimulating the inhibitory fibers of the pneumogastric, it lengthens diastole, thereby giving time for the cavities to receive more blood. It also acts upon the vaso-motor ganglia in the medulla, causing contraction of the arterioles and thereby increasing arterial tension. It is a vascular stimulant raising arterial pressure, and steadying the heart by lulling it into long diastoles. Is digitalis a cardiac tonic as well as stimulant? It certainly increases the nutrition of the heart muscle by supplying it liberally with blood. The coronary arteries fill during diastole and when the heart is acting powerfully and steadily under the influence of digitalis, the increased volume of blood swells the aorta, which, in turn by a mighty recoil, fills the coronary arteries and carries food to every part of the heart.

Strychnia stimulates the vasor-motor centers, constricting the capillaries and causing an increase of arterial tension. It also stimulates the vagus, inhibiting cardiac contractions. Thus we see it has a double action in slowing the heart.

Cocain affects the vasor-motor centres and the cardio-motor ganglia, increasing arterial tension and the force of the heart's action.

The action of belladonna is to increase the force and the frequency of the heart's action by stimulating the cardiac ganglia and by paralyzing inhibition. It also raises the blood pressure through capillary contraction, due to vaso-motor stimulation.

Ergot, by stimulating the vaso-motor ganglia, decreases the caliber of the arterioles and produces a marked increase in arterial tension, thereby causing the heart's action to become slower. It also acts on the unstriped muscular fibers in the arterioles, aiding their contraction. All the remedies thus far considered, viz., digitalis, strychnia, cocain, belladonna and ergot may be classed as vaso-constrictors.

Aconite, by lowering the action of the cardio-motor ganglia, lessens the force of the systolic contractions and by stimulating the vagus, lengthens the interval between the beats. It also dilates the peripheral vessels, probably through vaso-motor depression, thereby lowering blood pressure and slowing the heart.

Veratrum viride depresses the vaso-motor centers, dilating the vessels and reducing vascular tension. By a direct effect upon the heart and its contained ganglia it lessens the force and frequency of its pulsations.

Glonoin increases the energy and rate of the heart's contractions and lowers vascular tension by widening the blood paths. The former is done by directly stimulating the heart, the latter by its action on the muscular coats of the arterioles, and not by depression of the vaso-motor centers. Aconite, veratrum and glonoin may then be classed together as vaso-dilators, but with this difference in their action, while aconite and veratrum depress the heart's action, glonoin increases it.

Strophanthus slows the heart's action, lengthens diastole and increases the force of the muscular contractions, thereby raising arterial pressure, but does not affect the caliber of the vessels through the vaso-motors.

Convallaria, by direct action on the heart, lessens the frequency and increases the force of systole, thus raising arterial pressure. It does not effect the vaso-motors or the pneumogastric.

Caffein stimulates directly the heart, increasing its contractions in force and frequency. It causes dilatation of the arterioles, not by vaso-motor depression, but by an action upon the intra-vascular nerve ends (Semmla). Large doses affect the vagus, decreasing the number of systolic contractions.

Cactus shortens and increases the energy of systole, raises arterial pressure and shortens the intervals between the beats. Under its use the pulse becomes quicker and stronger.

Sparteïn primarily increases the pulse rate, and the force of the

heart. This increase of the heart's action is soon followed by a decrease of the same. The augmented rate is due to an action of the drug on the heart's muscle or its ganglia, and the decrease to stimulation of the cardio-inhibitory centers. Spartein increases the blood pressure by its action on the heart and by stimulating the central vaso-motor system, and subsequently decreases it by a depressing effect through the same channels.

Thus we see that strophanthus, convallaria and cactus have no appreciable effect on the caliber of the vessels, while the effect of caffeine and spartein in this direction is less marked than is that of the drugs we have classed as vaso-constrictors. The affect of opium is to stimulate inhibition, producing a slow and full pulse with increased arterial pressure. Systole and diastole are both lengthened. Bromids lessen the force and frequency of the pulse, as well as arterial tension. It is claimed by Hammond that bromids produce contraction of the arterioles of the brain, thereby causing cerebral anemia. In the study of cardiac therapeutics it is well to bear in mind that the heart is a double pump with normal valvular insufficiency on the right side and with perfectly closing valves on the left side; that the principal resistance to the flow of blood is in the arteries and arterioles, and not in the veins; that the capacity of the veins is double that of the arteries, and that the abdominal vessels when dilated are capable of holding all the blood in the body. By the use of the vaso-constrictors we increase arterial tension, and as a result send an increased quantity of blood through the coronary arteries, thus improving the nutrition of the heart muscle. In a dilated heart without compensatory hypertrophy, we may, by increasing peripheral resistance and keeping it just within the power of cardiac contractions, bring about hypertrophy of the left ventricle, and thus restore the circulation to a nearly normal condition. This has been proved by Oertel. The effect of the vasco-constrictors may be carried too far, and so narrow the arterioles, as to send the blood so rapidly through the capillaries as to cut off nutrition from the heart. The administration of nitro-glycerin, which has the power of dilating the capillaries, will, however, remedy this over-contraction. The vaso-constrictors increase peripheral resistance and lower the rate of the heart's action. The vaso-dilators, on the other hand, decrease peripheral resistance and lower the rate and the power of cardiac contractions.

Now the question arises, what working conclusions are to be drawn from these considerations? Let us try for a moment to apply the above data to some of the conditions which we daily meet. In mitral stenosis we have at the mitral orifice an obstruction to the free flow of the current of blood from the auricle to the ventricle. The orifice being narrowed, the auricle can not pump the normal quantity of blood through it, in the time allotted, and in an attempt so to do, the heart works at an increased rate. Dilatation of the auricle follows, and there is a stasis of blood on the venous side of the heart while the vascular tension is lowered on the arterial side. What must be done to help that heart? We must increase the power of the ventricular contraction in order to overcome the effect of the dilatation, at the same time that we lengthen diastole, to give the auricle time to empty itself. We must also increase the blood pressure in the arteries for the benefit of the coronary circulation, and must work the blood over from the venous to the arterial circulation. If our findings in the physiologic action of drugs are correct, here is a field for the use of either digitalis, strychnia, strophanthus, spartein, convallaria or ergot, or a combination of two or more of them. In regurgitation at the mitral valves, we have the conditions above noted, with the addition of eccentric hypertrophy of the ventricle. Such a heart may be in great distress, putting in thirty to fifty extra beats per minute, with the veins full and the arteries empty. Systole is weak and diastole too short for the ventricle to fill with blood. The indications are plain; shorten and strengthen systole and lengthen diastole. To do this we must turn to the same remedies mentioned in speaking of mitral stenosis. Here is an opportunity to use the full physiologic effect of digitalis. Having secured that effect, having restored the equilibrium of the circulation it is probably better to combine glonoin with the digitalis, in order to cut out the vaso-constrictor effect of the latter. In some cases a combination of ergot, for its vaso-motor effect, with spartein or strophanthus, will accomplish all that is desired. The other drugs mentioned in connection with these lesions are valuable and play an important rôle in cardiac therapy, but having pointed out the general indications for their use, we will not attempt to do more at the present time. In aortic stenosis, so long as hypertrophy keeps pace with the obstruction and with the ventricular dilatation, all goes well. But when the compensation is broken, when the obstruction or the

dilatation, or both, get ahead of the hypertrophy, then the ventricle is unable to send the full charge of blood through the narrowed aortic opening. At each contraction of the ventricle some blood is left within its cavity, and the blood flowing in from the auricle as usual, causes a surcharge of blood within the ventricle. This condition makes it impossible for the auricle to fully empty itself and here again we have dilatation resulting. Nature at once attempts to compensate by starting a hypertrophy of the left auricle; but this only adds fuel to the flame, for the increased power of the auricular muscle sends more blood into the crippled ventricle, which is already distended to such an extent as to destroy the compensatory balance. The effect upon the circulation is decreased arterial tension, and engorgement of the pulmonary and venous circulation. Now what are the indications? Plainly, to strengthen systole, shorten diastole and increase arterial tension. We certainly must not look to digitalis and its congeners to meet these indications. Cactus, caffenin and cocain, from their physiologic effects, may be expected to do much for us, and experience has proven their value in aortic stenosis. In aortic regurgitation we have eccentric hypertrophy of the left ventricle from a reversed current of blood from the aorta. Regurgitation becomes rapid and prevents the perfect filling of the coronary arteries. The hypertrophy so increases blood pressure as to produce endarteritis and finally atheroma. Thus the heart muscle becomes impoverished and dilatation without compensation results. Regurgitation through the aortic orifice takes place during diastole. If we can shorten diastole and strengthen systole, we are certainly doing something toward restoring the circulatory equilibrium. Again our physiologic findings point to cactus, caffenin and cocain. We have it on so good authority as that of Dr. Reynold W. Wilcox, of New York, that cactus has proved itself, clinically, to be the remedy, par excellence, in aortic regurgitation. Lesions of the right heart being rare we will pass over their consideration. In cases where there is increased peripheral resistance as in pneumonia in the first stage, chronic disease of kidneys, etc., we find a special field for the use of the vaso-dilators, viz., aconite, veratrum and nitro-glycerin. In the first stage of pneumonia we have engorgement of the blood-vessels of the lung, with increased action of the heart. If we give veratrum, we bring down the heart's action and dilate the blood-vessels throughout the body. We take the blood away from the lung, and we practically bleed the patient

into his own vessels. I am well aware of the important role played by hygienic, dietetic and mechanical agents in cardiac therapy. However, a consideration of these in detail is entirely without the scope of this paper, in which I have endeavored to call attention to the scientific use of some of those agents, which strictly speaking, must be set down as secondary to a proper regulation of rest, diet and regimen, in the treatment of cardiac disease.

ANTITOXIN TREATMENT OF DIPHTHERIA.*

By EDWARD R. CAMPBELL, M. D., Bellows Falls.

Mr. President, and Gentlemen :

Perhaps it is safe to say that during the past year no subject has received more attention from the medical profession than serum therapy, especially in relation to its value in the treatment of diphtheria. While it is true that we who practice in the country have not individually the large number of cases to report that some of our city friends see in their great hospitals, I believe that collectively this society can, if each member will report his carefully watched cases, collect statistics at least equal in value to those given us by our hospitals. The loss of a little patient nearly a year ago of membranous croup under the old methods of treatment, and noticing some reported cases shortly after where treatment with the antitoxin had apparently saved life, led me to investigate. I first wrote Dr. Caverly, the efficient president of our State Board of Health, who replied that owing to the fact that Rutland had been quite free from diphtheria for some time, he had had no personal experience with the remedy. Having met Dr. Durgin, president of Boston Board of Health, at the meeting of American Health Association, I took the liberty to write him in regard to the matter, with much the same result, he saying that he had had no personal experience but from his acquaintance and conversation with some of Boston's physicians who had commenced to use it, he had much confidence in the

*Read at the 82nd Annual Meeting of Vt. State Medical Society.

remedy. I immediately procured a vial of Behring's strongest serum, and in February last tried it for the first time. We were at the time having several cases of tonsilitis and when I first saw this case I thought it might also prove to be tonsilitis, but within the next forty-eight hours a large amount of membrane made its appearance and the temperature rose to 104° . That evening I injected about 600 normal units of antitoxin; there was no further disturbance, and within twenty-four hours the temperature was less than 100° and the membrane was commencing to disappear and was practically gone within three days. The father, about 46 years of age, was given 400 units to produce immunization. For a few days he suffered slightly from a local urticaria but no other abnormal symptoms presented themselves.

The third case was a child about five years of age, seen in consultation, who had been sick nearly a week with diphtheretic croup—and was in a moribund condition. It died about five hours after injection. A younger child in the same family, which had considerable hoarseness, was also injected with between four and five hundred units, and within twenty-four hours the attending physician reported symptoms of improvement and the child recovered. Within less than one week I was called to see two children aged seven and nine, one of whom had been ill several days. The younger one, who had been sick at least four or five days, was what we should term a severe case. The serum sent for not having arrived, I used the usual remedies, and for three days the cases seemed to be doing so well that I did not use the antitoxin. But one morning I found the younger child hoarse and breathing hard, considerable stenosis being present. I immediately used 600 normal units of the antitoxin in this case, also 400 in the other. I also used for immunization 200 and 300 units in the case of two younger children who could not easily be isolated as there was only three small rooms on that floor. I saw the case three hours later and the symptoms were more alarming; in the evening there was apparently no change, and at midnight the family thought there was but little hope as the child was literally "gasping for breath" as they expressed it. But shortly after there seemed to be a change for the better and in the morning the patient seemed more comfortable and continued steadily to improve. For several days there was considerable albuminuria in this case. A second injection of 600 units was made twenty-four hours after the first serum was used.

Case nine was a woman in rather feeble health who was injected within twenty-four hours after diagnosing the disease, and who made a slow recovery. The dose here used was about 600 units of Behring's serum.

Cases ten, eleven and twelve were where it was used in children in this family to procure immunization, with no abnormal symptoms.

With the exception of the one fatal case the others remain in good health, and for the past four months I have seen no diphtheria, so that my experience is complete with the dozen cases.

After giving our individual experience the next question that naturally arises is, what the profession as a whole think of the remedy. Dr. Kellogg, chairman of the Section on Practice of Medicine, said at the last meeting of American Medical Association, "It is with the utmost caution that I approach this latest form of medication. The past year has brought forward a theory and practice which is either a tremendous farce, or the greatest discovery in any branch of medicine since Jenner, in 1798, proclaimed to a plague-stricken world the greatest scientific discovery ever made by man." Most of you are probably well aware that Virchow has been one of the most persistent critics of the so-called bacteriologist, hence his testimony in regard to the serum treatment of diphtheria is all the more valuable, and at the risk of repeating what you have all seen in the medical journals I quote his words. He says, "Treatment by diphtheria antitoxin was begun last March in the Kaiser and Kaiserin Friedrichs Hospitals. In June and July (1894) nearly all diphtheria cases were treated with the serum. The results were as follows: In eight weeks 63 cases were treated with a mortality of less than 13 per cent. Suddenly the supply of serum ceased as, unfortunately, the very horses from which the serum was taken died. The old methods of diphtheria treatment had again to be resorted to and the results were in the next seven weeks 109 cases treated with 55 deaths, a mortality of over 50 per cent. This sad increase in the mortality induced the hospital to return to the serum. Immediately there was a change. In the next six weeks 84 cases were treated with a mortality of less than 15 per cent." He further says that "All theoretical considerations must give way to the brute force of these figures."

I gladly quote freely from Dr. Chas. McClintock's excellent summary before the Michigan State Medical Society. In speaking of the

serum treatment he says: "It is now a question of facts. It has ceased to be a question of opinion. It is no longer what you or I believe, it is what are the facts?" and then he goes on to state, "With over ten thousand cases treated with this remedy—used by careful, critical, often fault-finding men—probably 80 per cent. of these cases being reported from hospitals, often the diagnosis made by one man, the treatment given by another and the report made by still another, the larger part of the diagnoses being confirmed by disinterested bacteriologists." He again makes the assertion that it is not now an opinion whether or not the remedy is a success. Then he goes on to say that he "has looked with some care over the report of the leading medical journals of this country, England, Germany and France, and it is well within bounds to say that an average of all reports made shows a reduction in mortality of over one-half. He quotes Virchow, Roux and others and we can do no better than to also give some of their conclusions. Dr. Foster of Washington in February last tabulated the report of 7,185 cases, collected from all sources. The mortality of those without antitoxin was 45.56 per cent, while with those treated with the serum the mortality was 18.54 per cent. And he makes the positive statement that "of the cases treated with antitoxin, there was not a single death when the treatment was given in the first day of the disease. When it was begun on the second day the mortality was 2.83 per cent.; begun on the third day 9.99 per cent., on the fourth 20 per cent." Berhings makes the prediction that the mortality will not exceed 5 per cent. if the treatment is begun within 48 hours after the attack. Roux reports that in one Paris hospital the mortality for four years was 51.71 per cent. In the six months since antitoxin was used 448 cases gave 24 per cent. mortality and during the same six months, in another hospital in the same city where serum was not used 60 per cent. died. To show that the medical profession is not unanimous in commending its use I might mention editorials and notes in one of the journals, "Medical Brief," I believe, which severely condemn its use. Also the report of Assistant Surgeon Cordeiro of the U. S. Navy. But perhaps Dr. Winters of New York City is the most pronounced in his opposition to the treatment, and he is quoted as making a sweeping challenge of every claim made for serum therapy, and attacked the statistics and alleged a number of serious after-effects due to the antitoxin. His reports were made to the New York Academy of Medicine from obser-

vations made at the Willard Parker Hospital. But he is reported not to have had a single supporter at the meeting, and that Dr. Somerset connected with the hospital for the past year or two virtually contradicted every conclusion reached by him, while Dr. Hermann Biggs, Bacteriologist of the New York Board of Health, stated that so far as he knew "there was not a single distinguished clinician, pathologist or bacteriologist in Europe who had not accepted the new treatment of diphtheria as the most important advance in therapeutics in modern times. In regard to such after-effects Dr. Baginsky of Berlin, director of the Royal Hospital for Children, one of the largest children's hospitals in the world, states that in his opinion the injection of serum does not increase the frequency of nephritis; cardiac collapse occurred in 10.9 per cent. of cases without serum and in only 5.69 per cent. of those treated with it, and that diphtheretic paralysis occurred in 6.8 per cent. of cases where the serum was not used and in 5.14 per cent. where it was used. Dr. F. Gordon Morrill of the Children's Hospital, Boston, reports that in 438 immunizing injections given between January 13th and May 13th, 1895, "he failed to observe any dangerous symptoms arise from immunization excepting one case, a boy, aged two, with leucocytosis and a large spleen, temperature of 105.4 and considerable oedema about the point of injection, cold baths and brandy soon made him better. He also speaks of the occasional appearance of erythema and urticaria. Virchow says, that "even when disagreeable by effects have proved to occur here and there, they were not sufficient to dissuade him from continuing the treatment." And last, but by no means least, it gives me pleasure to present to you the very recently expressed opinions of Dr. S. H. Durgin, a former president of the American Public Health Association and at present president of the Boston Board of Health.

HEALTH DEPARTMENT,
OLD COURT HOUSE, BOSTON,
Sept. 24th, 1895. }

Dr. Edward R. Campbell, Bellows Falls, Vt.

DEAR SIR :—Your letter asking for my opinion in regard to the "Serum Treatment of Diphtheria," is at hand. In reply I beg to say that the effect of the use of antitoxin in the treatment of diphtheria in the Boston City Hospital has been to reduce the mortality about one-half. The last 113 completed cases treated at the City Hospital, and of

which we happen to have a report within a few days, resulted as follows. There were 23 deaths and 90 recoveries. Of these deaths at least 15 of the 23 entered the hospital with severe sepsis, which would leave eight deaths out of 98 cases that could reasonably have been expected to be cured, which gives a mortality, taking the whole 113 cases, of 25 per cent., whereas the mortality at the City Hospital in ordinary times was over 50 per cent. If we exclude the 15 cases of severe sepsis, we should have a mortality of only 10 per cent.

With the vast accumulation of data showing the remarkable success of this treatment, it seems to me there can be but one verdict on the part of the medical profession. I am a strong believer in the power of antitoxin in diphtheria and also in its immunizing influence on the human subject.

I will enclose an article written by F. Gordon Morrill, M. D., on the "Immunizing Effects of Antitoxin," which may also interest you.

Believe me,

Yours very truly,

S. H. DURGIN, M. D.

Also the opinion of Dr. Briggs, Bacteriologist to N. Y. City Board of Health :

HEALTH DEPARTMENT,)
 NO. 301 MOTT St.,)
 NEW YORK, Oct. 12, 1895.)

Dr. Edward R. Campbell, Bellows Falls, Vt.:

MY DEAR DOCTOR :—In reply to your inquiry as to my opinion of antitoxin, I would say that my opinion has never changed since my first full knowledge of this remedy was obtained, about one year ago.

I believe that it is a specific for the treatment of diphtheria when administered early in the course of the disease, that its use has given far better results than any other method of treatment, that it is attended with no serious after effects, and that by its use the mortality from this disease may be diminished to at least a third of the average mortality before its discovery. Protection may also be conferred for short periods of time against diphtheria, by the administration of small quantities of serum.

I am, very sincerely yours,

HERMANN M. BRIGGS.

From my own limited experience with the antitoxin treatment of diphtheria and the extensive experience tabulated by others during the past year, it seems to me that the "preponderance of evidence," as our legal friends would term it, is very much in favor of the serum, and I have faith to believe that what we now see in serum therapy is the glimmer of the rising sun of progress and not "simply a 'will-o'-the-wisp,' shining to lure the traveler from the true path into unknown depths."

CHOLERA INFANTUM.

A complaint peculiar to infantile life, too well known to need further description. I have been requested to give my treatment for this scourge of the nursery. I will not stop to give its pathology or morbid anatomy. What the profession needs is the simplest and mildest treatment that will relieve the little sufferers in the shortest time; one of which, at least, I hope to give.

The first five years I practiced, I treated these cases as I had learned to from the books and lectures. When my little patients died I wondered why they did not get well, for I knew my treatment was orthodox. When a poor, little emaciated one lingered through the summer into autumn, and finally got well, I knew it was despite both disease and treatment.

Among my patients was our own little Ruby, a bright, sweet darling of fourteen months, stricken July 2d. I exhausted the remedies laid down in the books and those in my memoranda taken down at college, then called to my assistance the ablest physicians available. They said I had done all they could do, and offered nothing new. One, a diplomat, said, he had obtained the best results, in such cases, from the use of Mrs. Winslow's Soothing Syrup, advised me to try it, and went away. In my despair, I cried out, "is this all?" Is this the end of all hope of assistance, in this hour of my great distress.

July 28th she ceased to be. We laid her away, and might well have written on her little monument, whose spire points heavenward, "Died early, because they knew not what to do."

Then I began to inquire of every doctor I met: What is your treatment for cholera infantum or summer complaint in children? They replied: Opium, morphine, laudanum, paregoric, Doveri, cinnamon, cloves, allspice, nutmeg, kino, blackberry-root tea, white oak bark, raspberry leaf—the whole catalogue of astringents—made into

some form of powder, decoction or syrup. The same old, old treatment that has sent, and is still sending multiplied thousands of lovely, innocent children to premature graves, that ought to be saved; and many of them would get well if they never saw a doctor, or rather, if a doctor never saw them. Hard words to say! but I have been over the battle-grounds; I have witnessed the last struggles; I have heard the weeping of mothers and friends, who anxiously watched for the last breath.

I have paid dearly for my knowledge. I am still in a position to look over the field, read the results, and know whereof I speak. I had tested the treatments laid down in the standard works, and those given me by my teachers, and found them disastrous failures. I had applied to professional gentlemen with whom I met, and some of them appeared to think they had about reached the top round, and, from them, learned nothing new under the sun. I was then, comparatively, a young man. I determined to pull out of the rut made by that old professional cart, that went out from Philadelphia over one hundred years ago, and, if possible, blaze a way to the goal of my ambition, to relieve and save these little sufferers.

Under astringents, I found the inner coating of the stomach wrinkled and hard, like that of chicken's gizzard; the small intestines the same, with occasional short spaces distended with gas. No digestion, absorption or assimilation could take place under such conditions. (If you will cut down here after death, gentlemen, you will find, after using your puckering treatment, a similar condition.)

I began to think for myself: There is evidence of irritation here, manifest at both ends of the line. First, by the vomiting, and second, the diarrhœa. What then are the indications?

The answer is plain. First, control the irritation, and second, remove the cause. To control vomiting, one-eighth grain tablet of calomel every hour until four are taken. Follow with teaspoonful doses of castor oil, or pure olive oil, in which is mixed three to five drops of Battle & Co.'s Bromidia, every two hours, until it operates on bowels, and be sure that it *does operate, too*.

Then give every two or three hours from half to a teaspoonful, according to age and emergency, of the following:

R	Aquæ Calcis.....	I	ounce.
	Mistura Cretæ.....	I	ounce.
	Syrup Acaciæ.....	I	ounce.
	Bromidia.....	½	ounce.
	Bismuth Sub Nit.....	I ½	drachms.

M. Sig.: Shake well before using.

Repeat the oil every morning *till it operates*, and follow it as before. If the Bromidia in this formula is not sufficient to insure quiet and sleep, I give enough of it in addition till it does, always properly diluted. In extreme bad cases, with "brain symptoms," I depend entirely on Bromidia, and it has never failed me. I have given it in half teaspoonful doses every hour till the desired effect, with no unpleasant results.

Observe proper rules of feeding and bathing and the little patient is usually all right in a few days. Since I have adopted and followed this course, now about twenty-five years, I have not lost a case of cholera infantum or summer diarrhoea, and my records will show that I have treated, probably, as many as any one in the same section of country.

I want to say here, that I have saved the lives of more children, of all ages, with Bromidia, than any other remedy I have ever used, and I have used it since it was first introduced. I would no more think going among the little ones without a bottle of it than I would of going among the "Haw-eaters" of the Missouri Valley, without a bottle of quinine. I know how many feel from what they write about so-called proprietary remedies, but "what I have written, I have written." "The proof of the pudding is in chewing the string;" chew the string, gentlemen, and then tell us what you know.

When doctors learn that medicines never cure any disease, but may only remove the cause, that the system may restore itself, then there will be a great revolution in our medical armamentarium, and the manner of using, to obtain the desired results.

J. M. DUNCAN, M. D.

Kansas City, Mo.

Medical Brief, September, 1895.

WAYSIDE THOUGHTS.

Stand up for temperance, but remember that more people are gluttons than drunkards.

"Less medicine and more hygiene" is a grand motto for medical men.

A doctor must first be a man; other things follow.

A physician who in every patient sees only a fee is decidedly near sighted.

The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

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EDITORIALS.

THE PUBLIC DISPENSARY AN ABUSE OF CHARITY.

Charity is an admirable virtue and these remarks against the existence of the public dispensary are not meant to disparage the exercise of true charity in any sense. Far from it, for one of the most evident obligations of our present status in society is that we shall help those "who have not." But we are convinced that the public dispensary is economically wrong and will be just so long as mankind are continually striving to get *something* for *nothing*. In Altruria the dispensary may fulfill its mission and have its place, but in the cold, sordid world wherein we live and play our parts, it is fundamentally wrong and a menace to society!

These may be strong words, but we believe the occasion demands them. All over the country during the past few years, public dispen-

saries have sprung up and while undoubtedly much good has been done, it has not been the "greatest good to the greatest number." In the first place, because the giving of something for nothing tends to produce paupers; and secondly, because probably one-half of the beneficiaries of the system can afford to pay the regular fees of an attending physician and not require more time than the average patient. This is a conservative estimate, though not demonstrable by actual figures. The results can easily be seen. Aside from the injury to the regular practitioner, which we will not consider, it has a bad moral effect on the recipient of free treatment who could have paid. He has derived something without giving a fair return and he has obtained this something by fraud *i. e.* by representing himself as too poor to pay a regular fee. He has violated moral, economical and Christian law and no one can maintain that the individual is better morally for his success in cheating the dispensary. The temptation is present, however, and human nature does the rest.

Of those who cannot pay, fully one-half are unable to because of *laziness, intemperance or other vices*. This leaves but one-fourth of those benefited who are really deserving of free treatment. Therefore we believe that the public dispensary is a harm rather than a necessity. Charity does *not* require it, for if an individual is too poor to regularly engage a physician from circumstances or misfortune and his condition is such that he is prohibited from earning in the future, his case should come before the civil authorities just as it would if he was in need of food and clothing. After immediate investigation and being found as represented, a physician should be provided *at the expense of the town or city*. The physician is a wage-earner in every sense of the word, and deserves remuneration for his services as any other member of society, although some people are inclined to think that a doctor's calling is purely a charitable one. It is hardly necessary to say that it is no more so than any other.

Physicians also can and do accomplish a great deal for the sake of charity on their own responsibility, but the only right way is to do it privately. There are doctor's enough and kind hearted ones enough to allow no needy sufferer to go unattended. Physicians there are in plenty and we know them well, who day after day visit patients whom they know can never pay, but they do not shirk their duty. The world does not know how constant they are, but they can be found at the

last sad hour as the light goes out of many a poor stricken body, faithful to the end, though remuneration was never anticipated. This is true charity and no mistakes are made, for the physician who comes into the home knows pretty accurately the family resources. The sufferer is spared the shame of public charity and is allowed to comfort himself with the hope of being able sometime to repay his benefactor.

Are not these plans far better than the public dispensary with its motley crowd of willing paupers?

We think so, and believe that the promiscuous charity of the present day is quite as potent for harm as actual good. Experience proves that there are more drones from choice than necessity or misfortune.

Owing to the non-appearance of certain data which is needed for our article on "Milk Supply," we cannot present it to our readers in this issue.

MEDICAL ABSTRACTS.

GONORRHEA IN PREGNANCY, LABOR, AND THE PUERPERIUM.—Fehling, of Halle (*Wien, klin, Rundsch.*, No. 51, 1895, p. 813; from *Munch. med. Wochens.*, No. 49 and 50, 1895).

The author refers to the works of Bum and Wertheim, which have given many new conceptions of gonorrhoea and its manifestations during pregnancy. Wertheim has shown that it is possible for a man affected with old latent gonorrhoea to give the same to his wife, and in return receive a new infection from her.

In pregnant women with gonorrhoea, vulvitis is very common, and the parts are often covered with pointed condylomata. It is still a mooted question whether gonorrhoeal vaginitis exists of itself, or whether it is kept up by discharge from an infected cervix.

Gonorrhoeal salpingitis and parametritis frequently develop during pregnancy, while metritis has never been observed. The occurrence of interstitial endometritis has not been definitely determined, but it is supposed that it is the cause of frequent abortions in gonorrhoeal women.

Treatment consists of abstinence from sexual intercourse, and applications of antiseptics to the vagina. Douches are not to be recommended.

During labor vaginal examinations should not be made, or made as infrequently as possible.

The eyes of the child should be cleansed thoroughly and treated by Crede's method.

According to Kronig some of the cases of fever in gonorrhoeal women are due to auto infection from the parturient canal, but this question is still in dispute.

Should puerperal fever develop, the treatment is the same as for fever in non-gonorrhoeal women; namely, absolute rest, and avoidance of local treatment.—*Ame. Med.-Surg. Bulletin.*

FECAL IMPACTION.—This condition occurs most frequently in women and lunatics. There is always a history of previous constipation which, as a rule, gradually increases till the point of occlusion is reached: but the occlusion may be sudden. The commonest sites are the cecum and rectum. Constipation is usually absolute, but, when the impaction occurs in the rectum, the mass may be channelled, allowing the passage of the feces from above, and the patient, for a long time, be ignorant of any trouble. There is no blood in such actions. Eructation is a common and, often, distressing accompaniment of fecal impaction, but vomiting does not occur till late, and is very rarely stercoraceous. Pain and tympanitis are also late symptoms. A tumor, which pits on pressure, can usually be felt by abdominal palpation, and, if the rectum be the site, the trouble can be diagnosed by digital examination.—*Richmond Jour. Practice.*

VOMITING AFTER ANESTHESIA.—In a recent issue of the *N. Y. Med. Times*. Dr. Edmund Carleton gives his experience on the use of vinegar in carbolic acid poisoning. Either externally or internally, it counteracts the action of the acid, and seems to be almost a specific. The editor of the *Times*, referring to the *Revue de Chirurgie* as authority states that vinegar is a most excellent remedy to prevent vomiting in chloroform anesthesia. It chemically counteracts the chlorine irritation of the larynx, and speedily relieves the dehydration of the tissues caused by the chloroform. It is an active stimulant to the respiratory tract. A napkin is saturated with it and the patient is allowed to inhale the fumes of it.—*Medical Gleaner*.

GONOCOCCI OF APPARENTLY HEALTHY PROSTITUTES.—Kopytowski on the basis of a number of extensive clinical experiments finds (*Amer. Medico-Surg. Bull.*) that often after most careful police inspection, gonococci are found in the secretion of the cervical canal of women who are pronounced by the police surgeons to be absolutely healthy and that long after the apparent cure of an acute gonorrhoea, gonococci still linger in this region. Hence he argues the futility of an examination as at present conducted and the absolute impossibility of determining without elaborate bacteriologic investigation the presence or absence of gonorrhoeal infection in prostitutes.—*Medical Standard*.

TETANUS.—A case of tetanus is reported as having been cured by hypodermatic injections of solution of carbolic acid, two per cent. Twelve drops were injected every three hours until twenty-eight had been given. The recovery was complete in every particular.—*Journal of Practical Medicine*.

PILOCARPINE IN CROUP.—Dr. Carl Sziklai (*Bir. Mek. Rev.*, Vol. 38, No. 208) gives the following conclusions regarding the treatment of croup: "Pilocarpine is a specific in the widest sense of the term. The action of the drug begins at once; a cure is to be obtained in a few hours. It is indifferent whether it is administered by mouth, rectum or subcutaneously. In urgent cases the subcutaneous method is preferable. With pilocarpine mortality is reduced to a 0 per cent., and the course of the disease shortened. Pilocarpine can be given up to twice the officinal dose without fear."

COMMON CAUSES OF ALOPECIA.—Henri Fournier (*Jour. des Malad. cut. et syph.*, 1885, VII, p. 641) The author believes that the scalp is washed too often and is frequently lacking in oil. Many races oil the hair, and this is beneficial. Some animals also, as, for example, birds, which possess neither sebaceous nor sebaceous glands, have a gland which secretes an oily substance which the animal rubs on the skin to protect the feathers from the action of water. The product of sebaceous glands is remarkably rich in fat, and possesses a notably small

amount of water. The falling of a certain number of hairs is a physiological phenomenon. The author is of the opinion, however, that the application of oil to the scalp would be beneficial to most persons, and it is suggested that the rubbing into the scalp of a pomade or other fatty substance be made part of the daily toilet, the pomade to carry with it some antiseptic substance.

THE SURGICAL TREATMENT OF RETRO-DEVIATIONS OF THE UTERUS.

Dr. Augustin H. Goelet of New York, (in a paper presented to the N. Y. State Medical Society) believes that many of the operations designed for retro-deviations of the uterus, are unnecessary and irrational. The objection to Alexander's operation is the time it consumes and the prolonged convalescence it entails. Both ventro-fixation and vaginal fixation substitute an abnormal position and leave the organ fixed. When the uterus is movable, opening the peritoneal cavity to overcome a displacement is not justifiable if a cure can be effected without it. This should, he thinks, be reserved for those cases where the organ is fixed in an abnormal position by firm adhesions which cannot be otherwise overcome, and in these cases the uterus should be suspended from the anterior abdominal wall, not fixed to it. This secures the organ in a nearly normal position of antelexion, and it is fairly movable.

Vaginal fixation has been given undeserved attention in this country. Its originator, Mackinrodt, has abandoned it. When it is more generally known that the fixed abnormal position which results, offers a serious impediment in pregnancy when it supervenes and complicates labor, it will cease to be recognized as a legitimate procedure.

Where the uterus is movable, Goelet dilates carefully, cures the cavity, and inserts a straight, glass drainage tube which serves the purpose of a splint and keeps the uterus straight. The vagina is then tamponed with iodoform gauze in such a manner as to throw the organ temporarily into a position of anteversion. Subsequently, a vaginal pessary is made to take the place of the tamponade. The tube is retained in the uterus for a week during which time the patient is confined to bed, but it is removed every day and the cavity is irrigated to remove mucous and clots which may be retained. When the patient is permitted to get up, the tube is permanently removed and a vaginal pessary is employed for a while to maintain the uterus in a correct position until the normal tone of its walls and supports is restored.

When the adhesions are not very firm or extensive they are broken up by manipulations under anaesthesia without opening the peritoneal cavity, and the case is then treated as one of movable displacement.

This seems a rational procedure since it aims at a cure of the metritis and endometritis, the maintaining cause of movable displacements; re-establishes a normal position of the uterus, and leaves it movable. It is entirely free from

risk if thorough asepsis is observed, and requires only a week's confinement in bed.

The uniform success which this plan of treatment has afforded in his hands, leads him to believe that the other more hazardous and complicated operations designed for retro-deviations, are generally unnecessary.

COLLEGE NOTES.

Dr. Dillon Brown, owner of PEDIATRUS, one of the brightest and best edited journals which finds its way to our desk, completes his lectures on Diseases of Children at the U. V. M. Medical Dept., Thursday, April 23. This course has been of great value and thoroughly appreciated by the graduating class, with whom Dr. Brown is a great favorite.

Dr. Tinkham finishes his course on Anatomy the 24th inst. The students of the U. V. M. will miss the anatomy lectures, for Dr. Tinkham is not only an interesting lecturer but an excellent teacher. Anatomy is not the most pleasant study in the world to most students, but Dr. Tinkham does a great deal to rob it of its terrors.

NEWS NOTES AND FORMULA.

NEXT.—Cohn says a single germ could, under good conditions, multiply in three days to 4,772 billions, and make a mass weighing 7,500 tons. Fortunately the "good conditions" are not a common commodity.—*Medical Fortnightly*.

ACONITE TO ABORT COLDS.—The *Med. Record* strongly advocates the plan of giving aconite in the abortive treatment of colds. Small and frequently repeated doses are given, with the result that the fever is controlled, the pain in the muscles disappears, and the patient put on the road to recovery. Aconite is a powerful aid in the treatment of acute bronchitis and colds in the head and chest.—*Med. Brief*.

TUBERCULOUS GLANDS.—In tuberculous adenopathies Jeannel recommends :

R Sodii Bromid, 2½ dr.
Sodii Chlorid, 2½ dr.
Sodii Iodid, 15 to 30 gr.
Aquæ, 3 oz.

M. ft. sol. Sig: Teaspoonful every morning in milk.—*La Médecine Moderne*.

A SIMPLE TREATMENT FOR GRANULATED LIDS.—According to the London Lancet, the eminent Russian Dr. Neznamoff's custom in treating granulated lids is to paint the mucuous membrane of the lids with a solution of pure iodine mixed with liquid vaseline (oleum petrolei) twice a day. In chronic cases he uses vaseline containing from a half to one per cent. of iodine. In about four days improvement begins and in about twenty a cure is generally effected.—*Med. Fortnightly*.

DEATHS FROM ANESTHETICS.—A committee of the German Surgical Society have investigated the deaths from anesthesia occurring during the last five years and have secured the following data: Chloroform was administered 201,224 times with 88 deaths, or in the ratio of 1 in 2,286; ether, 42,141 times, with 7 deaths, or in the ratio of 1 to 6,020; chloroform and ether, 10,162 times, with 1 death; chloroform, alcohol, and ether, 5,744, with 1 death; ethyl bromide, 8,967, with 2 deaths.—*Am. Med.-Surg. Bulletin*.

The world-famous actor, Joe Jefferson, gave an address before the Medical Class of the University of Vermont, April 13, in the amphitheatre of the Medical College. Mr. Jefferson, after introducing his remarks by some inimitable stories,

spoke on "Oratory and the Drama." His thoughts were finely expressed and thoroughly enjoyed by the audience which packed the large amphitheatre from top to bottom. Governor Woodbury and many of the Faculty of medicine were among those who were present.

Dr. J. A. Drew, who graduated from the U. V. M. Medical Department last year, has been appointed Health Officer of St. Albans.

CHOREA.—Dr. W. F. McNutt, in *Pacific Medical Journal*, describes an aggravated case of chorea in a child, which, after a thorough trial of our treatment, was very promptly relieved by the use of sodium salicylate. The patient—aged seven years—was given this prescription :

R Sodii salicylatis... ..dr. ii
 Syr. gaultheriace.....oz. i
 Aquae gaultheriace. .q. s. ad. oz. ii

M. Sig.—Twenty drops every hour for six hours, and thirty drops every two hours thereafter.

Try Iodia in diseases attended by pus and mucous discharges.

In spasmodic asthma, try caffeine citrate in five grain doses.

In pulmonary troubles, syrup of the hypophosphites is invaluable.

Bromidia is the only pure, safe hypnotic preparation of chloral.

It seems to be well sustained that bathing in water in which borax is dissolved—about an ounce or more to the gallon of water—will check perspiration.

To abort whooping cough, give one two-hundred-and-fiftieth grain atropine every hour until the throat becomes dry, then discontinue until next morning.

Balsam of fir, three ounces, and fifteen drops of hydrochloric acid make an excellent mixture for frost-bitten toes and hands. It should be applied twice daily.

BOOK REVIEWS.

DIETS FOR INFANTS AND CHILDREN IN HEALTH AND DISEASE, by Louis Starr, M. D. Published by W. B. Saunders, 926 Walnut St., Philadelphia. Price \$1.25 net.

The dietary of infants and children should receive the closest attention at all times. Verbal directions are sure to be forgotten or neglected by the nurse and the mission of this little book is to obviate carelessness or negligence.

It ought surely to do this for it is scientifically arranged and with a view to accomplish the desired result with the least amount of "red tape." The leaves are detachable after the directions are written in the blank spaces and so, complete instructions can be left with the nurse or mother. Thus mistakes can be avoided with no inconvenience.

It is without doubt one of the handiest books which we have received.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX FOR 1896. Edited by a corps of thirty-seven department editors—European and American—specialists in their several departments. 728 octavo pages. Illustrated, \$2.75. E. B. Treat, Publisher, 5 Cooper Union, New York.

The fourteenth yearly issue of this valuable one-volume reference work is at hand; and it richly deserves and perpetuates the enviable reputation which its predecessors have made for selection of material, accuracy of statement, and great usefulness. The corps of department editors is representative in every respect. Numerous illustrations, many of which are in colors, make the "Annual" more than ever welcome to the Profession, as providing, at a reasonable outlay, the handiest and best yearly resume of Medical Progress yet offered.

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The Fourth and last part, is made up of miscellaneous articles, such as Recent Advances in Sanitary Science; New Inventions in Instruments and Appliances; Books of the Year; etc.

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INFANTILE MORTALITY DURING CHILDBIRTH, by A. Brothers, B. S. M. D., Philadelphia, P. Blakison, Son & Co. 1896.

This book was awarded the W. F. Jenks prize of the Philadelphia College of Physicians, and we are sure that Dr. Brothers, aside from the distinction of winning the coveted Jenk's prize, will receive the plaudits of his professional brethren all over the world. It is a splendid work and one which obstetricians cannot help but appreciate. Complete in every detail and modern in every idea we are impressed with the zeal and ability of the author.

Scarcely a day passes but what our attention is attracted to the present high rate of infantile mortality and we believe that that rate could be reduced by greater care and better attention on the part of the attending physician. Too much responsibility is left to the mid-wife, who is seldom equal to the demands of the various situations liable to arise.

Dr. Brothers' essay will have the desired result of impressing physicians with the importance of the subject and we welcome it as a valuable addition to medical literature.

"DON'TS FOR CONSUMPTIVES, OR THE SCIENTIFIC MANAGEMENT OF PULMONARY TUBERCULOSIS," is the title of a book which has just appeared under the authorship of Dr. Charles Wilson Ingraham, issued by the Medical Reporter Publishing Company of Rochester, N. Y.

The complete work of thirty-five chapters is devoted exclusively to the general management of pulmonary invalids, no reference whatever being made to drug treatments.

The title defines the contents of the book and we need say but little in regard to it. Dr. Ingraham has produced an excellent book and one which every physician should place in the hands of his consumptive patients, not only for the benefit of the patient, but in the interest of society. It is well written and presents a neat and attractive appearance. We congratulate Dr. Ingraham on the result of his endeavor to present a book to meet the demand. He has abundantly succeeded.

A TEXT BOOK UPON THE PATHOGENIC BACTERIA FOR STUDENTS OF MEDICINE AND PHYSICIANS, by Joseph McFarland, M. D., Demonstrator of Pathological Histology and Lecturer on Bacteriology in the Medical Department of the University of Pennsylvania, fellow of the College of Physicians of Philadelphia, Pathologist to the Rush Hospital for Consumption and allied diseases. With 113 illustrations. Price, \$2.50 net. Philadelphia. W. B. Saunders, 925 Walnut street, 1896.

This book is just the thing for medical students and practitioners who are not abreast of the times in the all important subject of Bacteriology. The preparation of slides and the examination of specimens, the recognition of the various kinds of Bacteria are all described in such a manner that any one of decent capacity might perform the work. The technicalities which have tended to make the study dreaded in the past are eliminated as much as possible, and the result is that we now have an excellent working book. The numerous illustrations add to the value of the book and its typographical appearance is certainly fine.

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COLOR-VISION AND COLOR-BLINDNESS.—A Practical Manual for Railroad Surgeons. By J. Ellis Jennings, M. D. (Univ. Penna), Formerly Clinical Assistant Royal London Ophthalmic Hospital (Moorfields); Lecturer on Ophthalmoscopy and Chief of the Eye Clinic in the Beaumont Hospital Medical College; Ophthalmic and Aural Surgeon to the St. Louis Mullanphy and Methodist Deaconess Hospitals; Consulting Oculist to the Missouri, Kansas, and Texas Railway System; Fellow of the British Laryngological and Rhinological Association; Secretary of the St. Louis Medical Society. Illustrated with One Colored Full-Page Plate and Twenty-One Photo-Engravings. Crown Octavo, 110 pages. Cloth, \$1.00 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This work is not, as one would suppose from the title, of interest only to the eye specialist. In it can be found much of interest and value to every medical man. There are ten chapters in the book, and the text in clear, concise and scientific language describes the affection most thoroughly. Many important facts are given concerning the physics of color-vision and its relation to color-blindness.

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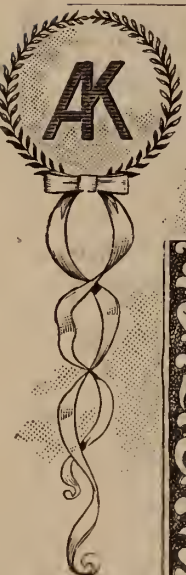
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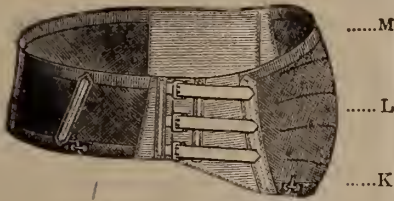
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The Vermont Medical Monthly

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MAY, 1896.

No. 5

Blood Stains.*

BY DR. J. N. JENNE, ST. ALBANS. Professor of Materia Medica in University of Vermont Medical Department.

Mr. President and Gentlemen :

In medico-legal inquiries of suspected homicide it is often of the greatest importance that stains, upon articles of clothing, upon carpets, furniture or implements found in the vicinity of the scene of the tragedy, or upon the apparel, person or the belongings of the suspected person, should be examined by an expert capable of giving to them the widest possible signification consistent with the facts. This ordinarily falls to the lot of the medical expert, and it is expected of him that he shall take charge of whatever articles may be delivered to him by the officer, that he shall retain them in his charge, specifically identify each, minutely describe their appearance, and enumerate all marks, spots or stains to be found upon them ; he should be further prepared to describe any change that may have been wrought in them by time, exposure, or treatment ; the effect upon them of temperature, moisture and of any other conditions that may have been described as having surrounded the articles prior to their having been delivered into his

* Read at 82nd Annual Meeting of Vermont State Medical Society.

hands, and the influence of the same and other conditions and influences to which they may have been subjected subsequent to their being so delivered.

Within the limitations of this paper I shall only attempt the consideration of stains of blood, substances containing it, or suspected of containing it, in the form of a response to the interrogatories :

First. Is the stain blood, or does it contain blood ?

Second. If blood, is it blood of man or some of the mammalian race ?

These questions are answered more or less perfectly by the results of the application of two or more of three methods of examination. The chemical, the optical and microscopical. The former two have a bearing only upon the determination of the first question, "Is the stain a blood stain, or does it contain blood?" and in no way upon the question of its source. The microscopical test may be relied upon in settlement of the first question only, with certainty, when in the hands of an expert microscopist, and in the examination of specimens known to be fresh blood, if blood at all. Since other bodies or cells are found which correspond in size and contour, and might be mistaken for, the red corpuscles, it is a safer working rule, to first determine by the chemical test the presence or absence of blood, and then apply the microscopical test as verification. While this is not necessary for the absolute and positive determination of the fact of its being blood in many instances, it is in the others. If corpuscular or cellular bodies are found corresponding closely with the red corpuscles in size and contour, the evidence is strengthened in that point by the microscopical examination, particularly, if, in addition, the circumstances surrounding the specimen have been such as to admit of degenerative changes having taken place in them, such as render their measurement unsatisfactory for the distinguishment between human corpuscles and those of the mammalia.

In the determination of the second question, "Is the stain of the blood of man?" the microscopical is the only test, and it is based solely upon the discovery and measurement of the con-

tained corpuscles. That it is possible by this means to discriminate between the larger, nucleated, and oblong cells, of the fishes, birds and reptiles, from those of the smaller, circular and non-nucleated cells of man and mammalia, there can no longer be a question; but that it is possible to so positively discriminate between the corpuscles of man and of some of the lower animals whose corpuscles approach closely those of man in size, I must deny.

It will be more convenient and logical to discuss that portion of the subject after we have studied the facts upon which these several tests are based, and I will, therefore, proceed to review briefly the constituent elements of blood which concern us directly in this inquiry. The red corpuscles and haemaglobin, a constituent element of them in nearly all vertebrates, and of the blood serum in all invertebrates.

The corpuscles in man and the mammalia are described as biconcave disks with round edges and depressed centers, of a diameter in man of 7.75 Mm. or $1/3250$ of an inch: their greatest thickness $1/13000$ of an inch, since it is by the size and shape alone that we are able to differentiate the varieties of mammalian corpuscles, it is of the greatest importance to determine with the greatest possible accuracy the normal average diameter of each, particularly those of man and the mammalia the diameter of whose corpuscles approach most closely those of man.

A vast amount of study and research has been devoted to this subject, and, while the results have shown some divergence of opinion, it may now be fairly stated, that even only within the limitations of health and disease, the diameter of corpuscles of maximum and minimum sizes vary but slightly in any species. The following is the table of diameters of the red corpuscles as given by Wormley:—

Elephant,	1'2738
Opossum,	1'3145
Man,	1'3250
Muskrat,	1'3282
Monkey,	1'3382
Guina Pig,	1'3410

Dog,		1'3561		
Ass,		1'3620		
Rat,		1'3652		
Rabbit,		1'3656		
Mouse,		1'3743		
Mule,		1'3760		
Bat,		1'3966		
Raccoon,		1'4084		
Lion,		1'4143		
Ground Squirrel,		1'4200		
Ox,		1'4219		
Horse,		1'4243		
Pig,		1'4268		
Cat,		1'4273		
Leopard,		1'4390		
Sheep,		1'4912		
Goat,		1'6189		
Chicken,	l. d.	1'2101	s. d.	1'3436
Goose,	"	1'1836	"	1'3839
Duck,	"	1'1937	"	1'3424
Pigeon,	"	1'1973	"	1'3643
Dove,	"	1'2005	"	1'3369
Turkey,	"	1'2045	"	1'3598
Quail,	"	1'2347	"	1'3470
Turtle,	"	1'1231	"	1'1882
Trout,	"	1'1524	"	1'2460
Eel,	"	1'1745	"	1'12842
Owl,	"	1'1763	"	1'4076
Pike,	"	1'2000	"	1'3555
Perch,	"	1'2099	"	1'2821
Sparrow,	"	1'2140	"	1'2500

With reference to the element hæmaglobin, it may be said that it is a crystalizable substance with oxygen, nitric oxide and carbonic oxide, but this fact is of no interest in this connection; it is decomposed by heat, with the coagulation of its globin, and the crystalization of its hæmatin. In presence of a bromide, iodide, or chloride the corresponding hæmatin salt is formed. Hæmatin is soluble in alcoholic sulphuric acid and the alkaline hydrates, but is insoluble in ether, alcohol or water. It is further decomposed by conditions of high temperature when combined

with moisture, in a recent fresh state, but since it can only in exceedingly rare instances happen that a specimen can have been subjected to the temperature required for the decomposition of both its soluble form of hæmatin, and the destruction of its corpuscles, to an extent incompatible with the recognition as corpuscles of blood, and farther from the limitations of this article, I shall not enter into the discussion of these products of decomposition, their recognition, or signification further than to say that it is possible to submit a specimen of blood to such conditions as will decompose the hæmaglobin, and so far modify or destroy the corpuscles, that both chemical or microscopical tests will fail to detect the presence of blood when it is present in a specimen; but the chemical and microscopical test, except as stated in very exceptional, and never accidental instances, will reveal all that is sought; the fact of blood and its probable source; with this I will proceed with the details of the two chemical tests, the so-called Guaiacum and the Hæmatin, or Teichmann's. They are at once the most simple and more commonly used, the former is based upon the reaction observed between the freshly prepared tincture of guaiacum, blood, and ozonized oil, or hydrogen per oxide, the latter the more easily obtained and the cleaner reagent and this is generally to be preferred. A dry stain upon a smooth non-absorbing surface, as the floor, the walls, or a knife, may be removed by scraping with a sharp blade, or if it be an absorbing surface as a garment, by maceration in water, which may then be expressed upon the surface of a clean piece of blotting paper or the fluid may be dropped upon a watch crystal or other shallow earthen dish. A few drops of tincture of guaiacum is added and after that the hydrogen per oxide. The reaction consists in the production of a beautiful and quite characteristic blue color, which only appears with blood, when the reagents are added in the order directed, and it appears immediately upon the addition of the last named chemical. If the blue color is produced in any other way, or before the hydrogen per oxide is added, then the test is a failure, and some of the fallacies that exist in the test should be sought for and eliminated.

It is observed, as I have stated above, a blue color produced only when the reagents are added to the suspected stain in the manner and order directed, is significant of blood ; if it appears upon the addition of the guiacum alone, milk, the juices of some fresh root, like horse radish or starch, gelatine, chloride or an acid of oxide of iron are present in the stain, in the reagents, or upon the paper used. The guiacum, if oxidized, will also give the blue color upon the addition of the hydrogen per oxide alone, no blood being present, so, too, a mixture of these reagents, will produce like results, with other substances than blood. Certain glazed papers into whose composition alum enters, will give to the guiacum alone the blue reaction. Only tincture of guiacum from the fresh gum, or the interior portion of the tears should be used, and this only when freshly prepared. A test then should be made first with the reagents alone, and if no blue color is produced, it may then be considered safe to proceed with the test of the specimen. This precaution should always first be taken, particularly, if the stain be a small one, lest the fault with the reagents be discovered only when the material is exhausted. When all these possible sources of fallacy have been carefully eliminated and the test carefully applied in the manner described and the blue color immediately produced, the stain surely contains blood.

Teichmann's test, or the Hæmatin test is the most reliable if not the most easily applied, and is based upon the crystallization of hæmatin in solution in the presence of sodium chloride, potassium, iodide or bromide, with the production of the corresponding salt of hæmatin. The test is performed thus :

A small fragment of the stain is removed and let fall upon a clean microscope slide, a drop of water containing a crystal of potassium iodide is allowed to fall upon it ; the water is then slowly evaporated, care being taken not to heat beyond 140 C. A cover glass is then placed over it and a drop or two of gulacial (acetic) acid allowed to run under the cover ; this heated, but not allowed to boil until air bubbles appear under the cover. It is then

allowed to cool, when the hæmatin crystals will appear, if blood is present, if viewed through a microscope.

If the specimen has been heated to or exceeding the temperature 140 C. during the test or prior to it, the hæmatin may have been reduced or destroyed, and no crystals will be found, then too, after the addition of the acid, if active boiling occur, the crystals may be mechanically removed from the field and not be discovered.

These crystals are so well known that I scarcely need to devote more time to them than to say ; they are rhombic plates, of a dark brown or yellow color ; they vary somewhat in size and arrangement depending upon various conditions, influencing crystallization everywhere. They are quite characteristic, however, when recognized and are certain evidence that the stain contains blood from some source. An effort has been recently made to show that these crystals, in the different varieties of apyrenemata vertebrata possess properties which enable the observer to distinguish blood of one member from all other members of the class, but thus far they have been futile. The recognition of the hæmatin crystals signifies the presence of blood, nothing more, but a negative result does not prove its absence, for the reasons already mentioned. The microscopical test, is, as has been stated, based upon the recognition of the red corpuscles, and as between the corpuscles of the pyrenemata and apyrenemata, birds, fishes and reptiles on the one hand, and man and the mammalia on the other, the discrimination is a comparatively easy task ; but to discriminate between man and certain of the mammalia, is quite impossible, the only distinguishing feature being size as determined by the micrometer. It happens, however, often that questions in cases of legal inquiry involves only a determination as between the corpuscles of a man and that of a certain animal as, for instance, the ox, or the horse ; the corpuscles of the former $1/4219$, the latter $1/4243$. Here an expert need not hesitate, but if fairly experienced may pronounce with certainty, for one or the other, and even between corpuscles with measurements approaching each other more closely, a fairly decisive opinion may be had.

Occasionally the question presented for a medical expert is

as to the consistency of the allegation that certain stains of blood are from the chicken, duck, cow, or pig, but he can only in a specific case like this reply that the microscope reveals facts consistent or inconsistent with the allegations as are the facts found. The microscopical examination applies to the examination of fresh, recently shed blood and the dry stains, but the results of the examination of dry blood, may or may not prove satisfactory, depending upon the conditions surrounding it and connected with its drying. If blood has fallen upon a smooth non-absorbing surface, and has not been subjected to too great vicissitudes of temperature, or particularly moisture, then the examination, even after the lapse of years, is quite as simple and its results nearly as satisfactory as the results of the examination of a fresh stain, or freshly shed fluid blood. If, however, the blood has fallen upon some porous absorbant substance, particularly fabrics, then the contour of its corpuscles are often so all altered by their adhesive properties, and the attractive properties of the fibres of the cloth as to render their measurement very difficult, if not impossible.

Stains of fresh blood are usually prepared by placing a drop of freshly drawn blood upon a clean slide and placing the cover immediately over, but often corpuscles show such a disposition to arrange themselves in rouleux, and are so closely assembled that many are overlapped or stand edgewise and their measurement is rendered difficult or impossible. It will generally be found more satisfactory after placing the drop on the slide, to place another slide, face upon it, pressing them firmly together so as to diffuse the blood extensively upon their surfaces and then to separate the slides, maintaining them in a parallel position. A cover may not be immediately put on or the blood allowed to dry even by the aid of additional heat, a drop of balsam placed about the rim of the cover will preserve the mounting for several days. The latter method of mounting, diffuses or separates the corpuscles, even to isolation, which greatly facilitates their examination and measurement.

With dried blood, some fluid is required to disintegrate the

mass that will not destroy or modify the contour or diameter of the corpuscle. Many have suggested Muller's and Virchow's being the popular ones, the former consists of potassium bicarbonate two parts, sodium sulphate one part and water 100 parts; the latter is a 33 per cent aqueous solution of Potassium Hydrate. They each are about the specific gravity of the blood serum and both cause contraction of the corpuscles from long maceration in it, equal to 1-3 of the diameter of the corpuscles. These solutions are to be preferred to some others when an immediate examination of the stain is required, as the alkali rapidly disintegrates the dry mass and sets the corpuscles free. A small fragment of the stain is removed from the surface upon which it has fallen by a sharp knife and is allowed to fall upon the surface of a slide. A drop or two of Muller's or some other fluid is added, a cover of glass placed over and sealed. A sufficient length of time should now be allowed for the particles to become wholly disintegrated which will vary exceedingly, from a few minutes to as many days, depending upon the age of the stain, the surface from which it was removed and other influences to which it has been subjected. It can be examined from time to time until it is observed that the mass is softened, and the corpuscles loosened up, and isolated sufficiently for their measurement. If a stain is from a large spot or from an absorbant surface, that portion of it should be selected which gives evidence of having been the first to dry, as the corpuscles will have been less changed by absorption or water.

Having mounted a specimen of dry or fresh blood we proceed to the measurement of its contained corpuscles in precisely the same manner. The microscope with a movable stage greatly facilitates the bringing of the corpuscles accurately and speedily within the lines on the scale of the micrometer. Since the greatest accuracy is absolutely essential in the securing of even approximately correct results, it should be borne in mind that the eyepiece micrometer can only be used upon the instrument for which it was made, or upon one on which it has been verified by a reliable stage micrometer. The scale in the eyepiece micrometer

measures the image of the object formed in the focus of the eye-piece and not the object itself; no two objectors are exactly of the same power, hence the necessity of great care in the adjustment of each eye-piece micrometer to the instrument on which it is to be used, and making the proper correction of readings for each power, and for each instrument, Again, it has been stated, the diameters of the corpuscles of all the mammalia vary within limitations in health, and are also influenced by diseases; fevers, septicaemia, diphtheria to diminish, leukacmia to increase their diameter. A large number of corpuscles should always be measured, three hundred or more, and the average of their diameters taken. It is customary to include the dark, outside ring of the corpuscle in the measurement.

Fortunately for the expert, it is never necessary for him to state specifically that the corpuscles of a given stain are of man, or of any specific animal, and if he has placed himself in the position of assuming to be able to distinguish any specified corpuscles, from all other corpuscles, it is his own fault; he is only called upon to state what is consistent with the facts of which he has possessed himself by the examination, and if the fact is consistent with the theory that it is a blood of two, or a dozen animals, he should so state.

If a specimen examined shows corpuscles of an average diameter of $1/3250$ of an inch, it is consistent with the theory of its being the blood of the monkey, the Guinea pig, the dog and others; it is not consistent with the theory of being the blood of the sheep, ox or horse, and the medical expert may so state.

If the corpuscles are oblong and nucleated, he may state that it cannot be the blood of man or of the mammalia. If the average diameter be less than $1/4000$ of an inch he may state that it can not be from the blood of man, the dog, monkey or rabbit and some others.

The Guinea pig, rabbit and dog are the only domestic animals whose corpuscles closely approach those of man in diameter. If it should be shown that the specimen examined could by any means have been from one of those sources and the corpuscles

measured $1/3100$ to $1/3300$ of an inch in diameter, in a criminal case, that fact is for the jury, and not for the expert, and he should make no use of it in forming his opinion or giving his testimony.

Much has been said and written recently respecting the values of higher power of the microscope in distinguishing the corpuscles of man, and the various mammals, but it is to be observed, however, that the conclusions of these writers and observers who claim superior advantages for the higher power instrument, do not materially differ from their former declarations that, if the corpuscles are more than $1/4000$ of an inch they cannot with certainty be distinguished from man, no matter what the source may have been.

These same results are reached with quite as great accuracy with a $1/12$ or even a $1/5$ objective in the hands of the other observers. Personally, I have had no experience with the higher power instrument. From my own observation and from a careful perusal of the best and most recent authors, and the conclusions of the foremost haematologists such as Bell, Reyburn, Rees, Ewell, Farmand, Masson, Wormley, Wood and White, I am of the opinion that the corpuscles of the blood of man can, in no instance, with certainty, be distinguished from those of certain mammalia in the present state of our knowledge.

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The Commencement Exercises of the U. V. M. Medical Department will occur July 6.

Dangers Which Threaten the Usefulness of Cod-Liver Oil.

BY JNO. T. WINTER, M. D., Professor of Theory and Practice of Medicine, National University, Washington, D. C.

From recent observations I am convinced there are dangers which threaten the future usefulness of one of the most valuable remedies in the *materia medica*.

That cod-liver oil has valuable therapeutic properties has been known for two centuries. For half a century this oil has been carefully studied, and its physiological action and therapeutics placed upon a sound scientific basis. Until recently, thousands of physicians have prescribed cod-liver oil, confident that certain results would follow. Thousands upon thousands of the laity have taken advantage of the teachings of the profession and of the experience of their fellow-men, and incalculable benefit has resulted therefrom.

It is no slight matter to weaken the confidence of the profession in a remedy which has stood the test for at least fifty years. It is equally serious to diminish the faith which the people have in so valuable a remedy. No one can deny that cod-liver oil has given comfort to those who could not be cured, has greatly prolonged the lives of vast numbers, and has restored countless thousands to health.

In the light of all this, is it not trifling with human life to break the faith of both physician and patient in a remedy which has proven itself so valuable, we might say, indispensable? Is the profession soon to lose faith in cod-liver oil as a remedial agent? And is the public about to abandon its use?

Neither physician nor patient will continue the use of a remedy unless the desired results are obtained. Experience has established these results. Cod-liver oil is not prescribed as an experiment. Its physiological action is no longer watched with

an uncertain eye. But suppose these expected results no longer appear, what then? Confidence is impaired, and in looking about for a substitute a hundred worthless remedies are tried, and the most valuable time for successful treatment is lost.

Having for many years been a firm believer in the curative properties of cod-liver oil, I have of late looked with great anxiety on efforts which tend to impair its usefulness. I can see at least three great dangers. Unless these are destroyed, the therapeutic value of cod-liver oil will be an uncertain factor.

The First Danger—The first danger is the result of a modern theory that a part equals the whole! We all know that cod-liver oil is a most complex body. Its chemical analysis reveals the presence of many constituents. These have been called the alkaloids, or the "active principles" of the oil. They exist in peculiar combination with the fat, and are with difficulty separated from it. It is significant that nearly every original investigator has been able to extract from the oil some additional substance. In fact, even prior to 1888, there had been discovered over fifty elements in this oil. Within the past eight years chemists have been very active in discovering new principles, until at the present time I am not aware of the length of the list.

To break up cod-liver oil into these several ingredients, is to change its character altogether. I do not believe it is possible to take any of these constituents from the oil without either impairing or totally destroying the therapeutic properties of the parts taken or of those remaining. There is no doubt but the alkaloids of cod-liver oil are valuable; they are valuable, however, *because of the peculiar combination as it exists in the oil.* To take all of the oil, or fat, from cod-liver oil, and then claim that the alkaloids are useful as a fat-producing food, is just as reasonable as it would be to administer iodine, bromine, or phosphoric acid to a patient as a food! Persons can live on cream and on other fatty foods, provided their digestive powers can properly care for so rich a diet. But they could not live on iodine or any of the alkaloids or active principles of cod-liver oil, or on all of them combined. To use only the alkaloids of cod-liver oil, is to

employ a remedy without value as a fat-producing food. If this be not true, then let us abandon the oil entirely and rely upon other sources for our iodine, bromine, etc.

This new theory of substituting a part for the whole is, to many minds, the greatest danger which threatens the usefulness of cod-liver oil. No matter how ingeniously the alkaloids may be combined with wine or other liquids, the results of the past will not be verified by this substitution, and the profession and laity alike will distrust it. If they were only skeptical regarding these new preparations, the case might be different. But having been taught that cod-liver oil is valuable only for its alkaloids, then the failures are charged against the oil as a whole, instead of against a part.

Even granting, for argument's sake, that all of the good properties of cod-liver oil reside in these so-called alkaloids, the fact remains there is no reason for believing that they would exert the same good office when thus isolated as when they existed in their natural state; just as a mineral water would not do the same amount of good if its various constituents were extracted and administered separately.

It must be laid down as a rule, founded upon scientific study and verified by scores of years of observation, upon hundreds of thousands of cases, that *the whole oil must be used* if the best therapeutic results are desired.

The Second Danger—The second danger would be more serious than the first, but fortunately it can never grow to such magnitude. There are only a few manufacturers so unscrupulous as to impose such frauds upon the public as these to which I now refer.

In his "Practical Therapeutics," Hare says: "One of the emulsions widely advertised in the street cars of Philadelphia as 'tasteless' has been shown to contain no oil at all." He adds also that, "Oil devoid of smell is probably devoid of medicinal value, as all the peculiar properties have been purified out of it." Patients invariably object to the odor and taste of raw cod-liver oil, so it is but natural they should be pleased with these "odor-

less and tasteless" preparations. That these preparations are in use at all is probably due to two reasons: (1) Only a few physicians are aware of the fact that they contain no cod-liver oil whatever; and (2) the laity have no reason for doubting that the mixture is other than what it pretends. The physician and patient have every right to expect that a "preparation" of cod-liver oil contains that oil. It is the most cruel kind of deception to thus impose upon those who place all their hope for health on this valuable remedy. As it is not present, so the results are not obtained. Therefore, cod-liver oil is put down as of no value whatever in such cases. Even if the deception be discovered, it is generally too late for the oil to accomplish good, at least to its full amount.

The Third Danger—The third danger is a universal one, and is of great importance. To understand it a few words of explanation are necessary.

Without doubt the great bulk of cod-liver oil is taken in the form of an emulsion. The reasons for this are evident. A good emulsion has little of the fishy odor and taste, although these are always present. An emulsion is more easily borne by the stomach and is not so liable to cause eructations of gas. This is probably due to the fact that when an oil is emulsified it is, in a measure, digested, for the digestion of an oil is simply breaking it into minute globules. Modern physiology teaches that the oils are not saponified, but emulsified, by the pancreatic juice; this is the case, at least, with those oils which are assimilated. The oil in ordinary emulsions probably requires some further digestion in order to prepare it for absorption; but its emulsification is doubtless a great aid to its digestion. Then again, emulsions are more pleasant to the taste than are the raw oils. Therefore we find the majority of physicians prescribing them, while the laity, undirected by physicians, almost invariably ask for them.

It is an unfortunate fact that there is no fixed standard for cod-liver oil emulsions. We find one pharmacist offering an emulsion of his own manufacture at a certain price, while his competitor just across the way is offering one at a third less. But

the former gives thirty per cent of oil, while the latter may give but ten, yet both preparations are "Emulsions". No physician should prescribe an "Emulsion" of cod-liver oil unless he knows the preparation contains cod-liver oil, and in definite proportions. To prescribe any "Emulsion" or "Preparation" of cod-liver oil simply because it is an emulsion, or preparation, is to express as much confidence in the label as in the drug.

The third danger, therefore, is one due to unreliability and uncertainty. It is easily overcome by the exercise of ordinary care that only those preparations be ordered which are reliable, and of definite composition.

It is because I believe cod-liver oil to be such a valuable remedy that I call attention to some of the dangers which threaten its future usefulness. But they are dangers which we are abundantly able to remove, and which must indeed depart without effort if we keep clearly in mind the facts upon which cod-liver oil rests its reputation.

The New Hampshire State Medical Society Meeting.

The One Hundred and Fifth Anniversary Meeting will take place Monday and Tuesday, June 1 and 2, 1896, at Concord, N. H. A most excellent program has been arranged and a very large attendance is expected.

The Annual Meeting of the Alumni of Dartmouth College will be held at the Eagle Hotel, at 6 o'clock p. m. the first day, and will be followed by a banquet.

The Society Council will also meet the same evening at 7.30 p. m., to consider all business that may properly come before it. The members of the Council are as follows:

G. D. Frost, M. D., Hanover.
 J. W. Staples, M. D., Franklin Falls.
 G. S. Gove, M. D., Whitefield.
 G. H. Saltmarsh, M. D., Lakeport.
 J. W. Parsons, M. D., Portsmouth.
 D. L. Stokes, M. D., Rochester.
 C. B. Hammond, M. D., Nashua.
 C. A. Fairbanks, M. D., Dover.
 C. F. Starr, M. D., Manchester.
 A. K. Day, M. D., Concord.

L. J. Frink, M. D., Bartlett.
 G. W. McGregor, M. D., Littleton.
 J. Wallace Russell, M. D., Concord.
 Elizabeth B. Reed, M. D., Keene.
 L. B. Morrill, M. D., Centre Harbor.
 J. T. Greeley, M. D., Nashua.
 G. H. Larabee, M. D., Suncook.
 E. B. Hodson, M. D., Centre Sandwich.
 I. G. Anthoine, M. D., Nashua.
 W. M. Megrath, M. D., London.

After the Council Meeting (probably about 8.45 p. m.) the physicians of Concord will entertain the Society and their friends with a social hour, when Rev. W. J. Tucker, D. D., President of Dartmouth College, and Hon. John C. Linehan will address the Association. Friends of the Society and the College are invited to be present.

Dr. G. P. Conn of Concord, N. H., is the Secretary of the Society and all communications should be addressed to him.

College Notes.

UNIVERSITY OF VERMONT, MEDICAL DEPT.

Dr. A. F. A. King began his annual course of lectures on Obstetrics, on Monday, May 18th. The Doctor's opening address to the Medical Class was very much enjoyed by the students and heartily applauded.

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Dr. A. M. Phelps also commenced his course on Surgery, at 2 p. m. the same day, and received a very warm welcome from the Class. There seems to be a large amount of material for the surgical clinics this year and there is every indication for the same excellent course given by Dr. Phelps in preceding years.

Owing to circumstances, Dr. Witthaus was unable to begin his lectures as scheduled, but will commence instead on Monday, June 1st.

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The Class in Histology under Prof. Jo H. Linsley completed their laboratory course Saturday, May 16th. The boys did excellent work this year, and were very successful in the examination. Prof. Linsley is responsible for the amount of histological knowledge acquired by this year's class, for he has used every effort to assist the men in their work. That he succeeded was shown by the quizzes and the result of the examination.

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The Laboratory course in Pathology commenced May 18th and will continue the rest of the term. Dr. Linsley also gives this course.

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HYDROZONE IN PURULENT OTITIS MEDIA.

A REPORT OF A CASE SUPPOSED TO INVOLVE
INFLAMMATION OF THE MASTIOD.

BY WM. CLARENCE BOTELEK, M. D., OF KANSAS CITY, MO.

*Published by the Medical Bulletin of Philadelphia, Pa.,
February, 1896.*

On November 4th, 1885, I was consulted at my office by Robert P—, aged 24 years; occupation, laborer in the Armour Packing Company. The patient complained that for about four weeks he had been suffering from intense pain in his left ear, making it impossible for him to sleep at night, or rest during the day. The pain was so severe that at times he apparently lost consciousness and it seemed to extend through his entire brain. Upon inspection, the man's face was found terribly deformed; an edematous swelling the size of one-half of an ordinary loaf of baker's bread occupied

the usual location of the ear and the surrounding muscles. The auricle of the ear was almost buried in edematous tissue; upon palpation, the part was found intensely tender, and deep pressure evoked expressions of excruciating pain. The integument and sub-cutaneous tissue were thoroughly infiltrated. Ichorous, fetid pus was slowly exuding from an almost imperceptible meatus. The patient expressed feelings of chilliness, showing a possible septic contamination of his system. Every indication and sign pointed to possible suppuration of the mastoid cells—tenderness upon pressure over the mastoid being very marked. Efforts to localize the tenderness, whether in external meatus or mastoid, for discriminating diagnosis, were unsatisfactory. I concluded to withhold a positive diagnosis as to whether the condition was purulent otitis media or suppurative inflammation of the mastoid, and used tentative treatment for a short while. I immediately placed the patient under heroic doses of elixir of the six iodides internally. After laborious effort I succeeded in separating the edematous tissue sufficient to admit the introduction of a small Eustachian catheter into the external meatus. Through this, with a small hard rubber syringe, I injected four times daily about one-half an ounce of hydrozone, allowing it later to drain away, advising hot fomentations. The patient was confined to his bed and the best possible hygienic surroundings provided. In twenty-four hours after the treatment was commenced, the intensity of the odor, amount and character of the discharge had manifestly lessened, the swelling was reducing and the patient feeling better. The edema being lessened, the aperture was enlarged. I now recommended the injection of hydrozone through a catheter of larger calibre, every hour, requiring the head to be kept turned to the opposite side for ten minutes to allow the percolation of the hydrozone as deeply as possible into the middle ear, before reversing the position to allow drainage. We continued this treatment for a week, the man's recovery progressing with remarkable rapidity, his pain and the constitutional symptoms having disappeared about the third day. At the end of eight days the swelling had entirely disappeared, his features were again normal, and he expressed himself as perfectly well. An examination showed a circular perforation in the ear drum the size of a shot, proving that the case had been one of purulent otitis media, with septic contamination of the patient's system, and infiltration of the surrounding cutaneous tissues. Small incisions were made at two different places to permit the exit of pus from the integument. The mastoid was found not involved. The rapidity with which the disease yielded after the introduction of hydrozone through the catheter into the middle ear impressed me with the wonderful value of the preparation; for, struggling with such cases during a practice of seventeen years, I have never seen its efficiency equalled by any medicinal or operative procedures.

The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
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EDITORIAL.

"The Physical Basis of Life."

Students of physiological text-books are inclined to form the erroneous belief that life is the result of cellular activity and has its origin *de novo* in the cell itself,

To many this is far enough to trace the origin of life, but to those whose innate hope is for something beyond a physiological existencē, the protoplasm of a cell is but the field of life-manifestation. Science to-day recognizes no such thing as a spontaneous generation, and biogenesis necessarily goes beyond the cell origin of life. What the beginning was, or what the vital force is, that

we designate life, none can say, but there was a beginning and there is a force which expresses itself in the protoplasm of a cell and vital phenomena result.

Cells do not produce vital force. Instead they are the *exponents* of vital force and simply perform the functions set in motion by that force. Like the modern engine made up of cylinders, valves, piston-rods, driving-wheels, and the many intricate elements which are motionless until steam converts them into moving, working parts, the cell is an immobile mass without the presence of the essential force. Huxley has said: "Cells are no more the producers of vital phenomena than the shells scattered in orderly lines along the sea beach are the instruments by which the force of the moon's gravity acts upon the ocean. Like these, the cells mark only where the vital tides have been and how they have acted."

Therefore, there is no such thing as a "physical basis of life." Basis implies foundation and protoplasm is not the foundation of life. What the true basis of life is we do not know, but we do know that *omne vivum ex vivo* and there must have been a beginning. Men have sought for the genesis of life in chemical and physiological phenomena, but years of research have only given us the atom and the cell. Like the blind who are continually groping with outstretched hands for tangible support, the followers of science are ever seeking for a material solution of life. And this is but natural, for our minds, necessarily finite, can receive nothing but material impressions, and no thought has ever been other than tangible in its realization. In other words, every thought is expressed in terms of material things, and this fact alone places the origin of life outside the pale of science. Biogenesis occurred before matter existed, and though evident in a material world, life had its origin in one of which science knows nothing. The cell then is simply the point where, life enters the material world and manifests its presence, or, using a metaphor, it is the arena wherein life begins its struggle for supremacy over matter. The cell mass or protoplasm does not create life, but is itself dependent on the vital spark for its own being.

If this is so, and it cannot be denied, the term "physical basis of life" is a misnomer and should be avoided.

The Need of Endowment for Medical Schools.

In all the numerous accounts in the daily papers of public bequests, we seldom observe a gift to a medical college. The only reason for this seems to be that medical schools are rarely considered when a will is being made. Why this is so we cannot tell, but it is a lamentable fact.

Public minded citizens can achieve no greater deed of charity, nor one productive of greater benefit to future generations, than to endow some of our reputable medical schools. The task of raising the standard of medicine lies fundamentally in the hands of the institutions who have the training of future physicians, and they cannot accomplish the best work without the best means. It is ridiculous to maintain that a self-supporting medical school can give to its students the high advantages that it otherwise could, if such school was endowed, and equally ridiculous to suppose that the school depending on an income from its students for existence, will ever raise the entrance or graduation requirements to the extent of reducing the attendance. Nor can they be blamed, for the medical men who give their time to teaching and college work must have somewhere near decent recompense. To lower their remuneration will certainly lessen their enthusiasm and the result will be to lower the quality of their work. Therefore, though better fitted mentally for medical study, the student will receive a far poorer fitting for his chosen profession.

No one can say that this matter is not worthy of serious consideration. Medical colleges are striving with every effort to produce better doctors, but are handicapped by the lack of sufficient financial support. Meanwhile certain notable academic institutions of our land are accumulating wealth which they cannot spend!

Surely this condition of things is wrong. There is no class to whom the public owe more than to medical men, no class from whom more is expected and no class who receive less from the public during their student life. The laity are always crying for better doctors, while physicians themselves are constantly bewailing the need of higher medical education. Both criticize the work of the medical college but forget that sufficient resources are the first requisite to the higher education and more efficient doctors.

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DOCTOR, A WORD WITH YOU.

What do you think of this month's issue of the VERMONT MEDICAL MONTHLY? Does it meet the requirements which you think a local medical journal should fulfill?

If it does, we will be glad to receive a year's subscription from you as a mark of your approval and encouragement. If it looks worthy of your assistance, we will be glad to receive some short articles from your pen. At any rate let us hear from you in some way, if it is only a word of commendation or friendly criticism.

Sincerely yours,

THE VERMONT MEDICAL MONTHLY,

Official organ Vt. State Med. Society.

Burlington, Vt.



MEDICAL ABSTRACTS.

Cocaine Poisoning—Dr. C. J. Fox in *New England Medical Monthly*, says: “The literature on cocaine poisoning is very interesting especially in 1892, when Mattison, of Brooklyn, and Germain See, of Paris, each reported two hundred cases with twenty deaths. In five cases which resulted fatally by Manheim, the quantity of the alkaloid taken was fifteen grains and in two cases by Mattison death occurred after two-thirds grain hypodermically, the symptoms generally found are dilated pupils, acute delirium, dizziness, incoherency of speech, weak, imperceptible pulse with some tetanic spasms, suppression of urine and cyanosis in general. From alcoholic delirium, the delirium is to be distinguished by the absence of wild hallucinations, the hallucinations are rarely present in this class of cases, the thirst and dryness of throat is a noticeable feature. The phantasms are brilliant and interspersed with a flow of wit, an habitue of cocaine has expressed himself as desiring rather ten years with cocaine than centuries without it, in every such case elements of present grandeur predominate. As to treatment the suggestive parts offered would be as follows: Morphine has been looked upon as antagonistic but has been given where symptoms collapse with convulsions and cyanosis, nitrate of amyl has been indicated where the heart action is weak and imperceptible, brandy and strychnine hypodermically have all been tried but recovery is often rapid without any treatment. The poison is generally eliminated by the skin and urine. Several clinicians, among them Decker, state that one-half grain hypodermically is the maximum dose.”

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The Unfavorable Results from Antisepsis—Schrader, who has recently investigated this subject, considers a vaginal douche, given after labor, not only useless but dangerous in that a certain number of bacteria are carried from the vagina to the lower segment of the uterus. If the patient does well after vaginal injections it is not because of the injections, but in spite of them. The value of antisepsis in obstetrics is in prophylaxis and not in local treatment.—*Med. Visitor*.

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A Sixteenth-century Plan of Treating Prolapse of the Uterus—In the *Independance medicale* for April 22d we find an account, by M. Fiessinger, of how Amatus Lusitanus, about the year 1550, treated a case of falling of the womb. While lifting a heavy weight, a young woman had felt pain in the loins and in the lower belly, and uterine pro-

lapse was diagnosticated. For Amatus to correct the displacement himself would have been indelicate, so a midwife was ordered to do it. When she had accomplished her part, a simple plan was resorted to for maintaining the organ in place. As everybody knew, the uterus was pleased with sweet odors; so the patient was directed to breathe the emanations of musk and fragrant herbs, and the womb would surely mount in the direction of her nostrils. But this was not all. The repugnance of the organ to unpleasant odors was also well known; therefore the vulva was exposed to the smell of galbanum and the fumes of burned feathers. Thus lifted from above and pushed up from below, the womb could not fail to be kept in place.—*N. Y. Med. Journal.*

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Pilocarpin as a Sudorific—Grandclement concludes from his experience of pilocarpin (1) that to produce general sweating, which he considers has been too much abandoned of late, one ought to employ the old methods as a rule, and use injections of pilocarpin only as the exception, as in some subjects the latter drug produces poisoning resembling that caused by nicotine or aconite; and (2) to produce local sweating, the old method of wrapping the part in cotton-wool and oiled silk is the best, as frictions with pilocarpin produce only an insignificant amount of sweating. In support of this latter assertion, he relates a case which was treated by him with local applications of pilocarpin combined with the old cotton-wool and oiled silk method. It was found that unless the latter was well applied, the sweating was practically *nil* in spite of the pilocarpin.—*Lyon Med.*


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Boiled Milk—Practical and every-day experience shows that when milk is boiled it is not only more easily digested, but that it has a nutritive value quite equal to the raw article. Experiments undertaken by Dr. C. Chamouin (*Canadian Lancet*), first with kittens and afterwards with infants, showed after exhaustive and repeated trials that the kittens fed on boiled milk were "twice again as fat" as those supplied with the raw milk, and that the boiling of milk is the means of preventing the loss of innumerable lives by gastro-intestinal disease. Not only so, but it is more easily digested, and agrees with a far greater percentage of cases than unboiled milk. There is ample authority for this view of the case, but certain points must be attended to, else the results will not be so favorable. First, all the vessels in which the milk is carried, boiled, and afterwards kept must be *scrupulously clean*. Nothing else but absolute freedom from dirt will suffice. Then it should never be boiled in an open vessel; this should have a close cover. Lastly, it need not be kept at 212° F. for more than twenty minutes. This is sufficient to sterilize and cook it, and no further boiling is necessary.—*Practitioner, 1896, lvi, 330.*

Mortality from Anæsthetics—The record of the year 1895 as to deaths during anæsthesia, according to Sir Benjamin Ward Richardson, show fifty-one from chloroform out of a total of sixty from all anæsthetics. This record is not high when one thinks of the many thousands who went under anæsthesia, but it is yet too high, and especially unfavorable to chloroform. This agent requires much more caution in its administration than does ether. In our opinion its administration should be preceded by a twenty-four hours' preparation of the patient by the administration of suitable heart tonics, especially strychnine. Spraying the nostrils with a solution of cocaine (4 per cent) previous to the administration of anæsthetics prevents, in a measure, the local irritation of those parts, and consequently the struggling and strangulation.—*Med. World.*

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Aconite in Colds—Aconite is the old-time "stand-by" for acute inflammatory affections, particularly of the respiratory tract, and though new and elegant remedies have crowded in, the efficacy and reliability of aconite, proved by years of clinical utility, has rooted it too strongly in professional force, to permit of its being replaced or substituted. As to the most effective method of administering aconite, there seems to exist a slight difference of opinion, one class of physicians believing small doses frequently repeated to be more effective than larger doses less frequently. It would seem that small doses frequently repeated, getting the effect slowly, would give better effect, for by this course the aconite would be given a chance to more thoroughly permeate the system. Large doses assert the superficial action of the drug more decisively, but it is doubtful indeed if they are advisable unless the case be exceedingly urgent. Without approaching a homœopathic basis it would seem that, especially for children, minute doses, frequently repeated, are eminently indicated.—*N. Y. State Med. Repor.*



NEWS NOTES AND FORMULA.

William F. Jenks Memorial Prize—The College of Physicians of Philadelphia announces that the fourth triennial prize of \$400 under the deed of trust of Mrs. William F. Jenks will be awarded to the author of the best essay on "The Etiology and Pathology of Diseases of the Endometrium, including the Septic Inflammations of the Puerperium."

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The Burlington Clinical Society—The regular monthly meeting will be held Friday, May 29th, at 8.30 p. m. An interesting meeting is expected.

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When to Rupture the Amniotic Sac—The following rules have been frequently published. We do not know their origin:

1. In a multipara, rupture when os is fully dilated.
2. In a primipara, delay until the small parts are so dilated.
3. In cases of face and breech presentation, delay in rupturing the sac is best.
4. Where the pelvis is small and the fetus large, delay rupturing.
5. In premature labor, with dead fetus, rupture early.
6. Rupture the sac early when the membranes are unusually thick, tough, and unyielding.
7. When speedy delivery is demanded, rupture early and dilate with the fingers.
8. Rupture the sac when an excessive amount of amniotic fluid retards labor.
9. When version is necessary, and can be accomplished by bimanual manipulation, perform this operation before rupturing.
10. Remember that a dry labor is always to be deprecated, hence, do not rupture at all, unless for good reasons and the case demands it.—*Med. Council, April.*

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Erysipelas—As a local application take honey, four ounces; carbolic acid, one drachm. Mix. Spread on a suitable cloth and apply to the parts. Renew every four or six hours, and it will give entire relief from pain, and be followed with convalescence.—*American Med. Jour.*

Alopecia—R	Quiniæ Sulph.....	2	drachms.
	Bay Rum.....	5	ounces.
	Ol. Rosemary.....	4	drachms.
	Tinct. Canth.....	1	ounce.
	Glycerini.....	1½	ounces.

M. Sig. Rub into the scalp every morning with a small sponge.—*Med. Brief.*

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Dryness of Mouth—Thirst and great dryness of the mouth in sickness is often relieved by a teaspoonful of powdered gum arabic, beaten thoroughly with a couple of teaspoonfuls of glycerine, to which is added a glass of cold water and enough lemon juice to make the mixture palatable. The mixture may be taken freely, with great relief to the dryness of the mouth and thirst.—*Meyer Bros' Druggist, 1896, xvii, 137.*

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The Treatment for Soft Chancre—The following treatment is recommended by *La Tribune Medicale*, Nov. 28, 1895: Every morning the ulceration should be touched with a tampon of cotton, wet in this solution:

Menthol.....	1	gr.
Carbolic acid.....	5	grs.
Alcohol.....	1½	fl. drs.

Aristol is next dusted on, and a piece of absorbent cotton applied, thus completing the dressing. The patient is directed to wash the sore several times with carbolic acid solution, and to dust with aristol. All friction or causes of congestion are to be avoided.

Phagedenic ulcer is touched with a solution made up of :

Cocaine.....	1	gr.
Potassio-tartrate of iron..	15	grs.
Distilled water.....	1½	fl. drs.

It is next powdered with a mixture of 20 parts iodoform and 5 parts menthol, and potassio-tartrate of iron is given internally.—*Med. Retrospect,*

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Medicinal Value of Asparagus—Asparagus roots have long been used abroad for kidney diseases, and the discussions as to the value of the stalks and tips as food have shown much difference of opinion, but the balance of the arguments by experienced medical authorities is in favor of its use by people of sedentary habits. Its value as a preventative of scurvy, a relief for dropsy, and its use as a diuretic has been unquestionably accepted. It is also said to be a soothing agent in cases of heart palpitation.—*N. E. Med. Monthly.*

Chronic Diarrhea—Com. tinct. myrrh.....	2 drs.
Tinct. rhei.....	2 drs.
Tinct. opii.....	1 dr.
Comp. spirits lavender.....	2 drs.
Oil anise.....	15 dps.
Oil cinnamon.....	15 dps.
Gum camphor.....	30 dps.
Tartaric acid.....	15 grs.

M. Sig.—Teaspoonful in a little sweetened water after each action of the bowels.

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Milk Baths as a Remedy—Since it has become known that milk in a bucket sitting in a sick-room will absorb germs, a recent writer (*Medical Press and Circular, Ec.*) has applied the idea in the treatment of small-pox, fevers, diphtheria, etc., with marked success. The patient is laid on a mattress covered with blankets. He is then packed in a sheet saturated with milk, covering the entire body, in which condition he remains an hour. A warm water bath is then given, after which the surface is dried and the patient is put to bed.—*Ex.*

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Foreign Bodies in the Eye—Foreign bodies in the conjunctival sac or cornea, produce such an intense amount of irritation that their immediate removal is generally demanded by the patient, and in the vast majority of cases this may be readily accomplished by any practitioner if he will only commence his operations by instilling a few drops of a four per cent solution of cocaine. In untrained hands any sharp instrument for the removal of foreign bodies from the cornea is to be avoided, as much needless damage may be done. A clean piece of blotting-paper will often suffice, or, if it fails, a small stick of wood—such as the sticks of orange wood used by dentists—whittled to a broad, flat point, will dislodge the more firmly imbedded particles. After removal, a soothing lotion of boric acid or salt solution will be found to be most agreeable to the inflamed eye.—*Richmond Jour. Practice.*



BOOK REVIEWS.

Diagnosis and Treatment of Diseases of the Rectum, Anus, and Contiguous Textures—Designed for Practitioners and Students. By S. G. Gant, Professor of Diseases of the Rectum and Anus, University and Woman's Medical Colleges; Lecturer on Intestinal Diseases in the Scarritt Training-School for Nurses; Rectal and Anal Surgeon to All-Saints, German, Scarritt's Hospital for Women, and Kansas City, Fort Scott, and Memphis Railroad Hospitals, to East-Side Free Dispensary, and to Children's and Orphans' Home, Kansas City, Mo.; Member of the American Medical Association, National Association of Railway-Surgeons, the Mississippi Valley Medical, the Missouri Valley Medical, and the Missouri and Kansas State Medical Associations, etc., etc. With two chapters on "Cancer" and "Colotomy" by Herbert William Allingham, F. R. C. S. Eng., Surgeon to the Great Northern Hospital; Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum; Surgical Tutor to St. George's Hospital, etc., etc., London. One Volume, Royal Octavo, 400 pages. Illustrated with 16 Full-Page Chromo-Lithographic Plates and 115 Wood-Engravings in the Text. Extra Cloth, \$3 50 net; Half-Russia, Gilt Top, \$4.50 net. The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street, Philadelphia; 117 W. Forty-Second Street, New York; 9 Lakeside Building, Chicago.

This book comes to hand amply recommended by the names of Gant and Allingham, and the text is by no means disappointing. The subjects treated are classified most systematically and are modern in every particular. Rectal work is an important branch of present day surgery and this work places due stress on the more common ailments of the rectum.

It contains two important chapters that are entirely new in a work of this kind, namely "Railroading as an Etiological Factor in Rectal Diseases" and "Auto-Intoxication, or Auto-Infection, from the Intestinal Canal."

In short, it is the *par-excellence* work on "Diseases of the Rectum, Anus, and Contiguous Textures" for the general practitioner and student as well as the specialist, the contents of the work being comprehensive, complete and practical in the best sense.

In point of excellence of press-work, paper, binding, and particularly the handsome chromo-lithographic plates it is unsurpassed among modern medical works, and its very moderate price renders it easily obtainable by every physician and student.

Obstetric Accidents, Emergencies, and Operations.—

By L. Ch. Boisliniere, A. M., M. D., LL. D., Late Emeritus Professor of Obstetrics in the St. Louis Medical College, etc. Profusely illustrated. Philadelphia: W. B. Saunders, 1896. Pp. 11 to 381. [Price, \$2.]

Many young physicians start into practice with little or no knowledge of obstetrics outside of that obtained from their college lectures and the standard text books. Theory they may have to perfection, but of actual practice they know nothing. This book by De Boisliniere is evidently designed to supply the deficiency of actual experience for students, and to provide for practitioners a handy guide for constant reference. It is abundantly able to fulfill its mission, for it is well written, fairly illustrated, and covers a wide field of usefulness. We predict certain success for this work, and believe that it will prove a valuable aid to those who use it. Of the typographical appearance we need say nothing for the work of Mr. Saunders is too well known to require any laudation from us.

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A Compound of Diseases of Children.—By Marcus P. Hatfield, A. M., M. D., Prof. of Diseases of Children, N. W. N. Medical School, Physician to Wesley Hospital, Home for Crippled Children, Chicago Orphan Asylum, etc., etc. Second Edition, thoroughly revised. Published by P. Blakiston, Son & Co., Phil., 1896.

This little book is one of Blakiston's quiz compends and maintains the reputation of the series very satisfactorily. Though especially adapted and intended for the use of medical students, no practitioner can do better than to supply his library with a full set of these quiz compends. They contain the essential parts of each branch and in such a convenient way as to make them constant companions.

In regard to this particular one on Diseases of Children but little need be said. The book is in its second edition and we find it complete, efficient and practical in every way. It speaks for itself.

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CONTENTS.

	PAGE
Blood Stains, By Dr. J. N. Jenne, St. Albans. Professor of Materia Medica in University of Vermont, - - -	127
Dangers which Threaten the Usefulness of Cod-Liver Oil. By Jno. T. Winters, M. D., Professor of Theory and Prac- tice of Medicine, National University, Washington, D. C.	138
The New Hampshire State Medical Society Meeting, - -	142
College Notes, - - - - - - - - - - - - - - -	143
Hydrozone in Purulent Otitis Media. By Wm. Clarence Boteler, M. D., of Kansas City, Mo., - - - - -	144
Editorials, - - - - - - - - - - - - - - -	146
Medical Abstracts, - - - - - - - - - - - - -	150
News, Notes and Formula, - - - - - - - - -	153
Book Reviews, - - - - - - - - - - - - - - -	156
Publisher's Department, - - - - - - - - - -	158

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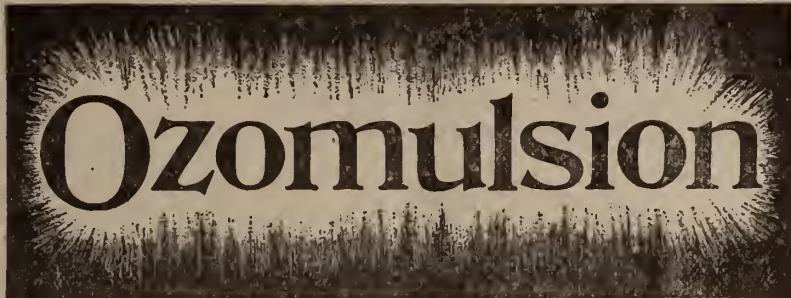
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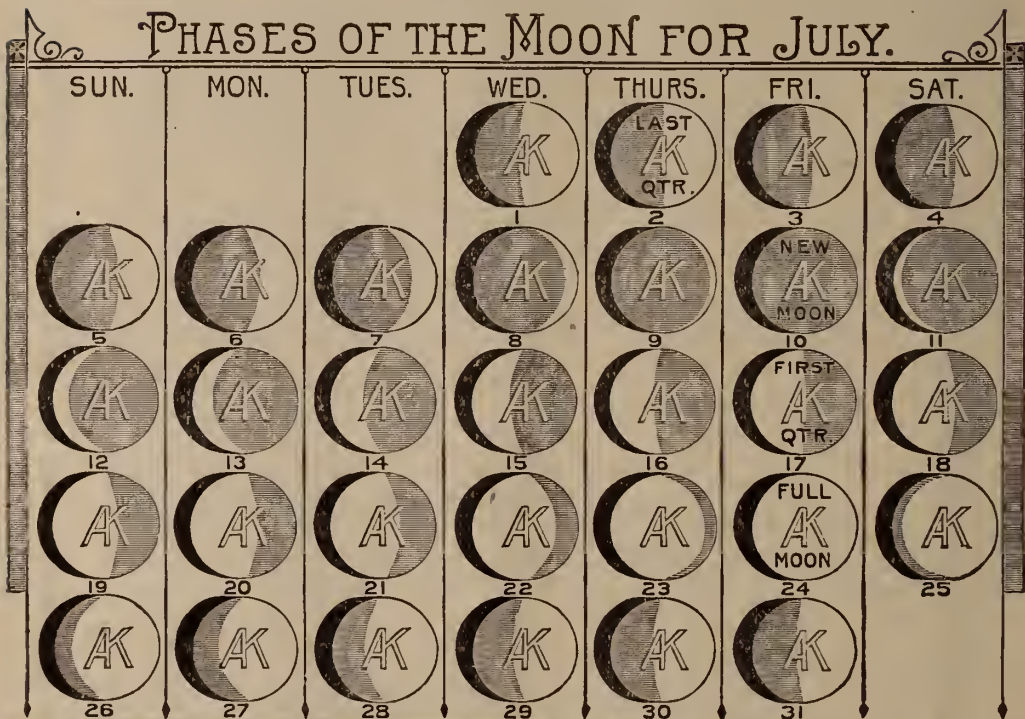


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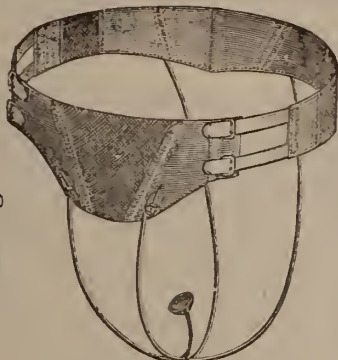
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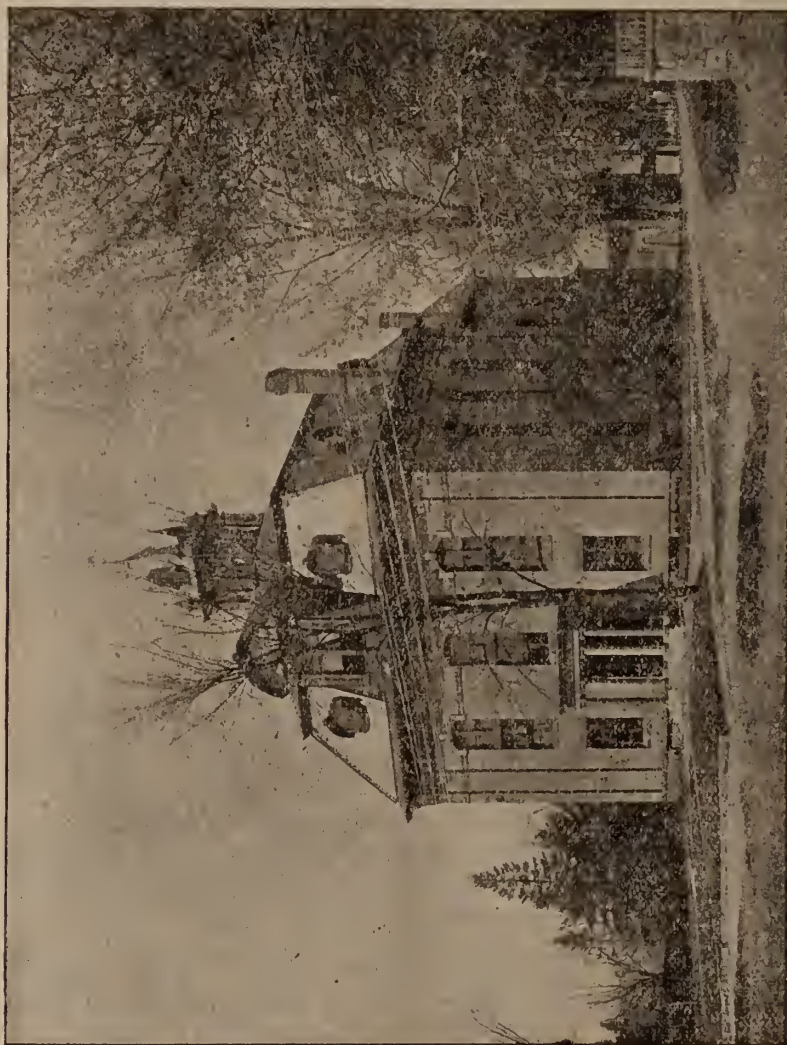
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Official organ of the Vermont State Medical Society.

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JUNE, 1896.

No. 6

Altitude; Its Effects Upon Different Individuals.*

WITH REPORT OF TWO CASES. BY GEORGE S. GOVE, M. D.,
WHITEFIELD, N. H.

Fellows of the New Hampshire Medical Society :

Some months ago, I was requested by your Honorable Executive Committee to contribute a paper that should be presented at this meeting. The subject was left optional with me.

For the past four and one-half years, I have been enrolled with the invalid corps; and within that time I have not met with any case in my limited general practice, the history of which would particularly interest you, but a case did come under my observation, while journeying to California in 1889, which interested me very much, and thinking that perhaps it may you, in a degree, I have decided to make a brief report of it and also of another case which came under my observation, the subject of this paper, hoping some useful deductions may be drawn from their consideration.

The route taken in this journey was by the Santa Fe. I had an itinerary which contained a time-table telling of the arrival and departure of the trains at the several stations and also the

*Read at the 105th meeting of the N. H. State Medical Society, June 2nd, 1896.

elevation of the most important, several being of very high altitude.

Noticing this, and also that the rise to all of these is so gradual that one would scarcely be conscious of it, the less so as the railway winds along in apparent valleys with high mountains all about, (it being the same when at the highest points ;) it occurred to me that it would be interesting to observe the effect of those high altitudes upon the different members of the party.

There were between forty and fifty of us, varying in age from the infant to those who were upwards of eighty, and all being strangers to me, they furnished an unexceptionally good field for study.

At the Raton Pass, near the eastern boundary of New Mexico, we reach an elevation of something over 7600 feet. As we ascended to this, I noticed that some of the children were very restless, calling more frequently for water, while others showed no physical disturbance. What was true of the little ones was also true of the other people present regardless of age. There was one person who was making a good deal of effort in breathing. She was using her fan vigorously and her countenance gave evidence of great suffering for the want of air. We were detained at this pass for a short time but as we descended, her discomfort became proportionately less.

Three more high points were to be overcome ; the Glorietta Pass with an altitude of 8432 feet ; the Continental Divide, 7295 feet, these in New Mexico ; and Flag-Staff in Arizona, 6933 feet. We made no stop at any of these, but at each of these localities the lady gave the same evidence of distress as at Raton Pass, and while at Glorietta Pass, I was called on to prescribe for her ; I administered stimulants and heart tonics which served to tide her over the difficulty until the descent could be made ; and she required my services no more during the journey.

Meantime I learned that some time previous to the journey, this lady had passed through a severe illness which was diagnosed by her family physician as Pneumonia. This was followed by a troublesome cough and dyspnea ; for the relief of this, she was

advised by her physician to take the journey to California and to spend the winter months.

After reaching Pasadena, I saw no more of her until about the first of April when she made her appearance at the Raymond Hotel, where I was boarding. It was upon the eve of her setting out on her homeward journey. In conversation with her, I learned that she was disappointed in that she had not gotten the relief from the journey and change of climate that she had been led to expect, and certainly her appearance confirmed her opinion.

I was to return to the East with the same party of which she was a member. We left Los-Angeles in the morning and nothing occurred during the day to mar the peace and delight of the journey; until along in the night I was called by the conductor to see a lady in another part of the car. On reaching her berth I found the patient to be the same one of whom I have written. She was suffering as she had on previous occasions when making the passes, only her sufferings were much intensified, so much so that nothing done for her seemed to bring relief, that only came to her as we made the descent from Flag Staff when she was again comfortable until we approached the Continental Divide, when the distressing symptoms again returned and her labor for more air was hard to witness; it was only by the greatest exertion that her life was preserved to pass this elevation.

Because she had overcome so much, we hoped that she would succeed in withstanding the effects of the higher altitude to be encountered at Glorietta Pass, but when we commenced the ascent to this point she had not fully recovered from the depressing effects of the last attack and she soon began to show signs of increased physical disturbance.

The elevation at the summit of this Pass is 8432 feet and for a long distance before reaching it, the rise is very gradual so that the degree of discomfort attending the high altitude was much prolonged; this she was unable to endure, and just as we reached the summit she struggled in vain for breath and passed away.

This brings me to a case that I was called to treat while in California during the winter of 1891. The patient was a young

lady from Canada, twenty years of age. She was a domestic in the Raymond Hotel, Pasadena, where I was boarding. This young lady, previously healthy excepting occasional attacks of asthma, had spent an afternoon at the beach with several companions. During the time, she was for an hour or an hour and a half, bathing in the surf and frolicing upon the beach. Late in the evening of the second day after this, I was called in to see her professionally. I found her with a high fever, severe headache, a labored respiration and a troublesome cough. I gave her remedies and left orders to be called if these did not bring relief. Early in the morning of the third day, I was called to her again. I found the patient laboring for breath, face purple, pulse too rapid to be counted, and plenty of moist rales in both lungs. I was tempted to take blood from the arm but, being a tramp physician in the State, decided to call counsel.

Dr. D. B. Van Slack, of Pasadena, a worthy gentleman and physician formerly from near Boston, Mass., was summoned to meet me and responded at once. On his arrival he inspected the patient, who by this time had become delirious and was muttering and coughing constantly. After a hurried consultation, we decided that as the patient was in a critical condition requiring something to be done at once to relieve the overburdened heart and lungs, it was best to adopt heroic measures. We opened a vein. At first the blood merely dribbled from it, but by rousing her and using considerable effort in friction, etc., we succeeded in taking a pint of exceedingly dark blood. For a few minutes after the vein was closed, we thought the patient would expire but in about ten minutes there was a little change for the better in her circulation. Her condition improved so much that in an hour she had become conscious her respiration was less labored and her face less congested. It was arranged that Dr. Van Slack should meet me again in the evening, but before then I found that the patient was fast relapsing into the condition of the early morning, so I telephoned him to come at once.

When he arrived, we re-opened the vein and took from it from a pint to a pint and a half more of blood. Before the vein

was closed, there was a perceptible improvement in her condition. The heart beats were stronger and less frequent, the respiration easier and the face of more natural color. From that hour she continued to improve, going through with double pneumonia with but little suffering, and making a good recovery with no perceptible bad effects from either the disease or the treatment.

The prevailing antipathy to blood-letting among the people, and also with the greater number of my Medical brethren, has often restrained me from resorting to it.

I have been an advocate for it in the early stages of pneumonia and pleuro-pneumonia, and in reviewing my history of these cases, I find no cause for regret for having resorted to this practice, but I have regretted that I had not employed this means for relief, as my judgment dictated, when my efforts by other methods proved of no avail.

In the history of the two cases given you, there was a similarity of conditions viz : labored respiration, rapid pulse, puffed, purple and congested face, distended veins and the early maturing of delirium.

The results in the second case were undeniably due to the blood-letting which relieved the burdened heart and lungs. I was debarred by circumstances from pursuing the same method in the other case, but might not the unhappy termination have been averted could I have done so?

DISCUSSION OPENED BY DR. G. P. CONN OF CONCORD.

MR. PRESIDENT :—The report of Dr. Gove, and his experience with passengers in the same car, or on the same train, portrays an object lesson that has happened to many medical men when traveling through the higher altitudes of the United States, although it is not usual that the termination of the case be so abrupt.

I have been over the Raton Pass and the Glorietta Divide several times, and while I have never seen anyone seriously affected, yet there is always one or more who has been affected unpleasantly. However, I have always found that those affected

were invalids, and never have happened to see anyone unpleasantly affected whose standard of health might be considered normal.

I have witnessed something of the same conditions affecting people going to the higher altitudes in New Hampshire, more especially among those going to the top of Mt. Washington. The first time I crossed the Rocky Mountain range, a young theologian from Minnesota experienced pretty severe epistaxis, while passing through the Raton Canon and over the Glorietta Divide, yet this same individual after going by stage from Deming to the mountains beyond Silver City, New Mexico, had no further trouble and soon improved in weight and strength.

It has occurred to me that the reason we hear so little about functional disturbances among the many thousand people that have ascended Mount Washington since the railway was constructed in 1869, is because the ascent is made so slowly that the system becomes accustomed to the differences in the atmospheric pressure, while en route.

Three miles an hour allows physical changes in the circulation and respiratory movements to take place in the system of the passenger that will add much to his comfort, when a velocity of from three to five times that speed would be very annoying, if not actually deleterious in its immediate action upon the vital organs. While it may seem a very low rate of speed to a well person to travel only three miles an hour, by rail up and down Mount Washington, yet I consider it much safer than at a rate of nine miles an hour, as is usual on the road up Pike's Peak. I am told that a great many have to leave the train on Pike's Peak when at the half-way-house, on account of difficulty in breathing and palpitation.

It is true Pike's Peak is much higher than Mount Washington; in fact the base of Pike's Peak stands on a broad plateau about as high as the top of Mount Washington, yet I believe that if they would run their trains at a less rate of speed they would have less trouble in respiration and the cardiac action of

the passengers, who would therefore be able to enjoy the outlook instead of impatiently waiting for the train to descend to a lower level, where the vital actions of the body will go on without attracting the attention of the patient.

The effect of high altitudes upon those with incipient or the first stages of pulmonary tuberculosis has attracted the attention of the profession, and during the past decade a good deal has been written upon this subject. Almost all of us can recall one or more instances of more or less complete recovery from apparent tuberculous disease, the patient being taken from New England to the higher altitude of New Mexico or Colorado, where pure atmosphere, dry soil and sunshine is the rule rather than the exception.

In an address upon "The Special Influence of Altitude upon Health, Disease and Sanitation," Dr. S. E. Solly of Colorado Springs, who for several years has made a study of this subject, says:

"When air is inhaled in the lungs, a certain proportion of the total amount of oxygen contained in this air is absorbed by the hemoglobin, which is that element of the blood which is contained in the red corpuscles and whose business it is to absorb oxygen. As each drop of hemoglobin can only take up oxygen in certain proportion to the oxygen pressure of the air, when the oxygen pressure is lowered, as it is in the elevated climates, discomfort ensues to the visitor because his blood is not sufficiently oxygenated at each ordinary breath. To remedy this he breathes faster so as to get in more air, and so more oxygen, in a given space of time, and the heart has therefore to pump blood more frequently into the lungs and his pulse beats faster. Such is the temporary remedy, but in time the chest becomes expanded so that more air is taken in at each breath and the heart is stretched, thus its cavities hold more blood and its walls are thickened, so that the muscle has more force to pump this increased amount of blood.

Nature's method of compensating for this deficiency does not stop here, however, and a still more remarkable change takes

place and one in which lies the special therapeutic value of high climates for appropriate cases. This change is the increase in the amount of red corpuscles and hemoglobin; by this the oxygen-absorbing power of the blood is largely fortified in a definite ratio to the elevation."

Experimenters in South and Central America, as well as in the high altitudes of the United States, have done a great deal of work and been able to confute many of the wrong conclusions drawn by the great traveler and scientist Von Humbolt. These men found that there was a decided increase of certain normal constituents of the blood in a few days, and that many times health and strength followed as a natural sequence. They seemed to establish the following facts, namely:

"That the peculiar effects of high climates are to increase the amount of red corpuscles, hemoglobin, and the power of blood absorption. The chest expansion is also increased, the latter being admitted by all observers, who also have remarked frequently upon the almost emphysematous character of the breathing, especially at the apices of the lungs of the native-born children and old residents.

With regard to the assumed enlargement of the heart cavities and muscle, no sufficiently precise or extensive experiments have been as yet made to prove what logical deduction and common belief endorse, viz., physiological cardiac hypertrophy. The remarkable power of horses raised in high climates to endure prolonged fatigue and great speed, both in their native uplands and also when transferred to the sea level, are matters of common observation and belief. In men, the superior endurance of mountaineers is also well known. This has been noted especially by Hirsch in accounting for the endurance of the natives resident in the high Andes. Further, the results of the treatment of heart disease by the strengthening effect of climbing and high climates, as recommended by Oertel, tend to confirm the belief that the heart is increased both in strength and capacity by altitude. We have then as the special physiological effects of altitude, that

is of diminished barometric pressure, greater lung capacity, as shown by the increased chest expansion and more forcible breath sounds, a stronger and larger heart and an increased ability of the blood to absorb oxygen.

For these reasons it may be asserted that there is developed a greater power of resistance to the attempted lodgment of germs within the body, through the increased germicidal character of the more highly oxygenated blood, and through the more perfect working of the lungs and the heart. We may also assume that there is an equalizing of the circulation throughout the body and that the tendency to local stagnation of the blood, that is, to chronic congestion, is thereby lessened, while on the other hand the more vigorous circulation would, if by any accident it should be obstructed at any point, cause a more violent local inflammation and a greater general fever and disturbance."

In this connection I wish to say a word relative to that portion of New Hampshire that we may consider a higher altitude, for while we have nothing except Mount Washington and Moosilauke, that is anywhere near as high as the most of Colorado or New Mexico, yet in these two mountains we have pure air, an uncontaminated soil, and pure water, therefore for three months in a year I do not know why that class of cases may not do as well as to go to the Rocky Mountains.

It is true that patients can not—without special provisions are prepared—live in these high places in New Hampshire in the winter, but for three or four months one could make the trial, the results of which might serve to point out the best course for the patient to pursue.

DISCUSSION OF DR. GOVE'S PAPER CONTINUED BY DR. HILAND,
OF CONCORD.

MR. PRESIDENT:—I shall only say a word in reference to my life in Peru. It is in the tropics, the climate on the coast is damp and cold on account of a cool current coming from the southern region. In all intermediate lands between the sea coast and the

higher altitudes in this climate, there is a great deal of consumption, a great deal of tubercular trouble, all kinds of rheumatism and malaria diseases. The rule with physicians is this: that if the patient with beginning tubercular trouble can be sent into the high altitude the chances of life and recovery are very much increased.

The Aroya road goes over the Andes and I have had the privilege of going over the Andes as far as the road was being run during the war, which was I believe to an altitude of twelve thousand feet. The upper part of the road was in the hands of the enemy, or the Chilians, and usually we stopped at between twelve and thirteen thousand feet. The effect, Dr. Conn has described very well. It gives you a certain discomfort which you have on account of the blood in the head, and the heart beats too rapidly. You attempt to walk around and feel weakness as soon as you come to a hill to climb, you conclude then you will walk slowly. The people in this high altitude are markedly different from those on the sea coast. They are shorter in stature, their chest measures five or six inches more than the same individual would if he had been born on the sea coast. The heart is larger. The ear on the chest will detect a larger expanse of heart muscle; in other words, it is a natural hypertrophy which is compensatory and restores the harmony of action. The people generally are healthy so far as my observation goes.

The rule with the physicians of Lima is, that they do not transport their patients at once to the higher altitude; they make three, four and five stages, stopping at different towns which have facilities for taking care of invalids, and in that way they send them to an altitude of about nine or ten thousand feet, very seldom higher. Most of them that are in the first stages of consumption recover. Of course, malarious troubles are benefited by going away from a malarious climate; that we all understand, and that is found by going into a cooler and more bracing atmosphere.

Surgical Cases of a Country Practice.

By EDMOND J. MELVILLE, M. D., C. M., Bakersfield, Vt.

Gentlemen :

The subject of my paper to-day is entitled "The Surgical Cases of a Country Practice." The country doctor, who is rash enough to lance a boil, or pull a tooth without simulating fear and trembling, is a doomed man.

Before night he gets the reputation of being hard-hearted and reckless with the knife, and has the satisfaction, perhaps, of seeing some of his good paying, timid patients, employ his rival, who, though by all admitted to be a very inferior doctor, has the reputation of being a careful and very sympathizing man, who enjoys the reputation of never having hurt anybody, who would rather manipulate the lachrymal gland than wield the knife, and whose grave shake of the head adds more to his reputation than a successful amputation.

To the older members of this Society, my advice is not needed, but to the enthusiastic young members, whose fingers are itching for an ovariectomy, would I say: Do not enter the perilous paths of a country surgeon until you weigh well the cost. If you succeed in your first operations, perhaps on some dead-heat, you will earn that practice-killing reputation of "being a pretty good surgeon but—of being a kill or cure sort of a rough head and bloody bones man, who, if sent for at all, is called in when the rest of the local doctors have given the patient up and his friends think that desperate cases need desperate remedies.

On the other hand, if you fail; Ye Gods! For weeks you will be pointed at by the store loafers as if you were a thing to be shunned by gods and men.

For instance, and this gentlemen, is true: A lady had strangulated hernia, the old doctor was called in, applied poul-

*Read before the Franklin County Med. Society at Enosburgh Falls, Vt., May 12, 1896.

tices and gave morphine for four days, telling the friends it would go back as soon as the inflammation went down. The fifth day the young doctor was called in, greatly against the wishes of the attending physician, who "didn't want his patient experimented on." Result, an operation, gangrene of bowel was found; patient died next day. The old doctor cried a little, shook his head gravely, stroked his whiskers, and said "I told you so."

But, gentlemen, if you are willing to stand the odium, libels and loss of practice that a beginner must endure; if you are still bent upon doing surgery in the country; if you keep your tongue quiet, your hands clean, and your habits regular, then may you, Phœnix-like, arise from the flames of opprobrium, and like Goldsmith's minister,

"Around his breast the rolling clouds are spread,
Eternal sunshine settles on his head."

Then, gentlemen, if you have the will to do and the soul to dare, if you know what to do and then do it, if you remember that he who hesitates is lost, you will have the satisfaction of having the very ones, who cried you down, flock to your standard and cry you up. (But to tell the truth, I would as leave have them crying one way as the other.) Gentlemen, let us no longer send our patients, with pockets full of money, to the hospitals. Let us operate right here at home, far from the city's polluting air and far from the germ laden wards of an institution where every disease, from diphtheria to tetanus, is treated daily.

Although we may not have an elegant operating room, with a northern exposure, nor a bed surgically clean, wherein to put our patient after operating, still we are not likely to have an anthrax bacillus, and a streptococcus pyogene aureus, sailing round arm in arm, looking for a good moist hatching ground.

Again, gentlemen, when we operate we know the eyes of the community are upon us and we are not likely to let our patient die for want of good after-treatment, while in the hos-

pital after the operation the care perhaps devolves upon some callow youth, whose one aim in life appears to be, to wear a skull and cross-bones gracefully on his necktie.

In conclusion, I would wish to call your attention to three cases that it was my good fortune to see in the past year. I report these cases, as I think they are not seen very frequently in a country practice.

I.

On May 3d, '95, I was called to see a young farmer, Theo. L., who had attempted suicide. Found him in a state of collapse from loss of blood, which was still oozing out of a penetrating wound of the throat situated on the left side one half inch below the hyoid bone and an inch from the median line. I forced some liquor down his throat, which quickly ran out of the wound in his neck, while his aged father remarked that Tuff. must be pretty sick, as this was the first time he ever refused a drink." Pulse absent at the wrist, and heart beating 150, very feeble and intermittent; noticed bubbles of air escaping from wound and decided larynx must have been entered; injected ether and brandy—parts 30 min. of each with nitroglycerin 1-100, followed in five minutes by strychn. 1-40 gr. Repeated this in ten minutes, and as he rallied somewhat and hemorrhage correspondingly increased, I decided to discover the extent of the injury. After cleansing parts carefully and shaving the surrounding area, gave CHCL 3, as being more rapid and producing less nausea afterwards. Surgical stage in about four minutes; then proceeded with the operation in the following way. (I might state here that this operation was done contrary to the wishes of his friends who thought better to let him die in peace, his wife pathetically remarking that he had been cut enough for one day). Laying the patient on his right side and instructing my assistant (the village harness maker, by the way) about the CHCL 3, an incision was made from the lower lobe of the left ear almost to the sterno-clavicular articulation, following as closely as possible the anterior edge of the sternocleido mastoid muscle, and taking as a center the wound in the neck. Tearing gently through the tissues, found most of the hemorrhage coming from a large vein, probably the external jugular, which was ligated at both ends at once, and several small arteries, which were controlled by twisting, and a larger one, the superior thyroid, which was ligated. The wound extended through the posterior pharyngeal wall, and great tearing and laceration was found there.

After stopping all hemorrhage I found that he had severed the hyoid bone, from the thyroid cartilage almost entirely. In fact, during the operation most of his breathing was done through the wound in the neck.

I put in twelve catgut sutures, large size, a short distance apart, and well through the cartilaginous substance above and below, and approximated the ends of the muscles in so much as I could, closed wound except an area of about three inches over larynx, which I packed with gauze, 10 per cent., sprinkled all with iodoform, put on a thick layer of absorbent cotton and a roller bandage. Came out from the anaesthetic before had roller bandage on and spoke a few words. Took the precaution to put a sandbag each side of his head and strap them together by means of adhesive plaster over forehead and chin, tied his hands and left him in charge of a trusty fellow at 7 P. M. Saw him at 8 A. M., May 4. Temperature 98½, pulse 88 and fair, slept some, took some nourishment, vomited about a quart of blood at midnight, dressed wound, bichloride 1-2000, peroxide of H 1-2, iodoform, gauze, sterilized cotton and bandage. Followed this up every day for a week on account of a little oozing, sprayed throat with carbol and peroxide. Uneventful recovery. Took him to the Asylum at Waterbury in three weeks; discharged in two months and is now carrying on a farm in Newport.

II.

In August last, was consulted by a lady 56 years; anaemic; passed menopause, 10 years' family history of tuberculosis. Always well and strong till past few years. Three months before she began to have a bloody discharge and her womb, as she termed it, "came into this world." Upon careful questioning found that a constant hemorrhage had existed since that time, with burning in the vagina, tenesmus of bladder and rectum.

Would not consent to an examination, declared she would rather die first. Gave her iron tonics and astringent wash. Told her that I could give no positive diagnosis of case without vaginal examination. Saw her occasionally, symptoms gradually growing worse. Kept on insisting upon an examination until January, 1896. She consented, found vagina filled with a mass as large as a turkey's egg and about same shape with base downwards, bluish red in color, *soft* and emitting a fetid odor; excoriation of vaginal walls, labia and inside of thighs from acrid discharge, which was bloody and mixed with muco-pus. With sound in the bladder and finger in the rectum, body of uterus could not be felt intervening. Os fully dilated admitting a finger one inch all around mass, could pass sound no further. Diagnosis; fibroid of fundus which had undergone sarcomatous degeneration with inversion of uterus caused by weakening or palsy of uterine muscle or an easily dilated cervix. Stated case plainly to patient and advised an immediate operation. Patient would not consent to an assistant though I reasoned with her a long time explaining my inability to do it alone, but to no account. I finally decided to operate under cocaine. Made an application of Ag NO 3, 20 grs. to the os. after washing several times. Repeated wash t. i. d. with bichloride 1-2000 for four days.

February 5, 1896, did the operation in the following way : Gave her an enema to empty bowels ; had her pass water, gave vaginal injection of perman potas 1 oz. to gallon of hot water. Kept towels rung out of hot bichloride sol. 1-500 over thighs and buttocks. Sterilized instruments by boiling in hot soda solution then kept in carbolic 1-10, genitals attended to and served in usual way.

Placed her in Sims position with Sims large size speculum in place held by nurse and injected 30m. of a 4 per cent solution deep into the mass, waited a few minutes, then put a pair of clamps on each side encircling growth in uterus close to the os and clipped off everything external to clamps with a pair of uterine scissors.

Had little hemorrhage, perhaps one-half ounce in all. Left on clamps four days, packed vagina daily with Iod. gauze 10, moved bowels third day by injection, gave daily douche of bichloride of mercury 1-2000 followed by douche of peroxide of H. 1-2. Kept this treatment up for two weeks. She walked on 15th day ; discharged on 16th ; suffered no pain after operation ; no rise in the temperature, in fact was the most uninteresting case I ever had as regards after treatment. I have not seen her professionally since ; says at present she feels well ; gained 22 pounds ; does work of small farm alone and has no hemorrhage and no discharge.

III. VESICO VAGINAL FISTULA.

A lady, Mrs. H. ———, came to me from Newport with a history of tumor which a surgeon there offered to remove for \$75.

Not having the wherewithal she politely but firmly declined. Family history good. Had tumor twelve years, since birth of first child ; was delivered with forceps after a long and exhausting labor ; had three children since, two still-born. After birth of first child water began to escape involuntarily, and she has worn a sponge ever since. Has been given medicine to make her hold her water, but all to no purpose.

Had no control over sphincter ani and feels best when she is constipated, going sometimes two weeks without having a passage.

Could never tell whether she menstruated or not, as she always had a bloody discharge mixed with urine and pus.

To sum it all up, as she herself said, she was in a very bad condition. External examination showed a bulging red mass protruding between the labia ; deep red in color and as large as a goose egg. The perineum was absent, the recto vaginal septum sphincter ani with the rest of the rectal muscles being torn, making one continuous passage from pubes to coccyx. Upon vaginal examination I found the so-called tumor to be a prolapsed vaginal wall with a large tear, perhaps two inches by three, shaped like a half moon, extending through the anterior vaginal wall into the bladder an inch from and following the direction of the rami of the pubes. I could

easily understand how the mistake in diagnosis was made, as the tear resembled very closely a patulous os and the prolapsed wall was taken for a polypus, a mistake I almost fell into myself, clearing up my doubts by discovering the os uteri in the posterior fornix, which might easily be mistaken for a pucker in the flabby vaginal wall. A careful examination with sounds urethral and uterine and speculum cleared up any remaining doubts and I advised an operation.

Directed her to take vaginal, which of course meant rectal and vesicle, injections of borax, 2 dr. to one quart t. i. d., and as she was very much emaciated and anæmic I put her on FeCl 2 and a tonic laxative.

Her general health improved somewhat, and after about five weeks I operated, assisted by Drs. Kingsley and Start, on March 30 last. After etherizing and preparing her in the usual way she was placed in Sims position and a large Sims speculum introduced. Then with a small tenaculum to hold the edges of fistula we pared them all around as nearly straight as possible, taking care not to injure mucus membrane of bladder. Considerable hæmorrhage was met with which was controlled by pressure with hot water compresses.

Some difficulty was experienced in paring the edges on account of peculiar shape of fistular and flabby condition of vaginal wall. We then introduced the sutures beginning in the left lower corner using a curved needle and No. 5 silk, the stitches being placed one-fourth inch apart and deeper in the center than at either corner. Clamped each pair of ends with artery forceps; washed out bladder and removed clots, stopped all oozing by hot water compresses, curetted uterus with sharp curette and applied equal parts Carbolic and Iodine, tied sutures. Did not attempt the restoration of the perineum as one of the doctors dryly remarked, that if this operation was not a success it would give us plenty of room to work when we did it over again.

Tamponed with Iod. gauze and sterilized cotton; left soft rubber catheter in bladder; removed it next day and instructed nurse to pass it every five hours. Removed tampon next day; some oozing; not much pain; promised to remove the stitches on the eighth day. For some reason I did not come till the ninth, and patient getting very nervous sprang out of bed to chastise one of the children and noticed after that the discharge on napkin had a urinary odor. Took out stitches next day; found tract all healed except at lower left corner where urine was seen to dribble through; patient very much improved in every way; some prolapse of walls of vagina. At present patient is in much better spirits and has gained in flesh and strength and is anxious for the second operation when I will endeavor to close the fistula and repair perineum. Then with an anteversion pessary with Skene's bladder rest she may at least have an enduring existence.

Yeast Nuclein in the Treatment of Hip-Joint Disease.

*By CHARLES W. HITCHCOCK, M. D., Detroit.

In the *American Lancet* for January, 1895, Dr. Charles W. Hitchcock of Detroit, remarks that not all cases of hip disease are, with any fair promise of success, amenable to conservative treatment. Cases long neglected, in which erosion of the joint structures has already occurred, together with suppuration and resulting fistulæ, are not encouraging instances for non-operative measures. An early diagnosis is of the utmost importance, that the case may be taken in hand before gross and irreparable damage has placed it beyond the reach of any save the most heroic treatment.

The nucleins, says Dr. Hitchcock, are among the newer remedies that may do much as an aid to tissue-building, more especially as they are said to influence cell metabolism so as to bring about a healthy resistance to disease processes.

The germicidal properties of nuclein, he continues, have been demonstrated, and Vaughan and McClintock have shown that the germicidal constituent of blood-serum is a nuclein. Parke, Davis & Co., he says, have rendered yeast nuclein accessible to the profession. They make it for Dr. Vaughan and according to his formula; the solution which they supply is about a one per cent. solution. Of this solution of yeast nuclein, from five to sixty minims may be administered at a time. The dose may be increased gradually and cautiously from the initial dose (which may appropriately be about ten minims), regard being had to the febrile reactions, which may be decidedly marked and are to be looked out for.

He then gives the following report of a case: "March 30th 1894, I first saw Miss L. C., aged twenty years, of English parentage and in this country only about two years. She is one of a family of six children. One sister died at ten months, and one sister, aged nineteen years, has of late had what is reported by letters from her home as "dropsy of the knees." The father and mother are both living and are healthy, so far as I can learn. One maternal aunt died of consumption. The patient herself is of medium size, rather rosy complexion, and somewhat delicate in appearance. The young lady gives a history of having been always well until December, 1890, when she fell on a sidewalk and struck on the left hip. The following month she fell on the ice on the same hip, which, she says, "has seemed weak" ever since this second fall, though she was able to be

about as usual and tried to persuade herself that she had no serious trouble. She went to the World's Fair in the fall of 1893, and each day's sight-seeing tired her greatly. Her left knee would pain her at night and the hip would ache; but she would not give up to it. Later, after her return home, her hip began to pain her intensely after every walk: The first pain was in the knee, and more or less still continued there, but the hip now grew so exquisitely sensitive and painful that all use of the leg had to be given up, and for three weeks before I saw her (March 30th) she had not walked at all. She was obliged to lie on the back or right side, and I found the left leg well flexed and adducted. Any attempted passive movement of the leg seemed to give great pain, and the whole region about the hip joint was so sensitive that even the lightest pressure of the finger could scarcely be borne, though at the same time the sensitive area presented nothing on inspection to attract notice. Any attempt, with the patient on her back, to extend the leg, quickly caused an aching of the pelvis to correspond to what little extension could be endured.

Removal to the Harper Hospital was proposed and consented to. She endured the ride of two miles in the ambulance very well, and was admitted between 5 and 6 p. m., March 30th, with a temperature of 99.6° F. and a pulse of 80. Lead and opium stupes were applied to the region of the sensitive joint, and under their use the acute tenderness so subsided that on April 3d, by careful manipulation, we applied a simple Buck's extension, the plaster being applied the whole length of the thigh and leg. This was kept up for several weeks and with quite a heavy weight, greatly to the relief of the patient, pain gradually disappearing from the direct region of the joint being longest complained of through the groin.

June 1st I applied a plaster-of-paris cast enveloping the entire left leg from the ankle up, and extending around the pelvis. An extra sole of about an inch and a half in thickness was now applied to the sole of the right foot, crutches were secured, and the patient was encouraged to be up and about. She soon began to walk some each day, but the weight of the cast annoyed her and its pressure about the pelvis irritated her (though it really fitted very well), and she found a semi-reclining position in a wheelchair much more comfortable than the erect position. The cast had been relied on to make necessary extension, but now became somewhat loose and was removed on June 27th. Two days later a Buck's extension was again applied. The patient had not borne the confinement to bed and hospital well; she did not eat or sleep well, and was getting thin, although the hip was now very comfortable. She therefore decided to leave the hospital, which she did on July 6th.

On July 4th, under chloroform, I injected from two to four drachms of a ten per cent. iodoform emulsion into the joint cavity. I took this opportunity to completely flex the leg on the thigh and the thigh on the

body. There was no adhesion or resistance in either joint, and no feeling as of erosion or thickening about the hip joint. During her stay in the hospital the temperature varied from normal to 100° , but the most of the time between normal and 99.2° . The pulse varied from 76 to 110. Malt, hypophosphites, cod-liver oil, and other remedies had been given, but had not been well borne.

"At home she was for a short time kept in bed, with extension, but soon she tired of this and insisted on being up and about on her crutches. She improved somewhat in appetite and felt much better, but still slept poorly. She had no pain in the hip, and took several long walks and rides in the street-cars. She presumed too much upon her ability to do, however, so that restrictions were necessary. Extension hardly seemed called for, but I had a Thomas splint made for her—to thoroughly immobilize the joint. This she continually wore through the day, and with no discomfort save the awkwardness in sitting.

"September 1st I began the systematic use of yeast nuclein, and the improvement almost from the first has been noticeable and extremely gratifying. The remedy has been administered hypodermically, and the site chosen was the region immediately around the affected hip joint. The first few injections were made daily, but the reaction seemed to me so marked that I found treatment on alternate days to be more satisfactory. It has been recommended, as a good precaution, to sponge the chosen site with a two or three per cent. solution of carbolic acid, for its antiseptic and local anesthetic effect. This precaution, however, I did not find necessary, but used great care with the needle and syringe, sterilizing both, each time, before using.

"From September, 1894, to January, 1895, the case was under constant supervision and care, and correct and detailed reports were kept noting the patient's temperature, general condition, and especially the amount of nuclein solution which was injected at each visit. At the beginning twelve minims only were used in each twenty-four hours, this being gradually increased to fifty minims with the happiest results. There were at times some pain and a burning sensation at the site of the injection. The temperature each afternoon was about 99° to 99.4° , on one or two occasions going as high as 101.2° . At the time of the last named date the patient experienced no pain whatever in the hip and expressed herself as feeling as well as ever. The nuclein was temporarily stopped, and I do not consider it accomplished all a continuance of it might do. The improvement has been most gratifying since I began giving the nuclein, and I think there can be no doubt that her comfort has been due to a large degree, to this remedy. It was given with the idea that her case was probably tuberculous, and for this suspicion the family history affords us more or less ground. The nucleins are said to be of avail in incipient

tuberculosis, and this seemed a good case for their use, which is, of course, as yet largely empirical. The disease process in this case certainly seems to have been held in abeyance. Whether the action of the nuclein in such a case is simply to enable the cellular elements to resist encroachments of bacilli, or whether we may hope for so strong a germicidal action as to destroy entirely the bacilli, is, I judge, a question concerning which one can, as yet, only speculate. This patient understands that she is forbidden to step on her left foot or use the limb before next summer, and the day may then be still further postponed. I do not yet regard, or now report, the case as one of recovery, but it seems to me especially interesting as showing gratifying improvement under the use of an agent, quite new as yet, which may have a wide field of use. I hope eventually to have the young lady walking without apparatus of any sort and an evidence of what conservative treatment may accomplish, even in a somewhat unfavorable case."

In a postscript written in January, 1896, Dr. Hitchcock adds :

"This patient was kept under frequent observation until May, 1895, the splint having been discarded some time earlier. In May, first one crutch, then both, and later the cane were dispensed with, the injections of nuclein were discontinued, and the patient has since walked through the summer and fall without support of any kind and without any discomfort whatever in the hip. She has been very happy and grateful for her relief from pain, and it has been delightful to see her evident joy in her ability to walk without suffering. Indeed, she has been altogether a pleasing fulfillment of what I hoped to do when I first presented the case in January, 1895, and this excellent result I attribute very largely, if not entirely, to the long and persistent use of nuclein."—*New York Medical Journal*, March 7, 1896.

College Notes.

U. V. M. MEDICAL DEPARTMENT.

The laboratory course in Pathology was completed the 20th of this month. It was a very instructive course and the lantern-slide demonstrations of pathological specimens at the the Y. M. C. A. proved of great help to the students. It was unfortunate that Dr. Linsley should have been taken ill during the latter part of the course and kept away for a few days, as his presence and own enthusiasm added greatly to the efficiency of the student work in this branch. Sincere appreciation is felt by the boys for the help and kindness shown them by Dr. Linsley's assistants, Mr. Baylies and Mr. Wiltze.

Examinations begin June 29th. The largest class in the history of the Department is coming up for graduation.

An unusually large amount of clinical material has been obtained during the present course, and a correspondingly large increase in the amount of work done by the different professors has been required.

The clinics of Professors Phelps, Grinnell, Jenne and Wheeler, besides the special subjects, have been ample and wide in their scope, and of immense aid to the students.

It is interesting to note the number of local practicing physicians who attend the clinics.

The Annual Commencement occurs July 6th. In our July issue we will have a detailed account of the exercises.

The Vermont Medical Monthly.

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Medical Sciences.*

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EDITORIAL.

A Cause for Concentration of Capital.

Sociologists for years have known that the tendency of capital is to become concentrated and by that concentration depreciate the value of labor. Depreciation of labor obviously means a widening of the gap between the capitalist and the laboring man and even a cursory glance over the annals of the past few years will show that just this thing is taking place. Every politician, social economist and pessimist has given to the world reasons for this condition of civilization. As medical men we have no desire to oppose or support their views, but in the pursuit of our pro-

fession we have observed certain facts which are bound to contribute to the tendency of the times.

Foremost among these is the decrease in size of the wealthier families and relative increase in numbers of the poorer. One hundred families, each of whose wealth represents over \$300,000 have been compared with one hundred other families, who are dependent on their daily toil for maintenance.

The first hundred, besides the parents, comprised 163 children, an average of 1.63; the second hundred, besides the parents, aggregated 522 living children, an average of 5.22! The different families of both classes were taken at random, are in every way typical and the figures are absolutely correct.

The question then is what deductions are to be drawn from these figures? Just this fact, which is patent to every thinker, and it is that the laboring classes are increasing over three times as fast as the wealthier. The result is, of course, to give the control of immense capital into the hands of the few and make more subservient the classes who depend on that capital for the application of their labor.

Several causes can be given for the decrease in size of the wealthier class and relative increase of the poorer, but there is one force at work which reaches terrible proportions among the four hundred, and is comparatively rare among the four million. This force which is actively aiding the decline of American aristocracy, so-called, is wilful abortion, and we blush for shame as we write it.

The average society woman has grown to look on maternity as a misfortune and an evil to be avoided. The false idea has become rooted in her mind that the bearing of children will cause her to age prematurely and her vanity overcomes her maternal instinct. In her efforts to escape her divine imposed mission she is not willing to deny herself, but prefers instead to commit a crime against herself, her country and her God. Abortion, *the direct cause of a mortality of over 60,000 infants yearly*, is standing to-day in many a home the mighty barrier between true happiness on one side and eternal regret and remorse

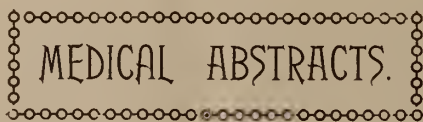
on the other. Oblivious to the peace of the home many American women of means shirk their duty and sink to a depth of personal crime, which even the brute creation around her know nothing of. Forgetful of self, of country, of all that is good and noble, the woman who allows herself to stamp out the life started by her own act and helplessly dependent on her for existence, is criminally undermining our whole moral and social condition. Many times her crime in itself brings adequate punishment, for one abortion often means a life of suffering and ill health, but what an arraignment must await such a mother at the Great Tribunal! What an army of sad-faced nameless babes will be marshaled before her guilty gaze as she humbly sues for mercy at the Judgment Seat! What remorse will chill her barren heart as she realizes that she, too, added to the mighty throng of nameless ones! No little voice to sweetly call her mother, no little arms to entwine around her neck and trust to her for protection. What a curse!

Perhaps she did not know that her crime would recoil upon her eternal life, perhaps she did not know that her country's welfare demanded the sublime sacrifice of motherhood from her, but down in her heart there must have been a spark of mother love and she crushed it out wilfully, cruelly. No words that man can use are half strong enough to condemn her deed. We can understand how some poor woman already the mother of a large family, discouraged, disheartened and almost wild at the thought of bringing another life into the world to suffer the pangs of hunger, could stifle her mother love and stoop to this crime. But for a woman surrounded by affluence and whose only excuse is that to have children will spoil her form or make her grow old too soon, such a deed is beyond our comprehension.

As a matter of fact, however, this "slaughter of the innocents" is confined principally to the women of the better classes. They become adepts in the act of abortion because they have the means to achieve their purpose at their beck and call. Their poorer sisters have neither the knowledge, skill, nor, thank

God, the desire to be wilful murderers, and this is oftentimes the reason why we see a laboring man's family consisting of ten or twelve children while his millionaire employer has only one.

Other factors are at work but we sincerely believe that the crime of abortion has reached such dimensions as to have an important influence on the social questions of the day. As medical men let us lift up our voices and cry out against this crime which despoils the home, lowers the women we ought to look up to for purity and nobility, and tends to increase lust and its attending ills. May Divine help aid us in stemming the tide!—*Lewis*.



MEDICAL ABSTRACTS.

Chronic Gastric Dyspepsia—K. S. Howlett (Tennessee Medical Society, April 14,) said: Rapid eating and imperfect mastication are the chief exciting causes of all forms of dyspepsia. Mental strain or shock, etc., belong especially to the neurosis. The pathology of functional dyspepsia consists of either an atonic condition or an exaggerated irritability of the nerve supply. Cannot believe that the purpose of the nerves is simply to enable the stomach to recognize the wants of the system and the system to take cognizance of its condition. Believe that a depression or excitement of the nerve supply always brings on disturbance. The pathology of gastritis is simply one of glandular inflammation, with the accompanying results.

In differential diagnosis, the stomach tube gives valuable information and is well-nigh indispensable. Dieting plays an important part in the treatment, but may be too strict and prolonged. After giving the stomach a short rest, more liberal diet should be added as rapidly as possible. Digestion begins in the mouth, and any error as to cleanliness, thorough mastication and in salivation should be corrected. The hygienic measures consists of taking active, though not fatiguing exercise, proper recreation, etc. Lavage, with alkalized water and simply drinking large quantities of the same, are most useful remedies. In hyperacidity alkalies are called for. In *hypo*-acidity, hydrochloric acid is widely used. Essayist thinks it is often given in too large quantities and for too long a time. An acid on both sides of a secreting membrane is not a condition favorable to osmosis, and the constant supply of this acid from without lessens the power of its secretion. Hence it should be given only temporarily and withdrawn as soon as possible. The same objections apply with still greater force to pepsin. However, the theory upon this and like remedies that have been so widely used, is a most unscientific one any way. Creosote is the best antiseptic and antifermentive. Nux Vomica is a most excellent tonic, and massage and electricity are beneficial. Cascara is admirably suited for relieving the constipation.—*Charlotte Med. Journal*.

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Chloroform and Camphor as Anesthetics—Dr. Gundrum of California reports in the *Therapeutic Gazette* that for some four years he has been administering a new combination as an anesthetic, which in thirteen cases seems to present an improvement over what is ordinarily used. His combination is made by substituting the spirit of camphor

for the alcohol in the well-known A., C. and E. mixture. He believes the camphor stimulates the cardiac action and the odor renders anesthesia much more agreeable.—*N. Y. State Med. Reporter.*

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Tea and Coffee in Digestion—The custom of using the leaves or berries of certain varieties of plants which contain as their active principle substances resembling theine or caffeine is almost universal. They undoubtedly possess a certain amount of stimulating power and a hold upon the nerve structures which prevents a too rapid change of molecules in the animal economy until they have performed their proper functions, but it has been shown by physiologists that their immediate effect upon the stomach is to retard digestion. It is known that the process of digestion in the stomach is due to the presence of hydrochloric acid and a small amount of pepsin, both of which are secreted under the stimulating action of food. A distinguished German has experimented upon digesting food artificially in a medium of hydrochloric acid with the necessary amount of heat. Hard-boiled eggs were chopped and thrown into the acid liquid, and to this was added in different cases pure water, tea, and coffee. The percentage of albumen digested by pure acid was 94, with water 92, with tea 66, and with coffee 61. The question might arise, in light of these experiments, if tea and coffee would not serve their legitimate purpose when taken alone, or with a cracker or a crust of bread, instead of a full meal.

In whatever way they are taken there is no doubt but what digestion is seriously impaired by their excessive daily use. A strong stomach with full vitality may suffer but little, while the delicate and sensitive should use them with great caution. Tea and coffee are just as liable to abuse as opium and alcoholic stimulants—*Columbus Med. Journal.*

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The Treatment of Broncho-Pneumonia—Berg, in the *Medical Record*, in speaking of the treatment of broncho-pneumonia, advocates inhalations of oxygen, as they stimulate the heart, and enable a crippled lung to do the work of a healthy one by absorbing oxygen in a more concentrated form than in the ordinary air. Antipyretics should be avoided. Poultrices should never be used.

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The Action of Lactophenin.—(*Wiener Med. Presse, 1886, No. 50.*) The author reports a large experience with this drug in the treatment of children. He has used it as an antipyretic in pneumonia, bronchitis, typhoid fever and diphtheria. It reduces the temperature promptly, and he reports no untoward effect on the stomach or depressing effect on the heart. Because of the last named advantage he has substituted it largely for other antipyretics for children. To infants of one year he gives three-fourths of a grain; at four years he gives one-fifth of the adult dose.—*Archives of Pediatrics, June, 1896.*



NEWS NOTES AND FORMULA.

New Hampshire Medical Society—At its annual meeting, held in Concord, the following officers were elected to serve during the coming year: President, Dr. Abel P. Richardson of Walpole; Vice-President, Dr. M. C. Lathrop of Dover; Treasurer, Dr. M. H. Felt of Hillsborough Bridge; Secretary, Dr. G. P. Conn of Concord; Executive Committee, Drs. Charles R. Walker of Concord, George D. Towne of Manchester, F. A. Stillings of Concord, W. T. Smith of Hanover, F. E. Kittredge of Nashua, A. C. Heffenger of Portsmouth, and Ira J. Prouty of Keene; Anniversary Chairman, Dr. James T. Greeley of Nashua; Necrologist, Dr. Jno. J. Berry of Portsmouth.

—————

An Ozone Cure for Phthisis has just been announced, according to the daily papers, by Dr. Erich Langheld, at the International Medical Congress at Wiesbaden. The name of this latest discovery is Antimicrobia, it consists chiefly of ozone and cod liver oil, and is reported to have cured ninety cases of consumption at the Moabit Hospital in Berlin during the past year.—*Pacific Med. Journal*.

—————

For Dry Pharyngitis—Acid carbolic..... 4 grs.
 Tinct. iodi..... 5 min.
 Tinct. aloes..... 8 min.
 Tinct. opii..... 10 gtt.
 Glycerini..... 1 fld. oz.

M. Sig.—Use as a spray several times daily.—Danet, *Progres Medical*, No. 51.

—————

Simple Test for Albumen—Dr. A. C. Ewing (*Medical Record*) says: Draw up into a small glass pipette or tube about an inch of the urine, let the finger remain tightly over the top and insert the pipette into nitric acid and draw up under the urine about the same quantity of acid, when, if even a trace of true albumen be present, there will appear a beautiful line of demarcation between the acid and urine. This test is as accurate as it is simple and, besides, is decidedly economical and far less troublesome than all others.

Addition— Now one and one are two, 'tis true ;
 But if the two do marry,
 Then in a year, 'tis also clear,
 They're two, and one to carry.

—*The Mathematician.*

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How to Stop Hiccough—Take a deep, full inspiration, filling the lungs to their utmost capacity ; then do not let out any of the air, but breathe in little short breaths. Keep this up till the hiccoughs are gone. Hiccoughs are caused by irritation of the laryngeal or pharyngeal nerves, as by swallowing hot coffee, pepper or irritants, causing reflex action, and then transmitted to the diaphragm and intercostal muscles. Filling the lungs puts these muscles on the stretch, paralyzing and relieving the spasm. This method has been tried with success.—Dr. J. M. White in *Times and Register.*

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Iodide of arsenic plays an important role in the therapeutics of uterine fibroids.

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Gelsemium controls pain in the ovaries better than anything else except narcotics.

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Sulphur is very efficacious in the treatment of acne and other chronic facial eruptions.

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For cracked nipples apply bismuth-subnitrate made into a creamy paste with distilled water.

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In Asthma, tincture convallaria majalis, ten to fifteen drops, every three to five hours, is recommended.



BOOK REVIEWS.

A Manual of Anatomy. By Irving S. Haynes, Ph. B., M. D., Adjunct Professor and Demonstrator of Anatomy in the Medical Department of the New York University; Visiting Surgeon to the Harlem Hospital; Member of the Society of the Alumni of Bellevue Hospital, of the American Association of Anatomists, etc. With 134 half-tone illustrations and 42 diagrams. Philadelphia. W. B. Saunders, Publisher. Price, \$2.50.

In the preparation of this volume the author has given great importance to a thorough knowledge of the viscera and of their relations to the surface of the body. To this department has been accorded the most prominent place in illustrations and description. The anatomy of the extremities has been treated as fully as its requirements seem to demand. Descriptions of the bones and joints, and of those minute parts which require special preparation for their dissection, have been intentionally omitted. The descriptions are given in their natural order—that is, in the order in which the structures are discovered in the dissection. The writer's experience as a teacher in anatomy for several years is utilized in stating the "facts of anatomy," which have been gathered from the standard textbooks on this and the allied subjects. All in all, the work is first-class in all respects—as an anatomy, thoroughly and handsomely illustrated by reliable cuts of the parts, and printed in good, clear type. — *Med. Brief.*

The above from one of our esteemed exchanges seems to describe the book so well that we take the liberty of reproducing it. We echo the commendation it receives.

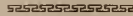


PUBLISHERS' DEPARTMENT.

Dr. X. T. Bates, M. D., Poughkeepsie, N. Y., in *March Notes on Pharmaceutical Products*, speaking of Elixir Maltopepsine (Tilden), says: Malt and pepsin are the component parts, combined with hydrochloric acid and phosphorus acid. This is an important factor for the conversion of starchy matter into dextrin, another to supply the place of the natural digestive ferment, another to assist the solvent power of pepsin, which is the true exponent of its value, and still another which acts as a refrigerant and nerve tonic.

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In many forms of acute gastritis and gastro-intestinal indigestion it is indicated and readily meets the requirements of such symptoms as nausea and vomiting, head aches and depression in adults, and diarrhoea and colicky pains in children, while the digestive ferments which it possesses are a very important therapeutical measure in the treatment of chronic gastric catarrh.



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Recipe for a Reliable Infant Food.*—Beat one heaping teaspoonful of flour with half a medium sized coffee-cup ($\frac{1}{2}$ pint) cold water until perfectly free from lumps. Add this to one and a half cups ($\frac{3}{4}$ pint) boiling water in the inner vessel of a double boiler; stir well, cover, and cook for ten minutes by keeping the water boiling in the outside vessel.

Take out the inner vessel and set on table; add at once one and a half cups ($\frac{3}{4}$ pint) cold water, then mix in a scant half teaspoonful **Maltine Plain** and stir thoroughly with the same teaspoon, cover and let stand fifteen minutes. Then put the inner vessel back into the boiling water in the outer vessel and cook fifteen minutes. Strain and keep well covered in a cool place.

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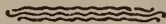
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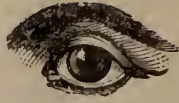


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CONTENTS.

	PAGE
Altitude. Its Effects on Different Individuals. By Dr. Geo. S. Gove, Whitefield, N. H., - - - - -	159
Surgical Cases of a Country Practice. By Dr. E. J. Melville, Bakersfield, Vt., - - - - -	169
Yeast Nuclein in the Treatment of Hip Joint Disease. By Dr. C. W. Hitchcock, Detroit, - - - - -	175
College Notes, - - - - -	179
Editorial.	
A Cause for the Concentration of Capital, - - - - -	180
Medical Abstracts, - - - - -	184
News, Notes and Formula, - - - - -	186
Book Reviews, - - - - -	188
Publisher's Department, - - - - -	189

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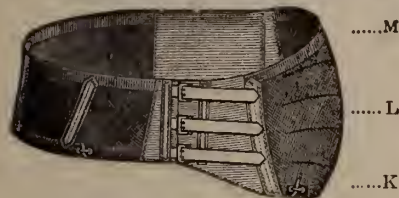


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Obstetrician to Brooklyn Hospital

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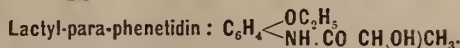
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The Vermont Medical Monthly

*A Journal of Review, Reform and Progress in the
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Official organ of the Vermont State Medical Society.

Vol. II.

JULY, 1896.

No. 7

Clinical Lectures on Diseases of the Skin.

MEDICAL DEPARTMENT UNIVERSITY OF VERMONT,
May 12th, 1896. }

BY PROF. GEORGE THOMAS JACKSON, M. D., NEW YORK CITY.

We have here a group of cases of ECZEMA. At first glance these cases do not look at all alike; and yet they are all cases of eczema.

This baby shows a typical case of eczema in a baby. You see that the baby looks pretty fat and good natured—as if it were well fed. You see that the cheeks are red, and that they are crusted, cracked and sore. It looks like the picture we passed around a few moments ago, of eczema on the face of a child.

Now, the first thing to do, in such a case as this, is to ask the question, “Do you nurse the baby or do you feed it from the bottle?”

The mother says she nurses the baby.

“Then, how often do you nurse the baby—every time it cries?”

“Yes.”

Now, that is just the trouble, and it is the trouble you will often find—that children are nursed or fed too frequently.

They are given the bottle every time they cry, and very often it is stomach-ache that makes them cry, and then they are fed more to give them more stomach-ache. You cannot be too particular about the baby's diet.

There was a child, older than this one, that was brought to me in New York. The parents were wealthy and they owned a country place and a cow, feeding the baby with the milk of this cow. I asked some questions about the cow, and found that she was about to have a calf. I stopped feeding the baby on the milk of that cow, and the baby got well.

In the case of this baby, the first thing to do is to instruct the mother about feeding it, beginning with intervals of two hours between the nursings, and continuing to increase the length of the intervals as the child grows older.

"Do you keep the baby very clean?"

"Yes."

"Wash it several times a day?"

"Yes, in soap and water."

Cleanliness is said to be next to Godliness, but not so in eczema. So long as you keep washing the skin with soap and water so frequently, irritating it and removing the epidermis that nature is trying to form, so long will the baby have a sore face. So we will first forbid the washing of the child's face.

The next thing to do is to prescribe something to put on the child's face.

This is not acute eczema, but sub-acute. In the sub-acute form use both an astringent and a protective dressing. Spread the oxide of zinc ointment on pieces of soft linen, muslin, or lint, to fit the cheeks, nose, chin, etc., lay them on the face and cover with a mask of linen with holes cut for the eyes, nose and mouth and fasten it with straps under the chin and pin it to a cap on the head. You will find that mothers will object more to this than anything else. They don't want the baby's face covered. But when they see that this treatment does more good in twenty-four hours than anything else you can do, they soon become reconciled to it.

There is a preparation which sticks well, and is very good for use in these cases. It is composed of 40 parts oxide of zinc, 20 parts each of chalk, lead water, and linseed oil. Mix the zinc and chalk together, then the linseed oil and lead water, afterward mixing the whole together. This is very good when you cannot have them wear a mask.

This little girl does not show very much of the eczema, but she seems to drool a good deal, and one side of the mouth is red. I think the child has the habit of sucking her thumb, and often eczema comes from a trick of that kind.

I had a man come to me in the Skin and Cancer Hospital. He had a half-moon shaped patch of eczema on his lower lip. Upon questioning him as to his habits, we found that he was a car starter and was in the habit of carrying a whistle in his mouth, and the moisture caused by continuously carrying it in his mouth caused eczema. In the case now before us we will try and have the bad habit corrected, and order an ointment of oil of cade, one drachm, in oxide of zinc ointment, one ounce.

This other youngster has what does not seem like a very obstinate case of eczema. You can see a number of red, crusted spots upon his head. He has had eczema three years. Has been treated for it in various ways, apparently with skill and proper remedies; but has not got well. We are asked if three years is not a long time to treat an eczema without curing it? No, it is not, especially in boys. You cannot always tell whether an application put onto a boy's scalp will stay there very long, when they go out playing ball, in swimming, etc. It is rather difficult to treat them successfully. I think tar is better than anything else. One drachm of oil of cade to an ounce of sweet oil, thoroughly rubbed into the scalp once or twice a day, would cure this case, I think. It is best not to change the remedy too often, but get a good one and stick to it. All troubles with the scalp are obstinate. The reason is that the scalp is covered with hair, which interferes with the applications. It takes a great while to get them well.

CASE OF DYSIDROSIS.

Now this case is a rare one, as it looks to me at the present, and I am pretty sure it is. Rare cases are not so very good for students, but this is a rare case that you may come in contact with sometime. By many it would be regarded as an eczema. But I want you to note several things about it, and perhaps it will be instructive to you as a lesson in diagnosis.

In the first place both hands are affected, and it occurs only on his hands.

As a working rule, you generally can expect that if both hands are affected there is some general disturbance, often some nervous derangement.

This man's hands sweat a great deal. We have hyperidrosis, which though not a common thing in men, is common in women. They are sometimes so troubled with it that when they hold the hand up in a horizontal position, the sweat will drip from the fingers. Hyperidrosis is simply excessive sweating. It is very annoying to ladies, of course, as it ruins their kid gloves.

This man's hands are very wet. The most common seats of the trouble in hyperidrosis are the palms of the hands and the soles of the feet. Hyperidrosis of the palms is not amenable to local treatment as a rule. You can generally overcome it by attention to the general health, and by tonics. Of course you can use belladonna, and stop it at once; but I do not think it advisable to use these powerful remedies in such a disease.

It has been claimed by some that sulphur in teaspoonful doses three times a day is one of the best means of relief.

Hyperidrosis of the feet is quite a common disease and one that you should know about. It sometimes prevents people from walking. If the feet sweat too much the epidermis becomes soggy and the feet sore. In the army men are laid up with this trouble, being unable to walk on account of blistered feet.

In German books you will find that there is a great deal said about hyperidrosis of the feet. The epidermis looks

soggy, as though it had been soaked in hot water. This is a very disagreeable trouble, and often there is associated with it, bromidrosis, commonly called stinking feet. Both troubles are very easily taken care of. The patient should simply be told to soak his feet every day in borax and water; then, at night, turn the socks inside out, powder the feet, and powder the socks and insides of the shoes with finely powdered boric acid. In this way the patient will be relieved of his hyperidrosis and bromidrosis at the same time.

In regard to the case before us, we note, 1st, that both hands are affected; 2d, the hands are very sweaty; 3d, the eruption occurs between the fingers very markedly. The disease has progressed so far now that you probably cannot find the distinctive lesions. The skin is broken and looks red. If you had seen it a little earlier you would have found marked sago grain-like vesicles where the skin is now broken. It is a case of dysidrosis or pompholyx.

This disease was first described by Hutchinson and Fox. They both examined the same patient, though they did not know it was the same patient, and they gave different names to the disease. Fox called it dysidrosis, Hutchinson named it cheiro-pompholyx. As it occurs on the feet also, the latter name is inappropriate.

This disease occurs in persons who are not in good general condition. It seems to be in most cases a neurosis. These patients should have as much out-of-door exercise as possible, and should take tonics to build up the system. Locally diachylon ointment may be applied to the parts affected.

CASE OF TELANGIECTASIS.

The patient has, as you may possibly be able to see from a distance, a red spot upon her cheek, just below her eye. It is quite red and seems to be composed of dilated capillaries. As you look at it more closely you will see there are apparently two dark red spots near the middle of it. The name that is applied to this disease, spider cancer, should never be used; it

simply frightens the patient. It is not a dangerous trouble. It should be called Telangiectasis, which simply means dilated vessels.

We have what are called Nevi or birth-marks, that are also dilated vessels, and are congenital; but these Telangiectases are acquired. We do not know always what causes them, but they are supposed to be due to some slight injury to the skin, perhaps a mosquito bite or a pin prick.

The treatment is very simple. Take a galvanic battery of six or eight cells, to the negative pole of which is attached a needle holder with a fine cambric needle, the patient squeezing the wet sponge electrode attached to the positive pole. The needle should be passed into the centre of the growth where the dark red spot is, and the current passed through it for half a minute. Or, if one has not a galvanic battery the same thing can be accomplished by the use of nitric acid applied by means of a sharpened stick or a small piece of glass, accurately to the red spot.

CASE OF EPITHELIOMA OF LIP.

This man was operated upon some thirty years ago by Dr. Little, formerly connected with this college, and a most estimable man he was. You can see there is a scar here of a previous operation, but he complains of a certain amount of pain in the lip during the last couple of months. On one side the scar of the old operation remains, and there is a little crusting of the lip on the other side. You can see a quite well marked raised edge on the crusted side of the lip, which suggests a return of the epithelioma.

There is not now anything very definite upon which to make the diagnosis of epithelioma, but when any patient comes to you, who is past middle life, who has a circumscribed scaly patch upon his face, and if he tells you there is more or less pain in it, you should always consider the probabilities of the development of epithelioma.

Epithelioma is a very common disease, unfortunately, and is one which you should all know something about, as the most

of you will probably be general practitioners, and this is something with which the general practitioner has to do; at least, he has cases of this kind come to him for diagnosis.

It develops from a great many different sources. It may come from a waxy nodule; it may come from a mole which has been on the face since early life; it may come from a wart that has been on the face some time; it may come from a scaling or sebaceous patch; but no matter what its form may first be, whether it be the sebaceous matter, the waxy nodule, the wart or the mole; by and by it begins to grow larger. It begins to form a raised edge, then it will flatten down in the middle and ulcerate and then you will have no trouble in detecting that it is an epithelioma. It will have a well marked, raised, white, waxy edge, over which you will find blood vessels running. Wherever you find a lesion of that sort you may be sure what you have to do with epithelioma. After a time we have added lancinating pain, and last of all enlargement of the neighboring lymphatic glands.

Epithelioma is very apt to occur upon the lip, and singularly enough upon the lower lip. That is one diagnostic mark between epithelioma and the initial lesion of syphilis. Epithelioma almost invariably occurs upon the lower lip. Many persons have been operated upon for epithelioma upon the upper lip, when the trouble was a chancre, because the surgeon did not bear in mind that epithelioma was very rare upon the upper lip, while the initial lesion was very common there.

The treatment of epithelioma must be energetic. Do not fool with an epithelioma. If you give it any encouragement it will grow rapidly worse. It must be destroyed root and branch. If you are a surgeon, you will be sure to cut it out, if not, you will destroy it otherwise. I would not advise cutting out an epithelioma. I think it can be treated better otherwise; but I speak from the standpoint of a dermatologist and not from the standpoint of a surgeon. If you cut them out, give them a good big margin and be sure that you have gotten rid of every root and branch. I would not cut it out of any portion of

the face except on the lip and near the eye, unless it be of very large size. I should treat it first by means of the dermal curette, scratching it out thoroughly, then apply an ointment containing $33\frac{1}{3}$ per cent. of pyrogallol. After about ten days I should take this off and let the wound heal up under mercurial plaster.

CLINICAL LECTURE, MAY 13th, 1896.

CASE OF LUPUS VULGARIS.

We have two cases here this afternoon of very extraordinary interest. The first is one of Lupus Vulgaris and is one of the finest examples of that disease that I have ever seen.

Lupus vulgaris is a tuberculous infection of the skin. You might call it phthisis of the skin. It generally begins in early life, very often in childhood—and this is exactly the account which this patient gives of herself—almost always before the age of fifteen or sixteen years. It begins as a very small lesion, a little red papule that people speak of as a pimple. They always accuse themselves of being to blame for its increase in size. They say it began as a pimple, and they scratched it with the finger-nails, making it spread. But this is not so. The small lesion gradually grows larger of itself, though very slowly, then new ones form around it, and so the disease constantly spreads by satellites, spreading out from the center to involve a larger and larger portion of the face.

The characteristic lesion of lupus vulgaris is the small reddish brown apple jelly tubercle. It is tubercular in origin, slow in progress, starting, as I have said, from a little papule at from twelve to fifteen years of age, it will increase in size for a time; and then it will seem not to progress for many months. Then it will start up on account of some unknown change taking place in the patient's condition that favors further infection of the skin by the tubercle bacilli.

After the patch has grown to some extent, the center becomes cicatrized, while new tubercles form about the patch, and by and by in the cicatrix itself. The recrudescence of the disease

in the cicatrix is characteristic of the disease. In this country ulceration rarely takes place, but it is often seen in lupus in Europe.

It is due to infection by the tubercle bacillus; but there are not many tubercle bacilli in it. The reason they are so few is that the skin of the face is not a good feeding ground for them. They are exposed to changes of temperature—by the air and also by constantly washing the face, and they do not get on so well as they would if they were covered all the time and so kept warm and protected.

The majority of cases occur upon the face, and the lesion is very often a single one.

Lupus may occur anywhere on the body—we sometimes find it upon the legs, specially in children when they have been in a family where some one has tuberculosis, and they have scratched the leg while crawling on the floor and inoculated themselves with tubercle bacilli.

The diagnosis is simple, if you recollect that the characteristic lesion is a small brownish red tubercle, and that it is prone to cicatrise and to have tubercles in the cicatrix.

Unfortunately, we have another disease which is called lupus erythematosus, although it is in name only that they are alike. It differs from lupus vulgaris in having no apple jelly like tubercles, in not tending to recur in the scar, and in usually being symmetrical. Its color is not as dark and it does not begin so early in life.

Lupus vulgaris is often mistaken for syphilis. In diagnosis the time the disease has lasted is a very important point.

A patch of lupus vulgaris would take ten years to reach the size that a patch of syphilis might take on in ten days or ten weeks. Syphilis, too, would not be apt to occur in a young subject, it usually occurs in early adult life. If you find an ulceration that has existed for years and began in early life, you may be pretty sure you have to do with lupus.

This patient, of course, wants to know what the chances are, if she can get well. I do not think anybody should ever

promise to cure a case of lupus vulgaris. You very often can succeed in destroying what you see; but no matter whether you cut the patch out, or burn it out, it is hard to permanently destroy it. But patients rarely die of lupus vulgaris.

The method of treatment should be energetic. You must either bore into each one of these little nodules with a stick of nitrate of silver or with the dental burr, or you can scrape the whole out with the curette, and treat the patch as directed in epithelioma.

I think in this case, it would be better to try to reduce the trouble by the use of salicylic acid, and it is well to cover the patch with a piece of plaster muslin, which comes from Germany, containing 25 per cent. salicylic acid and 40 per cent. creosote. The latter is added to reduce the pain caused by the acid. At best it is a painful application.

Chronic Gastritis of Long Standing, with Periodic Attacks of Migraine.

REPORT OF A CASE. BY GEO. A. CURRIDEN, M. D., OF CHAMBERSBURG, PA.

The herewith reported case is one of double interest, inasmuch as the patient has been under my care for a number of years, and previous to the commencement of the present treatment, I have been unsuccessful in affording much relief or preventing the recurrence of the frequent and periodic attacks of migraine, to which she had been more or less subject to since early womanhood. The cause of which I could not account for more than "a habit long continued," aggravated by gastric catarrh.

The history of the case is briefly as follows: Mrs. A., age 55, since early womanhood has been subject to periodic attacks

of migraine at intervals of two, three or four weeks, but seldom free from them for longer intervals.

An attack comes on by general malaise of usually a day's duration, repugnance of food or drink, marked drowsiness, much depression with request for rest and quiet, followed by complete physical prostration, dull frontal headache, which the least noise or disturbance makes the more intense, invariably accompanied by violent and frequent attacks of vomiting and retching, inability to retain any food or nourishment of any kind, retention of bowels, often cold sweats, pulse somewhat slow and weak and small in volume. This condition lasting usually two days, followed by gradual cessation of symptoms.

During the whole period of usually four or five day's duration, she is unable to take nourishment of any kind, remains constantly in bed, and desires only complete rest and quiet. The previous treatment has been so varied and on so many different plans, that I refrain from mentioning them.

Two years ago I was able to prevent an attack for over two months by the use of strychnine in 1-20 grain doses t. i. d. with careful diet and artificial digestive.

In May, 1895, I put her on Charles Marchand's "glycozone" in teaspoonful doses well diluted t. i. d., using this as all other previous remedies experimentally; she commenced to improve much in general health, an unusually good appetite, without the previous distressing symptoms following, a more regular movement of the bowels, freedom from headache, and in every way a decided improvement; this improvement and enjoyment of good health lasted during continuation of above treatment for over three months. Unknown to me she stopped taking the glycozone, thinking herself perfectly well. In a few weeks had a return attack, milder and devoid of gastric distress. A similar attack two months later, both of which occurred some weeks after stopping the above described treatment, and I might say caused by imprudence in diet.

The conclusion come to, in this case is that the headache is sympathetic, that the stomach becomes acutely inflamed by its

inability to naturally and properly perform its functions, and responds to the call of nature to unload itself, and thus secure for a time rest, that the use of glycozone has corrected the existing gastritis and by so doing has removed the primary cause of these many years of suffering.

Forty-third Annual Commencement.

The 43rd Annual Commencement exercises of the University of Vermont Medical Department occurred Monday evening, July 6, at the Howard Opera House. Although the weather was anything but pleasant, a very large audience was present to witness the debut of 52 young physicians.

Prayer was offered by Rev. Geo. I. Bliss, and after a selection by the orchestra Prof. J. Henry Jackson introduced the candidates to Governor Urban A. Woodbury who conferred the degrees. After another selection by the orchestra Prof. A. F. A. King in a few appropriate remarks announced the five honor men who were Lyman Allen, A. B., H. W. Mitchell, M. L. Griswold, A. B., V. A. Marshall and C. F. Morse. Of these five Drs. Allen and Mitchell received the Faculty prizes of \$50 and \$25 respectively for having passed the two highest examinations. Amidst tremendous applause the honor men returned to their seats and Dr. L. J. Marshall delivered the valedictory address, which was well written and delivered. His remarks were appreciated by the audience, receiving the commendation of generous applause. The address of the evening was then delivered by the Rev. P. M. Snyder, of Burlington. In every respect it was a masterly effort and thoroughly enjoyed by every one present. Eloquently delivered, logically expressed and full of wit and true thought, Mr. Snyder's address will be remembered for many a day by those who heard him.

This concluded the exercises and the Graduating Class with their invited guests adjourned to the annual banquet at the Van Ness House.

The officers of the class were as follows :

- | | | |
|-----------------|-----------|------------------------|
| S. R. Davis, | - - - - - | <i>President.</i> |
| G. Roberts, | - - - - - | <i>Vice-President.</i> |
| E. L. Washburn, | - - - - - | <i>Secretary.</i> |
| W. A. Hare, | - - - - - | <i>Treasurer.</i> |

EXECUTIVE COMMITTEE :

- | | | |
|-----------------|-----------|-----------------|
| H. W. Mitchell, | - - - - - | H. G. Rockwell, |
| N. R. Cook, | - - - - - | E. C. Bullard. |

The graduates number 52. Ten men failed to pass their examinations, and, in the language of the student, were "plucked." Several who were eligible for final examination decided to wait over another year.

Following are names of the successful candidates for graduation :

- | | |
|-------------------------------|---------------|
| James Thacher Adams, | New Hampshire |
| Lyman Allen, A. B., | Vermont |
| William Preston Beauclerk, | Vermont |
| Lester Warren Burbank, M. S., | Vermont |
| W. Irving Burns, | New York |
| Walter Simpson Bates, | Massachusetts |
| Ernest Calvin Bullard, | Vermont |
| John Galt Baylor, | Vermont |
| Arthur Irving Boyer, | Connecticut |
| John Hiram Bean, | Vermont |
| Thomas Henry Crotty, | Ontario |
| Harry Smith Chaffee, | Vermont |
| Norman Randolph Cook, | Maine |
| Herbert Leavitt Cooper, | New Jersey |
| William Orson Congdon, | New York |
| Bernie Dennis Colby, A. B., | Vermont |
| Edwin Black Davis, | Vermont |
| Stephen Rich Davis, | Vermont |
| Charles Elton Duffy, | New York |

Albert Samuel Fay,	New York
Merton Lyman Griswold, A. B.,	Vermont
Jacob Wade Paul Goudy,	Maine
Burt Dutton George,	Vermont
Stanley Richard Hutchings,	New York
William Andrew Hare,	Massachusetts
Jefferson Warren Hawthorne,	Maine
Van Buren Herrick,	Vermont
Vincent Joseph Irwin,	Massachusetts
Osceola Elworth Jackson,	Massachusetts
John Wesley Judd,	Massachusetts
George Warren Libby,	New York
Bertie Duane Longe, B. S.,	Vermont
Grosvenor Porter Lowrey,	New York
Calvin Sampson Lenox,	Massachusetts
Everoy Paul Lunderville,	Vermont
Oscar Warren McKenna,	New York
George Ernest Myers,	Connecticut
Harry Walter Mitchell,	Massachusetts
Charles Frederick Morse,	Vermont
Velona Alonzo Marshall,	Vermont
Lewis Jackson Marshall,	Vermont
John Adnea Peterson,	Massachusetts
George Roberts,	Vermont
Peter Augustin Reque, A. B.,	Minnesota
Herbert George Rockwell,	New Hampshire
Edmund Louis Saunders,	Connecticut
John Mather Stafford,	New York
Samuel Albert Shaffer,	Pennsylvania
Daniel Webster Sullivan,	New Jersey
James Fenton Underwood,	New York
Tenney Hall Wheatley, B. S.,	Vermont
Eber Leslie Washburn,	New York

Announcement.

The Fifteenth Annual Announcement of the New York Post-Graduate Medical School and Hospital, has just been issued. Five hundred and forty-two physicians from all over this Continent have attended the courses at the institution during the past year. More than one thousand operations were performed in the Hospital, which is one of the largest in the city, containing special wards for babies and children, while nearly twenty thousand patients were treated in the Out-Door Department. Recent discoveries have revolutionized medical and surgical methods, and a man whose medical education ended fifteen years ago, is not a physician or surgeon within the present meaning of the term. Post-graduate medical instruction is for the purpose of furnishing to these graduates in medicine a means of refreshing their knowledge. It supplies them with the opportunity of coming in direct contact with disease by means of special courses in all the departments of medicine.

The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

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EDITORIAL.

The Subject of Examination of Females.

There is one thing which no reputable physician should ever tolerate and that is a remonstrance on the part of a female patient to submit to a full physical examination.

A physician to whom a true woman applies for treatment is presumably a gentleman and to object to what he deems essential in order to make a complete diagnosis is to offer him a direct insult. Such an insult should only meet with immediate dismissal of the case, for no man with any respect for himself can afford to treat a patient whose confidence he does not possess.

Many physicians are too lax in this matter and it is no uncommon thing to hear a doctor say that it was a long while before such and such a patient would allow an examination.

The doctor himself is the sole judge of whether an examination is necessary or not, and we cannot imagine a more despicable, disgraceful picture than a regular practitioner pleading with his patient to allow him to make a vaginal or rectal examination. It is demoralizing to patient as well as to physician, but particularly so to the physician. He is in a profession which implies honor and trustworthiness and such a refusal on the part of one who depends on him for skilled treatment is an impeachment which he must resent.

Honest indignation at false modesty when it so treads on the character of a doctor will quickly overcome it and do more than anything else to assert one's dignity, character and reputation.

Character, the first Requisite for Graduation.

We are constrained to believe while the Medical Colleges of our country are making such radical changes in their courses of study and entrance requirements, tending towards the production of more efficient and better educated doctors, that they will do well to emphasize the importance of good character by making it a more essential requirement for graduation. Almost without exception every medical college in the United States declares in its catalogue that evidences of a good moral character are necessary from all candidates for graduation. This is all well enough so far as it goes, but no man however depraved is so friendless or unpopular that he cannot show ample recommendations vouchsafing admirable moral traits and virtues.

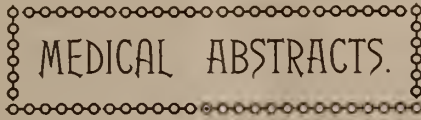
The burden of proof concerning his character rests not so much on the testimonials of his friends as upon himself de-

picted in his daily life by his relations with men, the company he keeps and his general manners.

The faculty of a medical college in their daily association with their students know very well, or ought to at least, the characters of the men whom they are instructing. It is for them then to weed out those men who show tendencies which only give promise of immorality, dishonesty and lack of principle.

In every class there are always some black sheep and it often happens that they are not the poorest scholars. But no matter how brilliant a student may be if he lacks the cardinal virtue of sound manly principle, he is unfit to go forth cloaked with the diploma of a reputable school. It is an injustice to the people and to the medical profession, and so long as character is not made the first requisite for the degree of Doctor of Medicine, just so long will the evils which confront the ideal standard of ethics be in evidence.

The power to prevent the extension of the dispensary abuse as well as the medical club demoralization lies almost entirely with the medical colleges. The status of the medical profession will rise or fall during the next few years in proportion to their use of that power.



MEDICAL ABSTRACTS.

The Absorption of Iron Preparations.—It is a now generally accepted fact that inorganic iron preparations are practically worthless in blood therapeutics, while organic compounds exert varying effects in the ratio to their absorbability. The albuminate preparations have a certain degree of value because they supply—in loose combination—the components from which the system can compound the required form of iron—just as it is abstracted from all food. This natural form of iron, as it is found in the tissues, and particularly in the liver—where it “comprises the reserve store for blood formation”—is ferratin, as substantiated by the studies of Schmiedeberg, Marfori and Filippi, and confirmed by other equally high authorities, including Prof. Chittenden of Yale.

These investigators have proved that ferratin is present in all human organisms, that it is absorbed from animal and vegetable food, and is stored principally in the liver—“to feed the blood.” When, therefore, the physician treats his anemic patient with carefully selected diet, exercise, hygienic measures, etc., he unconsciously enlists the aid of the digestive and other organs to manufacture the required ferratin from the food ingested; this is a laborious task, because the organs are weak,—and it is empirical practice, because there is too much uncertainty in trusting to the debilitated system to work its own recovery, even if useless inorganic preparations are added.

Schmiedeberg and Marfori having proved the identity and function of ferratin by conclusive physiological tests, which facts are now incorporated in text-books and medical literature, proceeded to duplicate natural ferratin by a synthetic process, in order to make the product available for therapeutic use; they succeeded in combining tartrate of iron with albumen by a complicated chemical process, yielding an iron albuminic acid—of *ferratin*. This product is chemically identical with the natural ferratin as it can be precipitated from pigs' liver (containing the highest percentage of ferratin among animal food) or spinach (highest percentage among vegetables), and further physiological and clinical tests have proved that this product is quickly absorbed and assimilated supplying the requisite amount of iron to the blood without taxing the system, and increasing the appetite and quickly stimulating the vital power.

There is nothing vague about the claims for ferratin. It is a logical scientific agent, designed on careful consecutive investigations by the highest international authorities; and it has clinically redeemed every

promise made for it, by increasing blood-corpuscles and hæmoglobin, improving appetite and general well-being, and markedly increasing body-weight.

Sajous' Annual for 1895 quotes the unqualified clinical tests and endorsements of ferratin of such authorities (in addition to the authors of the product, Schmiedeberg and Marfori), as German See, Jaquet, Banholzer, John Harold and Hugo Wiener—the foremost therapeutists of Germany, Italy, France, England and Austria. In America, ferratin has been endorsed in print by Einhorn of New York, Fackler of Cincinnati, Chittenden of New Haven, Perekhan of Chicago, Spencer of Cleveland, and verbally or in practice by hundreds of the foremost practitioners in all parts of the United States.

There are many iron compounds and blood tonics, all clamoring for preference; none has the scientific status, based on physiological investigation and proof, and endorsed on clinical records by authorities of highest rank and unquestioned sincerity, as possessed by ferratin and duly recorded in all standard text and reference books of recent issue.

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Catheterism—Dr. H. T. Goodwin in *Louisville Med. Monthly* says: Very small sounds I believe should be used as seldom as possible. The curve on those below No. 6 or 7 is generally incorrect, and in attempting to use the slightest force (as so many are tempted to do when the obstruction is encountered), the point of the sound leaves the normal curve of the urethral canal and makes a wound which always does harm, and frequently may prove fatal. I have often succeeded in passing a No. 12 or 24, after having for a long time vainly attempted to introduce a No. 1, 2, 3, 4, 5, or 6.

It is my custom, therefore, in these cases, to commence with one of the larger sizes, say a No. 12 or 14, and if I fail with these, I try smaller and smaller until the filiforms are reached. If I am still unable to effect an entrance I go back to the larger sizes. So far there have been but few cases in which I have not succeeded in gaining an entrance with them after having vainly tried with the smaller numbers.—*Med. Brief.*

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Disinfection of the Hands—(*American Journal Medical Science*. Vol. ex., No. 4.) Remieke, after a series of elaborate bacteriological examinations, arrives at the following conclusions: Absolute sterilization of the infected hands with the chemical solutions generally employed is practically impossible in the time usually allowed for that purpose. The most certain method consists in scrubbing the hands with soap and hot water for five minutes, then scrubbing for the same length of time in ninety per cent. alcohol, and finally immersing them in an antiseptic

fluid. If rapid disinfection is desired, they may be scrubbed for five minutes in alcohol.

Treatment of Abscesses of the Auditory Canal—When redness of the canal accompanied by lancinating pains appear, painting the part with a solution of silver nitrate, 1 in 10, or carbolic and glycerine solution, same proportion, is recommended in the hope of arresting the progress of the trouble. An ointment containing mercury and belladonna is also given. If the abscess has reached the second stage an incision is indicated. (Prompt incision at the start may cut short the suffering and prevent any further annoyance.—M. D. L.)—M. COURTADE, *N. Y. Med. Journal*, May 30, 1896.

Sleeplessness—In the use of sedatives we must be cautious and not use them *ad libitum*. The writer in a paper on "Sedatives in the Treatment of Insanity" (1892, *Hospital Bulletin of Minnesota*), said, "Each case is a 'law unto itself,' and as such requires patient and persistent study ere we commit the folly of giving a hypnotic, when more simple and efficacious methods would produce satisfactory results." You cannot cure sleeplessness by drug treatment; the drugs simply conserve nervous energy and act as valuable assistants to the building-up process, necessary to cure the sleeplessness. Sedatives act, as before stated, by placing the patient in a position to go to sleep, and nature does the rest.

In our experience we have learned to rely upon the bromides, chloral, cannabis indica and hyoscyamus as sedatives, which, if judiciously used, bring order out of chaos. The bromides lower the sensibility of the brain, and thus promote sleep. The single salts can be used, but in the writer's experience, where a sedative is indicated in sleeplessness, it is better to combine them, and when there is any excitement, add chloral. Cannabis indica is a sedative which is but little used by the general practitioner, and for the reason that it is misunderstood, misrepresented, and as a result never used as it should be. Clouston, Mathison and Echeverria have taught us their value. Hyoscyamus is another sedative, the value of which is not appreciated, a drug which is endorsed by Budde, Brush, Krafft-Ebing as a hypnotic. Now, these valuable sedatives, when combined give us a thoroughly reliable and satisfactory agent, with which to treat sleeplessness, and in the writer's experience no more elegant or reliable preparation is before the profession than that of Bromidia, in which is combined in proper proportion, the bromide of potassium, chloral hydrate, hyoscyamus and cannabis indica. We feel that the profession can always rely upon this combination, and find it especially useful in the treatment of sleeplessness.—*The Medical Fortnightly*.

Early Symptoms of Diabetes.—Unschuld calls attention to an early symptom of diabetes which is seldom mentioned by writers on the subject, but which is yet frequently found, and may assist in an early diagnosis of the affection. This symptom consists in cramps in the calves of the legs, and is found in about twenty-six per cent. of all cases. The pains occur with especial frequency in the morning upon waking, and occasionally also during the night. They are rarely troublesome in the daytime, unless after a nap or bath. Cramps of this nature, occurring in a person of feeble health, should always, Unschuld holds, suggest the necessity of an examination for sugar.—*Farm Doct.*

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Some of the Uses of Strophanthus.—W. K. Wadleigh (*Medical News*, 1896, LXVIII, p. 293).

In an article bearing the above title, W. gives an account of his experience with the use of strophanthus. He states that the physiological action of strophanthus, generally speaking, may be said to be similar to that of digitalis, but there are points of difference. Unlike digitalis, it has very little, if any, power to contract the small blood-vessels, in the ordinary medicinal dose. As a diuretic, it is much more sure and certain than digitalis, acting probably on the malpighian tufts. The effect produced by strophanthus is almost immediate, though not so prolonged as that of digitalis, and it scarcely ever produces any unpleasant stomach symptoms, no matter how long administered. Digitalis, to the contrary, not unfrequently produces derangement of the stomach, even when taken in small doses. In large doses strophanthus acts not only on the heart-muscle itself, but upon the entire muscular structures of the body. In poisonous doses it will cause nausea and vomiting, and acts as a depressant to the respiratory centers, and finally causes death, usually by asphyxia.

Clinically, strophanthus may be used in all cases where digitalis is indicated, not that it will do as well in all cases, but if digitalis has failed, or has had to be discontinued for any reason, we have in strophanthus a valuable substitute. But, the author states, it is more especially in a few conditions in which digitalis is not so generally applicable that strophanthus finds its chief usefulness.

Among aged people, in whom an atheromatous condition of the arteries often exist, the author has found that strophanthus gives much better results, in almost every condition, than other remedies of this class. In vertigo of aged people, caused by anemia or by a lack of balance between the different parts of the circulation of the brain, W. has been able to do much good with strophanthus.—*Am. Med.-Surg. Bulletin*

What is a Teaspoonful?—The question as to how much of a remedy constitutes a teaspoonful is one of the questions which is ignored by the profession. Teaspoons vary in capacity from one dram to two drams, according to whether they are filled as full as possible or only even full. When a physician writes on his prescription that a teaspoonful of some remedy is to be taken for a dose, he is committing a grave error, and the only wonder is that no serious results have followed this practice.

No physician is justified in directing a teaspoonful for a dose of any remedy of which three teaspoonfuls would do harm. He should always direct on his prescription that the druggist give the patient a medicine glass graduated to hold a teaspoonful or two teaspoonfuls, as the case may be. Such graduates are inexpensive and are given away by many prescription druggists and there is no excuse for the physician who, when prescribing, does not direct the use of a medicine glass.—*N. Y. State Med. Reporter.*

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A Popular Delusion.—The use of lithium salts, and so-called natural lithia waters for rheumatic, kidney and like affections, has been constantly on the increase. But the great inequality of natural waters is shown by the recent analysis of Prof. E. Waller of the School of Mines, Columbia College, as published in the *Journal of American Chem. Soc.* Some were entirely destitute of lithia, while others ranged from mere traces to but 2.4 grains per gallon. When we prescribe lithia water, we order it made with Patch's Compound Lithia Tablets, and it then contains in each gallon the equivalent of 48 grains of lithium citrate, or nearly 5 grains of lithium. The advantages thus secured are: 1st, convenience of form; 2nd, accuracy of dosage; 3rd, economy; 4th, uniformity. They are put up in tubes and bottles, representing respectively $1\frac{1}{4}$ and $6\frac{1}{4}$ gallons of the strongest natural lithia water known. Each tablet contains a uniform quantity of lithia.

If you think your patient needs lithia, see that he gets it, and not make him pay a high price for a so-called natural water which probably contains little or no lithia. Any good potable water will answer as well, and be very much cheaper."—*Mass. Medical Journal.*



NEWS NOTES AND FORMULA.

Treatment of Chorea by Salicylate of Sodà.—Dr. W. F. McNutt (*Pacific Med. Jour.*) reports a rapid cure of chorea from the salicylate of soda. The patient, a boy seven years old, had been sick for two years, and no benefit was obtained from the bromides, arsenic, chloral and other remedies. He was given the following mixture :

R. Sod. Salicyl, 2 drachms.
Syr. Gaulther, 1 ounce.
Aq. Gaulther, ad 2 ounces.

M. Sig.: Twenty drops every hour for six hours : and thirty drops every two hours thereafter.

The patient was nearly well in forty-eight hours, and in a week was allowed to sit up in bed.—*Med. Brief.*

Instantaneous Process for Sterilizing Cotton.—An absolutely aseptic tampon can be made of any piece of cotton by twisting it on a stick or toothpick, and dipping it into an alcoholic saturated solution of boracic acid for a moment. Applying a light to it, the alcohol burns out, while the boracic acid prevents the cotton from burning. Five seconds are enough. As soon as the flame turns green it is extinguished. The cotton is still white, dry, scarcely warm, but absolutely sterilized.—*Practical Medicine.*

Laryngeal Irritation—

R. Alcohol (40 per cent), 5 dr.
Menthol, 8 gr.
Cocain, hydrochlor, 2 gr.
Acid benzoic, 15 gr.

M. Sig.: Use as a gargle or spray. Add ten or twenty drops to half a glassful of warm borated water.—*La Reforma Medica.*

Infantile Eczema—In a recent case of most persistent eczema in an infant, Dr. Wells obtained excellent results by the use of the following application :

R. Carbolic Acid, 10 grains.

Acetanilid, 30 grains.

Petrolatum, 1 ounce.

The mother was instructed to thoroughly cleanse the affected parts with soap and warm water, care being taken to dry carefully. The ointment was then thoroughly rubbed in three times daily—*Phil. Polyclinic*.

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Diet of Prospective Mothers—No doubt the discomforts and pains of pregnancy and child-bearing are greatly aggravated by improper diet. A writer in a French Medical Journal offers these suggestions:

An excess of water and albuminous food should be avoided—water on account of its tendency to produce hydroamnion; and albumen, because it favors excessive growth of the child.

The following is the diet prescribed, which has been tried in a number of cases:

Meat once a day, green vegetables and potatoes; avoid eggs, peas and beans, as they are too rich in albumen. The advantages claimed for this regimen are:

1. The patients are active until the eve of their accouchment; they do not suffer from a sensation of fullness, excessive formation of fat, thirst or constipation.
2. Rapid and easy delivery, even in those cases in which the previous labors have been prolonged and difficult.
3. There is never an excess of liquor amnii.
4. All of the women thus dieted have nursed their babies. The quantity and quality of the milk were always good. The children were small, but healthy and well formed. They averaged about six pounds in weight.—*Healthy Home*.

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Acute Cystitis—

R. Potass. citratis, dr. iv
 Sp chloroformi, oz, ijss
 Tr digitalis, drops 80
 Infus buchu, ad oz. vii

Sig: Two tablespoonfuls three or four times daily (Fothergill.) The following suppository may be inserted high up in the rectum:

R. Iodoformi, gr. i
 Ext. hyoscyam, gr. i
 Ol theobromae, gr. xiv

M. et. ft. sup. i.



BOOK REVIEWS.

Borderland Studies.—Miscellaneous Addresses and Essays pertaining to Medicine and the Medical Profession, and their Relations to General Science and Thought, by George M. Gould, A. M., M. D., published by P. Blakiston, Son & Co., Philadelphia. 1896.

These addresses and essays which are now presented to the reading public in one compact volume, are most acceptable in appearance, subject-matter and quality. One cannot help but be impressed with the versatility and liberality of the author, for his work is broad in its treatment of every subject and absolutely free from the arbitrary spirit so evident in the average essay writer. We have the most profound respect for Dr. Gould's learning and have read his book with pleasure and profit. Books are in great abundance now-a-days, but good books are just as few as ever. That is why we welcome this volume of "Borderland Studies" and extend to Dr. Gould and his publishers our sincere commendation and gratitude.

A Treatise on Appendicitis.—By John B. Deaver, M. D., Phila. Surgeon to the German Hospital. Published by P. Blakiston, Son & Co., Phila. 1896.

This work is by all means the most complete as yet published on this interesting subject. The book itself, as regards binding and typographical appearance, is a marvel of fine workmanship and skill. The illustrations, comprising 32 full-page plates, and other illustrations, mostly in colors, are without doubt some of the finest we have ever seen.

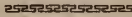
The reading matter is well worthy of its excellent appearance. Starting at the very beginning, the reader is successively taken through the disease in the following order—history, anatomy, etiology, pathology, symptoms, diagnosis, differential diagnosis, prognosis, treatment, complications and sequelae, and after-treatment.

No rash statements are made and no theories advanced which do not appeal to one's rationality.

The treatments advocated and recorded are modern and scientific in every detail and are substantiated by a wide experience with over five hundred cases.

The symptoms, diagnosis and differential diagnosis are well defined and submitted in a thorough painstaking manner, while the special technique of the operative treatment is so explicit and concise as to be of immense value and assistance to the reader.

All in all, the book is a magnificent one. It can safely pose as an authoritative work on the all-important subject of appendicitis and as a valuable contribution to medical literature it is bound to take high rank with the important publications of our time. We recommend it to every surgeon as a volume sure to be of service from every standpoint.



A Compend of Gynecology—By William H. Wells, M. D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic. With 150 illustrations. Philadelphia: P. Blakiston, Son & Co., 1896. 80c net.

Compend, of course, were never designed to take the place of the regular text-books, but these little books can prove of inestimable help to the medical student who is desirous of getting as much as possible in as little time. We find this particular one of the series fully up to the standard set by the others, and are pleased to observe that there is very little of unnecessary detail in its make up. Students cannot help but appreciate its value.



ADVANCED THERAPEUTICS.

European Endorsements—The *London Lancet* of March 28th, 1896, says editorially :—"Antikamnia is well spoken of as an analgesic and antipyretic in the treatment of neuralgia, rheumatism, etc., etc. It is not disagreeable to take, and may be had either in powder or tablet form, the latter being made in five-grain size. It is described as not a preventive of, but rather as affording relief to, existent pain, By the presence in it of the amine group it appears to exert a stimulating rather than a depressing action on the nerve centres and the system generally. If this be so, it possesses advantages over other coal-tar products."

The concise endorsement of the *Edinburg Medical Journal*, which appeared in the January issue, is equally interesting.—"This is one of the many coal-tar products which have lately been introduced into medicine in Scotland. In doses of three to ten grains, antikamnia appears to act as a speedy and affective antipyretic and analgesic."

§§§§§§§§§§§§§§§§

Functional Heart Disease—It is truthfully said that heart troubles of this character are certainly increasing among Americans. This, to some extent, may be due to the worry and excitement of business life, but it is more frequently the direct result of disordered digestion and poor assimilation, which always impoverishes and poisons the blood, and that irritates and weakens the heart.

The fermentation of half-digested food causes an accumulation of gas in the stomach, produces distention and increased upward pressure. This interferes with free action of the heart and lungs, producing irregularity, and shortness of breath.

The indications in the treatment of all functional heart troubles dependent upon stomach derangement are, to improve the digestion, and encourage a prompt assimilation of food.

This can be most effectually done by the regular use of Elixir Malt-pepsine (Tilden's), which exerts a direct influence upon the organs of nutrition, and brings the impoverished blood up to the normal standard; hence, less sympathetic and pneumogastric irritation.

We should be glad to have
you write for a sample of

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Acts more vigorously on starch than does
Pepsin on proteids.

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We are now able to relieve a large number of persons suffering from faulty digestion of starch, and can aid our patients, during convalescence, so that they speedily regain their weight and strength by the ingestion of large quantities of the heretofore indigestible, but nevertheless very necessary, starchy foods. We trust that the readers of the *Gazette* will at once give this interesting ferment a thorough trial, administering it in the dose of from 1 to 5 grains, which is best given in powder, or, if the patient objects to the powder, in capsule.

The Therapeutic Gazette.

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no Value _{arising from}

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2. A Course in Theoretical and Applied Chemistry.
3. A Course in Agriculture.
4. A Course in Mechanic Arts.
5. A Course in Electrical Engineering.

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All the courses in the Academic and Scientific Departments are open to young women upon the same conditions as to young men. The young women are required to room and board in private families approved by the Faculty.

Scholarships, cancelling tuition, have been established for the benefit of young men of limited means, in the Academical Department.

The University enjoys unusual facilities for securing employment for students in the Engineering Department, both during the course and after its completion.

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President.

Burlington, Vt.

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You kindly sent me a bottle of Papine some time ago, and as I am rather slow to adopt new remedies, having seen so many come and go, and no good, I did not use the Papine for some time, but finally I did try it, and to my general satisfaction. I have used several bottles, and consider it your greatest success. I find it to relieve pain like other opiates where nothing but opium will relieve, and without nausea or any disturbance of the digestive system. Recently, I have had a patient under a surgical operation, who suffered pain for nearly a week. I used at first a hypodermic injection of morphine and atropine, but the nausea and vomiting were severe, and the patient informed me that any preparation of opium always caused nausea and all its attendant distress. I then gave Papine regularly whenever she needed it, with perfect relief of the pain, with no nausea or any unpleasant effects whatever. I consider your discovery of Papine a marvelous success in therapeutics. If you keep the quality up to the standard, it will only require a trial by any intelligent physician to make it, as Dr. Bedford used to say, his sheet anchor for the relief of pain.

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CONTENTS.

Clinical Lectures on Diseases of the Skin, by Prof. Geo. Thomas Jackson, New York City, - - - - -	191
Forty-third Annual Commencement, - - - - -	202
Announcement, - - - - -	205
Editorial, - - - - -	206
Medical Abstracts, - - - - -	209
News, Notes and Formula, - - - - -	214
Book Reviews, - - - - -	216
Advanced Therapeutics, - - - - -	218

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**The Vermont
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August, 1896

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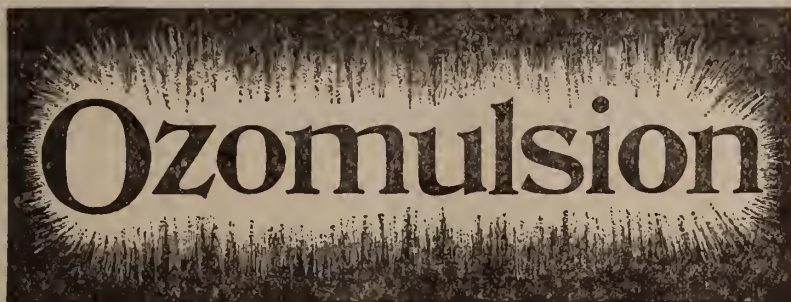
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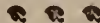
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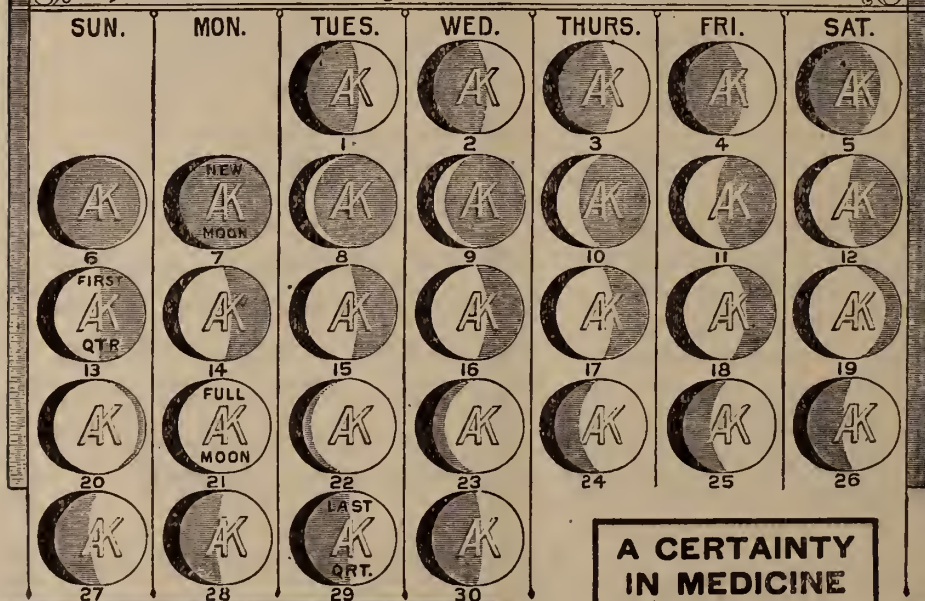
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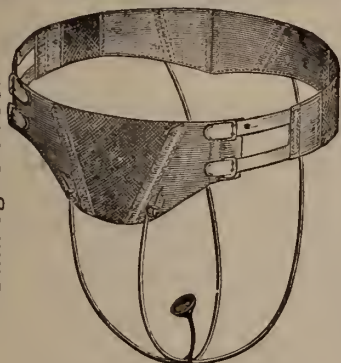
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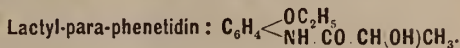
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The Vermont Medical Monthly

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

Official organ of the Vermont State Medical Society.

Vol. II.

AUGUST, 1896.

No. 8

Clinical Lectures on Diseases of the Skin.

BY PROF. GEORGE THOMAS JACKSON, M. D., NEW YORK CITY.

MEDICAL DEPARTMENT UNIVERSITY OF VERMONT,
May 13th, 1896. }

ERYTHEMA MULTIFORME.

I here show you a very excellent case of Erythema Multiforme. If anyone should tell me of a case which had a red eruption upon the backs of the hands and wrists, which would yield to pressure, that is, by squeezing it the color would disappear, and then return after the pressure was removed, I should say at once that it was a case of erythema multiforme. You can make that snap diagnosis in almost any case of this kind. I want you to see this case, because it is quite as typical as the one of lupus.

As we have already discussed the subject of erythema multiforme, I will say nothing more about it now. You can see the red papules, and that they take on the form of ring-shaped patches. The center is sunk in, and they form a ring. It is plainly marked.

CASE OF SEBORRHOEA SICCA.

This patient was brought here on account of a scaly condition of his face and scalp, which has lasted for some time. The scalp is more or less scaly and he says it is worse at some times than at others. The skin does not appear at all abnormal, except for the scaly condition. When you see persons with a scaly condition of the face, always remember that something is wrong with the scalp, even if they do not say anything about it.

If you look at the scalp, as in this case, you will find that it is covered with white or greasy scales. He has in his scalp what is popularly called dandruff.

There is no permanent cure for dandruff. It is very obstinate. It is supposed by some to be due to a parasite. Lassar of Germany thought it was always due to parasites and took the scales from a student's scalp, made them into a pomade, rubbed it into the back of a guinea pig. In a short time the guinea pig's back had a great amount of dandruff on it and the hair began to come off. Last year Dr. Merrill of Connecticut succeeded in isolating a micro-organism in this disease. He made a pure culture of it and produced the disease in a human being by rubbing into the chest some of the pure culture.

This seborrhœa occurs not only on the scalp, but also in other localities. You often find persons who have a good deal of seborrhœa upon the scalp, who will also have it on the chest and back. In these locations it often takes the form of scaly plates that sometimes form rings.

Dandruff is annoying as it comes down on the coat collars, soiling them. It is also itchy and causes loss of hair. A person with strong hair may have dandruff for many years without loss of hair, but in those in whom the hair is not strong they will be sure to lose the hair early.

In the treatment of dandruff I have found sulphur to be the most reliable remedy, using it in the proportion of one drachm of the flour of sulphur to one ounce of simple ointment, or of vaseline. Direct your patient to rub into the scalp a little of the ointment, and not smear a lot of it over the hair. The

application should be made at first daily, then every other day, and so reduce. A shampoo should be taken every ten days or three weeks.

LEUCODERMA.

It does not need much of an effort to see what is the matter with this man's hands. You can see that his hands have lost their color in patches, that is there is *apigmentation*, and around the white patches there is increase of pigment, *hyper-pigmentation*. This is one of the interesting cases. It is called leucoderma. You will see that he also has it on his face. The leucoderma or disease is always more evident in summer than in winter, because the normal skin becomes darker then, and of course the white patches show plainer.

We sometimes have a disturbance of pigment in which there is an increase, and the formation of brown patches. This is called chloasma. There is a certain amount of chloasma about the leucodermatous patches. There is this difference between what we have here and chloasma as an independent disease. Here you note that the brown patch has concave border, and that the white patch has a convex border. If this were a case of chloasma the border would be convex and not concave. We do not know what causes this disease. It is probably a neurosis of the skin.

Unfortunately we cannot do anything for it. There is no cure. The only thing to do is to improve the looks of it, either by staining the white patches darker with walnut juice; or by reducing the color in the brown patches by removing the pigment from time to time by applications of peroxide of hydrogen, or careful blistering.

The only consolation people with this disease have is that there are a great many others in the same condition, and that it is not dangerous to life or usefulness.

CASES OF TRICHOPHYTOSIS CAPITIS.

On looking from a distance you can see this child has something the matter with its scalp. You can see that he has lost

his hair from a patch of circular form. Here also is another child whose hair has been lost from a round patch. You will see, upon looking closely, that there is quite an amount of grayish scales upon the scalp.

These children are all living in the same place, and whenever you find two cases occurring in the same family or the same community of children, you may always expect that you have to do with a contagious disease.

These are instances of ringworm of the scalp—a contagious disease that is always due to the infection of the scalp by the trichophyton fungus.

Before infection can take place we must have a proper soil, a certain condition of the scalp—for all children cannot contract ring worm. Then, there must be a lesion of the scalp. If you see cases in the early stage of the disease, which you do not often do, the first thing you would notice is a pustule or vesicle, sometimes a papule. The primary lesion increases in size in a circular manner, the hair breaks off, and the surface becomes scaly. The size which one patch may attain is not very large, probably no larger than a fifty cent piece. If larger it is due to the coalescence of two or more patches.

You might say that these children have bald patches, but they are not absolutely bald. The hair is simply broken off, and you will see by examining the patches closely, there are a number of stumps of hair, some of which are split at the end. This is pathognomonic of the disease.

Another thing you will notice about these patches—they are grayish in color. The patch itches very often, and you will notice that the child scratches its head. The itching is often the first symptom of the disease to attract attention, and inspection reveals the ringworm patch. Ringworm of the scalp occurs only in children. There is no danger of your getting it. As the child attains the age of puberty the ringworm will disappear of itself.

Ringworms are a great trouble in an institution. It has gotten into this home, and it is difficult to manage. There is

every probability that the other children in the home will become infected unless it is energetically handled. The children are apt to have the same brush and comb used on their heads—they are prone to exchange caps, use the same towels, etc., all of which will tend to spread the disease.

It should never be allowed to get into an institution. Every place of this kind should have a resident medical officer whose business it is to examine every child as it comes to the institution.

To treat ringworm of the scalp, the hair should first be cut from the patches, then pull the hair out from an eighth to a quarter of an inch around the patches, scrub the scalp with soap and water, and then apply a parasiticide.

Chrysophanic acid is one of the best parasiticides, but it is apt to get into the eyes and cause conjunctivitis. Sulphur ointment is an old remedy, and is very good if thoroughly rubbed in. Bichloride of mercury is good, but it should be applied only by the doctor, as it is dangerous out of a physician's hands; You can sometimes stop ringworm by touching it with a bichloride solution of 10 grains to the ounce. Another good remedy is hydro naphthol plaster, 10 to 20 per cent strength. First shave the patch; then apply a piece of 10 per cent plaster. After 10 days remove it, scrub the patch with soap and water, and apply a piece of 20 per cent plaster for 10 days. Then remove and use the 10 per cent plaster for 10 days more.

In an institution the children who have ringworm should be isolated. They should never be allowed to play with the other children, and should always wear close fitting linen caps. It is a disease which takes a great deal of time to cure, and even with the very best of treatment, you cannot cure it inside of four or six months.

CASE OF PEDICULOSIS CAPITIS.

The next case is one of pediculosis capitis in a child.

The first thing is to recognize the disease. It is a very common disease and you will be apt to meet it. Never tell a patient he has pediculi until you have the pediculus under

your finger, he would be very angry, but if you have the pediculi to show him he cannot say anything. You will find the pediculi or the nits either upon the occipital region, or over the ears on the temporal regions. And we find them in this case in those regions. An eczema found in these regions should always suggest to you pediculosis.

It used to be said by Hebra that it was no disgrace for a man to have pediculi, but it was a disgrace for him to keep them. The treatment is very simple. The first thing to do is to saturate the head with equal parts of crude kerosene and sweet oil. This put on at night time, and repeated for two or three days will kill the pediculi. Many people object to using kerosene on account of the smell. Then you can use tincture of larkspur seeds, or in the country you can get the larkspur seeds, and if you do not know it yourself you can get some old woman in the neighborhood who can show you it. Of this you can make an infusion. Use the tincture or infusion in the same way as you would use the kerosene. After you have killed the pediculi you must see to it that every nit is removed from the hair. This you can do in two ways: one is to comb the hair with a fine tooth comb, *which is the only time when a fine comb should ever be used.* Many people use the fine tooth comb for dandruff, thinking they can comb it off and so get rid of it, but they only make a bad matter worse, and it should never be used for this purpose. It is apt to set up an inflammation of the scalp.

Another way to get rid of the nit is to wet a napkin in dilute acetic acid, or in vinegar and pull the hair through that. The acetic acid dissolves the mucilaginous substance that causes the nit to adhere to the hair, and the nit will come off easily.

CASE OF URTICARIA.

I am going to let this woman tell you the history of her child's trouble.

She says that blotches come out all over her, and they itch and burn and keep her awake at night. She scratches them and

the more she scratches the more they itch and burn. She has had this since she was a year old and she is now four years old.

THIS IS THE HISTORY OF URTICARIA.

Is it worse in summer or in winter?

She is much worse in summer than in winter.

Here we have a case of chronic eruption lasting for three years.

This child is apparently in good health, red cheeks, plump, and apparently happy.

What do you feed the child?

Oh, I feed her anything she wants, potato, meat, bread and butter, cake and coffee and tea.

Now that is just the trouble. Physicians are all the time dosing people with medicine, thinking it is their business to give medicine. *It is often of far greater importance to give general directions regarding the habits and life of the patient.*

The first thing to do in this instance is to put the child on a bread and milk diet, and the chances are that within a short time she will stop scratching. The idea of a child four years old taking anything she wants to eat, tea and coffee, cake, etc.! The only wonder is that she looks as well as she does. The only thing I would say to this mother is to put her child on bread and milk, giving her no medicine at all, but using soda and water for a wash for the skin, and in the course of a month or six weeks you will find the child much improved.

The Philosophy of Sex.

BY H. EDWIN LEWIS.

In three papers.

I

REPRODUCTION AND THE ORIGIN OF SEX.

"The one end to which, in all living beings, the formative impulse is tending—the one scheme which the Archæus of the old speculators strives to carry out, seems to be to mould the offspring into the likeness of the parent. It is the first great law of reproduction, that the offspring tends to resemble its parent or parents more closely than anything else."

—HUXLEY.

The various stages in the evolution of reproduction so bear upon the origin of sex that a consideration of one subject necessarily precedes what may follow concerning the other. Both are so intimately associated with the history of life and its phenomena, that they cannot well be considered without some reference to that life on which they depend. Under its marvellous transforming power, the world has risen from an awful condition of chaotic inanimation. Before life existed Nature slept, but with its advent the slumberer awoke and began to make the world beautiful.

In the entirety of its material form, life is made up of the phenomena of birth, growth, reproduction and death. To us in the flesh, these phenomena and the force behind them will always remain the great mysteries of the Universe. Interrogate Nature as we may concerning our birth and death, and there will always be a question to which she is silent; peer far out into the starry vault of surrounding ether, seeking knowledge of our past and future and we will find a limit beyond which no

eye can penetrate ; pass up whichever avenue our inclinations may lead, ever searching for some clue to the secret of life, and our weary footsteps will surely end at that point from which they started.

Mankind has always found it thus. A creature of destiny thrust into the world without his own permission, he has been vainly trying to fathom his existence ever since his course begun. To-day his task is no nearer completed than it was at the beginning,—but he still toils on. And after all, though he will pass down the ages, seeking that which he can never find in this world, he loses nothing by the search. Many a beautiful picture will unfold before his eager gaze as he strives to read the secret of life from Nature's scroll, and many a grand truth will greet his listening ear as he tries to catch each whispered word falling from Nature's lips. Science will open up her storehouse of wonders and he will master them all in his untiring effort to determine the fundamental principles of the Universe.

But he never will.

Man never has or never can unravel the great mystery of life though he has made himself what he is to-day by his trying.

Into the light of day he came, a helpless creature ; into the shadows he will pass, a weakling still. And when at last he lays himself down in submission to those great immutable laws he could not solve,

“—passing through Nature to Eternity ”

there will come a sad moment in his life e'er the curtain shall fall, when he will realize that his search has been in vain. Yet with the realization of his failure will come the knowledge that he himself is a better man and leaves behind a better world because life was a secret.

Opposition develops character ; character means will ; and *will means progress.*

Struggling to obtain a definite knowledge of life, man has learned much concerning himself. Every phase of living is strange and wonderful, but he has found the phenomena of reproduction probably the most remarkable of all life's various

expressions. Being the function which has to do with the perpetuation of material life it most immediately concerns the future of all organized living, for on it depends the survival of each species.

In the process of evolution reproduction is modified by the development of the parent. In the lower forms of life, like the *Amaeba*, it consists simply in a division of the individual into two distinct parts, differing from the original in size only. A period of growth ensues to each part when division again takes place ending in the production of two other individuals—and so on. This form of generation is classified as *reproduction by fission*, and is characteristic of the less organized form of life. So far as science has been able to determine this form of reproduction is an individual property not dependent on any influence external to the parent. Some doubt, however, exists among scientific men in regard to this fact.

Another mode of reproduction observed in low life, a familiar example being the *Sponge* family, is that which consists in the formation of a bud or nodule at some part of the body of the parent organism. This growth rapidly approaches the size and appearance of the parent, the connecting stem or pedicle becomes constricted and finally disappears, and the liberated bud is launched forthwith as an individual member of its class. This method is known as *reproduction by gemmation*. While it usually is an individual function it may be the result of fecundative processes,—and possibly the collaboration of two individuals.

This then is the first intimation we have of sex.

But the positive differentiation of two functions in the reproduction of a species is not an evident fact to the ordinary observer until we come to the method of *true generation*. This form implies the presence of two functions which correlate and result in reproduction. The difference in function is called sex, from *seco*, to *divide*, and means the division of reproducing individuals into male and female.

This distinction pertains to the function of each being, shown by its part in the reproduction of its kind. The female is arrayed

on one side of the line, producing the unvitalized body or form which requires something to set in motion the phenomena of growth. The male is arrayed on the other side, supplying that something necessary to vitalize the female product. The union of these two elements, fulfilling the mission of each, results in the reproduction of individuals, the prototypes of the parents. The means by which their union is achieved vary much, accordingly as the individuals are low or high in the scale of development,—but the result is essentially the same.

We now have come to that point where the question is asked, what was the reason for the origin of sex? Why could not all beings be propagated by means which would not require two different functions?

These queries are not uncommon, but until we possess the depth of infinite wisdom capable of discerning the true relations between cause and effect, they will remain unanswered. The observation and study of the evolution of species will throw some light on the subject, however, and give to us at least, new evidences of a great underlying plan working itself out in every detail.

The individuals of the lower forms of life possess powers of generation almost beyond comprehension. Their reproduction is enormous, and it is absolutely necessary that it should be so. Their environment is such and their struggle for existence is so great that their species would vanish from the earth in "the twinkling of an eye," but for their powers of rapid reproduction. Countless beings perish every minute, but others just as numerous take their place the next. As the **law of compensation** is evident everywhere else, so it is here. Nature cannot prevent millions from dying, but she can and does even things by reproducing just as many other new ones.

Passing up the scale of organized living, the struggle for existence becomes less and a corresponding decrease in reproduction becomes apparent. This world of ours is capable of supporting only a given quantity of life at any one period, and those things which contribute to the support of life constitute

the **environment** of living beings. This environment is the regulator of reproduction, for in so far as it entails a less struggle for the perpetuation of a species there will be less need for rapid reproduction. Nature, then, promptly steps in and devises a means of increase which sets a limit necessary to establish an equilibrium, and that *limit is sex*.

Passing still higher the same facts are only the more evident. As individuals become more highly developed through struggling to exist, they acquire instincts which enable them to better preserve themselves, and so there becomes less need for reproduction. By this is not meant that it is any the less important function in order that the various species may continue, but in a purely arithmetical sense reproduction is diminished. The most casual observer cannot dispute this fact. A comparison of any low type of life with a higher one will show beyond controversy that the reproductive function in one is far more active than in the other. Generation by fission or gemmation is far more favorable for greater reproduction than where increase of kind depends on the concerted action of two members of a type. The physical limitations of sex together with the elements of selection, time and place make generation less rapid and certain, and thus aid in limiting over-increase.

This then seems to be one reason for the origin of sex. Other conditions in the sexual relation modify increase of each particular kind, but there seems to be good reason to suppose that the existence of sex *per se*, has an important influence on the numerical decrease of reproduction.

* * * * *

Another reasonable cause for the origin of sex will be found in its bearing on the **preservation of conformity to type**.

Individual environment is a variable force. To one being this force may tend to progression; to another, retrogression. Where the complete reproductive function is vested in a single individual, the products of its exercise will inevitably assume the characteristics and tendencies of the single parent. If the

parent has degenerated, the offspring will show the same degeneration. If the environment of the parent has brought about improvement on its original status, the offspring will invariably give evidence of that improvement. This is simply the manifestation of the **laws of heredity** which are as certain and constant, as those which keep our earth suspended in space or cause it to daily revolve about the sun.

But where the propagation of a species is dependent on two individuals of the same type, though one may have degenerated, there is a chance that the other has not, at least in the same particular, and so the product of their collaboration will approach nearer the common type. Those who have had any experience in the breeding of animals well know that the distinct peculiarities of each parent, as a general thing, *are reproduced in only a modified form in the offspring*. Gardeners graft one variety of a fruit tree into another because they desire fruit which will present in a less degree the extreme flavor and characteristics of both trees.*

If degeneration was the same in each individual which has fallen below its original condition, the argument might here be brought forward that the offspring would be as degenerate as through the result of a single parentage. This might be so if every member of a type was alike and living under like conditions, but one of Nature's laws seems to be that no two beings shall be exactly alike or have the same environment. Even supposing degeneration to be the rule, (which, thank God, is not so) the environment of each individual is so variable that the descent of the offspring resulting from two degenerates, (always differing, however, in degree,) will be much more gradual than it would resulting from a single parentage which hands down to

*A very humble, though none the less striking illustration of this line of thought, was observed by the writer only the other day. In a field two different varieties of squash had been planted; one kind, characterized as turban-squash because of its shape, and the other a common variety larger in the middle but tapering peculiarly at each end.

At either side of the field where the vines of each variety did not come in contact, each grew characteristic squashes as above; but at the centre where the different vines came together and the pollen from the male blossom of one could fertilize the female blossom of the other, an entirely new kind of squash was produced. Instead of being strictly either one or the other, these new squashes showed a distinct turban flatness with the characteristic ends of the other variety. Their appearance plainly showed features resembling the peculiarities of both kinds, and proved an interesting study of the modified union of two types.

its product, unmodified, the whole of its particular retrograde tendencies.

A male and female of any type may unite to reproduce their kind. Both may be degenerate in some one particular, but the degenerative feature of the male may assume an entirely different phase in the female. A retrograde movement in the one under certain conditions of environment, may be a progressive movement in the other under opposite conditions of environment, and vice versa.

What then will be the result of their united reproductive efforts? Simply this, to reproduce individuals which possess the degenerative as well as the progressive features of both parents, *but in a degree nearer the original type than do the parents themselves*. Or to express differently, the progressive and degenerate tendencies of each parent will receive a set back in the offspring, for only a modification of the parental characteristics will be shown. If environment is such as to continue the progressive movements of either parent, a *down hill tendency* as regards the same movement will have to be overcome in the offspring. If it is such as to continue the *degenerative* movement of either parent, an *up hill tendency* as regards the same movement will have to be overcome.

In other words the extreme characteristics of the parents converge in the offspring towards the original condition and by that convergence tend to maintain greater uniformity of type in each species.

Other reasons for the origin of sex might here be given. But the relation which it has on the limitation of rapid increase, in order to establish an equipoise between Nature's supply and demand, and the effect which it undoubtedly has on the preservation of a common type in each species, seem to be the most important missions of sexual differentiation.

Laws are the Alpha and Omega of the Universe. Each, working itself out in every minor detail, contributes to the one Great Plan, which the Poet tells us consists of

"—one far-off divine event.
To which the whole creation moves."

Infant Feeding.

BY GEORGE Y. MACCRACKEN, M. D., PH. D.

The number of infant foods in the market shows the great difficulty experienced in obtaining a complete and satisfactory substitute for breast milk. Within the last five years immense strides have been made in properly feeding infants, and it has resulted from thoroughly understanding the composition of cow's milk and breast milk, and more especially the recently acquired knowledge of the bacteria in milk causing souring, fermentation or putrefactive changes, and the means that can best be adopted to overcome or prevent these changes. Milk, as it issues from the udder of the cow or the nipple of the woman, is practically sterile, but soon loses this sterile condition and the bacteria once present rapidly increase in number. These bacteria can be destroyed and the milk may be freed from germs by sterilization, *i. e.*, by heating the milk to more than 213° F., or by pasteurization, *i. e.*, by heating to from 160° to 170° F., for from 15 to 30 minutes. Sterilization destroys both the bacteria and their spores, while pasteurization destroys the bacteria only. The opinion of most physicians is against sterilization and in favor of pasteurization of milk for infant feeding.

The average composition of cow's milk, as determined by the Vermont Station of the U. S. Department of Agriculture, is :

Fat,.....	4.00	per cent.
Albuminoids,	3.30	“
Lactose,.....	4.95	“

and the albuminoids are approximately $\frac{3}{4}$ casein and $\frac{1}{4}$ albumin. The average composition of breast milk is :

Fat,.....	3.8	per cent.
Albuminoids,.....	2.0	“
Lactose,	6.5	“

and the albuminoids are $\frac{2}{3}$ casein and $\frac{1}{3}$ albumin.

The average composition of cream is :

Fat,.....	18.	per cent.
Casein,.....	2.	“
Albumin,	0.5	“
Sugar,	4.0	“

The difficulty in approximating the composition of breast milk by using cow's milk, is in sufficiently reducing the proportion of casein without too greatly cutting down the percentage of fat and albumin. In France the experiment is being made of feeding with pure sterilized milk, the quantity given at each feeding being slightly more than half of what is usually required ; and I know of cases where children have been fed on skim milk, and have thrived and were well, healthy babies. Dr. Meig's formula for infant feeding was :

R.	Cream,.....	2 ounces.
	Milk,.....	1 “
	Barley Water,.....	3 “
	Lime Water,.....	2 “
	Sugar of Milk,.....	2 drachms.

This when formulated shows :

Fat,.....	5.0 per cent.
Albuminoids,.....	1.04 “

Professor Leeds, of Brooklyn, suggests diluting cow's milk with half its volume of water, and one-eighth of this new volume of cream is added and sufficient sugar of milk, as in the following formula :

R.	Milk,.....	4 ounces.
	Water,	2 “
	Cream,.....	6 drachms.
	Sugar of Milk,.....	2 “

This would give :

Fat,.....	4.1 per cent.
Casein,.....	1.74 “
Albumin,	0.44 “

This, the best formula for approximating breast milk, is open to the objection that cream is needed ; now the cream

delivered in cities is not of the same age as the milk, being older, and it does not mix well with milk. It is therefore preferable to use whole milk, or else to permit the milk to stand until cream forms, and then to use the top half, which will contain nearly all the cream.

The plan which I have found satisfactory in practice is to dilute the whole milk with an equal quantity of water, to which has been added sugar of milk and lime water.

A convenient formula is to take one tablespoonful of barley, rice or oatmeal, and three tablespoonfuls of sugar of milk; let this simmer for one hour, then filter, and add sufficient boiled water to make one pint, and use this to dilute the milk. If the baby is under 4 months, it is best to use half sweetened barley water and half milk, if over 4 months, $\frac{1}{3}$ of sweetened barley water and $\frac{2}{3}$ milk, in either case adding one teaspoonful of lime water to each 4 ounces of the mixture.

If there should be a deficiency of fat, this can be remedied by letting the milk stand in a cold place and taking the top half to make the mixture, and as cream contains less casein than milk, we will not only increase the percentage of fat but also diminish the percentage of casein. In only exceptional cases will it be necessary to use all cream, and as cream is usually about 18 per cent. butter fat, we will need to use about $\frac{1}{4}$ cream and $\frac{3}{4}$ of the sweetened barley water.

The milk when prepared as above indicated, gives the following percentages: if half milk and half water it would be:

Fat,.....	2.00 per cent.
Casein,	1.30 "
Albumin,	0.35 "

If $\frac{2}{3}$ milk and $\frac{1}{3}$ water:

Fat,.....	2.67 per cent.
Casein,.....	1.73 "
Albumin,	0.47 "

If we use the top half of the milk, and use half this and water, we would have:

Fat,.....	3.00 per cent.
Casein,	1.20 "
Albumin,	0.32 "

And if we use $\frac{2}{3}$ of this milk and $\frac{1}{3}$ water it would be :

Fat,.....	4.00	per cent.
Casein,.....	1.60	“
Albumin, .....	.042	“

If cream used in proportion of $\frac{1}{4}$ to $\frac{3}{4}$ of water, we would then have :

Fat,.....	4.50	per cent.
Casein,.....	0.50	“
Albumin,	0.13	“

The stools furnish the best means of determining the necessity for changing the proportion of milk used, as in proteid intestinal indigestion the stools are usually offensive and alkaline, while carbo-hydrate indigestion causes acid stools with more flatus. Another point in connection with the stools is worthy of note, namely, that in intestinal indigestion, if the small masses in the stool are soluble in alcohol and ether, they are masses of inspissated fat, containing colonies of bacteria, otherwise they are masses of undigested casein.

Sometimes it is necessary to entirely dispense with milk for a few days, substituting barley or rice water, or beef tea, to a teacupful of which the white of one egg has been added, until the stools become normal in appearance and odor, when the baby can again be fed with a milk mixture, so prepared as to insure full digestion.—*Codex Medicus*.

612 North Thirteenth Street, Philadelphia, Pa.

See our notice in the advertising department. It may interest you.

Medical Society Announcement.

The 83d Annual Meeting of the Vermont State Medical Society will occur at St. Johnsbury, Vt., October 15 and 16, 1896. The Committee of Arrangements are Drs. J. M. Allen, E. H. Ross and H. J. Aldrich of St. Johnsbury. Special rates have been arranged with the railroads, and everything possible will be done to make this year's meeting a grand success. A large number of valuable papers will be read, covering a varied field of research and investigation. A full program will be given in our next issue.

Following are the officers of the Society :

President—Dr. C. F. Branch, Newport.

Vice President—Dr. Lyman Rogers, Bennington.

Secretary—Dr. D. C. Hawley, Burlington.

Treasurer—Dr. D. G. Kemp, Montpelier.

Auditor—Dr. L. M. Greene, Bethel.

Executive Committee—Drs. C. F. Branch, D. C. Hawley, and A. B. Bisbee.

Publication Committee—Drs. D. C. Hawley, H. R. Watkins and M. C. Twitchell.

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Necrology Committee—Drs. C. W. Peck, D. F. Rugg and E. M. Brown.

Anniversary Chairman—Dr. H. C. Tinkham.

The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

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EDITORIAL.

The Medical Society Meeting.

The announcement of the annual meeting of the Vermont State Medical Society, appearing elsewhere in this issue, suggests the thought that the success of that meeting depends largely on the number of members present.

Last year the attendance at the session in Burlington was very satisfactory, and there is no reason why even a larger number should not attend this year. A most interesting program is assured, but if it approaches anywhere near what the Committee of Arrangements provided last year, there will be no

occasion whatever for fault finding. St. Johnsbury is notably a hospitable town and every means will be taken to make the Society's visit a pleasant one.

Each member can show his interest in the society and contribute much to the enthusiasm and efficiency of the coming meeting, by being present and taking part in the discussions.

The Doctor Triumphant.

We take the following editorial from the *Charlotte Medical Journal* :

The effort made by the "old line" insurance companies to reduce fees for medical examinations from five dollars to three dollars has ended in failure. Whether three dollars is ample compensation or not, does not enter into the question. The "old line" companies had for years been paying five dollars for each examination where the policy was for \$2,000 or less. When they cut the fee to three dollars the examiners began to protest, and some went so far as to resign. They were told their places could be easily filled.

The question was thoroughly discussed by the companies on one side and the examiners upon the other, in the columns of the *Medical Examiner*, a most excellent Journal devoted to the task of making more competent the corps of physicians acting as life insurance examiners.

Both sides were ably represented, and the examiners seem to have had the best of the argument. And now we may look for a return of the five dollar fee, as the example has been set by the "Equitable Life-Assurance Society of the United States."

This company announces to its examiners its return to the old rates, and the other great insurance companies will undoubtedly soon follow its lead.

A few thousand physicians, each with a tender spot, however small, might be the means of helping to popularize assessment insurance.

But the real reason for the return to old rates is probably a sincere desire of the companies to please their examiners. If a man has done good work for a company, such work is usually fully appreciated. It is not every physician who can do good work as an insurance examiner, at least without special preparation. Many medical schools are now giving special instruction in life insurance examination as a part of their course of Study.

In connection with the above we take pride in knowing that Vermont is in the van of progress. For several seasons the University of Vermont, Medical Department, has offered a valuable course of lectures on Medical Examinations for Life Insurance, by Dr. A. B. Bisbee of Montpelier, Vt.

Peroxide of Hydrogen—Dr. Warren Brown, of Tacoma, Washington, in a paper on "Peroxide of Hydrogen," read before the Washington State Medical Society, and published in the *Medical Sentinel* of Portland, Ore., February, 1896, after alluding to its method of manufacturing, speaks of it therapeutically as follows :

Gonorrhœa may often be aborted by using a full strength hydrogen dioxide injection immediately on the very first appearance of discharge. The injection should be used four to six times in twenty-four hours and retained for five minutes.

Cystitis, where pus is voided with the urine, often yields rapidly to injections of a solution containing two ounces to the pint.

Otitis media is treated by hydrogen dioxide solutions in various strengths from 6 per cent upward.

Eye diseases, where there is a purulent external inflammation, are constantly being benefited by this agent. The Wills Eye Hospital, Philadelphia, uses a 50 per cent strength of the so-called 15 volume solution. Blepharitis marginalis is quickly cured by touching the edges of the lids once or twice daily with a strong solution, care being taken to avoid getting it into the eye.

Ulcers of all kinds improve rapidly under its use, and for treating and cleansing venereal sores, as chancroids, etc., it is of great service.

Empyema, especially where there is from the first a stinking sanious exudation following incision, is very satisfactorily treated by washing out the cavity with a solution from one half to full strength.

In appendicitis, the abscess cavity is cleansed with this solution by many operators, in preference to any other antiseptic. Robert T. Morris, of New York, has laid special stress on the value of the peroxide in these cases.

In follicular tonsillitis, the use of a spray, diluted just enough to prevent the smarting sensation, and alternating with this, one of the alkaline antiseptic sprays, or gargles, is a very satisfactory procedure.

Diphtheria and all naso-pharyngeal inflammations where there is a pseudo-membranous and septic condition, have been treated very widely by means of this agent. I like the plan of Jennings in Detroit, who uses an irrigation of an aqueous solution of one-eighth each of hydrogen dioxide and listerine. He throws the solution into the pharynx with an all-soft rubber syringe every one, two or three hours. The plan is an admirable one for treating children, and the combination is pleasant and effective.

Atrophic rhinitis is benefited remarkably by the use of a 40 per cent spray. It should be used a few minutes before the employment of the usual alkaline, stimulating spray, and the powder insufflations. In this way the scabs are loosened, muco-purulent secretions are dissolved, and a stinking breath is converted into one that is pure and sweet.

In acute cases of eczema of the leg, we find this agent of the utmost value. The tissues are inflamed, hot, swollen and oozing, the itching is almost unendurable, the odor is offensive. To secure the best results the limb is elevated, and a diluted solution of the peroxide is applied frequently, with cheese cloth, gauze or an atomizer. In two or three days a marked change for the better will be apparent, the pruritus is allayed, the purulent exudation is checked, and all inflammatory symptoms are subsiding. At this stage we begin the use of a soothing ointment, such as the boracic acid or zinc oxide, using lime liniment to wash the parts instead of water. Under this treatment, combined with rest, we will see our patient rapidly cured.

Eczema of the anus will rapidly improve if the fissures are touched twice a day with this solution, then dried gently with cotton, and a glycerite of lead application made. In nearly every form of acute eczema in the first and second stages the peroxide will give us the keenest satisfaction. The regular solution is diluted with two or more parts of water. Hydrogen peroxide is an excellent anti-pruritic and for this purpose it is widely used.

The hæmostatic value of this drug, as pointed out by Dr. Emerson Brewer, of New York, I can endorse. In operations on the nose and throat I have upon two occasions been enabled to check a persistent hemorrhage, when Monsel's solution and plugging had failed. At present I am in the habit of applying the full strength hydrogen peroxide after every operation on these parts. It is of special value after sawing out a deviated septum.

For flushing out a mammary abscess cavity this agent is invaluable.

Applied to the cervix uteri, adherent mucus is removed and our medications can be applied.

When it is inadvisable or impossible to make a complete opening of a fissure or abscess, irrigation with the peroxide will be found superior to all other antiseptics.

We have in peroxide of hydrogen a prompt, safe and efficient germicide. By its oxidizing power it rapidly decomposes pus, diphtheritic membranes, and other morbid putrifying material. It is a thorough deodorizer, and as a cleansing agent for foul wounds, abscesses, etc., it has no equal.

Of the different preparations of peroxide, Marchand's has been most uniformly satisfactory.

Since writing the foregoing paper my attention has been called to hydrozone, a stronger solution of peroxide of hydrogen, which for some months I have been using with much satisfaction.

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A Sign of Incipient Consumption—Enlargement of the spleen is said to be very generally present in the incipient stage of pulmonary consumption. So constantly is it present that it possibly constitutes one of the symptoms, at any rate it may assist in a diagnosis. The absence of

enlargement, however, and the presence of other indications, would not of course be considered important.—*N. E. Med. Monthly.*

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A Vegetable Digestant—Papain, the purified dried juice of the unripe fruit of *Carica papaya* (Papaw), is popularly called “the vegetable pepsin;” it has the advantage over pig’s or other animal pepsin (aside from æsthetic palatability) that it will act in all media—acid, alkaline and neutral—while pepsin acts only in the presence of acid.

There is a prominent dissimilarity between the two products, however, which is not generally considered and may, therefore, often lead to unsatisfactory results in treatment, and that is, that papain is distinctly a better solvent of fibrin, or meat, than pepsin while much less active on albumen.

The standard test for pepsin is its solvent power on albumen; for papain it is measured on fibrin. Of the two, considering that stomach derangements are usually due to too much or indigestible meat, papain is more valuable than pepsin, because

1. Papain acts in acid, alkaline and neutral solutions, while pepsin acts only in presence of acid;
2. Papain is a palatable vegetable product, acceptable to the most sensitive stomach, while pepsin is an animal product, often putrid and always noxious;
3. Papain has a greater solvent action on fibrine than has pepsin.

A standard test for papain is the following:

“Take three glass-stoppered vials of 120 gramme capacity, marking them a, b, and c, and put into each 10 grammes of finely chopped fresh beef, free of fat and sinews. Then add the solutions as follows:

- to a. 30 grs. of 0.3 per cent. acid solution;
- to b. 30 “ “ 0.3 “ “ soda carb, solution;
- to c. 30 “ “ distilled water.

Place the vials in a water-bath at 38° C. (100.4° F.), and when the contents have attained this temperature add 0.1 gramme papain to each vial, keep the vials at this temperature for one-half hour—frequently and violently shaking the contents—and then filter through muslin. Dry the residue on the muslin by exposure to 100° C. (212° F.) and then weigh; in the result the usual loss of 75 per cent, of water in drying meat and must be considered.

A standard purified papain* will by the foregoing test, dissolve at least

- 50 per cent. fibrin in acid solution;
- 70 “ “ “ in alkaline solution; and
- 60 “ “ “ in neutral solution.

The same test performed with an average quality of pepsin will show only about 30 per cent. dissolved fibrine in one-half hour.

It should be observed that one-half hour is taken for this test, while the average time for stomach digestion is about three hours, and the official pepsin test requires six hours. Extending the time in above test to three or six hours, the quantity of meat could be quadrupled and more and the result would be the same. Two grain doses of papain will materially assist the digestion of an average meal of meat.

The conclusion to draw from these facts is, that papain can be advantageously employed in general practice to relieve indigestion where meat is a favored food, and that it will prove useful in combination with pepsin where the latter seems indicated to help along the solution of albumen.—*American Therapist.*

* Papain (Boehringer) was employed to verify these tests.

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Simple Acute Laryngitis and Bronchitis.—According to clinical observation (*N. Y. Med. Journal*, July 18, 1896), an acute inflammation of the respiratory tract is of free progression. Resolution may have taken place in the larynx and trachea, and yet the lower tissues may be in an acute stage. The important factors tending towards recovery are a free flow of mucus and serum from the mucous membrane, and the getting rid of the foreign element as soon as possible. Retained secretions irritate and ferment, thus reinfecing the parts. Remedies that will stimulate secretion are indicated. The bronchial mucus is the best sedative to an inflamed larynx, and a flow of this non-irritating secretion should be encouraged. For five years the writer has found apomorphine, in a freshly compounded acidulated mixture, to be the best of all relaxing expectorants. He gives it in one-thirtieth grain doses, at two or three hours intervals, and it rarely fails to do its work. Rest is also applied in these cases. Sulphate of codein, in one-fifth grain doses, f. r. n., is also given. Carbonate of ammonium he found to be the most serviceable stimulating expectorant.

LARYNXORCOPE.

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Lesions Similar to Chancre.—In giving information concerning chancre in an applicant for insurance remember that, according to Gottheil (*N. Y. Med. J.*), the following lesions may simulate it:

Artificial indurations caused by irritants applied to simple lesions.

Nodular lymphangites, as occur in gonorrhoea.

Scabies, where penile lesions are the rule.

Secondary indurations at the site of the initial lesion (Fournier's pseudo-chancere).

Secondary syphilitic papules or tubercles situated upon the genitals.

Ulcerative gummata of the genitals.

Epitheliomata of the genitals.—*Medical Examiner.*

How Many are Perfectly Healthy?—If 100 people were examined, if so many could be found who have never consulted a physician since they were away from maternal or paternal care, and have reached middle life, it would be interesting to see how many things they were suffering from, which prevents them from having what a doctor of medicine would call a normal condition of the body. Let us not be too sure that in order to live, to live with tolerable comfort, and to live long, it is necessary to have perfect organs, such as lungs, kidneys, or eyes.—*The Post Graduate*.

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Diagnosis of Pott's Disease of the Spine.—Fisher in an article under this caption in *Pediatrics* says: The diagnosis of Pott's disease in the advanced stages is an easy matter, unless the affection assumes certain characters which have been described, but in the early period of the disease, before any visible change has occurred in the column, its presence may be overlooked. The evidence on which we have to rely for detection consists chiefly of the general appearance of the patient, local pain, interference with normal mobility of the column, and the history of the case. As to the latter, the existence of tubercular disease in the family of the subject, and the record of an accident, are two points which have generally been regarded as of considerable importance. Should the patient also complain of pain in any part of the spinal column, these three facts combined are pretty sure to be accepted as clear proofs of commencing vertebral caries. But no one of these separate conditions is strictly reliable as evidence, and therefore the saying as to the strength of a chain must be held in regard when estimating their value as a combination. Very few families, at any rate in England, could successfully pass a searching inquiry without showing traces of tuberculosis amongst one or more of its members. Again, traumatic influence must not be accepted as of much importance, since children are in the habit of falling and tumbling about, and there can be no difficulty in obtaining a history of previous damage in all cases of Pott's disease, as also concerning every child who is not affected with that complaint. Local pain is a suspicious symptom when complained of over a very limited area and always referred to the same spot, but even then it is not an infallible sign.



NEWS NOTES AND FORMULA.

Infant Feeding—A very important thing is the way the milk goes into the child's stomach. The bottles are so constructed that the milk goes down too fast. Every child who sucks at the breast has to work for what he gets. One of the great troubles in artificial feeding is, the milk is cascaded into the stomach and immediately cascaded back again. The most of the sick babies are made so by some prepared stuff being cascaded into their stomachs in enormous quantities. Quantity is a great element in these disorders and I have know too much food to make babies sick, even where the food was fresh milk. I generally tell the mother to put a piece of pure, clean sponge into the nipple, so that the child must work with its gums and lips to draw the milk, and thus obviate the too rapid flow.—*Medical Era*.

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Constipation in Children—

R. Bicarbonate Sodium, 3 drachms.
Powdered Rhubarb, 2 ounces.
Sulphate Sodium, 1 ounce
Oil Peppermint, 20 drops.

M. Sig. Half to one teaspoonful of this powder may be given in the morning before breakfast.—*Journal de Medicine de Paris*.

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To Sterilize Milk—To sterilize milk, Malcolm Morris directs thus: Place the milk in a clean bottle, and plug the mouth with clean cotton wool. Then stand the bottle in a suitable metal vessel so that it is raised about half an inch from the bottom; pour cold water into the outer vessel until it attains the level of the milk, and heat slowly on a stove until the temperature of the water reaches boiling point. Now take the vessel from the fire, and cover over loosely with a piece of woolen cloth for half an hour, at the expiration of which remove the bottle, and store it in a cool place.—*Pub. Opinion*.

Dry Pharyngitis—

R. Acid. Carbolic, 4 grains.
Tinct. Iodi, 5 minims.
Tinct. Aloes, 8 minims.
Tinct. Opii, 10 drops.
Glycerini, 1 ounce.

M. Sig. Use as a spray several times daily.--*Danet.*

=====

A New Combination—The Maltine Manufacturing Co., of New York, whose maltine preparations have a world wide reputation, announce a new combination, "Maltine and Wine of Pepsin" after September 1st Write for samples and literature.



BOOK REVIEWS.

Diet for the Sick.—Contributed by Miss E. Hibbard, Principal of Nurses' Training School, Grace Hospital, Detroit, and Mrs. Emma Drant, Matron of Michigan College of Medicine Hospital, Detroit. Second Edition. Enlarged. Limp Cloth, 16mo., 100 pages. Price 25 cents, Postpaid. Detroit, Mich.: THE ILLUSTRATED MEDICAL JOURNAL CO. 1896.

In this little book there is, besides the useful formulæ for "Sick Dishes," foods and cooling drinks for convalescents, quite complete Diet Tables for use in Anæmia, Bright's Disease, Calculus, Cancer, Chlorosis, Cholera Infantum, Constipation, Consumption, Diabetes, Diarrhœa, Dyspepsia, Fevers, Gout, Nervous Affections, Obesity, Phthisis, Rheumatism, Uterine Fibroids. It also gives various nutritive enemas. The physician can use it to advantage in explaining his orders for suitable dishes for his patient, leaving the book with the nurse.

In this way any serious errors in dieting can be avoided, and the patient's condition benefited. We appreciate the book very much because of its evident value.

The Multum in Parvo Reference and Dose Book.—By C. Henri Leonard, M. A., M. D., Professor of the Medical and Surgical Diseases of Women, Detroit College of Medicine. Flexible leather, 143 pages, price 75 cents. Detroit, 1896: The Illustrated Medical Journal Co., Publishers.

This is a recent edition of the Dose Book, of which the title page informs us some forty thousand copies have been issued. The present edition is printed on very thin paper, and is bound in red leather, round corners, so as to make it specially light and handy for the pocket; the weight is not two and a half ounces. Besides the doses of some 3,500 preparations being given, it has numerous tables, such as the solubility of chemicals, pronunciation of medical proper names, poisons and their antidotes, incompatibles, tests for urinary deposits, abbreviations, table of fees, etc. It will be found a handy pocket companion.

A new Journal—The Laryngoscope, a monthly Journal devoted to diseases of the nose, throat and ear, is the latest addition to the field of medical journalism. In every way it is an acceptable addition and we feel assured from its initial number, that it will prove of much value and worth. It is edited in St. Louis by Drs. Rumbold and Goldstein.



ADVANCED THERAPEUTICS.

In the Christy Saddle Messrs. A. G. Spaulding & Bros., have secured a bicycle saddle that fully meets all the demands and satisfies at once all medical and scientific requirements without losing any possible advantage in other directions. From a medical standpoint bicycle saddles are, as a prominent New York physician expressed it in a recent article, "physically and morally injurious. The entire weight of the body comes on the soft tissue of the pelvic floor. The sensitive tissues, subject to such pressure and irritation, must suffer, and the evil cannot yet be estimated."

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E. C. White, M. D., Jacksonville, Fla., writes: My experience with Maltopepsine (Tilden's) has been so decidedly satisfactory and gratifying that I prescribe it with a positive assurance that benefit will follow its use. In the case of an infant affected with a weak catarrhal stomach, with faulty digestion, and a tendency to excessive purging and vomiting, its action was very prompt in correcting the difficulty.

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"One of the Certainties of Medicine."—Belcher Hyde, M. D., of Brooklyn, N. Y., writes: "Antikamnia is an American product, and conspicuous on this account and because of the immense popularity which it has achieved. The literature is voluminous, and clinical reports from prominent medical men with society proceedings and editorial references, attest its value in actual practice in an endless variety of diseases and symptomatic affections. The fact stands incontrovertible that antikamnia has proven an excellent and reliable remedy, and when a physician is satisfied with the affects achieved he usually holds fast to the product. *Antikamnia is one of the certainties of medicine.* This is the secret and mainspring of its success."

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J. H. GILES, M. D.

West Nashville, Tenn., Dec. 23, 1895.

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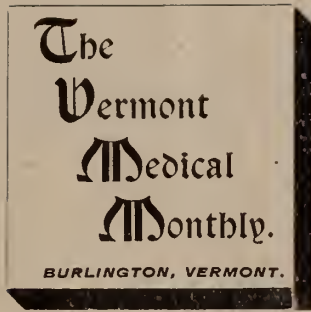
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CONTENTS.

	Page.
Clinical Lectures on Diseases of the Skin, by Prof. George Thomas Jackson, M. D., New York City, - - -	219
The Philosophy of Sex, by H. Edwin Lewis, - - -	226
Infant Feeding, by George Y. MacCracken, M. D., Ph. D.,	233
Medical Announcement, - - - - -	237
Editorial, - - - - -	238
Medical Abstracts, - - - - -	241
News Notes and Formula, - - - - -	247
Book Reviews, - - - - -	249
Advanced Therapeutics, - - - - -	250

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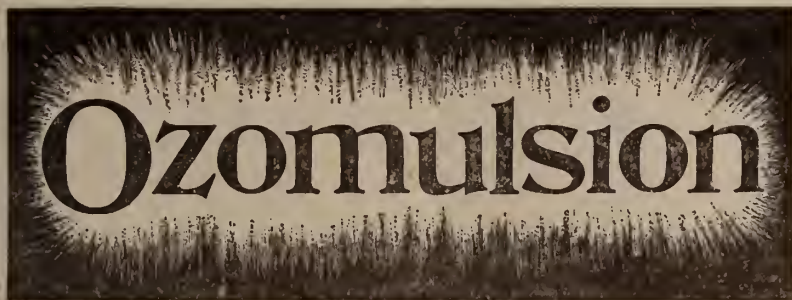
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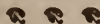
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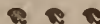
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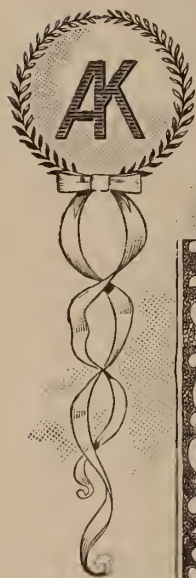
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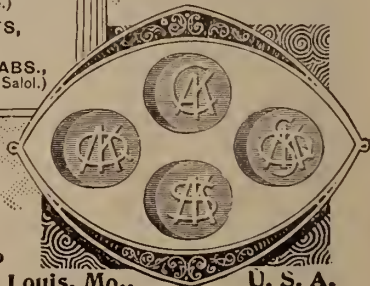
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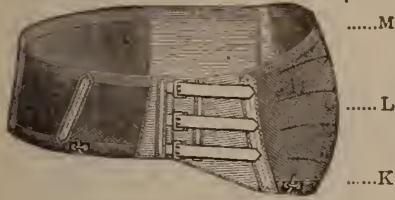
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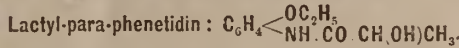
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3 Out of Every } WASTING Nine Children } DISEASES

die before they reach their fifth year. Rotch, of Boston, in his classic work, "Pediatrics," says: "In the latter part of the first year tuberculosis becomes very common." Add to this all cases of malnutrition, gradual decline, thinness, pallor, and other "wasting diseases" and you have a list of affections which call for

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MANUFACTURING CHEMISTS, NEW YORK

The Vermont Medical Monthly

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

Official organ of the Vermont State Medical Society.

Vol. II.

SEPTEMBER, 1896.

No. 9

Clinical Lectures on Diseases of the Skin.

BY PROF. GEORGE THOMAS JACKSON, M. D., NEW YORK CITY.

MEDICAL DEPARTMENT, }
UNIVERSITY OF VERMONT. }

CASE OF ALOPECIA AREATA.

Another of your number has kindly consented to come before you as a subject.

This case is probably known to all of you. It is called Alopecia areata. It is very well named as you will see, because we have alopecia—loss of hair—occurring in indefinite areas. It is not at all uncommon, and it is a disease that you are likely to come across. The disease generally appears suddenly, without any premonition. Very often the patient will go to bed at night with a good head of hair and in the morning will find a mass of hair on his pillow and a bald patch on his head. Or perhaps some kind friend will call his attention to the fact that he has a bald patch on the back of his head.

The disease either begins suddenly in this way, or it comes on more gradually, the hair coming off in circular fashion, until a definite sized patch is made, varying from a silver twenty-five

cent piece to a silver dollar. When you find them larger it is due to the fact that several neighboring ones have run together. The patches are always round in form. The patient may have had neuralgia preceding it, or he may not have had it. The hair is entirely off the patches, and the skin feels in a normal condition. In fact it feels a little more velvety than ordinarily.

In some cases the hair will fall from the whole body, leaving not a vestige of hair on the head or the body. The eyelashes, eyebrows and all will come off. This is called malignant alopecia. After the disease has lasted for some time it tends to get well. The hair is almost sure to come back, but it may be one or two years before it returns. In malignant cases where the hair comes off the entire body, the chances of its coming back are not so good. It is probably a neurosis, and due to some disturbance in the nerve supply to the part. Evidence is accumulating that the disease is contagious and we may find after all that it is parasitic.

Be sure that you do not mistake this for ringworm. There is no danger of it if you keep in mind a few facts. Remember that in ringworm the hair is broken and the patch is scaly, while in alopecia areata the skin is perfectly clean—the hair is entirely off and the skin is smooth.

There are very many remedies commended in alopecia areata, and whenever you find a great many remedies for a certain disease you may be sure that no one is a sure cure. The disease tends to get well of itself, and in self limited diseases it is difficult to tell how much our treatment really does. Treatment is simple. Wash the scalp in soap and water, and dab upon the patches stronger water of ammonia.

Another remedy is painting the spot with pure carbolic acid. That sometimes does well.

One treatment that I am going to ask the gentleman to use is that given by Raynaud, who says it will bring the hair back in forty days. I have seen it do so in one case, and fail in other cases. The patches are to be washed every morning with carbolic acid soap, and then is to be applied,

Solution No. 1.—℞. Hydrarg bichlor, .5
Tinct Canthardis, 25.
Bals Fioraventi, 50.
Aquae Cologniensis, 150.

Solution No. 2.—℞. Ac salicyl, 2.
B naphthol, 10.
Ac Acetici crystal, 15.
Ol ricini, 100.

Is to be used at night.

CASE OF PRURITUS CUTANEOUS.

This patient is also a typical case. It is not necessary to look at her skin because I do not think her skin would show very much, but you can hear her story and that will give you a typical account of the disease. She comes here on account of itching of her skin.

Dr.—You have had this a great many years, have you?

Patient.—I have had it ten or fifteen years.

Dr.—Is it worse at night or in the day time?

Patient.—It is worse at night and when I get along side of a stove. I begin to scratch in one place and then it itches somewhere else.

Dr.—This itching seems to go from place to place and does not occur in any settled locality?

Patient.—Yes; when I scratch in one place it seems to go to another.

This woman is not as young as she once was. Changes are taking place which affect her skin more or less. We have what we call pruritus senilis.

We have many forms of pruritus, some general, some local. Pruritus ani is an awful nuisance for one cannot help scratching, and when one begins to scratch there is no end to it. It is apt to come on when one uses a great deal of tobacco.

Then we have pruritus vulvæ which is very distressing. Somehow they are all very chronic—all very annoying.

In regard to treatment. The first thing is to ascertain the cause. Now, you know one sign of jaundice is itching of the skin, and many cases of pruritus cutaneous are due to trouble with the liver. This is the first organ to interrogate if there is any itching.

Then we have pruritus due to overwork or worry, or the use of stimulants. Always investigate the patient's habits and try and regulate them. One of the worst cases of pruritus ani that I ever saw, was a man who every day smoked seventeen or eighteen of the strongest cigars he could get. I stopped his smoking and he got well. Pruritus senilis is due to changes taking place in the skin.

You can, of course, treat all these cases by giving them anodyne, thus paralyzing sensation. Never give opium, as that causes itching, but use some other form of anodyne. You can also paralyze the itching by means of canabis indica, or tincture of gelsemium. Quinine in doses of 5 to 10 grains three times a day, sometimes does well. Salicylate of soda in 15 grain doses is another valuable remedy.

There are two formulas that I should advise you to bear in mind. One is known as Starbin's tonic, and is composed of:

℞ Magnesi sulphat, ʒvi-ʒiiss
 Ferri sulphat, ʒi
 Ac. sulphuric dil., ʒii
 Syr. pruni virg, ʒi
 Aquae, ad, ʒiv.

M. Sig: ʒi t. i. d. after meals.

The other is for local treatment, and is to be dabbed on the itching part.

℞ Ac. carbolic, ʒi-ii
 Liq. potassae, ʒi
 Ol. lini, ʒi

This is one of the best local remedies we have, and often if you can apply it as soon as the itching begins it will stop it from becoming general.

The Philosophy of Sex.

BY H. EDWIN LEWIS.

In three papers.

II

The Nature and Relation of Sex.

"That love which forms the theme of the poet's song and the burden of youth's first dream is only a myth—an esthetic vagary of the mind. Attraction between males and females certainly exists, but that attraction which society calls love is only the inexorable law of reproduction cloaked in the lustful raiment of sentimental thought."

From first to last the sexual relation is purely a physical one.

In the lower orders of the *vertebrata*, the male and female members simply perform their respective sexual functions by instinct. Periodically, physical changes occur in their bodies, and the newly formed reproductive elements which are intended by their union to create other living beings, become ready to be cast forth. Then, in blind pursuance of the reproductive impression, those elements are brought together, and fecundation of the female ova by the male spermatazoa takes place. Instinct alone guides their union, and instinct is but the expression of Nature's laws.

Strange it may be to us that these beings obey the mandates of nature so faithfully and under what often seems to be the most perverse circumstances, but obedience constitutes their whole existence. Nature has given to them only knowledge sufficient to fulfill her demands and beyond that their mission in life ceases. Without a single alternative, one path is given them to trod, one course to follow.

But as the caravan of life moves onward and upward towards a higher existence there becomes a danger that the development of the individual, will make Nature's laws less effective. New forces and conditions tend to detract from absolute conformity to those laws and make blind obedience onerous to a degree. Always alert to any conflict in the machinations of her plans, Nature immediately arises to the situation and makes the performance of the sexual function the most attractive feature of animal existence. Henceforth reproduction is in no danger from any other force for the all-absorbing passion of the animal economy is sexual congress. In the individual this great overruling desire seeks only self-gratification. No thought of its result is ever realized by the animal consciousness and the animal's sole reason for performing sexual intercourse is only to attain the fruition of self-desire. The ultimate result of this desire however, is to produce the fulfilment of Nature's laws, and fundamentally it is then, only a means to the common end, the propagation of life.

When we come to consider mankind these things assume a little different garb. The animalism is just as evident, though man rightly ascribes to himself a sort of *alter ego* other than the animal. Through the mysterious hand of the Directing Power, he has been given a dualistic existence ; one, the animal, still subservient to Nature's laws ; and the other, a spiritual, which recognizes the *ego* of the individual.

With the recognition of his own being, the *animal man* immediately became human. Marking the greatest epoch in the development of the species, this self-consciousness made the boundary line between the beast and mankind more decisive than any anatomical difference possibly could. Doubtless this spiritual factor was the result of gradual growth as everything else pertaining to life, but the humblest advent of a soul in an animal body, must have made an infinite difference to that body. This animal, henceforth to be called man, could not help but progress, for the relations between the members of the human family made progression necessary. Each knew how to better

supply his needs which were immensely multiplied by the new factor in his life, the knowledge of his own existence. Rapidly he widened the gap between himself and the soulless animal life around him, but the animal side of his own being underwent little or no change.

As other new needs and new means of supplying them followed each other in swift succession, civilization became a great on-rushing sea sweeping over all the earth, a perfect inundation of progress. Every phase of living was swept forward and placed on successively higher planes of development, until to-day we observe humanity standing a mighty pageant, glorious because of the contrast between its past and present.

In the passing of man he has naturally observed the workings of Nature's laws in himself and those surrounding him. To many of these forces he has given proper place and importance, but some he has enveloped with the glamour and subtlety of his own mind. The principal one of Nature's functions around which he has so woven his idealistic views is the sexual relation.

In his primitive condition before he began to appreciate the reasons for his existence, man looked on the attraction between males and females as a mysterious impulse, a natural source of pleasure, which he could not fathom. He knew that such an attraction did exist, that it formed part of his being, but why he could not tell, and probably he never gave it thought. The physical characteristics of beauty and grace varying with each individual and having a complementary expression as admiration in the opposite sex, made attraction more particular between certain individuals.

With a predominance of self, omnipresent man was naturally selfish, and his sexual desire soon sought individual possession of the particular object, or objects, of his attraction. He owned his land, his flocks and other chattels; why not his women? Surely there was nothing to prevent, and so marriage as it first appears in the annals of human history is simply a civil contract, a definite bargain, whereby one man exchanges

certain possessions for the woman he desires, and over whom the woman's parents are conceded primary ownership. This method withstood the test of time for a long period, and is even handed down to our own day by certain nations whose young men still maintain the practice of buying their wives from the girl's parents.

But as the religious side of man's varied nature began to develop, he very soon laid all things, especially those he could not understand, to a ruling power higher and stronger than his own. Every act, every journey that he took, in fact every minor detail of his life, was thought to be guided by some spirit or spirits. It was his custom then to invoke the benign influence of those powers in all his undertakings, and it was perfectly natural that such an important relation as that between himself and the woman who was to bear his children should commence under ceremonies calculated to bring down to him the pleasure and good will of his gods. From now on, the sexual relation between man and woman took on a holy aspect and marriage became considerably more than a simple contract, although it was still the custom to recompense the parents of a girl for the privilege of marrying her and taking her away. Even now the girl herself had no voice in the proceedings and only occupied a humble position as an article of exchange.

But within the last few hundred years, woman's ascendent star has been in evidence. From a condition of chatelage as a mere commodity subject to man's caprice, she has royally emerged to take her place side by side with her former lord and master. Almost nothing within the reach of man is withheld from her, and if civilization has made man a king of beings, it has unquestionably given woman the honor of being queen.

Yet with all their development men and women still look on the sexual attraction from an idealistic standpoint. Instead of giving it a proper place in the production of certain definite results, they almost make it the pivotal point of their existence under the cognomen of love, and call it the grandest, the noblest impulse of life!!

What a paraphrase on intellectuality to attribute divinity to the sexual relation or characterize it as grander or nobler than any other function which contributes to the promotion of life !!

For primitive man to consider the attraction between the sexes in an idealistic light was perfectly natural. His comprehension was such as to clothe all things with a sort of rude romanticism in keeping with his surroundings, and it strongly appealed to his romantic sensuality to deify the sexual instinct.

But for men and women who pride themselves on their development, on the *finesse* of their minds, to still labor under the sentimental delusion that sexual love is a spiritual force, "a kindling of the divine fire," is a sad commentary on their vaunted progress or development.

It should not here be understood that these words are written with any intention of robbing the poet of his favorite subject or destroying the mystic charm of the novelist's tale. Nothing from our humble pen could produce such a dire result in even the smallest degree. But that love which forms the theme of the poet's song or the burden of youth's first dream is only a myth—an esthetic of the mind. Attraction between males and females certainly exists, but that attraction which society calls love is only the inexorable law of reproduction cloaked in the lustful raiment of sentimental thought.

Nor should these words be taken as minimizing the importance of the sexual function, for it is a great natural force obviously necessary in the continuation of material life, but it is divine only so far as all things are divine which contribute to that same end. When men and women crown their sexual passion as the grandest of all impulses, even though it have the more conventional appellation of love, they stoop to sensuality.

There is without doubt a spiritual attraction, a genuine affection between beings which does exist, but it is irrespective of sex. Even this possesses little of the grandeur enthusiasts would have us believe, for the truest affection which can exist

between man and man, or woman and woman, excepting that of a mother, is surely prompted by selfish motives.

How cynical, how pessimistic, some one says. But let every one who reads this ask himself why he cultivates his friends. Let him analyze the reasons for his friendship. If he is honest with himself he will surely find a prime motive in a desire for congenial companionship, a craving for sympathy or consolation, or a longing for just appreciation of himself and his work by those who understand him. He may satisfactorily argue with himself that nothing prompts his friendship for another, that it is a spontaneous impulse, but how long would a man's friendship be given or his kindnesses be bestowed if they were not appreciated? And if they were not appreciated and he still continued to tender them how long would he do so, if it was not for satisfying his own conscience, and receiving the pleasure of his own approbation?

But there is an impulse standing high above all others, which really approaches true sublimity. Worthy of all the homage, all the glory of divinity, that impulse is mother love.

A mother's life, everything is merged into that of her offspring. Self is entirely forgotten. No sacrifice is too great, no burden too heavy for her to bear, and few there are, few indeed, who have a spark of manhood, or womanhood in their breast, a single memory of their own mother that brightens up their past, that can say there is one iota of selfishness in a true mother's love. Though all the world turn from us, though every friend prove false, there is yet one whose heart beats true. One who comes to us in the saddest of all hours, to the lowest depths of degradation or shame to which we may have fallen, freely willing to give her sympathy, her life, her very hopes of heaven itself, to help blot out the past and bring back honor and reputation. That one of all the world is a man's or woman's mother, and no relation in life is so grand, so pure and noble in its expression, as that between a mother and her child.

Comparison is the crucial test of greatness. When we compare the marital relation with that between a mother and her child, the contrast is plainly seen. Even in the most abstract

consideration of marriage, self is the ruling spirit. A young man and woman meet and see in each other certain traits or characteristics to admire, Their mutual admiration seeks companionship each for the other, and their sexual attraction draws them irresistibly closer. The dictates of good society prescribe marriage and intent on their own happiness, the bans are duly celebrated. Little or no thought is even taken concerning the probable result of their union. The horizon of the future is hidden by the landscape of the present, delineated by their pleasure in each other, and if children do come, — why, they will have to make the best of it!!

Is there anything particularly grand or noble about such a relation?

Yet marriage is a vast improvement over the ways of beasts, or so-called "free love," when it performs the mission of giving to human offspring the uplifting environment of a definite home, and places a curb on bestiality. In so far as it does this it is a most laudable institution. But it all too often is entered into only for personal convenience as a universal custom offering a better chance for gratification and self benefit. The great trouble lies in the fact that men and women seldom stop to consider its real use, nor even think what sexual differentiation is for. Many are more in the dark in regard to the real nature of sex than was primitive man. So long as they are blind to the knowledge that the sexual function is something besides a pastime, a means for self-gratification, and that marriage is anything but a license to their innate sensuality, just so long will impurity and lust be the barriers to a better life.

Thousands of men and women who are satisfactorily living up to society's moral and Christian law, and who look on the prostitute as the lowest and most degenerate of living beings, are themselves prostituting the sexual function. These views may be taken as those of an Extremist, but be that as it may, every sexual act which is performed for other than definite purpose of reproduction is a debasement of that function. Sex was never evolved as a means of pleasure and whether the act be consummated in or out of wedlock, if pleasure and self-gratification be the sole object, *it is degeneration.*

Man and women might as well come down to the cold sorted facts that they are only atoms in a great moving world, and that they are bound by irreversible laws to contribute to its motion. Their place in the plan was not made for them; they were made for their place, just as each part of an engine is fitted together and made dependent on other surrounding parts for usefulness. Working harmoniously together the several parts produce a given result, but a cylinder or a piston rod, alone by itself can accomplish nothing of the work for which the whole engine was intended, It is just so with man. Outside of his place in Nature's intricate machinery and he himself with all his individualism would be a sorry spectacle of uselessness. Sentiment has its place in brightening up the common place things of every day life but it can be carried too far. When it is carried to the extent of so altering our vision as to hide reality and truth, it is a harm and an injury, and just this thing has been done to the sexual function. Without a shade of morbidness, without a touch of cynicism, it is safe to say that the present false ideas of love and sexuality contribute much to the sensuality of our day. The so-called "problem novels" and society dramas which are fictitiously promulgated for the common good, instead of elevating the moral nature of humanity as they purport to do, only add fuel to the smoldering fire. Love, the great burning passion, for which strong men die and fair women mourn, sacrificing home, honor and reputation in its pursuit, in their only theme. To already inflammable natures, the pictures of lust and depravement which they thus portray, are like sparks to the tinder.

The authors themselves are not to blame. The fault lies with the unhealthy demand to which they cater, and it is a great, growing shame to the reading public, to all mankind, that men and women allow themselves to be amused, yes controlled by such rot. Their soul, the animus which makes them human ought to give them discernment sufficient to look beneath the superficial layers of sentimentality in the novels-with-a-purpose. Beneath those layers the sexual function is rampant, and unless

they are alive to its presence, they will suffer the consequences. Without doubt, the great majority of those who are being thus swept along on the tide of sensualism, are the victims of ignorance. To their warped and narrow minds all things were created for human pleasure and happiness and that pleasure and happiness recognizes nothing but carnal gratification. It is this class in whom lies every hope of elevating the sexual nature. The other class, those who through education well know what their bodies are for, but only care to drift along, without a single attempt to change their course, are beyond redemption, and out of our consideration.

The sin of an act comes in its wilful perpetration. No one can condemn the beasts of the field or the fowls of the air for being led by their sexual passions. They are only animals and it is Nature's only way to accomplish her ends. But man is a higher being, and it is more necessary for future development in the lives of those yet to come that he should triumph over his animal desires so far as he can. His victory over himself will bear noble fruit in his posterity, and our sincere hope is that some word in this article may serve to make some man less an animal, less a creature of passion and self-desire.

Specific Urethritis in Very Young Boys.

By BERNARD WOLFE, M. D., Atlanta, Ga.

Within the last year I have seen two cases of specific urethritis in very young boys. I append brief notes of the cases, which may be of interest to your readers not only from a professional but also from a sociological standpoint.

CASE 1.—A poorly nourished negro boy, three years of age, was brought to my clinic for treatment of frequent and painful micturition of a week's duration. Examination revealed a penis of unusually large size, with a swollen and oedematous prepuce, from the everted orifice of which a stream of thick, greenish-yellow pus was issuing. A slide was obtained from this, which was found after staining with carbol-fuchsin to be swarming with gonococci.

The mother of the boy stated that she shared her small house in the negro quarters with a family in which there were a number of half-grown girls and that shortly before the boy had begun to complain of pain on urination, she had detected him in the act of copulating with one of these girls.

CASE 2.—A well-developed negro boy, five years old, was brought by his parents for treatment of cystitis that had existed for ten days. There was an almost continuous dribble of urine and great pain and distress in the region of the bladder. A small quantity of pus was obtained by stripping the urethra and stained with methyl-blue. It was found to contain a considerable number of gonococci. The boy's mother expressed no surprise when I informed her of the nature of his trouble and said that she had already suspected it, as the boy slept with a

mulatto girl of fourteen and that she had several times been caught in the act of drawing the boy on top of her. When remonstrated with, she had feigned ignorance of the meaning of the reproof. I had an opportunity of examining this girl some time afterwards and found her suffering from vaginitis, presumably of gonorrhoeal origin.

These cases, while not unique, are of sufficiently infrequent occurrence, especially when the disease is contracted by actual sexual connection and not accidentally or intentionally inoculated, to be of interest. They serve to illustrate the extreme precocity of the sexual instinct in the negro.—*Pediatrics*.

Vermont State Medical Society.

PROGRAM OF THE EIGHTY-THIRD ANNUAL MEETING TO BE HELD IN THE
COUNTY COURT HOUSE, ST. JOHNSBURY, OCTOBER 15 AND 16, 1896.

FIRST DAY—THURSDAY, OCTOBER 15.

MORNING SESSION—10 O'CLOCK.

1. Call to order by the President, C. F. Branch, Newport.
2. Prayer.
3. Reading of Records by the Secretary.
4. Election of Committees.
5. Reports of Officers and Delegates.
6. Obituary of Prof. C. P. Frost. Prof. Wm. T. Smith, Hanover, N. H.
7. Miscellaneous Business.
8. Election of New Members.
9. Opium, Its Use and Abuse. F. W. Comings, Derby. Discussion, S. E. Darling, Hardwick.
10. Voluntary Papers and Reports of Cases.

AFTERNOON SESSION—2 O'CLOCK.

1. Introduction of Delegates from other Medical Societies.
2. Vice-President's Address. The Practice of Medicine in 1858 and 1896. Lyman Rogers, Bennington. Discussion, R. B. Skinner, Barton.
3. The Management of Acute Peritonitis from a Medical Standpoint. W. H. Vincent, Orwell. Discussion, A. P. Grinnell, Burlington.
4. Mineral Springs of Vermont, Therapeutic Effects, Etc. E. M. Brown, Sheldon. Discussion, J. A. Howard, Alburg Springs.
5. Twelve Years Practice of Obstetrics. J. Sutcliffe Hill, Bellows Falls.
6. Obstetrics. F. R. Stoddard, Shelburne. Discussion of two latter papers, P. E. McSweeney, Burlington.

EVENING SESSION—8 O'CLOCK.

1. President's Annual Address; C. F. Branch, Newport. Subject: The True Physician, or The Old and The New. Discussion, H. R. Wilder, Swanton.
2. Hernia and Its Cure. Illustrated by the Stereopticon. Henry O. Marcy, Boston, Mass. Discussion, H. D. Holton, Brattleboro.

BANQUET.

The Annual Banquet will be held at the St. Johnsbury House after the evening session. F. R. Stoddard, Shelburne, Anniversary Chairman.

SECOND DAY, FRIDAY, OCTOBER 16.

MORNING SESSION—9 O'CLOCK.

1. Election of Officers.
2. Miscellaneous Business.
3. Address in Surgery. Subject: Diseases of the Rectum. D. C. Hawley, Burlington. Discussion. H. C. Tinkham, Burlington.
4. Inebriety and Its Treatment. W. S. Nay, Underhill. Discussion, F. S. Gray, Troy.
5. A Class of Fatal Cases, presumably due to Intestinal Ptomaines. E. D. Ferguson, Troy, N. Y. Discussion, O. W. Sherwin, Woodstock.
6. The Operation of Shortening the Round Ligaments, Its Indications and Technique. E. H. Ross, St. Johnsbury. Discussion, E. M. Pond, Rutland.

AFTERNOON SESSION—2 O'CLOCK.

1. Address in State Medicine. Subject: Some Observations on Preventive Medicine. J. Henry Jackson, Barre. Discussion, R. T. Johnson, W. Concord.
2. Intestinal Obstruction. W. R. Prime, Burlington. Discussion, J. M. Allen, St. Johnsbury.
3. Puerperal Fever. J. M. Hamilton, Proctor. Discussion, H. A. Crandall, Burlington.
4. The Discovery of Ether. W. J. Aldrich, St. Johnsbury. Discussion, W. C. Blake, Lyndon.
5. The Value of *Cimicifuga Racemosa* in pregnancy and labor. F. C. Kinney, Greensboro. Discussion, H. H. Lee, Wells River.

ANNOUNCEMENT.

1. This program will be carried out in regular order. Papers crowded out at one session will be called for at the opening of the next session.

2. All papers should be ready for the printer at the time of the meeting. Failure on this point means delay in the publication of the Transactions.

3. The following proposed amendment of the By-Laws, which was introduced one year ago will be voted upon. Resolved that Sec. 1 of Art.

III of the By-Laws be amended to read as follows: "Every member of this Society (honorary excepted) shall pay to the Treasurer an annual fee of three dollars.

4. Railroads. Round trip tickets at excursion rates will be on sale at all principal stations on roads controlled by the Boston & Maine, on the Mont. & Wells River road, and at Richford, Enosburgh Falls, St. Albans, Milton, Essex Junction, Winooski, Burlington, Williston, Richmond, Waterbury, Montpelier, Barre, Williamstown, Northfield, Randolph, Bethel, So. Royalton, Sharon, Hartland, and Windsor, and all stations on B. & L. Division on C. V. R. R. to St. Johnsbury and return. On Bennington & Rutland R. R. from Bennington, So. Shaftsbury, Manchester and Wallingford to Rutland and return.

Members coming from Rutland R. R. are advised to use mileage to Burlington or Bellows Falls, and then purchase tickets, as no satisfactory arrangement could be made.

If any member is not accommodated by the above list on C. V. R. R., if he will drop a line to the Secretary at an early date, any other stations will be added.

5. *Special.* On Thursday evening, from 7:30 to 8:30, the members of the Society and their guests, by special invitation of the Board of Trustees, will visit the Fairbanks Museum, which contains one of the finest private collections in New England.

6. *Special.* All members of the regular medical profession are invited and urged to attend this meeting, and if not already members of the Society, to join. We need your help, and we will help you.

7. Headquarters of the Society will be at the St. Johnsbury House.

D. C. HAWLEY, Secretary.

Burlington, Sept. 26, 1896.

The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

H. EDWIN LEWIS, MANAGING EDITOR.

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The Subscription Price is \$1.00 per year IN ADVANCE. Single copies, 15 cents.

All communications of a business nature should be addressed to

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EDITORIAL,

A New Regime.

It is with no little feeling of satisfaction that we learn that the Faculty of the University of Vermont Medical Department have increased their course of study to a four years' graded one, to begin with 1898. This action pleases this School, which always has held an enviable position among Medical Colleges for thoroughness and efficiency, in the front rank with other progressive institutions.

The many alumni and friends who follow the successes of the College with pride and gratification, will without doubt welcome this news with considerable approbation.

A Doctor's Duty.

While we are utterly opposed to a Medical Journal giving outside its legitimate realm of medicine and kindred subjects to encroach on that of politics, we still hold to the belief that every physician should assert his loyal citizenship to his country, by going to the polls whenever opportunity offers and voting according to his conscience and convictions. He will respect himself far more, and be a better man, by so doing.

Is Constipation Ever a Disease?

Constipation has been very properly regarded by medical writers as a symptom of disease of the alimentary canal, or sometimes of the nervous system.

The question arises, however, from clinical experience as to whether it may not at times be a disease *per se*. This is suggested by cases such as the following, which are by no means infrequent. A person gives a history of repeated attacks of indigestion with the ordinary symptoms of diarrhea, nausea, pain in the abdomen, etc., preceded a day or so by sluggishness of the bowels or, perhaps, entire cessation of peristalsis. It has usually been said that the preliminary constipation was the first symptom of irritation of the alimentary canal. Attacks of this kind are caused by eating articles usually classed as indigestible, by overeating, or by eating articles which an idiosyncrasy renders improper. The treatment most used is to cleanse the alimentary canal at once by free purgation, thus aiding the natural tendency, and then to administer emollients and antiseptics.


At the same time we know that, if constipation arises in the course of organic disease of the spine, for instance, after a day

or two it is followed as a rule by free diarrhœa and, in general, symptoms much similar to those which accompany the disturbances caused by faulty nutrition, as noted above. Furthermore, observation shows that if *casgara sagrada*, a true tonic laxative, be used in small doses by the person predisposed to the attacks of indigestion, so as to insure free movement of the bowels every day, the attacks will not occur, or at least very rarely.

To such an extent is this true that some patients can partake with impunity of the articles for which they have an idiosyncrasy, provided they use the laxative simultaneously.

These facts seem to render the conclusion clear that constipation may frequently be the primary disease, while the diarrhœa, pain, etc., are merely incident to the irritation caused by the retained feces.

The further conclusion would also seem inevitable, though by no means novel, that certain articles of diet are of themselves directly constipating and produce more or less serious disturbance of indigestion, unless accompanied by a laxative drug or article of food which overcomes the constipating tendency. If the above method of reasoning is correct; and the conclusions are properly drawn, our cases of recurring dyspepsia should be restudied to see if any of them may not be permanently relieved by the method suggested.—*Cleveland Journal of Medicine.*



MEDICAL ABSTRACTS.

How to Give a Nutrient Enema.—It is a waste of time to administer by the rectum food which is not predigested, since this part of the intestinal tract has no power of digestion. The practice of injecting the food into the lower rectum by means of the ordinary syringe and nozzle cannot be too strongly condemned, says Dr. George Fisk in the June number of the *Canadian Medical Record*. A long pliable rubber tube should be employed and should be passed well up to the sigmoid flexure—eight inches for a child, ten to twelve in an adult. Not only is the irritation, or possibly hemorrhage, avoided by this method, and nutriment better retained until absorbed, but the fluid which passes into the blood from this portion of the gut is carried through the branches of the portal vein to the liver, where further changes necessary to assimilation take place; whereas, the inferior hemorrhoidal veins empty directly into the inferior vena cava.—*Denver Med. Times*.

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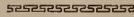
Cream in Congenital Constipation.—A Brooklyn Physician states in the *Medical World* that the main dietetic cause of infantile costiveness is a deficiency of fat in the food. A large percentage can be successfully met by increasing the fat ingested. It has been his practice in the past two years to give the child from one-half to a tablespoonful of cream before feeding. The child may refuse to take it readily, but by sweetening the cream with loaf sugar, the child soon becomes fond of it and will accept all that is offered. Upon following this plan your cases of congenital constipation will suddenly diminish, and the child in the very depth of its soul will feel comfort.—*Cincinnati Med. Journal*.

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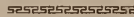
Sterilizing Catgut by Formalin.—Hofmeister. (*Bret. z. klin. Chir.*, XVI, p. 775.) In order to avoid the kinking which follows boiling if the catgut is not tightly wound, Hofmeister winds the catgut, not on rolls, but on glass plates with thick edges. The catgut is by this means kept stretched, and at the same time lies free from the sides of the plates. The ends of the threads are knotted through holes.

These plates are next immersed for twelve to forty-eight hours in a 2-to-4-per cent. aqueous formalin solution, and washed free from formalin in running water. This step should last at least twelve hours, as it takes a long time to free the innermost threads from the formalin, and if all of the drug is not washed out of the gut it is weakened by the boiling.

The plates are next put into cold water to avoid breaking, and boiled for ten to thirty minutes. Longer boiling is unnecessary, and tends to soften the gut. Water, and not soda solution, should be employed. The plates are removed and put into absolute alcohol containing 5 per cent. glycerin and 1-10 per cent. of corrosive sublimate (or 4 per cent. carbolic acid) for preservation.—*Am. Medico-Surg Bulletin.*



Milk.—Pure cow's milk should have a specific gravity of 1030. It should not become viscid on the addition of ammonium hydrate. Milk should yield from ten to fourteen volumes per cent of cream, and never less than three per cent by weight, according to the modern methods of analysis. On microscopic examination, pure milk should contain myriads of beautifully-formed globules of fat, entirely soluble in potassium hydrate. The normal amount of water should be about eighty-seven per cent. The total solids will vary from twelve to fifteen per cent, according to the age of the cow, its food, etc. Pure cow's milk should contain about four per cent of casein, including one-half to one per cent of serum albumin, and about four per cent of sugar of milk, with a little over one-half per cent of the salts of sodium, potassium, and calcium chlorides and phosphates.—*Nat. Board of Health Magazine.*



Care of the Eyes—A writer in the *Microscopist* gives the following excellent advice. It may be followed with profit by medical examiners:

In the earlier use of the microscope the care of the eyes cannot be too persistently urged. The wrecks of those wonderful organs along the shores of microscopy are too numerous to be ignored, or their lessons unheeded. Many more which have begun without rules have reluctantly abandoned the fascinating use of the instrument before utter destruction, but with impaired vision, who, had they been governed from the first by the following hints, might have made comparatively weak eyes strong and attained eminence in this pivotal, key-note, science and art.

- (1.) Begin exclusively with your lowest power objective.
- (2.) Until self-mastered use but one object at a sitting.
- (3.) Lengthen the time only five minutes at each sitting.
- (4.) Never begin work heated, angry or greatly excited.
- (5.) Stop instantly at the first scratchy feeling in the eyes.
- (6.) When two hours do not weary you, you are safely initiated.

Now use the next higher power objective under the same rules, half of the sitting time at each sitting, and thus on, on, on, as necessity or inclination beguiles or commands. "Excelsior, excelsior!"—*Med. Examiner.*



NEWS NOTES AND FORMULA.

Don't forget the State Medical Society meeting at St. Johnsbury, October 15 and 16.

Dr. M. F. McGuire, late House Surgeon at the Mary Fletcher Hospital, has completed his term of service with that institution and located in Montpelier, Vt. Burlington will be very sorry to lose him, but wish him the best of success in his new field of activity.

Danger in Public Baths—We recorded in our last the medical report from Riga, of four hundred cases of gonorrhœa in young girls, directly traced to the use of a common bath. In Newark, N. J., it is the medical opinion that something like an epidemic of eye disease has arisen among the boys in consequence of mingling in the free baths.—*Modern Med. Science.*

Asthma—

R. Tinc. lobelia, oz. $\frac{1}{3}$
 Ammoniae iodid, dr. ij
 Ammoniar bromid, dr. iij
 Syr. tolu, oz. iij

M. Teaspoonful every one, two or three hours.

Coryza—

R. Acid carbol, dr. $\frac{1}{3}$
 Alcoholis, dr. ij
 Aq. ammoniae fort, dr. j
 Aq. dest, dr. iij

M. Pour a few drops on a small cone of blotting paper and inhale.—*Med. World.*

Intestinal Disorders.—The most frequent of intestinal disorders is insufficient digestion of starch. The trouble generally lies in a deficiency of the starch ferment provided by the pancreatic and intestinal secretions. The deficiency is usually accompanied by diminution of all

secretions, and is obviated as the secretions are increased. Constipation is almost always present and should receive careful attention. The best form of treatment is that which gives immediate relief, yet aims to produce a permanent cure. Cascara Sagrada is the agent best adapted for relieving the constipation, and by its well known tonic properties tends to restore the normal secretions. While this result is being obtained, the utmost stress should be laid on the necessity of careful dieting, using at the same time with such dieting measures as are prompted by the demands of the case, the new, yet nevertheless well tried vegetable ferment, take diastase. A good and permanent result is almost a certainty under such treatment, and will be found efficient in many obstinate and chronic cases.

Stimulants on Retiring.—To take a drink of stimulants before retiring is not a good practice. The heart beats slower while the body is in a horizontal position than when erect by a number of beats, generally ten per minute—ten beats per minute, 600 per hour, multiplied by the usual period of rest=4,800 less that during wakefulness in the erect position. This is the period of rest, according to Richardson. Now, if the individual takes alcohol, which excites the circulation, his head does not rest, but performs its full duty even in sleep; consequence is a feeling of weariness instead of exhilaration. Better let whiskey alone when you go to bed. Rather place your physical system in the best condition to secure the rest of all organs and be refreshed.—*Medical Examiner*.

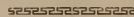
We go a step farther and say, better let whiskey alone all the time.



BOOK REVIEWS.

The Therapeutical Applications of Peroxide of Hydrogen (Medicinal) Glycozone, Hydrozone and Eye Balsam.—By Charles Marchand, chemist. 216 pp. 11th edition, 1896. 28 Prince St., New York City.

This work is a most valuable contribution to the therapeutics of peroxide of hydrogen. A very great number of cases are presented, many of them by eminent authorities, covering almost every demand for efficient antiseptics. After reading this work which represents a consensus of medical opinion on the vast influences of peroxide of hydrogen, one cannot help but be impressed with its value as an antiseptic and bactericide, and particularly so of its stronger form, hydrozone. Marchand's preparations stand entirely on their respective merits, and this work demonstrates clearly and without a suspicion of "fake" that their standing is unimpeachable and secure. Any physician desiring this work can obtain it by addressing a request to 28 Prince St., New York City.



The Charlotte Medical Journal—We cannot forego the pleasure of saying a few words concerning our friend and contemporary, the *Charlotte Medical Journal*. We always welcome it to our editorial desk as one of our brightest and most original exchanges and we have frequently borne witness to our high esteem for its reading matter, by making abstracts of its articles for our own columns.

In common parlance, Drs. Register and Montgomery, the Editors and Publishers, have "a good thing," in their journal. Its circulation is 9000 or over each issue, and the large number of advertisers who patronize its pages testify stronger than anything else to its value as an advertising medium. Its editorial articles are admirably written, being full of the spirit of progressiveness, yet never overstepping the border line of common sense and sound knowledge. Within the last few months several changes have been made in its appearance, such as making double column pages, setting in new type, etc. These changes could well be made by the publishers for we understand that they own a most complete and extensive printing establishment utilized exclusively for their own printing.

In every way Drs. Register and Montgomery are to be congratulated. They have a magnificent journal and it is a success from every standpoint. We extend our greetings with best wishes for the future of the editors and their publication.

ADVANCED THERAPEUTICS.

Wm. R. Browning, M. D., New Orleans, La., says: With the approach of the summer months, and the depressing influence of a high temperature, we are called upon to treat that disease which is so much dreaded by mothers as well as physicians—Cholera Infantum.

Improper feeding is usually the starting point in almost all these cases, producing, as it does, fermentative disorders of the stomach with increased gastro-intestinal irritation, resulting in frequent vomiting and purging.

In such cases I have found nothing so valuable as the following:

R. Hydrag. chlor. mite, gr. ss.
 Pulv. ipecac, gr iiss.
 Sodii bicarb, gr. v.

M. ft. chart. no. v. Sig.—One powder every hour until proper effect ensues, then I use the following:

R. Bismuth subnit. (Squibb's), oz. ii.
 Elixir Maltopepsine (Tilden's).
 Syr. rhei arom.
 Aq. Cinnamonii, āā oz. i.

M. Sig.—Teaspoonful every second or third hour as indicated.

Ferratin, Iron Tonic and Food—(*Chicago Med. Recorder, January, 1896.*) The author reviews the literature on Ferratin, quoting Schmiedeberg, Germain See, Dujardin-Beaumetz, Marfori, Jaquet, Fackler, Einhorn, and others, and then cites a case of anemia in his own practice "because the improvement under the use of Fejratin was so striking as to merit special mention." Patient, a girl of 17, became anemic after an attack of gripe, lost her appetite, etc.; condition on November 15th as follows: Face pale, of waxy color, lips and conjunctiva almost white, headaches, insomnia, constipation, shortness of breath, bad appetite, etc. Half gramme doses three times daily, with hygienic regulations, caused improvement after first week, and gradually her appetite returned, headaches and insomnia disappeared, red color was restored to lips and face, and within five weeks the blood corpuscle count showed an increase from 2,100,000 to 4,150,000 per ccm. Author concludes that "Ferratin can be safely recommended as a hamatinic remedy, with suitable diet, hygiene and exercise not to be neglected."

Prevalent Malarial Conditions.—When two such well-known drugs as antikamnia and quinine are offered to the profession it hardly seems necessary to indicate the especial class of affections which call for their use. Antikamnia may now unquestionably be called a perfect substitute for morphine, for internal administration. It has complete control over pain, while it is free from the undesirable after-effects of the alkaloid of opium. But antikamnia not only possesses the good qualities of morphine without the bad, but it also has the properties peculiar to the coal-tar series. In cases of malarial fever the combination of antikamnia and quinine should be given as a prophylactic and cure. For all malarial conditions quinine is the best remedy we have. But associated with this condition there is always more or less pain, which often renders the life of the individual uncomfortable, if not positively miserable. Antikamnia will remove these unpleasant symptoms and place the system in the best condition for the quinine to do its work. There are a number of ailments, not closely defined, which are due to the presence of malarial poison. All such conditions are greatly benefited by the use of this combination. "Antikamnia and Quinine Tablets," each containing 2½ gr. antikamnia, 2½ gr. sulph. quinine, meet the indications most frequently. In headache (hemicrania), in the neuralgias occurring in anæmic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition, the regular administration of these tablets will produce the most happy results.

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Atonic Dyspepsia.—In the treatment of this disease, as in that of other stomach disorders, regulation of the diet is the first step to be considered. Next is the selection of food which consists of nutritions and easily digested articles.

When the powers of digestion are weakened, special aids to this function are plainly indicated, and for this, Malto-pepsine, (Tilden's) in combination with strychnia and the bitters, is the most potent of remedial agents.

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CONTENTS.

	Page.
Clinical Lectures on Diseases of the Skin, by Prof. George Thomas Jackson, M. D., New York City, - - -	253
The Philosophy of Sex, by H. Edwin Lewis, - - -	257
Specific Urethritis in very Young Boys, Bernard Wolff, M. D.,	266
Program of the Vt. State Med. Society, - - - -	268
Editorial, - - - - -	271
Medical Abstracts, - - - - -	274
News Notes and Formula, - - - - -	276
Book Reviews, - - - - -	278
Advanced Therapeutics, - - - - -	279

N. B.—Full account of the Medical Society meeting in our October issue.

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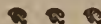
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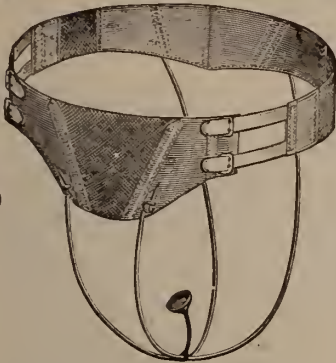
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- ROBERTS BARTHOLOW: MATERIA MEDICA AND THERAPEUTICS, ninth edition, 1896 p. 153.
- WILLIAM MURRELL: MANUAL OF PHARMACOLOGY AND THERAPEUTICS, 1896, p. 243.
- JOHN V. SHOEMAKER: MATERIA MEDICA AND THERAPEUTICS, third edition, 1895, p. 435.
- HELBING'S MODERN MATERIA MEDICA, fourth edition, 1895, p. 216.
- THE YEAR-BOOK OF TREATMENT FOR 1895 (Lea Bros. & Co.), p. 450; quoting *British Medical Journal, Epitome*, June 16, 1894, etc.
- THE YEAR-BOOK OF TREATMENT FOR 1896 (Lea Bros. & Co.), p. 425.
- SAJOUS ANNUAL, 1895, pp. A—90 and 91: quoting favorable reports of Schmiedeberg, Banholzer, John Harold, Germain See, Marfori and Hugo Wiener.
- SAJOUS ANNUAL, 1896, pp. A—97 and 98: quoting favorable reports of Marfori, Deustsch Von Ziemssen, and Max Einhorn.
- AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY (Dr. George M. Gould, editor), 1896, pp. 74 and 1038.

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The Vermont Medical Monthly

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

Official organ of the Vermont State Medical Society.

Vol. II.

OCTOBER, 1896.

No. 10

Before and After Treatment of Laparotomy.*

BY A. F. WHEET, M. D., MANCHESTER, N. H.

Mr. President and Fellow Members of the N. H. Medical Society :

In looking over various text-books, aside from some general principles, there is but little written concerning the details of the post-operative care of laparotomies.

This after-treatment is fully as important as the operation itself—in many cases much more so. Success comes not alone from a brilliant operation, but is also due to the careful attention given to the patient after the operation is finished. The beginner in gynæcology, unless he has had hospital training, naturally turns to the literature on this subject, and receives the proverbial stone instead of the bread looked for—and it is with this object in view, of giving, together with a general working plan, some of the more important details in connection with laparotomy, that this article is written. The practical side obtained from actual experience and observation, will be followed throughout.

First, a normal case will be taken up, carrying the patient from entrance to a hospital to operation—then from operation

* Read at the 10th annual meeting of the N. H. State Medical Society.

through convalescence, touching mainly on treatment not already written about. Asepsis is the foundation of a successful result, and this system is too firmly established to be even doubted.

The patient should enter a hospital *at least* three days before operation, in order to become used to new surroundings, and the preparation for operation. Up to the second day loose diet is permissible. The clinical chart is begun—heart, lungs, and urine noticed. The character of the pulse should be carefully examined by the surgeon. A thorough and complete surgical bath is given in the evening.

Next morning, the second day before operation, castor oil, or any laxative that will thoroughly clean out the bowels, should be given. Patient is kept in bed. Strychnia sulphate, grains 1-40, given by mouth three times a day, for this and the succeeding day, is an aid in going through the operation. This dose can be increased, or begun much earlier, if there is any indication for so doing. By this method, and the use of strychnia, not only does the patient endure the operation better, but also it shows the tolerance of the patient to strychnia, and this is important in the after treatment. During this day the diet is semi-solid, giving the foods that are most nutritious, and that are digested in the stomach, milk especially being avoided. A six quart vaginal corrosive sublimate douche at a temperature of 119°, or as hot as possible, is used. Strength of douche should be 1-1000 to 1-3000, and given twice a day, for at least three days preceding operation. This is especially important in complete lupterectomy. The surgical bath, excepting the hair, is repeated in the evening.

On the day before operation, a pint of the effervescent citrate of magnesia (formula is in the U. S. P.) is given in divided doses. Diet should be liquid, avoiding milk as before. During the forenoon, the abdomen from the umbilicus to the top of the vulva is shaved. The whole of the abdomen, including flanks, is washed with green soap and water, short and quick strokes of the scrubbing brush being used. Wash until the skin is fiery red; particular attention being paid to the navel. Then

the soap is thoroughly removed with alcohol or ether—or both can be used. Next a thorough rinsing off with corrosive, 1-1000. A soap poultice is next applied, and allowed to remain as long as endurable—generally two or three hours. Another washing with ether or alcohol until the soap is all removed, then the corrosive, 1-1000, is repeated, and a pad of the same strength is put on, covering all of abdomen. Perinæal straps are necessary to prevent the pad from rising up. This is removed the next morning, for the operation. All this is done with aseptic hands and aseptic material. It is an excellent idea to give the patient an abundant supply of water during this day in order to lessen the post-operative thirst, and also to increase the amount of urine, which is much diminished after etherization, especially that of laparotomies. This liberal allowance of water has never increased the nausea and vomiting. Occasionally, seven to ten grains of trional, given early in the evening, aids the person in passing a better night.

A primary and most essential object is to have the bowels move as soon as possible after operation. It has been found, after considerable experimentation, that the following will either cause gas or fœces to be passed within twelve hours after operation, in about eight out of ten cases—calomel, grains $\frac{1}{4}$, and aloini, grains $\frac{1}{8}$, given every half hour for six to eight doses, the last powder to be taken from an hour and a half to two hours before operation; the reason for this being that the absorbing power of the stomach is much diminished during this interval. Also, this method does not cause any distension of the bowels, both during and after operation. An enema of water, with or without glycerine, should be given about three hours before the time appointed for operation. Also two ounces of whiskey one half hour before, and 1-100 of a grain of atropine sulphate fifteen minutes before. The latter tends to diminish the nausea and vomiting, and enables the patient to go through the operation better. The urine is either voided or the catheter passed just previous to etherization.

The details and technique of the operating room are fully described in Hunter Robb's book on "Aseptic Surgical Tech-

nique," in a much better manner than I can give, and I would refer you to this work.

One other subject should be mentioned here, and about which a special paper should be written, and that is the etherization. This really concerns the after-treatment. A good many death certificates, many more than is generally supposed, which are signed "Shock following operation," should read "Shock following improper administration of ether." It is *very* easy to practically kill a patient with ether, and there are few men who know the right way to use it. An intelligent etherization saves the operator a great deal of worry, both during and after operation.

The operation is finished. The patient's pulse remains good (in judging of the pulse, three points should be considered—rapidity, regularity in force and rhythm, and tension.) The patient is transferred to a previously warm bed. A sheet, blanket, and counterpane are usually sufficient covering. An enema of about a pint of water can be given either on the operating table or after being put to bed. A nurse should remain in the room with a vomiting basin and plenty of towels at hand, until the patient is well out of the ether. If there is much nausea or any vomiting, inhalations of hot vinegar often relieve or check it. Patient is kept flat on her back for about twenty-four hours. A water enema every two or three hours will relieve the thirst. The lips and mouth can be moistened, if parched, with equal parts of glycerine and rose water. This mixture at first causes some heat and dryness, but the mouth feels much better in ten to fifteen minutes. An hourly record of the pulse and three hourly of the temperature should be kept. Respirations should be noticed, also. About midnight, if the stomach has been quiet for two hours, a drachm of water, warm enough not to be sickish, can be tried; and if no nausea follows, may be repeated every quarter hour, for four or five times. Ice should not be allowed, as it increases the thirst and is apt to upset the stomach. The water can be followed by teaspoonful doses of milk and lime water, toast water, arrow-root gruel, beef tea made by the cold process, or Horlick's malted milk.

Never awaken the patient from sleep, unless there is some special reason for so doing. Stupor or coma must not be confused with sleep. A light can be kept in the room but should be shaded—also see that the light is not reflected by any mirror.

*Cool cloths over the forehead and eyes are restful. Keep the sheets free from wrinkles. Other minor points will suggest themselves from watching the patient. Fresh air, avoiding draughts, is never harmful. In about twenty-four hours, the patient should be turned on her side, and the back and legs rubbed with alcohol. The bowels should be started as soon as possible. One half grain of calomel with or without soda is given every half hour for four to six doses, and followed in about two hours by some saline. Sometimes an enema of glycerine and water helps out. The saline, if effervescent, should be given flat. Meanwhile the back and legs have been rubbed several times, and nourishment given as opportunity offered. Small amounts and frequently repeated is the best way. The urine can be passed whenever the desire to do so is felt. The parts are washed off afterwards. If there is inability to pass water the usual means of aiding urination except, of course, hot cloths over the bladder, can be tried. The catheter should be the last resort, and must always be passed under strict aseptic precautions. There can be no excuse for neglecting surgical cleanliness in catheterization. If there is any distension of the bladder, not more than five hours should go by without urination in some way, the catheter being withheld as long as is safe. The urine is diminished in amount after etherization—especially so after laparotomies. The liberal allowance of water during the day preceding operation, tends to increase the amount excreted afterwards. A sharp rise of temperature within eighteen hours after operation, rarely indicates sepsis. With a normal case this rise occurs but occasionally and generally quickly subsides. For pain, morphine should never be used. Codeine in one to three grains sub cut. and repeated as needed, is generally sufficient to control the pain.

After the bowels have moved thoroughly, the diet can be increased; lemon jelly is very acceptable; egg nogs can always be taken if the milk is peptonized. All fluids should be "chewed," that is sipped slowly. Trionial is indicated for insomnia. Solid diet is ordered when safe. Tea and coffee are not allowed, and all pastry, sweet-meats, fried articles, pork, hot bread and the like, are to be avoided.

The stitches, if there are any to take out, should be removed by the tenth day—stitch hole abscesses, which show carelessness somewhere, are sometimes preceded for several days by a rise of temperature. Hydrogen dioxid and an ice bag, is good treatment for this. For constipation, the use of cascara sagrada for seven to ten days, followed by the A. S. & B. pill is very satisfactory. The patient may sit up in bed by about the sixteenth day—earlier or later according to her condition. Then comes chair and blankets, wrapper, etc.

The use of Gude's pepto mangan enables the patient to gain strength faster. An abdominal supporter of some sort should be worn for a year—day and night for the first month. The cost is six dollars to twelve dollars, and any dealer in surgical appliances can make one from these measurements: length of incision, and circumference of the flanks over the iliac crests.

Of course circumstances, such as emergency operations, may modify what has been said.

SHOCK FROM HEMORRHAGE.

In considering the treatment of shock in general, three drugs are to be especially mentioned; first, brandy or whiskey, which are heart stimulants; second, strychnia, which is a heart tonic; third, digitalis, which is both a tonic and stimulant to the heart. As a certain result is desired, these drugs must be pushed until that result is attained, irrespective of what the dose-book says.

Now, the patient lies on the operating table, the operation having been finished and the dressing applied. The skin is clammy and white, pulse 160, and has no tension—there has

been a considerable loss of blood—what is to be done? First resume the Trendelenburg posture, if the patient has been lowered; warm blankets and heaters put around, being careful that each heater is sufficiently covered so as not to burn the skin. One heater should be placed next to the heart, and one to the soles of the feet, six to ten being used in all. Strapping the legs and arms wastes time and adds further shock from exposure and manipulation. Sub cuts. of brandy should be given, followed by Tr. of digitalis, and then by sulphate of strychnia, using at least grains 1-20 of the last, at a dose; give an enema of one or two ounces of brandy and a drachm of digitalis.

Several assistants can be kept busy. There is no need of haste, but every move should count. If there is no response from the brandy or digitalis,—it is too soon to expect any results from the strychnia—a normal salt solution should be used under the skin, the following method being the quickest and easiest: all the articles mentioned can be found in all properly furnished operating rooms. If there is not a normal salt solution at hand, a good substitute is a drachm and a half of salt to a quart of water. Put this in a common, *clean* douche bag. A trocar such as is used with an aspirator, is attached to the tubing connected with the douche bag, and the joint tightened by a piece of silk ligature tied around.

The best places for injection are the subclavicular spaces, and under the fascia lata of the thighs. The subscapular space is good but the patient must be moved to reach it, and all unnecessary movements are to be avoided. The douche-bag can be held by a nurse or hung on any convenient hook. The trocar, with the solution dripping from the end, is thrust in, an inch or so from the edge of the sternum, parallel to, and about one and a half to two inches from, the clavicle. Pinch the tubing tightly with the thumb and finger of one hand, and strip the tube for two feet with the thumb and fingers of the other hand, thus forcing the solution under the skin. This is necessary as sufficient force cannot be obtained by elevating the douche-bag. Keeping hold tightly with the hand last men-

tioned, relax the pressure of the first hand, and allow the tube to fill up. Then repeat the process until the skin is distended to size of a lemon. Next inject under the other clavicle, then under the fascia of one thigh. By this time the solution has been absorbed from the first place of injection, and the round can be repeated. Gentle rubbing of the tissues aids the absorption, and it is surprising how rapidly the solution is taken up. Continue thus until an improvement is felt in the volume of the pulse. Then wait with finger on pulse, and if the volume decreases, use more solution. From two to three quarts can thus be used, if so much is needed. Beyond some soreness of the places injected there will be no trouble. If suppuration follows, it shows carelessness. This method is described in detail, as no mention of it has ever been noticed, though I presume it has been used before. Keep the patient on the table continuing treatment as indicated, until it is safe to move her—generally within eight hours. To test the pulse lower very slowly from the Trendelenburg. If the pulse weakens, elevate again. A careful and patient persistence will save about every case.

When removal is safe, put patient into a warm bed, avoiding all sudden and rough movements. Omit the brandy first, then the digitalis. The strychnia should be continued unless symptoms of poisoning occur, when the stopping of the strychnia generally is sufficient. If not, a drachm to a drachm and a half of the bromides by rectum, will stop the twitching. Champagne is an excellent aid, and can almost always be retained by the stomach, if given flat, and in teaspoonful doses. When the pulse reaches 110 with good tension, and the temperature is at least normal, practically all dangers are passed. As the stomach is reserved for medicine, nourishment is given by rectum.

The best enema, as found by experimentation, is composed of peptonized milk, two or three ounces, either the white or the whole of an egg, a teaspoonful of pressed meat juice (steak cut thick, from the round, broiled over hot coals, and juice extracted by a press), with fifteen grains of salt. Stimulants

and medicine can be added if needed. This enema is more rapidly absorbed than any other, and can be given every three or four hours. A cleansing enema is necessary once a day. A few drops of laudanum, arrowroot infusion, or a starch solution will allay any irritability of the rectum.

Watch the patient carefully, keep the pulse within control by strychnia, nourish up to the limit, and convalescence will not be interfered with.

SHOCK FROM ETHER.

Occasionally this is not preventable ; almost always it is. The treatment does not differ much from that of hemorrhage. Plenty of fresh air is important, and oxygen is more strongly indicated. Once in a while the use of the salt solution is of service. The above mentioned heart stimulants and tonics, pushed to the desired result, are sufficient in most cases. The Trendelenburg posture should be kept up longer. The patient should not be removed until pulse has remained good for at least one-half hour. The stomach is more irritable, and more or less vomiting the rule. This is usually over in from eighteen to twenty hours.

VOMITING.

Preventive measures are, the use of atropia, as mentioned before, proper administration of ether, and the withholding of everything by mouth for about twenty-four hours. A mustard plaster—using a teaspoonful of mustard to three or four of flour—placed over the epigastrium, or an ice bag in the same region, may be of service. Various and numerous medicines have been tried to check or stop the vomiting. The classical oxylate of cereum is of no service. Cocaine is useless, perhaps, because not given in large enough doses. The following are more reliable, though none are sure: one fourth drop of carbolic acid every hour, for three or four doses ; equal parts of creosote and compound tincture of iodine, in drop doses. Electricity is of no benefit. One method that is worthy of trial is counter-irritation over the lower cervical and five upper dorsal vertebræ. By far the best treatment, however, is to let the

stomach alone, allowing nothing to be swallowed, and nourish by rectum. If the strength of the patient is good, a full quantity of water may be given by mouth. This is promptly vomited, and seems to clear out the stomach. As a last resort, the stomach can be washed out. The condition of the patient will determine what is best in any special case.

SECONDARY HEMORRHAGE.

To the classical symptoms of pale lips and ears, pinched and staring expression of face, cold and clammy skin, dilated pupils, rapid pulse, and so forth, one more may be added,—sharp, knife-like pains in the lower part of the abdomen, and severe enough to almost double up the patient. This pain is different from the rubbing of inflamed intestines over tender spots: it is more sudden, shorter, and severe.

The treatment is, of course, to stop the hemorrhage, and it is worse than useless to depend on stimulation alone, as that only increases the leakage. The abdomen must be reopened, the sooner the better, and the source of the bleeding found and secured. However, digitalis and strychnia, in very large doses, will enable the patient to come out of the second operation in much better condition. Oxygen is of especial value here, but it must be combined with at least an equal part of nitrous-monoxid.

SEPSIS AND BOWELS.

These two go hand in hand, and will be spoken of together. In the treatment of sepsis, one thing *must* occur,—free and abundant watery movements of the bowels. The Alonzo Clark method of using opium has, I think, been almost entirely discarded. Codeia, in one to three grain doses, sub cut., is used for the pain. Aside from free catharsis, whiskey and strychnia are essential.

The preventative measures of sepsis can be summed up in one word,—asepsis. There is more or less—generally more—abdominal distension. Turpentine stupes, almost to blistering, are useful. Hot wormwood and rum is excellent for the soreness. Sometimes an ice-bag will give relief, but this should

rather be avoided. If calomel, followed by a saline, is not retained, a drachm of comp. jalap powder may be tried. Comp. liquorice powder, finely triturated, may answer. Epsom salts, by mouth or rectum, quite frequently aid in securing a movement.

High turpentine enemata, one to two ounces of turpentine to a pint of water, should be used every three hours. In inserting the tube, be sure the distal end does not curve back and down, instead of passing the rectal folds of the mucous membrane. That this occurs, has been fully demonstrated by Maurice Richardson, of Boston. The paralysis of the intestines is *very* hard to overcome, and a knowledge of various methods is useful. The chief trouble in causing a movement is the tiresome regularity with which the stomach returns everything given, in spite of all efforts to the contrary.

The clinical picture of pain, increasing distension of abdomen, drawn and pinched look of the face, the increasing rapidity and weakening of the pulse, the "septic odor" of the patient, the temperature hanging; all these, once seen, are not often forgotten.

But, on the other hand, there is danger of doing too much and exhausting the patient by unnecessary treatment, and it requires great nicety of judgment to know what to do and when not to do it. A single case of this nature, with the accompanying worry and care, will teach a man a great deal, and should make a convert of any doubter, to aseptic methods.

However, never give up; patients have been pulled through by persistent efforts. Strychnia is a tonic to the intestinal nerves and ganglia, and even when it does seem as though the bowels would never move, gas may be passed, which means that all your efforts have at last accomplished something. Now is the time for watchful waiting. Keep up the vitality of the patient, for if this holds out, it is only a question of time before more gas comes, then a dejection,—the distension is relieved, the vomiting becomes less severe, and the outlook in general is much more hopeful. A rectal tube, kept in for fifteen minutes, at a time, will assist the passing of gas. Watch

the patient's strength continually, as the numerous dejections are weakening.

CYSTITIS.

Almost always preventable. As soon as it appears, ten grains of ammonium benzoate every two or three hours, with saccharine and fluid extract of cornsilk three times a day, is often sufficient for treatment. Infusions of buchu, or lithia tablets, give good results. A large allowance of plain water should not be forgotten. Long, hot douches twice a day are most excellent.

Washing out the bladder—a boric solution may be used—is sometimes needed. If these measures do not suffice, and the inflammation still continues, the bladder should be examined by the Kelly method, and his line of treatment followed throughout.

Fæcal fistulæ and the subject of drainage do not come within the scope of this article.

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Fatal Cases of Poisoning with Sorrel Leaves—Dr. Fleming records in the *Lancet* two fatal cases of sorrel poisoning, in which two little girls succumbed to the effects of oxalic acid poisoning after eating sorrel leaves. The leaves were eaten in the afternoon of the day previous to that on which the children were brought for treatment, which consisted in the administration of chalk suspended in milk, with lime water and castor oil. Both died, one eighteen and the other twenty hours after taking the poison. Post-mortem examination revealed no noteworthy appearances except slight congestion of the small intestine in one case. Toxicological examination indicated the presence of a small quantity of oxalic acid in one case. An exploration of the fields which the children visited gave no indication of any poisonous plants, but arum and conium, besides the sorrel, and no trace of the two former was found in the stomach. —*Pharm. J.*, 1896, No. 1357, 523.

The Value of *Cimicifuga Racemosa* in Pregnancy and Labor.*

By F. C. KINNEY, M. D., Greensboro, Vt.

I do not remember, as a medical student, ever having my attention called, either by lecture or in text book, to any special value of Black Cohosh in Obstetric practice, but the "Medical Record" of August 29th, 1885, contained an extract of a paper read before the "Chicago Gynecological Society," by Dr. J. S. Knox, which I read with great interest.

The more so, perhaps, as but a day or two after I read this article, I had been consulted by a gentleman, whose wife was then six months pregnant, who, in two previous confinements, had long, difficult labors, resulting in forceps delivery and bad lacerations.

This gentleman asked me if there was "nothing to be given to make child bearing easier" for his wife. I counseled him about her dress, diet, habits, regulation of bowels and kidneys and asked him to call next day when I would have some thing ready for him. I again read the article referred too, and decided to give the *cimicifuga* a trial in this particular case. I accordingly made this mixture :

R. F. E. *Cimicifuga Racemosa*, ozi.

Comp. Syr. *Sarsaparilla*, oziii.

M. S. Teaspoonful at night on retiring.

This experiment, for it was neither more nor less, was tried to relieve the patient's mind for she "knew she would have just such another time" as she had before.

Her first labor resulted in death of child and a bad laceration. Her second child survived the ordeal, but her perineum was again ruptured. This prescription was taken faithfully during the last three months of her third pregnancy.

*Read at the 83rd annual meeting of the Vermont State Medical Society, 1896.

Let me now introduce the conclusions arrived at by Dr. Knox, from his clinical observations of a larger number of cases treated with the Cohosh.

"1st Cimicifuga has a positive sedative effect upon the parturient woman, quieting reflex irritability; nausea, pruritis and insomnia, so common in the last six weeks of pregnancy are always rendered less distressing, and often disappear under its administration."

"2d Cimicifuga has a positive anti-spasmodic effect upon the parturient woman. The neuralgic cramps and irregular pains of the first stage of labor are ameliorated and often altogether abolished. In fact during the first indiscriminate use of the drug in all cases, says Dr. Knox, I had the mortification with a few women of terminating the labor so precipitately and without prodromic symptoms as to be unable to reach the bedside before the birth."

"3d. Cimicifuga relaxes uterine muscular fiber and the soft parts of the parturient canal, by controlling muscular inability, thus facilitating labor and diminishing the risk of laceration."

"4th. Cimicifuga increases the energy and rhythm of the pains in the second stage of labor."

"5th. It is my belief that Cimicifuga, like ergot, maintains a better contraction of the uterus after delivery. It is my habit, however, to administer from fifteen to thirty minims of the Fl. Ext. of Ergot after the birth of the foetal head and I have had but few opportunities of testing this effect of the Cohosh."

Continuing, Dr. Knox says, My method has been to give fifteen minims of the fluid extract of Cimicifuga in Compound Syrup of Sarsaparilla each night for four weeks before the expected confinement.

One fluid ounce of the Fl. Ext. of Cimicifuga to three fluid ounces of Compound Syrup of Sarsaparilla, dose, one teaspoonful, makes just the required quantity.

Following the methods of Dr. Knox, it has become my usual custom, when notified that I was to be called to attend a confinement, to prescribe the Cohosh as above indicated. If from three to six weeks is to elapse before the expected confinement I order the mixture in teaspoonful doses on retiring.

If labor is to occur sooner, I advise teaspoonful before meals thrice daily.

In the past twelve years I have attended over two hundred labors, about half of them, or one hundred cases, received the preparatory treatment.

Among these one hundred cases there have been six cases in which the labor was completed before my arrival, and three cases of forceps delivery. One of these was in feet presentation, and forceps were applied to deliver the after-coming head; in one they were used to deliver quickly on account of uremic convulsions; the foetus being dead; and one case of a small mother with narrow pelvis, and a nine pound child after a labor of fifteen hours.

I have not kept a very close record of the time occupied in the labors as I had no idea of reporting them, but they average less time than those cases not treated by the cohosh, and have proven more comfortable ones to manage.

In three cases, each in their third pregnancy, and where the Cimicifuga had been administered for from three to six weeks, with a history of previous labors lasting from twenty-four to forty-eight hours, the labors were finished in from two to six hours.

The first of these cases was the wife of the gentleman who first consulted me, as mentioned before. Her first two labors lasted thirty-six and sixty hours, respectively, with one dead and one living child, and a laceration in each case, the forceps being used to terminate the labor. Her third labor began just before noon, Jan. 12th, 1886. I saw her at 2 p. m., and at 4 p. m.; her labor terminated in the birth of a female child heavier than either preceding, also females. She expressed surprise that she was through so quickly and easily.

Case No. 2 had never had less than eighteen hours of labor, and one of thirty. After about a month's use of the Cohosh she gave birth to her third son with a labor of less than three hours.

No. 3 had given birth to one male and one female child her shortest labor being 26 hours. About a month previous to confinement I prescribed the Cohosh mixture for her and her

third labor was completed in less than three hours, I barely having time to reach her bed side. In my experience there is less shock with, than without this treatment.

Patients are less nervous, have fewer cramps, do not suffer so much from vomiting during labor, are freer from pain in the intervals between the uterine contraction, and the second stage of labor is shortened by the use of the *Cimicifuga*.

I am not in favor of any routine practice, but it has become a routine practice with me when consulted, as much to prescribe the *Cimicifuga* mixture as to advise about dress, diet, and habits, and I am convinced that the use of the *Cohosh* in all cases renders a very large percentage of the obstetric cases occurring in my practice, shorter, easier and safer for both mother and child.

In calling the attention of the society to this particular use of this drug, if I shall be able to induce any brother physician to study this question for himself, I shall feel that my effort has not been in vain, as I think we are all agreed that any thing that can be done *should be done* to make child bearing a less trying ordeal to women than it now is.



What the Tongue Indicates.—A white tongue indicates febrile disturbance; a brown, moist tongue—indigestion; a brown, dry tongue—depression, blood poisoning, typhoid fever; a red, moist tongue—inflammatory fever; a red, glazed tongue—general fever, loss of digestion; a tremulous, moist and flabby tongue—feblenees, nervousness; a glazed tongue with blue appearance—tertiary syphilis—*Medical Age*.



How to Stop Hiccough.—Push out the tongue as far as possible and let it remain for some minutes. Repeat as often as is necessary.—*Exchange*.

The Philosophy of Sex.

BY H. EDWIN LEWIS.

In three papers.

III

The Attainment of Sexual Purity.

"Lack of knowledge concerning an evil is by far the most potent of all forces contributing to its growth and spread."

"New occasions teach new duties ; Time makes ancient good uncouth ;
They must upward still, and onward, who would keep abreast of Truth ;
Lo, before us gleam her camp-fires ! We ourselves must Pilgrims be,
Launch our Mayflower and steer boldly through the desperate winter sea,
Nor attempt the Future's portal with the Past's blood rusted key."
—Lowell.

It is of the utmost importance that the sexual relation between men and women should become purer than it now is.

The last few hundred years have witnessed wonderful improvement in most things pertaining to life and living, but to our shame it must be said, that sensuality has fully as firm a hold to-day in governing the sexual relation as it had during the Dark Ages. In many ways the sensual influence may not be as apparent now as it was then. People long ago learned to keep their affairs more to themselves and less before the public, for as living grew more complicated they naturally became opposed to having their enemies and competitors familiar with every act of their lives, since many times those very acts laid them extremely liable to ridicule and contumely, and it did not take them long to find out that the only effectual means of protection against such onslaughts, just or unjust, was to keep one's affairs secret. Thus the practice of living two lives, one especially for *public scrutiny*, and the other for *personal pleasure*, evolved itself into a fine art, and has been handed down to us from generation to generation.

But, though years and years have established the habit of living double lives, the fact remains unaltered that no matter how grand and noble a man's public life may appear, if his private life is not consistent with it, he is perpetrating a far greater wrong on society than the man who is perhaps much worse than he, but who does not claim to be that which he is not. It is a thousand times easier to cope with a known enemy than one whose weapons are unexpectedly hurled at us from some dark hiding place. Sexual abuses are enemies of this latter type, and consequently few appreciate the real danger from them because they are so completely hidden by deceit and false pretensions. But they are present, nevertheless, and though working insidiously their baneful influence is becoming more evident with each succeeding generation.

Let us consider for a moment one of the tendencies of 19th Century literature. To be sure, modern fiction is not a vulgar exposition of disgraceful scenes couched in language devoid of even a suspicion of modesty or morality, but too much of it aims to imply that which it does not express. Sailing under the guise of virtuous respectability the climaxes in many recent books are so suggestive that no room is left for doubt as to their evident meaning. The readers supply the missing parts, each to his own satisfaction, and probably many of the suggestive situations receive coloring far in excess of even the original intention. All of these "suggestive" books claim to point out a 'moral.' Undoubtedly they do, but as a matter of fact, the path leading up to the 'moral' is often times so filthy that our eyes are effectually blinded long before the 'moral' is reached. Therefore any beneficial result which is intended is hidden by the methods employed in endeavoring to attain it.

Can this be the highest literature? Is it necessary for a beautiful woman to fall ere she can live happily and become a devoted wife and mother? Must a young man "drain the cup of a fast life to the bitter dregs" before he can become a popular society leader and club man? Thank Heaven, no! and many present-day authors are giving us purer pictures of life, realizing that the healthier tone there is to a book, the more

actual good it can accomplish. But the criticism can be made against too many writers, that their books are not made to educate nor elevate, *but to sell*. That their class of work is the most popular is proven by the avidity with which it is read.

In regard to the Drama almost the same criticism can be made, though in a somewhat less degree. Those plays, particularly of French origin, which from a financial standpoint have been the most successful during the last quarter century, have been of the suggestive type, with but few exceptions. The actress with the greatest *risque* and abandon in her stage manner has been the usual one to draw the largest audience—and salary. Her purer, and consequently poorer sisters have been pushed aside to make way for her, though she may have had no experience except possibly that of leading lady in some particularly spicy divorce suit or society scandal.

No vulgar word has been spoken to offend a polite audience; every effort has been directed instead to making the *unspoken* part stand forth, the part which had humanity's animal nature for its *motif*. And, made up of fathers and mothers with their sons and daughters, that same polite audience has applauded to the echo every climax, no matter how suggestive, no matter how dependent on depravity and sin. This can hardly be called the higher class of Dramatic Art, for viewed in the light of Progress, the true mission of the Drama, identical with that of Literature, is to make us better men and women—and it can only be done by portraying healthy scenes and character. Realism of the proper kind will never prove objectionable, but there is absolutely no excuse for the realism which tends to make us worse than we are, or draw us deeper into the mire. That this has been the tendency of many recent dramatic and literary productions is, alas, too true.

Now why is this so? Are we, as a generation, more depraved sexually, are our thoughts more sensual and lascivious than were those of our ancestors? Are we, though more skilled in covering up our sexual natures, less able to control them?

Questions like these are sure to suggest themselves to those who have ever given any thought or attention to the sexual evil,

but their answer is largely a matter of personal belief. People in glass houses are not, as a general thing, inclined to throw stones, and so the evil of sexual intemperance has had few assailants.

But it is a great evil and one which people will soon begin to realize outstrips all others in magnitude and universality. Optimists may tell us with all truth that actual prostitution is on the decrease, that law and order are successfully wiping out infamy and crime, but, alas, they cannot deny that marriage vows are more often broken to-day than at any other time in the Christian Era, nor gainsay the fact that promiscuous sexual intercourse is reaching proportions which seriously threaten the sanctity of the home and honest parentage. Statistics prove beyond controversy that illegitimate births are increasing from year to year, and medical men well know that abortions and infanticides occur more often nowadays than ever before.

If there is one who doubts that the sexual evil is a fearful one let him spend a short time in a country town and affiliate with the young men. The chances are that he will observe sufficient depravity and lewdness to convert him into the rankest of moral pessimists. The young women are purer as a rule, but to his surprise many he would least suspect of wrong, will be found eligible to wear the 'scarlet letter.' These young men and women, often looked on as examples of purity in their community, marry sooner or later, but it does not have to be said that their private lives scarcely tend to make them the best of husbands and wives.

If there is another who thinks that this sexual evil is being magnified let him go into some Children's Hospital and see the number of little innocent ones who show the effects of lust and sin. Then, if possible, let him visit one of the venereal clinics held daily at some large City Hospital, and see some of the more striking results of sexual depravity.

Can people who have seen all these still claim that our moral condition is higher than ever before? God forbid that it should be any lower, for man's sexual status is already far enough below his claims of development and superiority. Why it is so, let others say, but it is a fact that cannot be denied that sexual

progress, if the meagre improvement that has been made can be termed progress, has by no means kept pace with the onward march of other reforms.

As thinking men and women we ought to consider this subject, and give to it our best thought. If we do this, and we must sooner or later, we will surely awake to the necessity of controlling our animal passions, not only for our own benefit, but for our children's. No one of us with even the smallest hope for the future, the humblest ambition for something better or higher in this or another life, can become reconciled to the belief that the ultimate end of all mankind is degeneration. No! a thousand times no! and though man will have a bitter struggle with the demon Self, he will conquer and come forth from the fray not a new being, but a purer one.

A mere flight of fancy, someone says.

Maybe so, but already many a young man and young woman are heartily disgusted with the sexual relation as they see it considered around them, and the time is not far distant when they will so express themselves. The nature of the subject makes it doubly hard to broach, and they do not realize that every day adds to the evil to be overcome. If they only knew that the time was never as ripe as now for beginning this great work of crushing out lust and impurity, perhaps it would spur them into action, and once started, this war against passion would inaugurate the greatest era of reform the world has ever seen. Countless Christian men and women, who as yet do not know the real use of the sexual function would gladly lend their influence to the bettering of the race if the scales were only removed from their eyes, and their united effort alone would be sufficient to make this movement for purer lives into a mighty power for good.

But it is not to be expected that we in this generation, nor even those in the next, can overcome once and for all our inherent sensuality. The inherited lust of past generations has too firm a hold in our natures to be uprooted in a day, but we can make a beginning, even though a humble one. And judging from the past triumphs of other reforms, who shall say that a

condition approaching perfect sexual purity is not possible in the years to come? The possibility is certainly worth our best effort, and though we may fail to achieve any great success in our own time, those who come after we are gone, will be able to better carry on the work that we start.

Two points of attack offer themselves, the home and the school.

Every great reform which depends on character must begin with the children. Their minds are obviously more receptive and their characters more amenable to impression. The home influence is always the one to leave the deepest imprint on a person's life, and those who come in touch with many children well know that their characters rise or fall accordingly as their home training is good, bad, or indifferent. In regard to teaching children about sexual matters there is a great diversity of opinion. To within a few years but few parents have ever talked with their children concerning their bodies. They have shrouded sexuality in the deepest of mystery and made everything pertaining to sex the most forbidden of all subjects. Instead of gaining the confidence of their boys and girls and telling them wisely and purely, when they are old enough to understand, all about their bodies and the reproductive function, they have rebuked their most innocent remarks and even punished them for asking the questions suggested by those things which live children cannot fail to see.

"They will find out soon enough about such things without our telling them," has been the spirit of many a parent.

Yes, and their children have found out what sex meant, but the knowledge has been too often gained at the cost of honor, and reputation. How many thousands of mothers have suffered the pangs of deepest sorrow when they realized that their daughters had "found out" for *themselves* what sex was for—but *too late to avert disgrace and dishonor*. How many fathers have cursed heaven and earth when they realized that their sons had indeed "found out" all about sexuality—but *too late to prevent loathsome disease or a life of dissipation!* What suffering, what misery might have been saved in the past if more parents had only

given their children the benefit of their own knowledge ! Only taken them and taught them Nature's reproductive laws, simply and truthfully ! And even supposing that new ideas were put into their minds, if the teaching was wise, would it not give them better protection against the designs of the wicked, than no knowledge ? Would it not give them a fairer chance to choose for, or against sexual sin, knowing the result of yielding to its temptations ? Most assuredly so.

This, then, is the opportunity offered in the home,—the giving a chance to the rising generation of becoming purer sexually. It is not only the duty but the privilege of every parent to instruct their children in the proper use, as well as abuse, of their bodily functions. The place for every child to discover that he or she has a sexual nature is in the home. The atmosphere of that home, and the honored respect which every child has, or ought to have, for its parents makes knowledge thus gained appear in a different and a far purer light.

No innocent inquiry should ever be rebuked. Children are naturally inquisitive and to wrap things in secrecy by not answering their questions is the poorest of all ways to satisfy their minds. Nor will indefinite answers do for them. Facts are what they want and facts they will get, if not one way, in some other, and perhaps a less pure one. It is for the parents, then, to see that those facts are obtained from the right source, the one which offers least danger of misinterpretation through lustful sentimentality or wilful design. That the home is the purest and best of all sources ought to require no argument.

* * * * *

The other point of attack against impurity commending itself because of the opportunity which it offers for ultimate success, is the school.

Without doubt the greatest factor in bringing the masses out of darkness into light is education. Under its influence crime is slowly but surely decreasing, and where the gaol and whipping-post once stood, a school house now stands. Within its walls the young of a nation receive the impulses for noble and valuable lives. New worlds of thought are being opened

to them, new power given them to work out their own destinies. Traveling throughout a country there is no better evidence of a community's progress than the school house which stands in its midst, expressing by its presence a mute but nevertheless eloquent promise for the future. Passing along a country road an Optimist can find no stronger, no more expressive argument against universal degeneration than the "little red school house" and its band of scholars. Well may it be said that the school is the "pulse of progress" for the real heart beat of a nation is best felt by getting in touch with its educational institutions.

Next to parents, school teachers have the best opportunity for moulding child character into what it should be, and in this work of purifying the sexual nature they can accomplish a great deal. One obstacle, however, which stands in the way, will first have to be removed, and that is the practice of having both sexes taught together. Some experience in teaching leads the writer to believe that school systems will never reach their highest state of efficiency until boys and girls, no matter how young, are taught separately. Physiologic teaching will certainly never be what it should, nor can all the functions of the body be ever safely considered in a mixed school. Further than this, as all teachers know, there is always a sort of restraint, a natural condition of reticence manifesting itself where both sexes are taught together which keeps many from being themselves or doing their best work.

The best system for teacher and scholar alike is that which places the boys by themselves under a male instructor and the girls by themselves under a female instructor. A man is certainly the one to study the psychology of the boy, and a woman that of the girl. Prominent educators have often told us that to be successful the teacher of a boy or a girl must anticipate every impulse, every tendency and emotion. But how unreasonable it is to expect a male teacher to understand the female mind and its manner of expression as a woman could, or *vice versa*, to expect a woman to understand the male mind and *its*

manner of expression as a man could ! The idea borders on the ridiculous.

No one can form a true estimate of a girl's temptations, her nature and its moods, and help her to a wise and pure knowledge of her physical being, like a woman. Likewise no one can understand the constitution of a boy's mind and give to him just the knowledge he needs to master himself and his passions, like a man. Therefore, properly divided into male and female schools, teachers of the same sex as the scholars may safely instruct the boys or girls under their care in the higher functions of the body, and thus be able to produce cleaner bodies and purer minds than is now possible under the mixed system.

Outside of their school life boys and girls should be allowed to mix freely. Their social life should be broad and of a nature calculated to overcome bashfulness, yet always sufficiently formal to maintain perfect respect between the sexes. Such a condition will be most easy to attain if the home and school teaching is liberal and discreet. No danger of bad results need be feared, for it is a misapprehension to think that a *proper* knowledge of sexual matters will harm anybody. *Lack of knowledge concerning an evil is by far the most potent of all forces contributing to its growth und spread.* The most rational, as well as the surest way, to overcome any great evil is to consider it in the light of reason and common sense. If it is an evil it will soon be evident, and if reason and common sense do not cause it to be shunned—nothing else will.

The sexual evil to be appreciated must be placed in its true light, and the home and the school have been given the power to dispel the shadows of ignorance which now surround it. Other factors like the church, the Young Men's Christian Association, and all other institutions which aim towards the uplifting of humanity, can unquestionably add to the result, but the great responsibility rests principally with the parents and the school teachers. If they are awake to the needs of the hour, the urgent demand for purer men and women, they can do a magnificent work through the children of this and coming

generations. If they allow the opportunity to pass without trying to accept it, they are false to every spirit of progress, or else too deep in the mire of sexual sin themselves, to even know that it is passing.

* * * * *

The benefits which would result from purer sexual relations ought to be evident to every one. Physiologists have known for a long time that nothing tends to lower the vitality of the whole body like sexual abuses. Nervous diseases and insanity can too often be traced to direct or hereditary abuse of the sexual function, and probably many nervous derangements supposedly resulting from "overwork" and "over study," could be laid to a like cause if the private nature of the abuse did not prevent accurate information. More self control and purer sexual relations would certainly tend to eliminate such ailments and avert their occurrence in future generations. Further than this, not only the nervous system, but the tone of the whole body would be higher, and consequently its power of resisting many other diseases would be increased.

If more people only knew how sexual abuses, by lowering bodily vitality, superinduce consumption, the most common, and doubtless the most deadly of all ills, these words might carry more force and importance. Many and many a young man could successfully combat any tubercular taint which he may have inherited *if he only would observe sexual continence until over the age of thirty*, in addition to ordinary hygienic precautions.

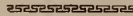
The best physicians are not telling their patients to-day that sexual intercourse is essential to physical health as some of them have in the past. They know better, and honest, God-fearing doctors have no desire to misrepresent actual facts, even though the knowledge they disseminate may be contrary to the wishes of the multitude.

In regard to the psychologic influence of a higher standard of sexual purity, little need be said. Every expression of the mind would be purer, and Literature, Art and Music as psychologic products would receive fresh impetus from being less trammled by sensualism and immorality. Life and living

would appear in a purer light, the sexual element would no longer be considered as more important than anything else instrumental in the perpetuation of the species, and energies now latent would be directed to developing our intellectual and spiritual being.

Higher intellectuality and spirituality would prompt a less selfish union of kindred minds and while the physical expression of sex would still make man a positive force and woman a negative force in the human economy, they would, from the sexual standpoint, consider each other only as factors destined to fulfil the *natural* duty of reproducing their kind. They would not enter the marital relation blindly, and with no desire but the attainment of individual gratification; the purer condition of their minds would make such a union distasteful. But they would consider marriage a privilege, a chance for them to contribute their share to the future of mankind; not only in a physical sense, but by the affiliation of two intellects and two spirits in thorough sympathy with each other to uplift the present generation and therefore benefit the next and succeeding ones.

The right of every child is the honest legacy bequeathed by a good healthy parentage. As men and women proudly living in a Christian age we must see that our children receive their honest inheritance of good health, good minds and a parentage which will never bring a blush of shame to their cheeks.



Hygiene of the Eye.—When the eyes ache close them for five minutes.

When they burn bathe them in water as hot as can be borne, with a dash of witch hazel in it.

After weeping bathe them in rose water and lay a towel wet in rose water over them for five minutes.

When they are bloodshot sleep more.

When the whites are yellow and the pupils dull, consult your doctor about your diet.—*Med. Brief.*

The State Medical Society Meeting.

The Vermont State Medical Society met in its eighty-third annual session at St. Johnsbury, Vt., on Thursday and Friday, October 15th and 16th, with the vice-president, Lyman Rogers of Bennington in the chair, Dr. C. F. Branch, the president, not being present.

The session was opened with prayer by Rev. E. T. Fairbanks of St. Johnsbury.

Prof. Wm. T. Smith of Hanover, N. H., presented an obituary of the late C. P. Frost, M. D., of Hanover, Dean of Dartmouth Medical College, in which he paid a high tribute to Doctor Frost.

Dr. Frost began the practice of medicine in this State and was for several years an active member of this society. After his removal to New Hampshire he became an honorary member.

Dr. F. W. Comings, of North Troy, presented a paper on "Opium, Its Use and Abuse."

The subject of the anti-vivisection bill for the District of Columbia was discussed and the following resolutions were unanimously adopted:

Resolved, That this society does most heartily endorse the protest of The American Medical Association against the passage of Senate bill No. 1552, entitled "A bill for the further prevention of cruelty to animals in the District of Columbia."

Resolved, That the Secretary be directed to forward a copy of these resolutions to our State Senators, and to the Chairman of the Committee on the District of Columbia of the House of Representatives and of the Senate of the United States.

The Secretary was instructed to issue credentials to such members as wished to attend the Pan-American Congress, to be held at the City of Mexico.

Dr. W. H. Vincent, of Orwell, read a paper on "The Treatment of Acute Peritonitis from a Medical Standpoint," in which he reported twenty-three cases of acute peritonitis treated by him medically with two deaths; one of the fatal cases being a case in which an operation was refused for intussusception, thereby limiting the series on actual report to twenty-two cases with but one death.

Dr. E. M. Brown, of Sheldon, presented an interesting paper on "The Mineral Springs of Vermont."

A paper entitled "Twelve Years Practice of Obstetrics" was read by Dr. J. Sutcliffe Hill, of Bellows Falls, urging the need of carrying out the principles of antiseptics in obstetrical practice.

The address on "State Medicine" was presented by Prof. J. Henry Jackson, of Barre.

At the evening session on Thursday, Dr. Lyman Rogers, of Bennington, presented the Vice-President's annual address, entitled "The Practice of Medicine in 1858 and 1896," in which he dwelt on the changes which

have come into medical and surgical practice during the past thirty-eight years.

At the same session Dr. Henry O. Marcy, of Boston, gave a most able and interesting address on "Hernia and Its Cure," illustrated by sixty stereopticon views.

At the close of the evening session the annual banquet was spread at the St. Johnsbury House; Dr. J. B. Wheeler, of Burlington, presiding as anniversary chairman.

At the opening of the Friday morning session the following officers were elected:

President, F. R. Stoddard, Shelburne; Vice-President, M. D. Warren, Cabot; Secretary, D. C. Hawley, Burlington; Treasurer, D. G. Kemp, Montpelier; Auditor, E. S. Allbee, Bellows Falls. Executive Committee, F. R. Stoddard, D. C. Hawley, J. N. Jenne; Publication Committee, D. C. Hawley, H. N. Jackson, M. C. Twitchell; License Censors, H. C. Tinkham, C. W. Strobell; Committee on Necrology, C. W. Peck, E. M. Brown, D. F. Rugg; Anniversary Chairman, W. S. Nay, Underhill.

The address in Surgery was ably delivered by Dr. D. C. Hawley, of Burlington, on the subject of "Diseases of the Rectum.

"The Treatment of Inebriety" was discussed in a paper by Dr. W. S. Nay, of Underhill. He advocated the hypodermic injection of nitrate of strychnia, as the most valuable medicinal agent in these cases.

A paper was read by Dr. E. D. Ferguson, of Troy, N. Y., Secretary of the New York State Medical Association, on "A Class of Fatal Cases, Presumably due to Intestinal Ptomaines."

Dr. E. H. Ross, of St. Johnsbury, presented the "Operation of Shortening the Round Ligaments" for retroversions of the uterus.

Dr. J. H. Hamilton, of Proctor, read a paper on "Puerperal Fever," in which he claimed that auto-infection was the most frequent cause. Antiseptic precautions on the part of both physician and patient, were urged by the writer.

Dr. E. B. Aldrich, of St. Johnsbury, eloquently delivered a high tribute to Dr. Morton, the first demonstrator of surgical anæsthesia, in an address entitled the "Discovery of Ether.

"The Value of *Cimicifuga Racemosa* in Pregnancy and Labor," was the subject of a valuable paper by Dr. F. C. Kinney, of Greensboro.

Twenty-four physicians were admitted to membership.

A legislative committee was appointed to take active steps towards securing, at the present session of the Legislature, the enactment of a law establishing a State Board of Medical Examiners.

A committee of three was also appointed to join with similar committees of the American Medical Association, or of other State Medical Societies, should such be appointed, in entertaining members of the British Medical Association, while in this country, next year, en route to or from the meeting of said Association in Montreal.

The next annual meeting will be held in St. Albans, October 14 and 15, 1897.

All of the papers were enthusiastically discussed, more than usual interest being shown at every session. The whole meeting was voted a great success and much credit is due the Committee of Arrangements.

Proposed Medical Legislation in Vermont.

The following bill has been presented before the State Legislature :

SECTION 1. The governor, with the advice and consent of the senate, shall appoint seven persons, residents in this State, who shall be graduates of a legally chartered medical college or university having the power to confer degrees in medicine, who shall constitute a board of registration in medicine. Such persons shall be appointed and hold office for terms of one, two, three, four, five, six, and seven years respectively, beginning with the first day of January, A. D. 1897, and until their respective successors are appointed, and thereafter the governor shall appoint, before the first day of January in each year, one person qualified as aforesaid, to hold office for seven years from the first day of January next ensuing. No member of said board shall belong to the faculty of any medical college or university. Vacancies in said board shall be filled in accordance with the provisions of this act for the establishment of the original board, and the person appointed to fill a vacancy shall hold office during the unexpired term of the member whose place he fills. Any member of said board may be removed from office for cause by the governor. Said board shall consist of three allopathic, two homœopathic, and two eclectic practitioners.

SEC. 2. The members of said board shall meet on the second Tuesday of January next, at such time and place as they may determine, and shall immediately proceed to organize by electing a chairman and secretary who shall hold their respective offices for the term of one year. The secretary shall give to the State treasurer a bond in the penal sum of one thousand dollars, with sufficient sureties to be approved by the State auditor, for the faithful discharge of the duties of his office. The said board shall hold three regular meetings in each year, one on the second Tuesday of March, one on the second Tuesday of July, and one on the second Tuesday of December, and such additional meetings at such other times and places as it may determine. Five concurrent votes shall be necessary to effect a choice in the election of officers and in deciding such other questions as may come before said board.

SEC. 3. Any person twenty-one years of age and of good moral character, who is a graduate of a legally chartered medical college or university having power to confer degrees in medicine and said medical college or university being recognized, as determined by said board, shall, upon payment of a

fee of ten dollars, be entitled to examination, and, if found qualified by five or more members of said board, shall be registered as a qualified physician, and shall receive a certificate thereof signed by the chairman and secretary. Any person refused registration may be re-examined at any regular meeting of said board, within one year of the time of such refusal, without additional fee. And thereafter he may be examined as often as he may desire, upon payment of the fee of ten dollars for each examination. Said board, after a hearing, may, by unanimous vote, revoke the certificate of any person registered by them, who has been convicted before a proper court of crime committed in the course of professional business.

SEC. 4. All fees received by the board under this act shall be paid by the secretary thereof into the State treasury once in each month. The compensation, incidental and traveling expenses of the board shall be paid from the State treasury on order of the State auditor. The compensation of members of the board shall be five dollars each for each day actually spent in the discharge of their duties, and three cents a mile each way for necessary traveling expenses in attending the meetings of the board, but in no case shall any more be paid than was actually expended. Such compensation and the incidental and traveling expenses shall be approved by the board and sent to the State auditor, who shall certify to the State treasurer the amounts due as in case of other bills and accounts that are approved by him under the provisions of law.

SEC. 5. The board shall keep a record of the names of all persons registered hereunder, and a record of all moneys received and disbursed by said board, and said records or duplicates thereof shall always be open to inspection in the office of the secretary of state. Said board shall annually report to the governor, on or before the first day of July in each year, the condition of medicine and surgery in this State, which report shall contain a full and complete record of all its official acts during the year, and shall also contain a statement of the receipts and disbursements of the board.

SEC. 6. It shall be the duty of the board to investigate all complaints of disregard, non-compliance, or violation of the provisions of this act, and to bring all such cases to the notice of the proper prosecuting officers.

SEC. 7. The examinations shall be, in whole, or in part, in writing, and shall be of a practical character. They shall embrace the general subjects of anatomy, physiology, chemistry, pathology, practice of medicine, surgery, and obstetrics, and such other branches as the board may deem necessary, and shall

be sufficiently strict to test the qualifications of the candidate as a practitioner of medicine.

SEC. 8. Any person who shall practice medicine or surgery under a false or assumed name, or a name other than that under which he is registered, or who shall personate another practitioner of a like or different name, or who, not being registered as aforesaid, shall advertise or hold himself out to the public as a physician or surgeon in this State, or appends to his name the letters "M. D.," or uses the title of doctor, meaning thereby a doctor of medicine, shall be punished by a fine of not less than one hundred nor more than five hundred dollars for each offense, or by imprisonment in jail for three months, or both.

SEC. 9. This act shall not apply to persons legally licensed or exempt under the provisions of former acts, or to commissioned officers of the United States army, navy, or marine-hospital service, or to a physician or surgeon who is called from another State to treat a particular case, and who does not otherwise practice in this State, or to prohibit gratuitous services.

SEC. 10. For the purposes of the appointment of this board, this act shall take effect upon its passage, and shall take full effect on the first day of January in the year eighteen hundred and ninety-seven.

SEC. 11. All acts or parts of acts inconsistent herewith are hereby repealed.

Staff Appointments of Fanny Allen Hospital.

The following physicians have been appointed to serve at Fanny Allen Hospital for the coming year: Attending staff,

Surgeons—Dr. W. R. Prime, Burlington; Dr. O. W. Peck, Winooski; Dr. W. G. E. Flanders, Burlington.

Physicians—Dr. P. E. McSweeney, Burlington; Dr. Omar H. Allard, Winooski; Dr. Walter McKenzie, Burlington; Dr. J. W. Sheehan, Winooski.

Consultants, Surgeons—Dr. W. B. Lund, Burlington; Dr. J. B. Wheeler, Burlington; Dr. Geo. C. Briggs, Burlington; Dr. L. M. Bingham.

Physicians—Dr. A. P. Grinnell, Burlington; Dr. J. L. Larocque, Burlington; Dr. F. E. Clark, Burlington; Dr. Elzear Lamothe, Winooski.

House Physician—Dr. E. P. Lunderville.

Chaplain—Rev. J. L. M. Cam.

Specialist, Eye, Ear and Throat—Dr. J. H. Woodward; pathology, Dr. Jo H. Linsley.

The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

H. EDWIN LEWIS, MANAGING EDITOR.

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EDITORIAL,

The Proposed Medical Laws,

It is with no little approbation that we have observed the movement on foot to provide our Green Mountain State with medical laws somewhere near the standard set by other states. For many years Vermont has been a favorite field for the medical quack in nearly all of his various disguises ("divine-healer" being his latest makeup), and it is about time that the people were protected from his seductive influence by suitable legislation. The proposed laws which are now before the present Legislature are a vast improvement over those in force, but there are several changes which ought to be made in them in order that they may more fully accomplish the purposes for which they are intended.

In the first place we are strenuously opposed to the appointment of the Board by the Governor. One can easily see how appointments so made might be influenced by political prejudices, and this *possible* danger, no matter how improbable, should be avoided by all means. If a Medical Board is to be created the very best men that can be persuaded to serve on it, men who will fulfil their duties at all times with the utmost impartiality and justice, should be appointed, *irrespective of political belief*. The best way which we have yet heard advanced was suggested by a prominent physician with whom we recently had some conversation concerning the proposed laws. His method was to have the Governor make the appointments, "with the advice and consent of the Senate" from nominations, two for each position, submitted by the respective medical societies of the State. That is supposing the Board to require seven appointments, as it will at first; the Vermont State Medical Society would make six nominations from which the three regular members of the Board would be chosen; and the State Homeopathic and State Eclectic Societies would each make four nominations from which the two homeopathic and two eclectic members would be respectively chosen. This method of appointment would obviate any "wire pulling" and result in the establishment and perpetuation of a State Board which would be representative of the whole Medical profession.

Another change which we would suggest in Section 1 is the substitution of the more correct adjective *regular* for "allopathic." Members of the *regular* profession dislike to be dubbed "allopaths."

Section 4 relating to the remuneration of the members of the Board will, we very much fear, be the cause of defeating the passage of the Bill. Economy seems to be the tendency of the present Legislature and any new item of expense will have to "run the gauntlet" in earnest. The need of good medical legislation is underrated, and if a new medical bill is passed it must entail little or no expense. A good plan to get around this difficulty would be to make the Board self sustaining, by limiting its expenses to its receipts. The time as well as labor of medical men is valuable, but we are sure that the matter of little or no pay would be no obstacle in the way of getting good men, loyal to their profession, to serve in any capacity which the State might request.

All in all, the proposed laws are not unsatisfactory. Even as they now stand they are far better than the old ones, and few objections would be raised if they were passed just as they are. But we want to see Vermont stand as high as any of her sister States, with medical laws which no man can assail. Hence our suggestions.

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MEDICAL ABSTRACTS.

The Treatment of Syphilis in the Young—In an article in *Pediatrics on Syphilis in the Young*, Dr. Barbour says: The treatment is summed up in the one drug, mercury, and the preferable mode of medication is by inunction of the official ointment, diluted or the oleate diluted. This drug applied on the belly-band of the child and worn constantly will produce less harm than when applied by other methods. If it gives rise to a local irritation, the application may be shifted to some other part of the body.

Of the preparations for internal use, the hydrargyrum cum creta, in doses of one grain three times a day, is least liable to upset the stomach and bowels. Almost all the early lesions of syphilis are markedly and rapidly benefited by this treatment, which should be continued until the symptoms have entirely disappeared. Grave lesions of the internal organs will naturally be rebellious to any form of treatment.

After the relief of the symptoms the child should be watched carefully and be put through a mercurial course at varying intervals. The question may arise as to whether children born of syphilitic parents should be put under treatment immediately after birth, or should be watched closely until the development of some specific lesion and then treated. Fournier's advice seems to be the most sensible: If the child is born healthy—in appearance, at least—of a woman recently syphilitic, especially if she has had any venereal accidents in the course of her pregnancy, should be put under active treatment immediately, for it is certainly syphilitic; otherwise we may wait for some definite manifestation.



For Earache.—The editor of the *Peoria Medical Journal* highly recommends for the recurring nocturnal earache of young children an aqueous solution of atropine sulphate one grain to the ounce, three to five drops to be warmed and instilled as needed. It is seldom necessary to repeat the dose.—*Denver Medical Times*.



Erysipelas.—R. Ac Tannic, 10 gr.
Camphoræ, 5 gr.
Etheris, 1 dr.

M. Sig.: Paint every hour or two over affected part and adjacent skin.—*New York Med. Jour*.



Acute Bronchitis.—In the first stage of acute bronchitis, put one grain of tartar emetic in a teacupful of water and give a teaspoonful every ten minutes until slight nausea is produced. Relief is pronounced.

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CONTENTS.

	Page.
Before and after Treatment of Laparotomy, by A. F. Wheet, M. D., Manchester, N. H. - - - - -	281
The Value of Cimicifuga Racemosa in Pregnancy and Labor, by F. C. Kinney, M. D., Greensboro, Vt. - - -	293
The Philosophy of Sex, by H. Edwin Lewis, Burlington, Vt.	297
The State Medical Society Meeting. - - - - -	308
Proposed Medical Legislation in Vermont. - - - - -	310
Staff Appointments of Fanny Allen Hospital. - - -	312
Editorial. - - - - -	313
Medical Abstracts. - - - - -	316

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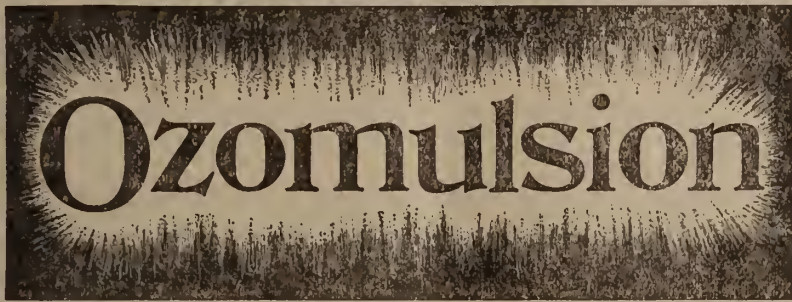
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Extract from page 153:

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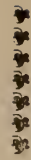
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ROBERTS BARTHOLOW, M.A.M.D., LL.D.

Professor Emeritus of Materia Medica,
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Vol. II.

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No. 11

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the State Insane Asylum.

An early recognition of the premonitory symptoms of insanity is a subject of growing interest, and one that hardly receives the attention its importance demands.

If we are familiar with the early warnings of mental disease, many a useful member of the community may be spared and perhaps years of suffering averted. It is a well-known fact that the chances of recovery from mental disease are lessened in proportion to the length of time it is allowed to run without being brought under the influence of appropriate treatment.

Winslow says: "Incipient insanity, provided it be not the result of severe physical injury to the head or has not a congenital origin or is not associated with a strong hereditary predisposition, yields as readily to treatment as incipient inflammation or any other disease with which we have daily to contend."

"I think," says Dr. Woodward, "it is not too much to assume that insanity in its incipient form, uncomplicated, is more curable than any other disease of equal severity; more likely to be cured than intermittent fever, pneumonia or rheumatism."

Experience proves that nine cases out of ten recover if placed under treatment within three months after the attack. It is, therefore, specially the duty of the general practitioner who is first called to such cases to familiarize himself with the early symptoms of this distressing malady, in order that he may arrest its progress at a time when curative measures are most effective.

In response to our inquiry, when patients are brought to us, we are often told that insanity came on suddenly, without previous warning; but upon investigation we find, almost without exception, that there was a long interval during which the patient exhibited peculiarities and committed strange acts.

Some authors go so far as to declare that the sudden onset of mental disease never takes place, and all agree that it is of the rarest possible occurrence. The duration of the premonitory stage must, of course, depend greatly upon the intensity of the exciting cause and the strength of the predisposition, but it usually extends over a period of months, and sometimes for years before the final explosion takes place.

A young lady was recently placed under my care with a history of having been mentally unbalanced one month or possibly six weeks, but to me she confessed that for upwards of three years she had been greatly tormented by hallucinations against which she had waged a constant warfare, and from the influence of which she was enervated and considerably reduced. This is no uncommon case and did time permit I could cite no end of examples, but I must proceed at once to the object of this paper, namely, to point out a few early indications of mental disturbance. A description of all its varieties would be a difficult task and a severe tax upon your patience. I will, therefore, confine myself to the more salient points found in a few *common* mental disorders.

I think no one, in these days, will question but that insanity is a manifestation of some physical derangement going on in the brain, or some distant part of the body affecting sympathetically the material organ of mind.

Wynter says: "The more the fact of the physical nature of insanity is acknowledged, the more it is recognized as an ailment which can be reached by physical agents, the greater will be the chance of its successful treatment."

If a man shivers and feels depressed, he seeks the advice of his physician that he may meet the coming fever with the best resources of his art.

If a man feels his brain disturbed, if he feels the early warnings of which his friends as yet know nothing, would it not be equally wise of him to summon the aid of medicine before it is too late? If such a mystery were not made of mental disease, it would be deprived of half its terrors and half its evil consequences at the same time.

Dr. Winslow declares that in every deviation from a healthy condition of the mind the brain is the seat of the affection.

The idea of the mind being disordered independently of physical disease, has no existence except in the imagination of those who wilfully close their understandings to the reception of truth.

Eccentricity, natural or acquired, is perhaps the simplest form of deviation from ordinary mental standards, and does not specially concern us here further than to remind us, that individuals who occasionally go out of the beaten path cannot therefore be classed as walking the border line of insanity unless the singularities exhibited should gradually develop into actual delusions as occasionally happens.

One of the most common and at the same time one of the most important functional nervous or mental conditions with which the profession has to deal is Neurasthenia, a disease even more prevalent, at the present time than when first described by Beard, some twenty or twenty-five years ago, and one which yields the most gratifying results when subject to appropriate treatment in its early stages.

Neurasthenia, like hysteria, is almost endless in its manifestations, and the symptoms so often simulate those of organic disease of the brain and nervous system, that we must constantly be on our guard in endeavoring to arrive at the truth. Indeed,

in no disease, are errors of diagnosis more common than in neurasthenia ; and this is not strange since diagnostic skill of the highest order is often required to exclude structural changes.

Beard thus summarizes the leading points in its pathology and rationale : "Neurasthenia is a chronic functional disorder of the nervous system, the basis of which is impoverishment of nervous force and waste of nerve tissue in excess of repair ; hence the lack of inhibitory or controlling power, physical and mental, the feebleness and instability of nerve action and the excessive sensitiveness and irritability, local and general, direct and reflex.

The fatigue and pain that temporarily follow excessive toil, worry and deprivation of food or rest, are symptoms of acute neurasthenia from which the chronic form differs only in permanence and degree.

The varying and multitudinous symptoms that accompany neurasthenia are largely the result of reflex irritation that takes place, not only through the ordinary motor and sensory nerves but through the sympathetic system and vaso-motor nerves. These reflex irritations may arise from any part of the body, and may be transmitted to any other part ; but the chief centres of such irritation are the brain, the digestive system and the reproductive system.

The heart and blood vessels through their abundant, complex and sensitive nerve supply, are quick to feel any such reflex irritation from any source. Thus the local and general blood supply of the body is liable to fluctuation, with a special tendency to local passive hyperaemia or venous congestion.

In the eye this condition can be inductively demonstrated. The circulation is thus kept constantly unbalanced, waves of hyperaemia pass from one organ to another under the influence of a myriad of exciting causes. Thus is explained the inconstancy and correlation of the symptoms, the caprice with which they come and go and the substitution of one symptom for another.

Usually after a somewhat protracted period of work involving more or less strain, worry and anxiety, the patient experiences disagreeable feelings in the head, accompanied by vertigo, sick

headache, tenderness of the scalp, pressure, heaviness, or an annoying feeling of coldness in the back of the head or over the vertex.

ringing in the ears is common and sometimes explosions, especially when the patient is in the recumbent position. Specks may float before the eyes, and I was recently consulted by a gentleman who was greatly annoyed by the appearance of spiders slowly descending before his vision. The pupil is usually dilated and abnormally active. A sense of oppression in the chest and a sinking sensation in the epigastrium, are symptoms nearly always present ; also tenderness of the spine accompanied with a crawling, creeping or burning sensation. The skin is often dry but the hands and feet are cold and wet with perspiration. Hot flashes are not uncommon, attended with slight nervous chills. The tongue is coated, bowels constipated and the patient often feels completely exhausted after defecation. Indigestion and a sense of fullness in the bowels often lead the sufferer to fear that the intestinal tract is becoming occluded with fecal matter, and if left to his own discretion he will take large quantities of physic, thus, of course, adding greatly to his discomfort. Insomnia is nearly always present and what sleep the patient gets is disturbed and unrefreshing. Muscular weakness is common, and notwithstanding the patient may feel equal to considerable physical exertion on rising, he cannot depend upon himself and is usually quickly exhausted.

Occasionally he gets on comfortably in an ordinary routine, but in attempting something new finds himself quite incompetent.

Brain work is particularly trying to this class of sufferers and often causes actual distress. A bookkeeper, who applied to me recently, declared that the thought of adding a column of figures exhausted him more than a day's work when he was in health. He loses confidence in himself and has great difficulty in concentrating his mind on any particular train of thought. He is depressed, hypochondriacal, introspective and believes himself to be the victim of an incurable malady. Unimportant symptoms are

dwelt upon until exaggerated out of all proportion to their importance.

A clergyman suffering from this disease applied to me not long since, who upon discovering that he had herpes preputialis, became greatly alarmed, consulted numerous works on venereal diseases and dwelt upon his misfortune until he became convinced that he was a victim of syphilis.

The sexual functions are weakened, seminal emissions occur at more or less frequent intervals, and the partial or complete impotence serves as a nucleus about which a whole system of gloomy forebodings are centered.

In the adolescent period of life, *almost all* cases are associated with the sexual system.

In middle life, the symptoms are more physical and less mental; the stomach, liver and bowels are chiefly disordered and the mind of the patient is constantly attracted to them.

In the climacteric period, vasomotor symptoms are more notable, such as irregular action of the heart, flushing of the face, cold hands and feet, hyperidrosis, etc.

I will conclude this part of my subject with a quotation from Beard, who says, "Very many of the signs of neurasthenia and allied states appear in organic affections, and in both conditions they are precisely the same, so that of themselves alone they would be no guide in a differential diagnosis; spinal tenderness; shooting, and stabbing and boring neuralgias; cardiac palpitation; insomnia or drowsiness; failure of memory; sexual exhaustion and involuntary emissions; mental depression; pain and heaviness in the head and back; disturbances of the nerves of special sense; hyperæsthesia, and anæsthesia, local or general; coldness of the extremities; twitchings of muscles—all these and other results of the functional nervous disorders we are considering, manifest themselves in spinal congestion, in ataxia and muscular atrophy; but in functional troubles they come and go and change about and alternate, appear and disappear and reappear without any clear cause, and sometimes utterly vanish even without treatment; in the nervously exhausted these symptoms fly

about from one part or organ to another as from the head to the stomach or back, from the upper to the lower part of the spine, from the front to the back of the head ; one day it is the eyes that are troubled ; another day the eyes are well and the stomach is complaining as through it would never cease ; but in a few hours perhaps, the digestion seems to be all right and the head is suffering, and so on through the whole system."

"The symptoms of organic disease are usually fixed and stable, while very many of those of neurasthenia and allied states are fleeting, transient, metastatic and recurrent."

It is not uncommon for Delirium to be confounded with insanity ; but the delirium of acute and sympathetic diseases is different from the disturbance of the intellectual faculties which characterizes insanity.

Maniacal delirium is distinguished by the absence of fever ; although there is sometimes an increased heat of the surface, yet it is usually confined to the scalp, or may be the result of violent muscular exertion.

According to Dr. Willis : "In delirium the mind is actively employed upon past expressions, upon objects and former scenes, which rapidly pass in succession before the mind, resembling in that case a person talking in his sleep ; there is also considerable disturbance in the general constitution, great restlessness, great want of sleep and a total unconsciousness of surrounding objects."

In insanity there may be little or no disturbance, apparently, in the general constitution ; the mind is occupied upon some fixed, assumed idea to the truth of which it will pertinaciously adhere, in opposition to the plainest evidence of its falsity ; and the individual is always acting upon that false impression. In insanity also, the mind is awake to the objects which are present. Then again the illusions and hallucinations of delirium are often quickly dispelled by placing a bandage over the eyes ; while those of insanity persist.

In judging of the existence of mental derangement we should be guided in our opinion by instituting a comparison between the

manifestations which prevail at the time when the mind is supposed to be disordered and the previous mental condition of the individual in its natural state.

When a person of mild temper and gentle disposition becomes subject to fits of violent passion without adequate provocation, when a man naturally virtuous becomes gradually addicted to sensual gratifications, when the kind and indulgent father and husband neglects his family or perhaps treats them with utter indifference, when a man noted for his probity, temperance and business sagacity becomes the reverse, when an ingenuous person of sunny disposition becomes reserved, suspicious, peevish, quarrelsome, and perhaps forms an aversion to those he formerly held in high esteem, then you may sure he is in the border land of insanity.

This stage is so vastly important I am sure you will pardon me if I quote an exceedingly graphic description by Prof. George : "Sometimes," he says, "the action of the cause is strong and rapid, at other times more moderate and slow. In the first case insanity breaks out at the end of some hours or some days after a state of anxiety and uneasiness, with headaches, sleeplessness, agitation or depression and threatening of cerebral congestion; the patient begins to babble, cry, sing, and becomes agitated and wild. He is then often taken for a person in a state of intoxication, and the mistake becomes apparent only after examining the previous circumstances and the duration of the malady. In the other case thought only becomes affected gradually and often very slowly; the patient is generally conscious of some disorder in his intellectual faculties; is beset by new and odd notions and unusual inclinations; he feels himself changing in his affections, but, at the same time, he preserves a consciousness of his condition, is vexed at it and tries to conceal it; he continues his occupation as much as he can; and lastly, as many people do in the first stage of intoxication, he makes every effort to appear reasonable. Meantime his health continues to give way and he either sleeps less or loses sleep altogether; the appetite diminishes or disappears; sometimes digestion is difficult and constipation super-

venes. The features alter, and in the female the monthly discharge becomes irregular, scant and at last is suspended. At the same time the bystander remarks something unusual and even extraordinary in the tastes of the patient, in his habits, his affections, his character and his aptitude for business. If he was gay and communicative he becomes sad, morose and averse to society; if he was orderly and economical he becomes confused and prodigal; if he had long abstained from the pleasures of love, he becomes the victim of insatiable desires and either seeks to associate with the other sex or has recourse to disgraceful practices. If he was moderate in his religious and political opinions, he passes to an extreme exaggeration in both; if he was open and candid, he becomes suspicious and jealous; if a wife, she regards with indifference her husband and children; the merchant neglects his business; tears and laughter succeed each other without apparent motive; the exterior of candor and modesty gives place to an air of conceit and assurance, which, especially in women, astonishes us. But all these phenomena are less prominent than they *appear* to be here, and unless the individual has been insane before, no one may suspect the nature of the ailment which torments him. All the questions put to him lead to no result except that of fatigue and giving him pain, for the ignorance which prevails in regard to insanity leads the friends to indulge in offensive insinuations, and to charge him with frivolous accusations, from not perceiving that he is under the influence of disease and not of reason. Sometimes the appetite remains unimpaired, or is speedily recovered, as well as digestion, nutrition, etc., and it is in these circumstances that the conduct of the patient gives rise to a host of interpretations on the part of the patient and the public. This period of incubation of mental alienation during which the true state of the patient is generally misunderstood or not appreciated, may last a long time."

Pinel relates that a man who believed his wife to have been ill only six months, the period of invasion of furious delusions, agreed after a multiplicity of questions that the disease must have been going on for fifteen years.

It is often easy to go back months or years in this way, and we finish by discovering that circumstances taken for causes, by friends, are frequently only the consequences of unobserved disease.

One of the earliest and most important indications of approaching mental trouble, is insomnia and restlessness during the night; this is always present in incipient mania, but it should be remembered that these patients frequently declare that they sleep soundly and awake refreshed and in full vigor. I hardly need say that this is only borrowed energy and portends speedy mischief. In incipient mania the first alteration to attract the attention may be general exhilaration and high spirits; new ideas, propensities and peculiarities are developed; there is an increased rapidity and expression of ideas, every faculty of the mind is exalted and new ones are conceived never before given expression to. Everything is done by impulse, nothing from reflection. Many things are begun with great enthusiasm, but few are carried out to completion. Short reveries are noted, there is great restlessness and a constant desire to change; he gives expression to quick and hurried utterances, is blustering and authoritative, commanding and countermanding in the same breath; is passionate and irascible, scheming, ambitious and extravagant.

All his business schemes come out far beyond his fondest anticipations; general agitation is noted with watchfulness, suspicion, and a propensity for drink, venery, etc.

All ordinary occupations are executed in a more hurried and less perfect manner, or are wholly forgotten; and there is great confusion of mind, though no positive delusion, hallucination or delirium be yet declared.

He has more or less pain in the head, with throbbing at the temples, giddiness and buzzing noise in the ears. The digestive function is altered, the appetite is capricious, sometimes increased, sometimes diminished; the complexion changes, the secretions and excretions are gradually impeded and vitiated and the patient grows thin. These symptoms may continue the same for some time, but by degrees they all become aggravated, or fresh ones

intrude before positive delirium is developed. If these symptoms are suffered to proceed, there is a sense of fullness or distension, or constriction like a band around the head. Noises in the ears become louder, great acuteness of hearing, but attention transitory. There is vertigo; redness and unusual brilliancy of the eyes; volubility and an exaggerated emotional state. These are a few of the more prominent symptoms found in the incipient stage of mania and as the active or confirmed stage is so patent to all, I will pass to a consideration of the symptoms of impending melancholia. This disorder usually has a protracted period of incubation during which the symptoms do not differ essentially from those in other varieties of insanity, except that mental depression is more pronounced and the patient is tormented by groundless apprehensions which are seldom found in mania.

Soon the characteristic change in the patient's general appearance and attitude takes place.

There is often marked diminution of nerve energy, accompanied with lassitude and general inertia. The muscular system is relaxed, the gait is unsteady, movements are made slowly and only when necessary. The voice becomes notably subdued and there is a disinclination to talk. At the same time his habits and mode of thought are observed to undergo a change.

He becomes dejected, peevish, suspicious and is disposed to connect everything bad with himself. He shuns the society of those with whom he formerly took pleasure and often fancies that his family are lacking in proper respect, or that they may be maltreating him. Everything about him is negative, nothing affords pleasure, he is self-conscious, discontented and ill at ease. He is usually aware that a change has taken place in his moral nature and seeks solitude to hide his infirmity.

If he reads he selects stories of a gloomy cast and is apt to search the Scriptures for passages that confirm his morbid fancies.

He sleeps but little and is annoyed by frightful dreams. There is a sense of weight and oppression about the stomach, accompanied with indigestion, flatulence, offensive eructations, loss of appetite, constipations, etc,

The habit of biting the nails is common, also picking the fingers or any pimple or abrasion of the skin until the parts are sore and sensitive, though the pain is unheeded.

He becomes irritable and often times flies into a passion upon slight provocation.

Some melancholiacs are always discontented and nothing pleases them ; others are utterly indifferent, because their attention is completely absorbed in the contemplation of their own misfortune ; and others maintain that everything is too good for them.

In all cases of melancholia it is our first duty to carefully investigate the general condition of health of the patient. Hepatic, gastric, or intestinal disease will almost invariably be found, and if promptly removed by appropriate treatment, mental health may, in some cases, be soon restored.

It is impossible here to do justice to the broad and important subject of General Paresis. I will therefore state briefly that the early symptoms are so common to other mental disorders that a diagnosis can seldom be made with certainty until the later characteristic symptoms are declared. Insomnia and mental depression with more or less hypochondria are always present in the incipient stage, but the opposite condition of exhilaration and great exuberance of feelings soon follows and continues to the end, with the exception of short intervals of depression, which distinguish a case now and then. Failure of the memory is one of the earliest indications ; he forgets his appointments, and often is unable to call old friends by name. In writing he occasionally skips important words. Slowly and insidiously a complete change is wrought in his moral nature, he becomes irritable, fretful, moody, and gives way to excesses and dissipations of various kinds.

His friends will tell you that for some time past he has been guilty of small, dishonest acts, one of the most common of which is theft ; and it is noteworthy that he steals openly, and appropriates articles which are of no value to himself or anyone else. He speculates foolishly and squanders his money in a most lavish way, is filled with schemes for achieving the impossible, has unlimited self-confidence and is quite blind to his glaring limitations.

All these symptoms, in an *intelligent* person, may be exhibited in a semi-plausible manner, and his friends do not, as a rule, consider him deranged, though they recognize that an unaccountable change has taken place in his character.

The practitioner seldom sees a case in this early stage, but a little later on, when the characteristic tremor of the tongue and lips, clipping of words, disturbances of coordination, bracing gait, irregular pupils, and grandiloquent delusions make their appearance, the diagnosis becomes easy.

In conclusion, it should never be forgotten that in the earliest stages of mental disturbance, patients are as a rule, morbidly suspicious, and keen to observe.

The greatest amount of tact and judgment is therefore demanded on the part of the physician to so conduct his examination as not to convey the belief that mental derangement is suspected; for in committing this error, we at once end our own usefulness and perhaps seriously complicate that of others.

Regarding the treatment of incipient mental derangement, I shall say nothing further than to remark, that there is no "Royal Road" to cure, and the characteristics of each case must be carefully studied and fought upon general principles.

I have touched upon only three or four of the more *common* mental troubles which are liable to come under your observation at frequent intervals, and an early recognition of which is of the utmost importance if we would be successful in averting one of the most dreadful calamities that can befall the human mind.

It is our duty to improve every opportunity to educate the public in this matter, and to correct the deplorable custom, which is everywhere prevalent, of ignoring the early indications of mental diseases, and trumping up excuses for slight departures from the habits and modes of thinking common to the individual, until he has drifted far beyond the borderland, and becomes so violently excited or dangerous in his impulses, as to compel the friends at last to acknowledge the truth.

"If," says Dr. Combe, "an acquaintance with the philosophy of mind were common among educated persons, and the pa-

tient had confidence enough in the knowledge and discretion of his friends, to reveal to them the first approach he felt of his losing his command of his own faculties, the development of insanity might often be prevented; and in fact, its attacks are in many instances, just so many punishments for our ignorance and neglect."

Bacteria in Noma.—Nicolaysen (*Norsk Magazine for Laegevidenskaben*, February, 1896; *British Medical Journal*, July 11, 1896) has made bacteriological examinations in two cases of noma (occurring in two girls, respectively three and fourteen years of age). The cultures and preparations were made in both cases from the boundary between the necrosed and healthy tissue. In both cases cocci were found together with a bacillus which was polymorphous and resembled the diphtheria bacillus. The cultures of this bacillus from the first case had no pathogenic effect upon animals. The author considers the bacillus found by him to be different from the one described by Schimmelbusch.

These findings correspond to those obtained by Bishop (*Transactions Chicago Pathological Society*, vol. i, p. 252), who reports cases of noma from which a bacillus was isolated resembling very closely in its morphology the diphtheria bacillus, but with slight pathogenic effect upon animals.

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The Discovery of Ether.

By W. J. ALDRICH, M. D., St. Johnsbury, Vt.

Just 50 years ago to-day in the city of Boston there was enacted a drama that not only startled the medical profession, but aroused the world. It was the proving of the power of Ether over pain—the production of anaesthesia for surgical operations.

To prevent or diminish pain in surgical operations is an object so desirable that from time immemorial efforts have been made to attain it. Homer mentions the anaesthetic properties of Nepenthe; Herodotus refers to the practice of the Scythians of inhaling the vapor of a certain kind of Hemp to produce intoxication. The employment of Mandragora to produce anaesthesia is alluded to by Pliny. It also appears from an old Chinese manuscript that a physician named Hoatho, who lived in the third century, gave his patients a preparation of Hemp, whereby they were rendered insensible during the performance of surgical operations. The soporific properties of Mandrake are alluded to by Shakespeare, who makes frequent mention of anaesthetising draughts. It appears that Augustus, King of Poland, underwent an amputation while rendered insensible by a narcotic.

But the practice of anaesthesia had never become general, and physicians in all ages appear to have regarded it with disfavor.

Coming down to more modern times, in 1800, Sir Humphrey Davy, while experimenting on Nitrous Oxide gas, discovered its anaesthetic properties, and suggested that it might be employed in surgery. His suggestion, however, remained unheeded for nearly half a century, until Dr. Horace Wells, a dentist of Hartford, Conn., in 1844, underwent in his own person the operation of tooth extraction while rendered insensible by Nitrous Oxide gas. After further experiment he became satisfied that teeth could be

extracted under its influence without pain, and he undertook to establish a practice of painless dentistry in Boston, but on account of the unfortunate failure of an experiment the project was abandoned.

The first record we have of the inhalation of the vapor of Sulphuric Ether was that of Dr. Pearson of Birmingham, Eng., who used it for the relief of asthma and other lung affections. In 1805, Dr. Warren, of Boston, used it in the same manner for relief in the later stages of consumption. In 1818, Faraday, while experimenting with Ether discovered that it possessed anaesthetic properties similar to those of Nitrous Oxide gas, and this same property was demonstrated by several American physicians about the same time.

To us, looking back upon the experiments and observations of these early investigations, it seems marvelous that the wonderful utility of their discoveries was not immediately recognized and turned to practical use, but they appear to have been regarded in the light of mere scientific curiosities, or subjects fit only for lecture room experiment, rather than as facts capable of being applied to the treatment of disease, and it remained for Dr. William T. G. Morton, a dentist of Boston, to demonstrate the usefulness of Ether and give to suffering humanity the greatest boon in the world's history.

The story of Dr. Morton's early experiments and the final proving of his discovery, is told by his widow in a recent article, and I am indebted to that narrative for many facts here mentioned.

Dr. Morton was one of those tremendously earnest men who believe they have a high destiny to fill, and he would often say to his wife that he had a great work to do in the world. For a long time prior to his discovery his spare time was spent in experiments on bugs and other insects, and even his faithful dog, but a time came when he wanted a human subject, and his assistants were sent out offering a reward to any person willing to have a tooth extracted while under the influence of ether, but no one could be found who was willing to assume the risk. Unable to find a patient, he shut himself in the office and tested it upon his

own person, with such success that he lay unconscious for several minutes.

So great was his joy at this success that he was determined not to sleep until he had repeated the experiment. Here Fortune seemed to favor him, for he had barely reached his office when there entered a man with his face all bandaged and evidently suffering acute pain, asking to have the offending molar pulled, and inquiring if the Doctor couldn't mesmerise him while it was done. The Doctor could have shouted for joy, but, retaining his self-possession, he explained the inhalation of Ether and assured the sufferer that it was better than mesmerism. To make a long story short, the man was anaesthetised and the tooth extracted with perfect success.

From that moment Dr. Morton felt that the success of Ether was assured, and thenceforward he was untiring in his efforts to bring his discovery to the attention of the Medical profession. After many discouragements he at last succeeded in inducing Dr. Warren, senior surgeon in the Massachusetts General Hospital, to allow him to try his discovery upon a patient who was about to undergo an operation.

Dr. Robert Davis, now living at Fall River, was then a medical student and witnessed the operation, and it is to him that we are indebted for a description of what transpired on that memorable occasion.

The amphitheatre was crowded with physicians and students, all curious, all skeptical as to the success of the operation. All of the eminent surgeons of Boston were present, including the celebrated Dr. Jacob Bigelow. The hour for the operation arrived and Dr. Morton, who was detained at the instrument maker's with his inhaler, was not on hand. Five minutes passed—ten minutes, and then Dr. Warren, the eminent surgeon, looking around with a sarcastic smile upon his face, suggested that as Dr. Morton was not present, the operation had better go on in the usual way.

At that moment Dr. Morton came hurrying in, and with a coolness and self-possession in strong contrast to the nervous assem-

bly, he proceeded to administer the vapor of Sulphuric Ether to a human being to produce anæsthesia for a surgical operation for the first time in the history of the world. As soon as anæsthesia was complete he turned to Dr. Warren and calmly said, "Doctor, your patient is ready."

In all parts of the great amphitheatre there came a quick catching of the breath, followed by a silence almost like death as Dr. Warren stepped forward and prepared to operate. The sheet was thrown back, exposing that part of the body from which a tumor was to be removed, an operation exceedingly painful under ordinary conditions, but neither very difficult nor very dangerous. The patient lay silent with eyes closed as if asleep, but every one present fully expected to hear a shriek of agony ring out as the keen knife descended into the sensitive nerves. But the stroke came with no accompanying cry, and then another and another, while the severed arteries spurted forth their crimson blood. The tumor was removed, the wound closed with sutures, bandages applied and the operation was done, and through it all no sign of consciousness or pain was exhibited by the patient. In a few minutes he revived from the Ether and Dr. Warren asked if he felt any pain, to which he replied that he did not. Then turning to the assembly Dr. Warren, in his impressive manner, said, "Gentlemen, this is no humbug."

The paths of a discoverer lead but to disappointment and chagrin, and such proved to be the case with Dr. Morton. There sprang up around him those who claimed priority of discovery, and one Dr. Jackson, declared the whole idea was borrowed from him. Be that as it may, the fact remains that Ether anæsthesia was never applied in surgery and never received the attention of the Medical profession until its utility was so ably demonstrated by Dr. Morton.

In view of the greatness of the discovery and its world wide application, it would seem but just that the government of his own country should make some recognition of so eminent a service, but in spite of the efforts that were made during subsequent years, nothing was ever done. This was perhaps the greatest

sorrow of Dr. Morton's declining years, a sorrow rendered all the more keen by the fact that other governments hastened to bestow upon him orders and decorations. Russia gave him the cross of the Order of St. Vladimir ; Norway and Sweden gave him the cross of the order of Vasa ; and the French Academy of Arts and Sciences gave him a gold medal. But the thing he prized most was a small silver casket from the Mass. Gen. Hospital containing one thousand dollars. These are all he received, except the everlasting gratitude, not only of his fellow-countrymen but of suffering humanity everywhere.

Dr. Morton died in his 48th year and was buried in Mount Auburn cemetery near Boston, in the presence of many noted physicians. Over his grave stands a monument erected by the citizens of Boston, bearing this inscription, written by the late Dr. Jacob Bigelow :

“ Dr. William T. G. Morton, inventor and revealer of anæsthetic inhalation. By whom pain in surgery was averted and annulled. Before whom in all time surgery was agony. Since whom science has control of pain.”

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A New Way to Give Calomel.—A new method of administering calomel which may be of great use is given by Dr. J. N. Hall, of Denver, Col., in the *Medical News*. He says that in cases where the medicine could not be given by the mouth without a struggle, a simple and effective expedient is to blow calomel into the nostril through a tube or roll of paper. The patient may be blindfolded, or, better, led to shut the eyes tightly, to escape having the application made directly to them, for such deception is certainly justifiable in some cases. The drug is nicely distributed over the nasal tract, finds its way into the intestinal tract, and operates as if given by mouth. It is not painful or disagreeable, as has been demonstrated by personal trial.

Hydrozone in Gastric and Intestinal Disorders.

BY JOHN AULDE, M. D., Philadelphia, Pa.

The period of nearly twelve years has elapsed since I first began the clinical use of hydrogen dioxide, generally referred to at that time as the peroxide of hydrogen. In 1887 I published a paper giving a detailed account of several cases in which it had been employed by inhalation, but even then I was thirty years behind the report of Dr. (now Sir) Benjamin Ward Richardson, of London, who had made a thorough investigation of its antiseptic, detergent, and healing properties. Notwithstanding the fact that this preparation had been known to the medical profession for that length of time it had achieved little or no reputation. This, however, may be explained by the fact that the discovery preceded the dawn of bacteriology. Indeed, I was one of the early contributors to medical literature relating to the clinical value of this product, and since that time I have published a number of articles, embracing practically every application, both medical and surgical, to which hydrogen dioxide is adapted.

In the present communication it is my object to direct the attention of the profession to its special value in the treatment of gastric and intestinal disorders. In gastritis, for example, there is no antiseptic which can be given with so much benefit as this remedy, because its effect is immediate, and even in considerable doses it is absolutely harmless. The same is true in regard to its employment in typhoid fever, cholera infantum, and Asiatic cholera. In the latter disease its efficacy has been thoroughly demonstrated by a number of well-known physicians, and its applicability in cholera infantum is well known to those physicians who have given careful attention to the most modern methods in the treatment of this class of cases.

The following brief notes will be sufficient to indicate the availability of this remedy in the treatment of the disorders already mentioned, although, in view of the fact that hydrozone is a more concentrated product, and withal a permanent solution, this latter remedy should have the preference. It contains at least double the volume of nascent oxygen which has heretofore been the standard for the medical peroxide of hydrogen.

In gastritis, either acute, subacute, or chronic, we have to deal with an unhealthy condition of the lining membrane of the stomach. The inflammation is attended with an increased output of mucus, which seriously interferes with the normal functions of the peptic glands. By the introduction of a small quantity of hydrozone, in the strength of one part to thirty-two parts of boiled or sterilized water, this objectionable mucus is at once destroyed by the action of the oxygen which is released, and the contents of the stomach remaining are promptly discharged into the small intestine. A patient suffering from gastritis should take at least half an hour before meals from two to four ounces of diluted hydrozone (one to thirty-two) and lie on the right side so as to facilitate the action of the stomach in discharging its contents*. The antiseptic properties of hydrozone thus used are sufficient to destroy the micro-organisms and leave the stomach in a healthy condition for the absorption of nutritive pabulum. All forms of fermentation are promptly subdued by the active oxidation resulting from the liberation of nascent oxygen. The patient is then in a condition to take suitable food, which should be nutritious and easily digested, liquids being preferred until the active symptoms have subsided. Later, small portions of solid food can be ingested, but all food stuffs of a starchy character must be thoroughly masticated, in order to secure the action of the salivary secretion upon the starch granules, breaking them up, and lessening the tendency of fermentation in the stomach. After taking a meal, a patient with gastritis should follow it with medicinal doses of glycozone, which contain, in addition to the nascent oxygen contained in hydrozone, a percentage of glycerin which favors

osmosis and assists in re-establishing the functional activity of both the peptic and mucous glands of the organ.

In the treatment of cholera infantum, typhoid fever and Asiatic cholera, the same general plan should be adopted in dealing with the stomach, always bearing in mind the necessity for having the patient remain in the recumbent position and on the right side for at least half an hour after the ingestion of the solution. In addition, however, to the preliminary treatment of the stomach, the same solution (one to thirty-two) is used as an injection into the lower bowel, care being exercised to insure its introduction as high up as possible. This can be managed by having the patient lie on the left side, with the hips well elevated, and the employment of a long, flexible rectal tube. In this manner we secure and maintain an antiseptic condition in both the stomach and large intestine, the importance of which will be understood when we consider the large number of micro-organisms which grow under these favorable conditions with such remarkable rapidity.

When deemed advisable, the solution introduced into the lower bowel may be combined with large quantities of either hot or cold water, which enables us to obtain the benefits of irrigation in addition to the antiseptic effects. These irrigations may be employed as frequently as deemed advisable by the medical attendant, but they will usually prove satisfactory if administered at intervals of four hours.

Although brief, it is believed this communication will prove serviceable to a large number of practitioners who have hitherto found serious difficulties in counteracting the mephitic influences of bacteria in this class of disorders, and the clinical virtues of the remedy being now so fully recognized, no one will hesitate to adopt the methods suggested, which may be conveniently carried out in addition to the usual routine treatment.

*In chronic cases with a large output of gastric mucus, and particularly in gastric ulcer, concentrated solutions are not well borne at first, owing to the formation of oxygen gas, but this difficulty disappears with the continued use of the remedy, and no treatment of gastric ulcer can be regarded as complete without the local employment of hydrozone.

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EDITORIAL,

The Recent Legislature.

To our regret, but by no means contrary to our expectations, the bill to provide Vermont with better medical laws was ignominiously defeated. We expected little or nothing from the recent Legislature, and we got almost all that we expected. The asinine voice of the "divine healer" reverberated in their midst and rather than take any chances of his hoodooing them, they voted against the bill. Surely it was a disappointing session. What they did will fill a book, but the things they ought to have done

and *did not do* will fill a much larger one. The lamest excuses imaginable were given as reasons for not voting in favor of the measure, and the representative of Burlington, which city, by the way, is the medical center of Vermont and the seat of a well-known medical college, gave as his reason for voting against the bill the excuse that he didn't know anything about the matter!!

It seems to us that a man who represents a city like Burlington ought never to make so flat a remark. It is his duty to know what is going on, and at least have a personal opinion on every important question brought before the House. This would require very little exertion, but it would certainly give his constituency more confidence in him.

The defeat of the bill then may be said to have been caused by ignorance. Our legislators did not understand the proposed laws, and rather than take the time to look the matter up, they voted against them. But never mind, brethren, the next Legislature may be composed of more liberal men, men who can shake off the net of superstition thrown around them by unscrupulous quacks, and they may realize the importance of giving Vermont as good medical laws as any other State in the Union. Let us hope for such a result.

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The Waterbury Insane Asylum Investigation.

The committee appointed by the last Legislature to investigate the management of the Waterbury Insane Asylum, submitted a report previous to the adjournment of that body which practically sustained all the charges made against the Superintendent and his assistants. The fact that no action was taken after the report was received, only shows more conclusively that the members of the Legislature were utterly unable to cope with any really important question. If their committee was one to be trusted, the findings of that committee should have been immediately backed by such action as the occasion required. But nothing whatever was done, and as far as the Legislature itself

was concerned every abuse reported by their investigating committee might continue indefinitely.

For our part we are inclined to think the evidence tending to show that the inmates of the asylum were abused, was much magnified. The investigation brought out the plain facts that the business of the institution was conducted carelessly, and that it was not managed on scientific principles, as such an institution should be. The various offices could have been filled with better and more capable material, but we do not believe that the patients were ever ill-treated from pure "cussedness" as the investigating committee's report would imply. Ignorance pure and simple was the cause of what abuses were actually found to exist, and so long as the people of a State do not insist on having only the best and most competent men appointed to positions of public trust, just so long will such scandals as we have been treated to continue to arise.

Another thought suggested by the investigation was that such matters should not be left entirely to men inexperienced in the care of the insane. People who are unfamiliar with the needs of an insane asylum, are apt to look at the management of the inmates superficially, and form their conclusions from a sentimental standpoint. They forget that oftentimes the most strenuous measures are necessary to control unruly patients, and they know absolutely nothing of the fearful dispositions and characteristics asylum attendants have to cope with. And so we say that when an investigation is called for it should be made by men who are best fitted to conduct it, and distinguish between real and apparent cruelties.

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"A Happy Combination."

Conditions which clearly indicate faulty digestion, from reflex or direct causes, are probably the most common of all symptoms brought to the attention of the doctor. At such times

the first object should be to relieve the pain—for pain is almost always present, and the best way to afford such relief is to give the digestive apparatus a rest. At the same time measures should be taken to promote the return of the normal function which is either latent or perverted. A remedy which combines all the properties essential to the production of the above is that known as Maltine with Coca Wine. The Maltine is a pre-digested food and is readily assimilated with a minimum amount of work from the digestive organs, while the Coca is accurately described by Shoemaker as follows: "Taken in small doses, Coca acts as a general tonic and prevents waste. In somewhat larger doses it is a nerve-stimulant, increasing the blood supply to the nerve centres, increases the force of the heart's action and arterial tension by its influence upon the vaso-motor centres and cordio-motor ganglia. It also gives a sense of well being that enables the organism to bear more fatigue and to sustain the powers of the body with less food or less sleep than usual. Coca increases the flow of urine, but the quantity of urea is lessened; it thus acts as an indirect food by preventing waste."

From the foregoing one can readily see what a happy combination Maltine with Coca ought to make and clinical experiences establish conclusively that "Maltine with Coca Wine" accomplishes in a highly satisfactory manner all that is expected from its constituents.

CLINICAL REPORTS.

CASE I. Mrs. M.—Aet. 43. Just entering climacteric period. Troubled with indigestion evidenced by distress, a sensation as of a hard mass in the stomach after meals and eructations of gas. The high strung nervous temperament of this lady suggested that her indigestion might be of nervous origin. Accordingly she was put on a simple diet for one week, Maltine and Coca Wine in wine glass doses being given after each meal. At the end of the week she was able to partake of ordinary food without the least distress. For two weeks longer the Maltine with Coca Wine was given after meals to assist digestion. It was then stopped and there has been no relapse since that time, five and a half months ago.

CASE II. Miss C.—Aet. 15. Anemia, complicated with occasional severe attacks of indigestion lasting four or five days. Had menstruated three times. She was put on ferratin, five grains three times a day for the anemia, and Maltine and Coca Wine was given after meals in half ounce doses to avert the attacks of indigestion. At the end of five weeks her color is much improved, she has gained $3\frac{1}{4}$ pounds, and she has not had even a premonition of her former indigestion.

CASE III. Mrs. R. S.—This lady was in her second month of pregnancy, when taken with excessive vomiting. Tablespoonful doses of Maltine with Coca Wine every hour effectually controlled her vomiting and after two days half ounce doses after meals were given to prevent a recurrence. Her pregnancy terminated at full term without another attack.



“Fair Exchange is No Robbery.”—It is to be regretted that medical men do not use the pen more often than they do. Many and many a doctor has hidden in the fastness of his gray matter, facts which he has learned from his own particular experience, that would prove a boon to some other practitioner whose experience has been in a different direction. And that other practitioner may have acquired some knowledge that the former has not. Each could benefit the others and himself by telling to the world through the Medical press what his experience has taught him. It is the old principle of exchange, and while we are receiving information from other physician's pens let us balance the trade by giving something from our own.



MEDICAL ABSTRACTS.

A Serious Error.—Parents are not exculpable who needlessly expose their children to the contagion of measles in order to escape the greater dangers which may follow an attack in advanced life. As previously set forth in an article on this subject, the liability to injury is too great to warrant exposure to this disease any more than to any other contagion, such as diphtheria or scarlet fever, although the mortality rate is much greater in these. In delicate children measles may prove fatal through such a complication as pneumonia, bronchitis or tuberculosis, while in other cases permanent injury may result to the eyes.—*Health Magazine*.

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Post Partum Hemorrhage.—Dr. J. C. McAllister in the *Medical Council* says: In a few cases of very serious post-partum hemorrhage due to atony and relaxation of the uterus, after emptying the uterus of all clots and shreds, I have carried a clean small handkerchief saturated with spirits of camphor to the fundus and mopped the inside of the uterus with it. In every case the uterus has responded promptly and efficiently and the patient gone on to a satisfactory convalescence without further complication.

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Practical Hints for Vaccination—Satisfy yourself the child is in thoroughly good health; always examine the body and buttocks before vaccinating.

Vaccinate only with lancets kept for that special purpose. Disinfect them thoroughly before and after use. The lancet blade, without any handle, is most convenient. Have a separate lancet for each child (they cost about six pence each, and last a lifetime).

Disinfect the arm before vaccinating.

Use soft tissue paper, which may be kept cut in packets of a suitable size, about four square inches, for washing and drying the arm, lancets, etc. Such paper "napkins" can not be used more than once; whereas people become so attached to bits of rag that they are loth to part with them. The packets should be sterilized by baking from time to time, and be kept in a well-closed vessel.

Use blunt lancets rather than very sharp ones.

Have the child's arm completely uncovered.

As the evolution of the pock takes place, mainly in the rete Malpighii and upper portion of the papillary bodies, the surface tissue must be removed so as to enable the vaccine virus to be deposited there; it is useless and disadvantageous to go deeper. By making too deep a wound some of the vaccine is deposited where it will not infect (in the deeper layers) and some is swept away by the hemorrhage which is needlessly caused.

It is disadvantageous and unnecessary to cause blood to flow.

As animal vaccine is so thick and tenacious, it will not penetrate readily into such minute scratches as suffice for the thinner and more watery human vaccine, therefore a slightly larger raw surface is necessary.

The best method is to rub off the surface of the skin by frequently passing the edge of the lancet rapidly over it. The spot should be about this size O. Do not make clean cuts or incisions.

Allow a few minutes for absorption, before the child is dressed.

Instruct the mother carefully (a few printed rules are a great assistance) to avoid irritating the pock, breaking it, poulticing, applying wet cloths, etc., and as to keeping the pocks scrupulously clean. About the seventh day it is advisable to have the sleeve ripped up to the shoulder, or taken off entirely to prevent rubbing the pock.

As the scab is a natural protector for the raw surface below, the mother should be instructed to take every care to avoid knocking it off.

Avoid "shields." The dry clean scab is the best protector.

Do not be too economical in the quantity of vaccine used.

Make at least four insertions well apart.—*Charlotte Med. Jour.*



Ambulance Dogs.—A writer in the *Union medicale* for September 19th remarks that in the streets of the village of Lechensch, near Cologne, there may be seen a veritable battalion of dogs which have been trained for the ambulance service in view of the approaching German military manœuvres. Each animal carries on its back a small basket provided with pockets which contain all that is necessary for use in temporary dressing, also a flask of brandy. The dogs have been taught to recognize wounded persons and to lower the basket so as to enable them while waiting for the litter, to quench their thirst and to relieve their sufferings. A large red cross is marked on the basket, and a small lantern with a reflector for night service is strapped on to the animal. These dogs took part in the German military manœuvres last year, when their usefulness was demonstrated. This year their instructor has been charged with the training of another pack, for which he has chosen Scotch dogs of medium size, the intelligence and docility of which are remarkable.—*Cincinnati Med. Journal.*



NEWS NOTES AND FORMULA.

Dr. E. P. Lunderville, late house surgeon at the Fanny Allen Hospital, has located at Wentworth, N. H. We wish him much success.

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A Remedy for Stage Fright.—The *Lyon Medical* states that, according to the *Médecine Moderne*, an American physician advises students to combat the nervous asthenia which paralyzes their faculties, and causes them to lose the thread of their ideas, by taking ten drops of tincture of gelsemium three times a day. For the same purpose an English specialist prescribes wine of opium to be taken by actors and singers, before going on the stage. From five to six drops, he says, will give to the most timid actress the self-possession of the most spirited old player.—*Medical Brief.*

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Acute Attacks of Rheumatism.—In acute attacks of rheumatism antikamnia and salol tablets (5 grs.) will be found of great value. The action of the salol is well known and aided by the analgesic and antipyretic effects of the antikamnia, immediate relief is produced. The pain subsides, any swelling present vanishes and all the distressing symptoms are gone in a few hours. Surely such a remedy is a godsend, and since, like few of the coal tar products antikamnia does not affect the heart, no after symptoms are left to annoy the physician or his patient.

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The New Lactated Food.—The well-known firm of Wells, Richardson & Co., are announcing to the profession a new improved form of their Lactated Food, which is said to be far superior to the old product. The Lactated Food of the past has won an enviable reputation for its excellence, and if the new food surpasses it, it will stand pre-eminently *the* food for invalids and infants. It is prepared in the splendidly equipped laboratory recently built at Richmond, Vt., under the personal supervision of Dr. C. Smith Boynton, Adjunct Professor of Chemistry in the University of Vermont.

The purest materials obtainable are used in its manufacture, and every care is taken to provide a scientific product which will most satisfactorily

accomplish the end sought in its administration. It is highly economical and can be prepared for immediate use with absolutely no exertion, simply by putting one-half to one teaspoonful of the Lactated Food in a teacupful of hot water. It will prove a boon to the aged, the invalid, the nursing mother and her child and those suffering from indigestion. The physicians of the country will not be long in availing themselves of its many uses.

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Exercise in Consumption.—Muscular development is not needed in a phthisical patient. Only enough exercise should be taken to stimulate the vegetative life processes. I have known a consumptive developing his biceps at a city gymnasium three weeks prior to his death. His muscular system was in splendid shape despite the dreadful local condition of his lungs. Decided attempts to develop the muscular system lead only to rapid progress of the disease. So long as the system possesses appreciable vitality, it will respond to efforts to develop the muscular system, but all such development is secured at a cost of a loss of nervous force and vitality that would stay the progress of the lung malady. Besides, violent muscular efforts lead to serious lung congestions and over-straining of the heart. Those who believe in muscular exercise of a decided kind in the phthisical, have but to remember what a holocaust consumption reaps among athletes to be convinced that excessive muscular exercises predisposes directly to phthisis.—*Hahnemannian Monthly*.

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“1897.”—Next year will be a very important one for the VERMONT MEDICAL MONTHLY. After you have seen our little prospectus of coming “good things” you will want to join our family, and we will gladly welcome you. Subscription price, one dollar.



BOOK REVIEWS.

The Physician's Visiting List for 1897.—(Lindsay & Blakeston's.) Forty-sixth year of its publication; for 25 patients; interleaved; P. Blakeston, Son & Co., Phila.; price, \$1.00.

This visiting list is fully up to the standard set by those of previous years, and is a handsome book. Everything that can be done to make it a most efficient pocket memoranda is embodied in its make up, and the tables of special information which we find in its front part contribute in no small degree to its usefulness. Physicians as a class are very slack in keeping their accounts, but with one of these little visiting lists always in the pocket, there will be little need for confusion or mistakes. The book is finished in elegant style with flexible leather cover and gilt edges.

The Electro-Therapeutic Guide—By Wm. F. Howe, M. D. President of the National College of Electro-Therapeutics, Indianapolis, Author and Publisher.

This excellent work, which we understand was formerly published in charts for the use of students in the National College of Electro-Therapeutics, is one which every physician who uses electricity in his practice should have. It is not a text book, nor intended to take the place of a text book. It is rather a working guide for use in applying electrical knowledge and apparatus to clinical conditions, and a perusal of the book will readily establish its value.

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Pamphlets Received, Etc.

Transactions of the New Hampshire Medical Society, at the One Hundred and Fifth Anniversary, held at Concord, June 1 and 2, 1896. Concord, N. H.: Printed by the Republican Press Association. 1896.

The Diagnosis of Tuberculosis from the Morphology of the Blood. An Original Research, with a Report of Cases. By A. M. Holmes, M. D., of Denver. [Reprinted from the *Medical Record*.]

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Up-to-date treatment for Epilepsy.—Hydrocyanate of Iron-Tilden has been meeting with phenomenal success in combating this dread disease. Epilepsy is an affection so very intractable, as a rule, that the ordinary remedies and methods fail to give even slightly satisfactory results, indeed they often appear to hasten the very disturbances which they are intended to correct.

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P. N. de Duboeay, M. D., F. R. C. S., of Tallulah Falls, Rabun Co., Ga., Sept. 22, 1896, writes :

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value. I have found your Iodia specially useful in cases of Menstrual disorder generally, and as an alterative. Papine must of necessity come greatly into vogue with the general practitioner relieving pain as it does without unpleasant after effects. It was of great value to me in treating the pain in a female suffering with (incurable) Cancer.

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Pain and Rest in Diphtheria.—Rest is one of the sweetest words in our language, and in the management of no disease is this more true, than in diphtheria. In keeping with the experience of Prof. T. E. Murrell, Ex-Vice-President of the American Medical Association, and Dr. Pollack of St. Louis, who have found Antikamnia valuable as a reliever of the pain of nocturnal earache, it has also been found of great value as a sleep producer in these cases. Given in doses of two and a half to five grains every two to four hours, there is no depression nor have other than satisfactory results been obtained. Dr. Eggers, of Horton Place, St. Louis, reports in the treatment of an attack of diphtheria in a member of his own family, that, to obtund the pain consequent upon the injection of antitoxine serum, which ordinarily lasts from three to four hours, he exhibited Antikamnia internally, securing relief in a few minutes. In the treatment of any neuroses of the larynx, coughs, bronchial affections, la grippe and its sequelae, as well as chronic neuroses, clinical reports verify the value of Codeine in combination with Antikamnia, the therapeutical value of both being enhanced by combination.

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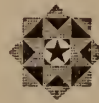
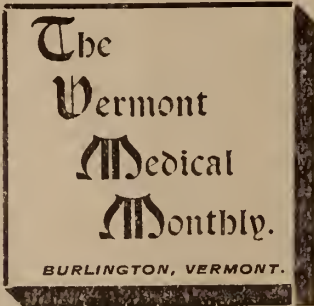
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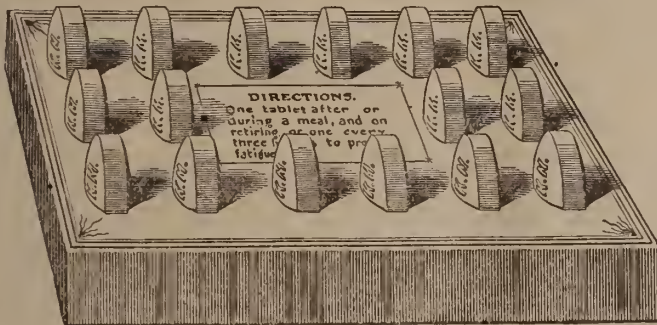
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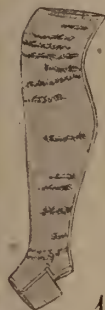


Fig. 1.



Fig. 2.

CONTENTS.

	Page.
The Border Lands of Insanity, by S. E. Lawton, M. D., Brattleboro, Vt.	317
The Discovery of Ether, by W. J. Aldrich, M. D., St. Johnsbury, Vt.	331
Hydrozone in Gastric and Intestinal Disorders, by John Aulde, M. D., Phila.	336
Editorial.	
The Recent Legislature.	339
The Waterbury Insane Asylum Investigation.	340
" A Happy Combination."	341
Medical Abstracts.	344
News Notes and Formula,	346
Book Reviews,	348
Advanced Therapeutics,	349



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December, 1896

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Contents for December.

	PAGE
OPIUM. ITS USE AND ABUSE. By F. W. Comings, M. D., Derby, Vt. - - - - -	351
THE OPERATION OF SHORTENING THE ROUND LIGAMENTS, ITS INDICATIONS AND TECHNIQUE. By E. H. Ross, M. D., St. Johnsbury, Vt. - - - - -	362
THE MODERN TREATMENT OF DIPHTHERIA IN PRIVATE PRACTICE. By W. A. Walker, M. D., New York.	368
STAFF APPOINTMENTS AT MARY FLETCHER HOSPITAL. -	371
EDITORIAL :	
VOLUME II. - - - - -	372
THE NEW SUPERINTENDENT OF THE WATERBURY INSANE ASYLUM. - - - - -	373
A SPECIAL BOOK NUMBER - - - - -	373
COLLEGE NOTES. - - - - -	373
MEDICAL ABSTRACTS. - - - - -	374
ADVANCED THERAPEUTICS. - - - - -	377

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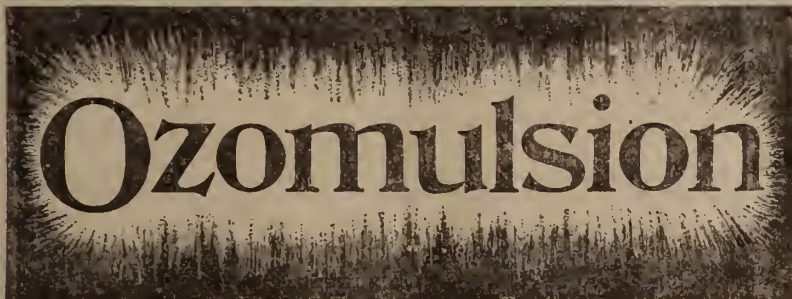
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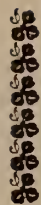
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Professor Emeritus of Materia Medica,
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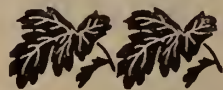
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The Vermont Medical Monthly

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

Official organ of the Vermont State Medical Society.

Vol. II.

DECEMBER, 1896.

No. 12

Opium. Its Uses and Abuses.*

BY F. W. COMINGS, M. D., Derby, Vt.

Mr. President, and Gentlemen of the State Medical Society :

Of all the many remedies of the U. S. Pharmacopoeia there are two, which, like Saul of Gibeah, are head and shoulders taller than their fellows; I refer to opium and chloroform. It is to the former of these two remedial giants that I wish to ask your attention.

Opium is the dried juice of the white poppy, *papaver somniferum* and its varieties, and is produced as an article of commerce in Asia Minor, Persia, East Indies, Egypt and China. It is produced to some extent in France, England and the U. S., though not to the extent of becoming an article of commerce. The drug as it is found in the shops, is in masses, of a reddish-brown or fawn color, and of an offensive, nauseating odor. The source of supply for the U. S. is Asia Minor, of which the principal port of export is Smyrna.

The poppy requires a rich soil for the profitable production of opium, and its time of sowing depends on the climatic con-

*Read before the Vermont State Medical Society, October 15th, 1896

ditions of the country. In Asia Minor the seeding is usually begun in November and continued at intervals for three months to guard against loss by insects, storms, etc., and for the purpose of preventing the maturity of the whole crop at once. The land having been thoroughly prepared by plowing and harrowing, the seed is broadcasted and dragged in, then the field is laid off into beds about ten feet in width, for ease in working and convenience in irrigating, after which the plants as they appear are properly thinned and weeded.

With the falling of the bloom the harvest appears. Within a few days after the petals fall, the immature capsules, then about $1\frac{1}{2}$ inches in diameter, are scarified by cutting about one-half way through the capsule. This is a process which demands considerable skill on the part of the grower, lest the incisions be made too deep and the juice be poured out on the inside of the capsule and thereby become lost.

The process of scarification is done in the afternoon, and the following forenoon the work of collecting the exuded juice commences. The operator with a dull knife or an iron spoon scrapes off the exuded juice and deposits it on a poppy leaf which is held in the palm of the hand. When a sufficient amount of the half-dried juice has been collected to form a ball weighing from a few ounces to two pounds, it is carefully wrapped in poppy leaves and dried in the shade. In this condition it is collected by buyers, who work it over and pack it in tins holding from 1 to 150 pounds in which it is exported.

Such opium as this is the finest that comes to this country and is known to the trade as "Turkey Opium." It is supposed to contain from 5 to 15 per cent. of morphia, and our government requires that all opium admitted to this country shall conform to a standard strength of 10 per cent. morphia, determined by assaying a sample taken from an entire case which has been thoroughly powdered. In this way a fair idea of the value of a given lot of opium can be obtained.

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An important derivative of morphia is apomorphia, which is obtained by the action of hydrochloric acid on morphia in a closed tube, heat being applied, the resulting product being our most active and reliable emetic—a hypodermic injection of 1-12 grain producing thorough emesis in two to five minutes.

The most commonly used preparations of opium which are officinal are: Powdered Opium, Denarcotised Opium, Extract of Opium, Dover's Powder, Tr. Opium, Vinegar of Opium or Black Drops, Tr. Comp. Opium, Deodorized Tr. Opium, Tully's Powder, Sulphate and Muriate of Morphine, and Codeine. To these I will add Svapnia and McMunn's Elixir which are unofficinal but are very commonly in use by the profession.

Svapnia, to my mind, is the ideal opiate where it is to be administered by the mouth, it being not suited to hypodermic use.

Its use is unattended in most instances by those unpleasant after effects which characterize opium in other forms, while its pain relieving powers are unimpaired.

As regards chemical antagonism, the alkaline carbonates, lime water and the salts of iron, lead, copper, zinc and mercury, together with Fowler's solution of arsenic are incompatible with all preparations of opium, as are also vegetable astringents.

In case of opium poisoning, emetics are in order, the quickest of which is apomorphine, 1-10 gr. given subcutaneously. In the absence of anything better, mustard and tepid water, freely given, will usually have reasonably prompt and satisfactory effect.

The stomach pump has its uses in case the narcosis is due to the fluid preparations of the drug, though in my opinion, the value of the pump is theoretical rather than practical.

Further treatment consists of the exhibition of larger draughts of strong coffee, hypodermics of potassium permanganate, forced exercise, cold bathing of the chest, the induction of severe pain by the application of thumb screws or similar devices; farodization of the chest muscles, together with subcutaneous injections of atropine 1-150 gr. given every twenty minutes, watching with great carefulness the state of the circulation and the condition of the pupils and the reflex movements.

Beware lest belladonna narcosis be substituted for opium poisoning by a too free exhibition of atropine. The injections should be limited to three in the case of the ordinary patient. Too great care cannot be exercised in the treatment of these cases. The hypnotic action of opium is greatly assisted by alcoholics; and its sudorific action by ipecacuanha.

PHYSIOLOGICAL ACTION.

All preparations of opium have a bitter, disagreeable and nauseating taste. They cause dryness of the mouth and throat, and a huskiness of the voice. If the drug does not nauseate, the appetite may remain unimpaired for a considerable length of time but eventually it is lost. The secretions of the glands of the body with the exception of those of the skin, are much diminished, and the peristaltic movements are greatly impaired. In consequence of the locked up condition of the secretions, hebetude and dullness of intellect, foul tongue, muddy skin and offensive breath, result.

If the administration of the drug be discontinued after prolonged dosing, a relaxed condition of the bowels succeeds the constipation and a profuse and foul-smelling diarrhoea follows. This condition of things is one that causes great inconvenience and distress, both to physician and patient, in the treatment of opium addiction. The heart's action becomes stronger and the tension of the arterial system is raised; the face is flushed, the

pupils of the eyes contract and the eyes become brighter. At this stage of the action of the drug the mind becomes more active and the ideas flow more freely, though not always with greater order. This stage of exhilaration or excitement, varies greatly in different individuals and is followed by a feeling of drowsiness, succeeded by sleep which is often accompanied by dreams and visions of a frightful character. Subsequent to the sleep are headache, vertigo, confusion of mind, muscular weakness and a sense of weariness and constipation. If full doses of the drug are administered, the stage of cardiac and cerebral excitement is much abridged and the stage of narcotic effect correspondingly prolonged and profoundly marked.

The confusion of mind, dizziness and drowsiness are succeeded by profound sleep, contracted pupils, slow pulse, slow and snoring breathing, itching of the nose, and possibly of the entire person, and a profuse perspiration. If the dose administered be lethal, the stage of narcosis quickly supervenes the person falls into insensibility, with a slow and feeble pulse, slow and shallow respiration, often stertorous, the face becomes shrunken, cyanotic and pallid; pin hole pupils, wet skin, profound unconsciousness, great muscular relaxation, together with the abolition of reflex movements.

The diagnosis between opium and alcohol narcosis and uraemic coma is not always easy, but it should be arrived at by a careful examination of the case and attention to its history.

The effects of the drug upon the brain induce a condition known as "wet brain," in which the subarachnoid spaces and the ventricles contain an abnormally large amount of serum, and the intracranial veins are engorged. The right auricle and ventricle of the heart are distended with soft clots—perhaps due to the manner of death.

Owing to the slow and feeble respiration the blood is imperfectly oxygenated and the capillary circulation of the lungs becomes interfered with.

The action of morphia is practically that of opium with this difference,—morphine is less stimulating and more hypnotic

and anodyne than opium and constipates less, but causes more itching and less sweating.

Circumstances greatly modify the action of opium, chief of which are age, individual idiosyncrasy, habitual use, sex and the presence or absence of pain.

Both extremes of life bear the drug badly. Death to the nursing infant has resulted from a medicinal dose exhibited to the mother ; and a drop of laudanum has proved lethal to a child of less than six months of age.

Old age demands relatively smaller dosage, as do women, who as a rule are more susceptible to the action of the drug than are men. Many persons are so violently affected by it that it should never be given in any dosage, its administration being attended by severe vomiting, vertigo, delirium, fainting and great prostration. The habitual use of the drug diminishes the effect of its action in a remarkable degree.

Thomas DeQuincy relates that at one time he habitually took 8000 drops of laudanum daily, equal to 320 grains of gum opium. A gradual increase in the dosage is necessary in order to maintain the physiological effect. The presence of great pain acts as an antidote to the effects of the drug, from which fact has arisen the idea of the use of some means to induce pain in the case of opium narcosis as one part of the treatment for that condition.

THERAPY.

In a general way, the prime indication for the use of opiates is the presence of pain in an unbearable degree ; yet this indication is hedged about with many limitations and each case must be judged by its individual peculiarities and symptoms.

I am sorry to make the admission, yet it is my honest opinion that the profession generally is not careful enough in prescribing this most potent of drugs—potent both for good and evil. The frequent cases of opium addiction indicate that somebody has injudiciously prescribed the seductive drug for a too long period of time or in an improper case, and the consequence has been most unfortunate.

It has been my fortune to have some experience in the treatment of cases of drug addiction and I speak from experience when I say that out of every ten cases of addiction I believe some doctor was responsible for nine of them. I do not wish to censure anybody for such a result, but if such results occurred in any of our families, I doubt not we should not refrain from placing the blame where it very properly belongs.

The range of action of opium is so great that it may very properly be employed in a great variety of ailments; yet in all protracted cases we must bear in mind that in certain temperaments the danger of addiction is very great, and shield our patients accordingly, else we do them a very great wrong while meaning to do them only good. I can hardly find words strong enough with which to condemn the careless—nay criminal—prescribing of opium in chronic cases. Let us listen to the tale of one of these poor degraded slaves of the morphine habit and reflect. I need not speak further of the need of carefulness in the use of this most potent of drugs.

As a remedy for many forms of vomiting, opium stands without a peer—notably, those cases of hepatic, renal and lead colic, and severe cases of dysmenorrhoea, bad cases of seasickness and some cases of vomiting of pregnancy. The pains of gastralgia are best relieved by a subcutaneous injection of morphia, but it is worse than useless to attempt its *cure* by such a procedure often repeated.

In acute Diarrhoea, the remedy finds a field of usefulness after the intestinal tract has received attention by the administration of a proper dose of rhubarb and soda, castor oil, or a saline.

In Dysentery, in the form of suppository or enema, it has often proven of use in controlling the pains, tenesmus and the frequency of the stools.

In Cholera Morbus, nothing can compare with a hypodermic of morphia. It is worth the whole of the other remedies of the Pharmacopoeia as a means of combatting this disease, stopping the pains, the watery stools, the cramps and the vomiting,

like magic ; and bringing about reaction and rescuing the patient from a state bordering on collapse.

In Cholera Infantum, I have often desired to try the same treatment, though I have never seen it recommended by any book on practice ; yet, I firmly believe that it would have the same magical effect as in Cholera Morbus, if it were administered early in the course of the disease, and in a proper dosage.

Not having had a proper case for the experiment, I have refrained from making the test ; but I have no doubt of the success of the treatment, if it is properly given, the " authorities " to the contrary, notwithstanding.

Bartholow lays down this maxim as a guide to its administration in gastro-intestinal maladies : "As a rule, opium does harm in all gastro-intestinal maladies in which there is a deficiency in the proper secretion, or a suspension of, the functions of the liver or kidneys." This saying of the great therapist should be remembered by us all as containing more than a grain of truth.

Before severe surgical operations, the hypodermic use of morphia has its appropriate place. It tends to strengthen the heart's action, to alleviate pain and to overcome shock ; and in all severe operations it should not be omitted.

In the treatment of many inflammatory diseases, opium is one of our principal remedies and upon which we place great reliance, combining with it, of course, appropriate local treatment. I refer to the treatment of Pleuritis, Peritonitis, Appendicitis, etc.

In Peritonitis, whether idiopathic, traumatic or puerperal, the *first* thing that should be done is the unloading of the bowels with a saline, large enough to leave no doubt as to its effect; this done, the bowels should be confined and kept so until the inflammatory action has subsided.

The quantity of opium given should be disregarded and attention given only to the pulse and the respiration, the drug being given to the extent of producing comparative freedom from pain even should it be necessary to go so far as to give

enough to bring the respiration down to 10 or 12 to the minute, though in my experience it is seldom, or never, necessary to proceed to that extent.

Loomis speaks of having given 4 grs. every two hours for twenty-four hours, but I cannot understand the necessity for such a dosage, if appropriate local treatment be employed as an auxilliary.

In Appendicitis, I believe we should go slowly in our administration of opium, lest we mask the symptoms too much and thereby defeat our object.

In Pneumonia, I shall take the ground that opium should *never* (almost never) be used.

I am aware that many most excellent physicians consider my views erroneous, and prescribe it from beginning to finish ; but so far as my observation goes, those Doctors who use it in this disease are the ones whose mortality record is one of which they can not speak with pride.

Prof. Loomis advised to begin the treatment of this disease with a sub-cutaneous injection of morphia sufficiently large to put the patient at ease, claiming that thereby you put the patient in the best possible condition to withstand this serious illness. I believe Dr. Loomis was mistaken in his premises and deductions, and that instead of being the *best* thing, it was the *worst* thing that could be advised ; at any rate Dr. Loomis was called upon to test in his own person the correctness of his own theories and treatment, and he like the majority treated with opiates failed to come back to life and health to tell us how nicely it relieved the pain, but how terribly it locked up the secretions, stopped the cough, checked the expectoration, increased the difficult breathing, intensified the sufferings and how it bound them hand and foot and delivered them over to the Grim Reaper.

I firmly believe that the use of opium in Pneumonia and Capillary Bronchitis is one of the grossest abuses of one of the greatest of remedies, and to this fact I respectfully ask your attention. I believe it is the direct cause of more mortality in

in these two diseases than any other one cause. In Pleuritis these remarks do not apply.

In Typhoid Fever the drug has its uses in controlling the diarrhœa, when too profuse, in relieving the pain and quieting the restlessness of the patient, thereby inducing sleep ; yet its use should be limited.

In Meningitis its use is contraindicated, owing to its tendency to cause increased congestion of the meninges and brain.

In Acute Mania and Delirium Tremens it should be used cautiously, preference being given to Bromides and Chloral Hydrate.

In Tic-Douloureux, Sciatica, Pelvic Neuralgia, Cardialgia and Neuralgias generally, the use of the drug is to be condemned, except it be occasionally, as the danger of addiction is great in this class of cases. The seductive powers of morphia, when given hypodermically, are too great to be resisted by many patients unless the physician is discreet and shields them from its evil influence.

In Diabetes Mellitus, codeine exercises an almost incredible power, checking the inordinate appetite, allaying the distressing thirst, lessening the secretion of urine, reducing the amount of sugar and arresting the changes in the nervous system, seeming to exert a really curative action.

In obstetric practice it is often of the greatest value, being used with great advantage in the first stage of many cases of labor, and in abortion.

In Puerperal Eclampsia hypodermics of morphine act quickly in controlling the convulsions, and give time for other measures to be employed.

The abuses of opium consist largely in the indiscriminate prescribing of it for all sorts of aches and pains, in chronic pelvic and nervous ailments ; in the prescribing of "cough syrups ;" in its administration in obstetric practice for the purpose of relieving "after-pains ;" in the acute chest and nervous troubles of infancy and childhood ; and in the too common use of in so-called "soothing-syrups," paregoric and other vile mix-

tures which are made use of by lazy and ignorant mothers and nurses who care more for their own ease and comfort than that for the good of their little ones.

We, as a profession, should not fail to enlighten the people among whom we go in our daily round of duties regarding the baneful effect of such mixtures upon the health of their little ones and by so doing we shall in some measure atone for the mistakes made by some of the more careless of the profession in the too prolonged and injudicious administration of the drug.

Thanking you for your attention, I leave the subject for further discussion.

The Operation of Shortening the Round Ligaments, Its Indications and Technique.*

BY E. H. ROSS, M. D., St. Johnsbury, Vt.

Mr. President, and Gentlemen of the Vermont State Medical Society:

Any operation undertaken for the relief or cure of diseased conditions should have for its prime object the restoration of the parts to as near the normal condition as possible. This is true of Alexander's operation when undertaken for the relief of:

- (1) Retroversion or retroflexion uncomplicated.
- (2) Retroversion or retroflexion with prolapsed ovaries.
- (3) Retroversion or retroflexion with adhesions.
- (4) Retroversion or retroflexion with prolapse of the uterus.
- (5) All cases of prolapse or procidentia.

My reasons for making the above statement can best be explained by considering for a moment the normal anatomical condition of the uterus as compared with the pathological conditions already mentioned.

The uterus normally is a freely movable organ, being suspended in the pelvis and held in position largely by its ligaments, the utero-sacral behind, the broad ligaments on either side and the round ligaments and utero-vesical in front.

When from loss of the support of the perineum, due to its rupture in child-birth, or when the uterus from repeated congestions becomes too heavy, these ligaments yield gradually under the strain and the uterus sinks down in the pelvis, taking any one of the positions of displacement determined by the conditions then existing. Or the same result may be reached after child-

*Read at the 831 Annual Meeting of the Vermont State Medical Society.

birth, when the ligaments are relax, if involution does not proceed normally and the heavy uterus prevents the ligaments from regaining their natural condition. When this state of affairs reached the interference with circulation, the innervation consequent upon it naturally tends to increase the difficulties and the woman begins to complain of all the symptoms with which you are so familiar. To relieve these symptoms, you must raise the uterus to its normal position and keep it there. This can be done sometimes by pessaries. But pessaries are annoying and require frequent attention.

Let us see what takes place when the round ligaments are shortened. Starting as they do from the anterior superior portion of the uterus, they extend outward and forward, lying between the folds of the broad ligaments, to the internal abdominal rings, then on through the inguinal canal to become lost in the fatty tissue of the mons veneris. Now as they are shortened, by drawing them out through the inguinal canal, they lift the uterus upward and forward at the same time acting as purse strings in the broad ligaments, they shorten them as well and tend to lift the ovaries, if prolapsed, at the same time.

When they are securely fastened to the pillars of the external abdominal ring the uterus is held firmly in its normal position and condition by two firm, fibrous cords which have incidentally shortened the elongated broad ligaments. The uterus is not firmly attached to the abdominal walls but is free to move as it normally should. The circulation is restored and it is surprising to note what a change takes place in a heavy congested uterus after the operation, especially if it be curetted at the same sitting to help relieve the endometritis which is almost always present.

The operation has been opposed by many for various reasons, among which are :

- (1) That the ligaments are often absent and are difficult to find.
- (2) That it is a dangerous operation.
- (3) That it interferes with subsequent pregnancies.

(4) That its results are not permanent because the uterus returns to its former position after labor.

(5) That it may give rise to serious secondary symptoms.

In reply to these, I would say :

I. It is generally admitted that they are rarely absent and a failure to find them is usually the fault of the operator. During my service at St. Elizabeth's Hospital, Boston, it was my good fortune to see forty-four cases operated upon and have the care of them during convalescence. In one of these cases the operation had already been attempted and the woman told she had no round ligaments. Still they were present and of good size. I have operated on only four cases myself and found the ligaments readily in all but one of them. In that case I failed to find the ligament on one side. This was due, I think, to not following closely enough my land-marks.

II. I can not see why the operation should be considered any more dangerous than any plastic operation. The abdomen is not opened and there is no need of suppuration even if the ordinary rules of asepsis or antiseptis are observed. In the forty-eight cases which I have followed through their entire convalescence and three more in which I assisted at the operation, I know of but one death. That occurred from pneumonia and could in no way be attributed to the operation.

III and IV. In the reports of cases that I have been able to refer to, I find records of fifty pregnancies which went to full term. I have not found mention of any cases of abortion due to the operation. In all but one of these cases the position of the uterus was normal some months after confinement. Alexander himself claims that pregnancy is favored by the operation.

V. From reported cases which number several hundred, the only serious secondary condition which I can find, is hernia, and this only in six instances. They were all easily controlled by a truss. When carefully done I do not see how a hernia can result from it, as the internal abdominal ring is completely closed by the ligament.

There is occasionally some vesical irritation during convalescence, but it is usually easily overcome.

I recall one case in which there was considerable pain in the incision and extending down the thigh. This was probably due to the injury to the nerve which was broken while pulling out the ligament on that side.

Abscess formation in the incision occasionally occurs but can be avoided by paying close attention to asepsis. It delays convalescence but does not interfere with the result. I have never known it to cause any unfavorable symptoms.

PREPARATION OF THE PATIENT AND OPERATOR.

Twenty-four hours before the operation the bowels should be moved by a saline or castor oil. The night before the mons veneris should be shaved and the abdomen thoroughly scrubbed with soap and water then washed with ether and a compress of cotton soaked in a 1-1000 solution of bichloride of mercury applied. This is held in place by a binder and is not to be removed until the patient is on the operating table. One hour before the operation, two ounces of whiskey are given by the rectum, and half an hour before etherization 1-100 gr. atropia is given by the mouth. When placed on the table, the compress referred to is removed and the abdomen again scrubbed with soap and water followed by bichloride 1-1000. As soon as the patient is etherized the bladder is emptied with the catheter and the vulva and vagina thoroughly cleansed with soap and water, followed by bichloride. The operator has already prepared himself by scrubbing hands and forearms for five minutes and soaked his hands in bichloride 1-1000, or if he prefers, in a saturated solution of permanganate of potassium, removing the stain by washing in a saturated solution of oxalic acid.

The room, tables, etc., are prepared as for a laparotomy. The instruments and ligatures are boiled. The towels and sponges (of gauze) are steamed.

In most cases it is best to curette the uterine cavity with the sharp curette before going on with the operation because of the almost invariable complication of chronic endometritis.

As a guide in making your incision, I think the land-mark suggested by Dr. F. W. Johnson, of Boston, the most reliable. This is the spine of the pubis. Locate this carefully on each side. Then make an incision, obliquely, from without inwards, stopping the lower end of it directly over the pubic spine. Carry this down to the tendon of the external oblique which will be recognized by its white glistening appearance. Stop all hemorrhage as you proceed, but use as few clamps as possible to avoid bruising of the tissues. Clear away the fat and tissue so that you can see the tendon clearly. Often the external ring can now be clearly seen. Occasionally the inter-columnar fascia is so dense that the ring does not show plainly. In either case, keeping the spine as your land-mark, cut through the inter-columnar near fascia and a bunch of fat will protrude. Grasp this, avoiding the fascia at the sides, and beneath, and tease the whole mass out carefully, including the nerve. After a moment you can distinguish the ligament by its yielding slightly as traction is made. Separate it from the nerve and fat, taking care to bruise the nerve as little as possible. The ligament is small at first but rapidly becomes larger. Avoid pulling it out too far or you may pull a pouch of peritoneum along with it and unintentionally open into the peritoneal cavity.

Having secured both ligaments pull them out until the uterus is raised into a position of slight anteversion (as determined by vaginal examination), but avoid bringing it into contact with the abdominal walls. While held in this position the ligaments are to be secured to the pillars of the ring by passing three sutures on each side. The wound is then washed with hot sterilized water and closed without drainage. The slack of the ligaments may be left in the wound, or if much bruised it should be cut off, first ligating the ligament to avoid hemorrhage from the artery in it. The line of incision is dusted with aristol

or acetanilid and covered with sterilized gauze, which is held in place by an abdominal binder with perineal straps.

The sutures used to secure the ligaments should not include too much of their substance or strangulation and suppuration may result. If the case is one complicated by adhesions these should first be loosened by a long course of packing or else broken up by passing the finger through an opening in the vaginal fornix.

The patient is kept in bed two weeks. The bowels are moved by a saline at the end of three days. To prevent vesical irritation the bladder should be emptied every four or five hours, preferably without a catheter. The sutures are removed in from five to seven days.

If suppuration occurs the wound should be reopened at once and packed with acetanilid, allowing it to heal from the bottom.

The operation is indicated as already pointed out in retroversion and retroflexion whether complicated by adhesions and prolapsed ovaries or not and in all cases of procidentia and prolapse especially when such cases cannot be cured by pessaries or when the patient wishes to be freed from the annoyance and inconvenience of wearing them.

The Modern Treatment of Diphtheria in Private Practice.

By W. A. WALKER, M. D., New York.

On the evening of September 14th, a little girl called at my office with a request that I should visit her sick brother. The public schools opened their doors on that day, and Johnny McD., although complaining of feeling sick, was sent to mingle with the hundreds of other school children.

An inspection of the case showed all the clinical symptoms of diphtheria, with a muco-purulent discharge from the nostrils so fetid that the odor filled the room. The examination completed, the mother anxiously inquired: "What is it?" "It is a case of diphtheria," I said; and her face blanched, her voice trembled, and she said quietly: "I know what that means—I have buried two children with that."

On the 19th the father called at the office to say that Johnny could not be kept in bed, and they thought he was well.

In a skeleton way this illustrates the results of treatment with anti-diphtheritic serum, and stands in bold contrast with the drug treatment with the bottles of medicine, the cruel swab, the sleepless nights, the futile attempt to force food and medicine, the onset of secondary infection, and death or a tardy convalescence.

The uniform success which I have observed, and had in my own practice, has convinced me that the treatment of diphtheria with antitoxin is a great advance in therapeutics, and it is my impression that critics who have condemned this treatment have in most instances either observed only hospital patients, or have not persisted in the treatment, or perhaps have not had a fresh and reliable serum, or have not used it early enough.

From the standpoint of a general practitioner I confidently expect to cure any case of diphtheria in private practice seen within forty-eight hours of the onset of the disease.

Take, for instance, a typical case: a previously healthy child, six years of age. The family physician is called in and finds the following conditions: general depression, face pale, pulse accelerated, temperature about 101° F. Inspection of throat shows general diffuse redness, with the characteristic deposit on one or both tonsils. This peculiar deposit once seen is not readily forgotten; the high fever, flushed face, and rapid pulse usually seen in pseudo-membranous tonsillitis are absent; the margin of the

inflammatory process is usually sharply defined in diphtheria and not in tonsillitis. In follicular tonsillitis the leading symptoms are intense congestion of the tonsils, with small discrete white patches, pulse and temperature high.

If, however, the symptoms are not well defined and the differential diagnosis cannot be clearly made, we should give the patient the benefit of the doubt and a dose of anti-diphtheritic serum administered at once. Then a culture should be made to verify the diagnosis. If I believe the case to be diphtheria, or have reasonable doubt as to the diagnosis, I use the antitoxin whilst waiting for the report from the bacteriologist. If the case turns out to be tonsillitis, no harm has been done, as I consider a fresh, reliable serum, properly administered, devoid of danger.

Given, then, a case where the diagnosis of diphtheria is clear, I give as quickly as possible either 1000 units or 1500 units of the serum. The attendant is instructed to keep the throat clean with a bichloride solution of 1 to 5000; or a solution of permanganate of potash may be used, 1 to 4000, if the attendant is not a trained nurse. With a young child, difficult to manage, it is best to inject the solution into the nostrils; in older children a spray can be used in both the nostrils and throat more advantageously.

At the end of twenty-four hours I expect to find the membrane beginning to shrivel and curl up at the edges. In any event, however, I administer a second injection at this stage of the disease, and in a majority of instances this is sufficient. I advise very strongly that the second injection be given in all cases where the diagnosis of diphtheria is clear. I do not expect a cure from one injection, and rarely omit the second. If the symptoms do not indicate the beginning of convalescence at the end of forty-eight hours, I give a third injection. In fact, I would use a fourth injection if it seemed advisable at the end of another twenty-four hours, but I think this will rarely be found necessary.

I have not used anti-streptococcic serum, but I am convinced that in cases in which the treatment has been delayed, or in cases showing the streptococcic infection, proven by bacteriological investigation or from the peculiar red zone of inflammation which begins to spread from the margin of the diphtheritic process, the anti-streptococcic serum should promptly be used. Not only would I do this, but in cases of severe acute disease in the throat, which present all the symptoms of diphtheria, but where the bacteriological report did not confirm the diagnosis, I would resort to the anti-streptococcic serum. In fact, if I should have a case of diphtheria in which the membrane does not begin to peel up by the end of twenty-four hours following say the second injection of antitoxin, I would use the anti-streptococcic serum.

The importance of a fresh, reliable, highly concentrated serum must not be lost sight of, and as I have full confidence in our American products I do not use imported serums. I have used several serums, but have been best satisfied with the effects of that sent out from the biological department of Parke, Davis & Co. I heartily approve of the way this firm now puts up the serum, in bulbs instead of in bottles. It is not only highly concentrated, but, being hermetically sealed, should keep indefinitely. It is put up in bulbs of so many units, 250, 500, 1000, 1500; and, each bulb being a dose, there is no temptation to use a serum that has been exposed to the atmosphere.

As to the medicinal treatment, I do not give any drug with the idea of influencing the course of the disease. I treat the conditions as they arise symptomatically. If I have evidence of the absorption of poisonous secretions, and a coated tongue, I give calomel tablet triturates, $\frac{1}{4}$ grain every hour, until the bowels move freely. Alcohol is rarely needed in cases receiving the serum treatment, especially if it is used early enough, whereas, under the old treatment, when we were so apt to find profound toxic symptoms, alcohol was more often needed. It is perhaps well to state here that I prefer fluid nourishment, principally milk, during the course of the disease.—*Pediatrics*.

Mary Fletcher Hospital.

The annual meeting of the board of directors of the Mary Fletcher hospital of Burlington, Vt., was held December 1st, and the following officers were elected :

President, M. H. Buckham ; Vice-president, Henry Wells ; Secretary, W. J. Van Patten ; Treasurer, Torrey E. Wales ; Auditor, Henry Greene ; Warden, V. G. Barbour ; Superintendent, B. J. Andrews.

Finance Committee, T. E. Wales, Henry Greene, C. P. Smith.

The following appointments were made by the board :

Attending Surgeons, Drs. L. M. Bingham, D. C. Hawley, J. B. Wheeler and H. C. Tinkham.

Attending Physicians, Drs. H. R. Watkins, P. E. McSweeney, W. R. Prime and S. E. Maynard.

The report of the superintendent, Dr. B. J. Andrews, showed that during the past year the whole number of patients admitted was 717; of whom 455 were charity cases.

As was said in a recent number of the *Vermont*—"The hospital is modern in every particular, and to-day is a source of justifiable pride to all Vermonters. Its equipment is unsurpassed, its situation is unequalled, and its discipline and management are matters of favorable comment by all who visit it. Remarkable success has attended the treatment of patients and the fact of its being constantly full of cases attests to the work it is doing."

The Vermont Medical Monthly.

*A Journal of Review, Reform and Progress in the
Medical Sciences.*

H. EDWIN LEWIS, MANAGING EDITOR.

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EDITORIAL,

Volume II.

This issue completes Volume II, and closes the second year of our existence. While not wishing to be considered at all egotistical or self-conscious, we cannot help looking back over the past year with some pride for it has been a successful one from almost every standpoint.

Whatever has been accomplished has been due largely to the efforts of our friends and well wishers. They have stood by us nobly and with their continued help we will make the VERMONT MEDICAL MONTHLY in 1897, a better and more valuable journal than ever before.

The New Superintendent of Waterbury Insane Asylum.

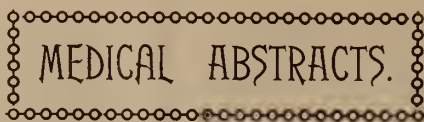
We are extremely glad to note that the trustees of the Waterbury Insane Asylum have appointed Dr. Frank W. Page of Boston as superintendent. Dr. Page is an alienist of no little reputation, and under his management the asylum will receive a new impetus and accomplish far more satisfactorily the work that it has to do.

A Special Book Number.

Our January 1897 issue will be a special book number for the benefit of medical students or young physicians just starting into practice. It will be our aim to suggest a number of books which are indispensable to every medical man, and which are absolute necessities in a medical library, however small. Each book will be fully described.

College Notes.

The 1897 session of the University of Vermont Medical Department will commence January 14th. J. E. Cushman, Professor of Medical Jurisprudence, will deliver the opening address. Already there are more matriculants than ever before in the history of the school, and the coming year bids fair to be a very successful one. The whole lower floor of the building formerly occupied by the Medical College, has been remodeled and will be used for laboratory purposes. This increase in room will add greatly to the convenience of the faculty and students alike.



MEDICAL ABSTRACTS.

Notes on Appendicitis.—In an article in the *Am. Medico-Surg. Bulletin* (Dec. 19, 1896) MORRILL makes the following statement :

“The frequency of appendicitis in early life justifies us in considering age among the predisposing causes. The most extensive statistics are those of Fitz ; in them we find it occurring in the following percentage :

1½	to	10	years	10	per	cent.
10	“	20	“	38	“	“
20	“	30	“	28	“	“
30	“	40	“	15	“	“
40	“	50	“	3	“	“
50	“	60	“	5	“	“

After sixty it occurs in less than one-half of 1 per cent.

Males are more prone to it than females, though some authorities deny this, especially Einhorn.

Referring again to Fitz we find that 80 per cent. of his cases occurred in males and 20 per cent. in females. These figures coincide with Fowler's 543 cases. That females enjoy greater immunity than males may be due to the greater blood supply in the female appendix.”

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Constipation of Children.—Jacobi says : “When constipation is due to deficient or too viscid intestinal mucus, correct the cause—usually a febrile condition, or a chronic intestinal catarrh—and give the infant a large quantity of water to drink.

In rickets, chronic, peritonitis, intestinal atrophy and hydrocephalus, the constipation may be due to incomplete peristalsis; and in tumors, intussusception, volvulus, undue length of the descending colon, and imperforation, it may be due to mechanical obstruction.

An apparent constipation may result from insufficient amount of nutriment. This is easily corrected, as well as the constipation due to a superabundance of starch or of casein, or to a lack of sugar in the food.

In infants oat meal should be substituted for other starchy food. A lack of sugar can be corrected by giving, previously to every feeding or nursing, some tepid water or oat meal water, in which a piece of loaf-sugar has been dissolved. Older children will take honey to advantage. Regular doses of cod-liver oil, given two or three times daily, will obviate or relieve constipation besides fulfilling other indications.

Rectal injections, friction and kneading of the abdomen, and electricity are often useful. Calcined magnesia (five to ten grains a day), either alone or combined with rhubarb, is indicated when there is an excess of acid in the gastric and intestinal contents. Nux vomica, to which may be added some purgative extract, is indicated in insufficient muscular action of the intestine. As an occasional purgative, for the purpose of relieving the intestinal tract of indigestible and injurious masses, castor oil is probably the best and mildest. Calomel or compound licorice powder, or the fluid extract of rhamnus frangula are valuable for this purpose."

§§§§§§§§§§§§§§§§

A Cause for Hay Fever.—In the *Laryngoscope* for July, (1896.) Bishop says:—"An excess of uric acid in the blood causes hay fever, or nervous catarrh. Attacks can be stopped by precipitating the excess of uric acid from the blood by rendering the latter less alkaline with an acid treatment. While pursuing the study of gout and allied diseases dependent upon lithæmia, I was struck with the close analogy between the conditions present, with their local manifestations, and the various phenomena of hay fever. The theory that the paroxysms of hay fever are due to a uric-acid toxæmia is not antagonistic to the present status of medical opinion or surgical treatment; but, on the contrary, explains questions that were inexplicable before. The uric-acid hypothesis explains why some persons suffer from attacks under certain conditions in winter as well as during the warm months."

§§§§§§§§§§§§§§§§

Syphilitic Treatment.—In a clinical lecture delivered at the New York School of Clinical Medicine, Nov. 25. 1896, Wm. S. Gottheil, M. D., said.

"A careful consideration and trial of the various methods of treating the syphilodermata has led me to the following conclusion:

1. In the primary stage, when only the chancre is present, no general treatment; calomel locally.

2. As soon as the secondary period sets in, as shown by the general adenopathy, angina, cephalalgia, and eruption, the internal treatment for mild cases should be $\frac{1}{4}$ to $\frac{3}{4}$ of a grain of the proto-iodide of mercury t. i. d., continued for three months, or until the symptoms disappear. In severer cases, with pustular eruptions, severe anginas, persistent headaches, &c., a course of six to ten intra-muscular injections of 10 per cent calomel-alboline suspension, five to 10 minims at intervals of five to fifteen days, should be employed.

3. After completion of the course and cessation of the symptoms, employ tonics, etc., without specific treatment, for three months.

4. Thereupon a second calomel course as above, plus a small dose (15 grains) of iodide of potassium in milk after meals. This to be given whether later secondary symptoms of the skin and mucosae appear or not.

5. Second intermission of treatment, lasting three to six months, according to the presence or absence of symptoms.

6. In the second year, if tertiary lesions marked by deeper and more localised ulceration are present, give the iodide of potassium in increasing doses (60 to 600 grains) daily, as may be necessary. Combine with it occasional courses of calomel injections. If no lesions appear, give a mild course of both.

The best local treatment of the syphilodermata is with the mercurial plaster-mull.

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Constipation of Children.—

R. Extract of belladonna, gr. 1-24 ;

Aloes, gr. i ;

Cocoa butter, gr. x ;

Mix. Ft. suppos. No. i. (1)

Sig.—Use one suppository, at first twice a day, after a week only at night, and finally every other day.—*Louis Starr.*



ADVANCED THERAPEUTICS.

A Case of Cerebro-Spinal Meningitis Complicating Gonorrhœa Treated by Antikamnia.—The concluding remarks from the above article, by G. S. Leggatt, M. R. C. S. England, L. S. A., taken from the *Lancet*, (London) are interested from both therapeutic and physiological standpoints.

“*Remarks.*—1. This is a rare complication of gonorrhœa, and, as far as I can find, is not mentioned in any of the books which refer to the subject; but bearing in mind the similitude of structure between the meninges and the joints there seems no reason why they should not be occasionally attacked in a manner similar to the latter.

2. “Antikamnia is a remedy said to possess analgesic, antipyretic and anodyne properties. Its dose is three to ten grains, and it will be observed that the doses I gave were large ones; but the symptoms were extremely urgent, and it is interesting to note that there was no depression. During its exhibition the pulse improved in force, and the administration of the drug reduced the temperature to normal, and seemed in this respect to be greatly superior to that of phenacetin.

3. “As to the diagnosis it is difficult to know how the symptoms, which were of a most pronounced kind, could be accounted for on any other supposition than involvement of the fibrous textures of the spine and cranium. That the disease did not more definitely and more permanently attack the pia mater and arachnoid is probably due to the prompt administration of the antikamnia and salicylate combined, which seemed to me to prevent the optic neuritis and other more obvious and serious consequences of an established meningitis.”

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Maltopepsine is especially recommended for consumptives from the very initial and throughout every step of the disease, as a stimulating, rudifying tonic and digestive. With particular emphasis is its use advised in the more advanced stages of pulmonary disease as an appetizer and promoter of digestion. While the direct effect is upon the organs of nutrition, strengthening the weakened gastric and intestinal secretions, relieving nausea and creating a desire for food, its direct action is to lesson waste, institute repair and to so fortify the system as to enable it the longer to hold out against the ravages of this malady.

GREETING



The VERMONT MEDICAL MONTHLY extends greeting to its many friends and readers. Two full years have passed away, years fraught with many difficulties and hardships, but now as we stand on the threshold of our third year it can be truthfully said that each and every obstacle has been squarely met and overcome. The constant aim of the management has been progress, and if the kind words of commendation which have been received from friends in all parts of the country are to be taken as a measure of success, the MONTHLY has improved. 1896 has witnessed important changes in the size and appearance of the MONTHLY, and a notable increase of original matter. Many valuable articles have been published, and the character as well as importance of the papers read before the Vermont State Medical Society which have appeared in the pages of the MONTHLY, together with several read before the New Hampshire State Medical Society, have added in no small degree to what success has been attained. Kind friends have proven their interest in the VERMONT MEDICAL MONTHLY in innumerable ways and with their assistance we have won a good standing in American Medical Journalism.

.

In 1897 a new system will be inaugurated which we trust will meet with the general approval of the profession. Each issue, excepting that of January which will be a special book number,

will be devoted to some particular disease or subject as follows :

February	.....	Pneumonia.
March	.....	Diseases of the Rectum.
April	.....	Bronchitis.
May	.....	Gonorrhoea.
June	.....	Summer Disorders of Child and Adult Life.
July	.....	Pertussis.
August	.....	Menstrual Disorders.
September	.....	Typhoid Fever.
October	.....	Diphtheria.
November	.....	Erysipelas.
December	.....	Appendicitis.

Original articles by well-known medical men on the above subjects will be the leading features of each month, although we shall still continue to present timely papers on general topics. Editorially we shall endeavor as heretofore to express liberal conscientious views on matters of interest to progressive medical men, with this addition, that the leading editorial of each month will be a short, terse epitome of the modern treatment of the disease or diseases under discussion. The departments, Medical Abstracts and News, Notes and Formula, will be hereafter devoted exclusively to excerpts and clippings from modern writings on the diseases considered in each issue. Book Reviews and Advanced Therapeutics will be conducted as heretofore. All in all, nothing will be left undone to make the VERMONT MEDICAL MONTHLY in 1897 a progressive, practical medical journal, up-to-date in every particular, and ever seeking to be of the highest value to the practitioner of medicine.

Index to Volume II.

	Page.
ORIGINAL ARTICLES.	
Altitude, Its Effect on Different Individuals.....	159
Antitoxin Treatment of Diphtheria.....	105
Before and After Treatment of Laparotomy.....	281
Blood Stains.....	127
Border Lands of Insanity, The.....	317
Cimicifuga Racemosa in Pregnancy and Labor, The Value of.....	293
Dangers which Threaten the Usefulness of Cod Liver Oil.....	138
Diseases of the Skin, Clinical Lectures on. 191, 219,	253
Discovery of Ether, The.....	331
Examination of Blood, Some Suggestions Concerning	65
Intestinal Indigestion.....	33
Opium, Its Use and Abuse.....	
Philosophy of Sex, The.....	226, 257, 297
Prostate, The; Some of its Acute and Chronic Con- ditions and their Treatment.....	1
Preliminary Education of the Professional Man....	14
Shortening the Round Ligaments, The Operation of.	362
Surgical Cases of a Country Practice.....	169
Thoughts on General and Cardiac Therapy.....	97
Thrombo-Phlebitis.....	47
 REPRINTED ARTICLES.	
Cholera Infantum.....	111
Dr. Edson's Consumption Cure.....	81
Empyema.....	51
Ferratin in Anemia and General Debility.....	82
Gastric Ulcer.....	84
Hydrozone in Purulent Otitis Media.....	144
Hydrozone in Gastric and Intestinal Disorders.....	336
Rational Treatment of Pertussis.....	17
The Modern Treatment of Diphtheria in Private Practice.....	
Specific Urethritis in Very Young Boys.....	266
Yeast Nuclein in the Treatment of Hip Joint Dis- ease.....	175

EDITORIALS.

A Doctor's Duty.....	272
A New Regime.....	271
A Happy Combination.....	341
Book Number, A Special.....	373
Concentration of Capital, A Cause for.....	180
Character, the First Requisite of Graduation.....	207
Doctor Triumphant, The.....	239
Examination of Females, The Subject of.....	206
"Fair Exchange is No Robbery".....	343
Intrinsic Value of Athletics, The.....	20
Inspection of Milk, The.....	87
Is Constipation Ever a Disease?.....	272
Meeting, The A. M. A.....	86
Meeting, The Vt. State Med. Society.....	238
Need of Endowment for Medical Schools, The.....	148
Public Dispensary an Abuse of Charity, The.....	115
Physical Basis of Life, The.....	147
Proposed Medical Laws, The.....	311
Recent Legislature, The.....	339
That Cathode Ray.....	53
Waterbury Insane Asylum Investigation, The.....	340
Waterbury Insane Asylum, The New Supt. of.....	373
Volume II.....	372

COLLEGE NOTES..... 179, 53, 143, 120, 373

MEDICAL ABSTRACTS,

23, 58, 88, 117, 150, 184, 209, 241, 274, 316, 344, 374

NEWS NOTES AND FORMULA,

27, 61, 92, 121, 153, 186, 214, 247, 276, 346

BOOK REVIEWS.

American Year Book of Medicine and Surgery, <i>Saunders</i>	63
Borderland Studies, <i>Gould</i>	216
Color Vision and Color Blindness, <i>Jennings</i>	125
Compend of Diseases of Children, A, <i>Hatfield</i>	157
Compend of Gynecology, A, <i>Wells</i>	217
Diet for the Sick, <i>Hibbard and Drant</i>	249
Diets for Infants in Health and Disease, <i>Starr</i>	123
Diseases of the Rectum and Anus, Diagnosis and Treatment of, <i>Gant</i>	156
Don'ts for Consumptives, <i>Ingraham</i>	124

Electro-Therapeutic Guide, The, <i>Howe</i>	348
Infantile Mortality During Childbirth, <i>Brothers</i>	124
Manual of Medical Jurisprudence and Toxicology, <i>Chapman</i>	94
Materia Medica and Therapeutics, <i>Shoemaker</i>	30
Manual of Anatomy, <i>Haynes</i>	188
Medical Annual, The International, <i>Treat</i>	123
Medical Prescriptions, <i>King</i>	30
Miskel, <i>Phillips</i>	94
Multum in Parvo Reference and Dose Book, <i>Leonard</i>	249
Obstetric Accidents, Emergencies and Operations, <i>Boisliniere</i>	157
Practical Uroanalysis and Urinary Diagnosis, <i>Purdy</i> ...	64
Principles of Surgery, <i>Senn</i>	63
Syphilis in the Middle Ages and Modern Times, <i>Buret</i>	94
Treatise on Appendicitis, <i>Deaver</i>	216
Therapeutical Applications of Hydrogen Peroxide, <i>Marchand</i>	278
Visiting List, The Physicians, <i>Blakiston</i>	348

MISCELLANEOUS.

Announcement.....	295
Annual Commencement, Forty-third.....	202
New Hampshire State Med. Society Meeting.....	142
Proposed Medical Legislation in Vermont.....	310
Staff Appointments, Fanny Allen Hospital.....	312
Staff Appointments, Mary Fletcher Hospital.....	371
Vermont State Med. Society Meeting.....	308

PUBLISHERS' DEPARTMENT.....31, 62, 95, 126, 158, 189

ADVANCED THERAPEUTICS.....218, 250, 349, 377

Contributors to Volume II.

	Page.
L. BOLTON BANGS, M. D., New York City.....	1
S. W. LANDON, Burlington, Vt.....	14
WILLIAM HENRY PORTER, M. D., New York City....	33
G. W. MCGREGOR, M. D., Littleton, N. H.....	47
JO. H. LINSLEY, A. B., M. D., Burlington, Vt.....	65
D. C. HAWLEY, A. B., M. D., Burlington, Vt.....	97
E. R. CAMPBELL, M. D., Bellows Falls, Vt.....	105
J. N. JENNE, M. D., St. Albans, Vt.....	127
JOHN T. WINTER, M. D., Washington, D. C.....	138
GEO. S. GOVE, M. D., Whitefield, N. H.....	159
E. J. MELLVILLE, M. D., Bakersfield, Vt.....	169
GEORGE T. JACKSON, M. D., New York City 191, 219, 253	
H. EDWIN LEWIS, Burlington, Vt.....	180, 226, 257, 297
A. F. WHEAT, M. D. Manchester, N. H.....	281
F. C. KINNEY, M. D., Greensboro, Vt.....	293
S. E. LAWTON, M. D., Brattleboro, Vt.....	317
W. J. ALDRICH, M. D., St. Johnsbury, Vt.....	331
F. W. COMINGS, M. D., Derby, Vt.....	351
E. H. ROSS, M. D., St. Johnsbury, Vt.....	362

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In Southern Practitioner, Sept., 1896.

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Fig. XVII—Dorsal Position.

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Fig. 1.



Fig. 2.

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