

Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /
Couverture de couleur
- Covers damaged /
Couverture endommagée
- Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée
- Cover title missing /
Le titre de couverture manque
- Coloured maps /
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur
- Bound with other material /
Relié avec d'autres documents
- Only edition available /
Seule édition disponible
- Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure.
- Additional comments /
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /
Qualité inégale de l'impression
- Includes supplementary materials /
Comprend du matériel supplémentaire
- Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées.

THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE,
CRITICISM AND NEWS.

Original Communications.

ON THE PHYSICAL CAUSES OF SEXUAL DEBILITY IN THE MALE, AS DISTINGUISHED FROM THE PSYCHICAL CAUSES.*

BY F. R. STRUGIS, M.D. NEW YORK.

Until within comparatively recent years, it was the custom among surgeons, when consulted by patients suffering from sexual debility, to refer the causes entirely to a disturbed condition of the mind, overlooking altogether the possibility that there might be some physical cause to account for the symptoms—symptoms which undoubtedly, in many cases, are conveyed through the nervous system, but which have not their seat alone in either nervous debility or in nervous depression.

Before calling your attention to the physical causes which I think underlie a large majority, if not all cases of sexual debility, I shall ask you first, to consider with me the symptoms for which patients consult a surgeon, under such conditions. There are two points which enter into all the symptoms that I have heard made by patients who suffer from this cause. One is the imperfection of erections, sometimes their entire absence; and secondly, the prematureness of the emissions, followed immediately by a subsidence of the erection, supposing this function to have been perfectly normal at the start. Associated with this latter condition, there may also be an entire lack of emission, or else if the emission takes place, the amount ejected is very small, and if examined under the microscope, is oftentimes found devoid, or but imperfectly endowed with spermatozoa, constituting the condition of affairs which is known as azo-spermism.

The former may be considered as the earlier

*Read before the New York State Medical Society, February, 1894.

stage, which tends towards the development of the second; the first point noticed by the patient being imperfect erection, associated with premature emissions and followed by an absence of erection. Since the introduction of the endoscope into urethral surgery, it has been possible to examine the urethra, to see, if there were any pathological conditions in this canal, which were either associated with, or perhaps caused, this condition of affairs; but even before the introduction of this useful instrument, the older surgeons recognized the fact, that these symptoms occur most frequently in patients who had been persistent masturbators, and in these, upon examination with sounds or bougies, a stricture, more or less definite, was found in certain portions of the urethral canal, and some went even beyond this, ascribing a hyperæsthetic condition of the canal as possibly one of the causes, or at any rate, one of the concomitants of this condition of affairs. This is exemplified by the use which the older surgeons made of the instrument known as Lallemand's "portecastique" which they used to cauterize the deeper portion of the urethra. But although the principle was perfectly correct, the application of it was defective, inasmuch, as most of the work was done entirely in the dark; portions of the canal were cauterized, which were not the seat of the disease, and the instrument, being at best a rough and cruel one, oftentimes produced laceration of the mucous membrane, with profuse hæmorrhage. The dangers resulting from its use finally led to its abandonment. But with the endoscope, we are now able to see the whole length of the canal, and to note those portions of the urethra which are normal, and those which are not. Since the days when Desormeaux and Cruse introduced their instrument for the examination of the urethra to the profession, the endoscope has been materially modified, in so much as its length and its capacity for illumination were concerned. The older instruments were long, and it was impossible to thoroughly illuminate the deeper portion of the urethra with them. The present instrument is short, and by telescoping, the anterior and pendulous portion of the penis, may be passed as far as the neck of the bladder, and its shortness allow of better and more perfect illumination. This is derived in a two-fold way; by gaslight, kerosene or the electric lamp, any one of which methods gives

a perfect and complete illumination of the canal, and the applications may be made directly to these portions of the urethra which are seen to be the seat of disease.

The causes which I have found playing a most frequent part to this condition of affairs, naming them in the order of their frequency, are:—

1. Urethral hyperæsthesia.
2. Prostatic hyperæsthesia.
3. Stricture.
4. Varicoceles.
5. Neuralgia of the testis.
6. Tubercular affections of the urethra.
7. Syphilis.
- * 8. Gonorrhœa.

Hyperæsthesia of the urethra and stricture may be included together as one single cause, for in many instances the one is more or less associated with the other; and to this point I shall call your attention more fully further on, when I come to discuss the question of stricture separately. Upon examining patients suffering with this form of disease, I have been frequently impressed with the fact, that there were two points in the canal which were most likely to be affected, to wit, one from two and a half to three inches down; the other at five and a half to six, and these two points were nearly always the seat of congestion more or less pronounced, with or without patches of granular material, and when the examination was made with a bulbous bougie, which is the instrument I use at the commencement of the examination, I have always found an obstruction to the passage of the instrument; an obstruction, however, which nearly always gives way after a few moments' delay. Should the obstruction, however, be obstinate, I then change from the bulbous bougie to the use of the steel sound, of a size which will correspond nearly as possible to the size of the meatus, and in nearly all these instances I have found that where the bulbous bougie was arrested, the sound would go through, showing that there was a spasmodic condition which produced a contraction rather than an organized material blocking up the way. In examining with the endoscope I have found that this condition was associated with a puffiness of the mucous membrane of the urethra, which would admit the passage of the endoscope, and beyond this puffiness the congested and inflamed portion of the mucous membrane was

seated. It is very seldom, indeed, that there is any discharge from the urethra, and if present, it is nearly always thin, mucous and sticky. The same conditions obtain deeper down in the prostatic portion; the congestion and inflammation are more pronounced there than they are in the portions anterior to this part of the canal; and I have furthermore found that this portion of the canal does not yield to treatment so readily as when the congestion is situated about the penoscrotal angle or the bulbous urethra.

Many eminent surgeons have considered that urethral stricture is induced by the habit of masturbation. If by stricture we understand any and every impediment which occurs to the passage of a sound, then, perhaps, their statement is correct, but if we consider stricture merely as those obstructions in the canal due to an infiltration beneath the mucous membrane, blocking up the lumen of the canal and preventing the passage of sounds, then I think some modification must be made of the statement that masturbation produces stricture, and particularly so if we consider for one moment the disproportion that exists between the number of males who at one time or other of their life have masturbated and the number of strictures which occur, I think we will recognize that it is too sweeping an assertion to make, that the one is caused by the other. If, however, we admit that there may be spasmodic contractions in the canal induced by some point of irritation in the urethra, then we shall modify this statement by saying that masturbation may produce a hyperæsthetic condition of the canal which leads to temporary and spasmodic contractions, but not to true stricture, and I have, in a pretty fairly large experience with these cases, come myself to that conclusion, for after the local treatment has been pursued, the puffiness and temporary obstruction in the canal disappear, the hyperæsthesia and inflammation subside, and the canal returns to a more or less normal condition, and with it the symptoms for which the surgeon was consulted gradually improve and entirely disappear. I have noticed the same condition in men who have indulged to excess in the sexual act, and who had not, so far as I could trust their word, masturbated for many years—sufficiently long a time to prevent me from considering that the masturbation had anything to do with their sexual debility.

and yet in these instances the physical conditions were precisely the same as in those who had masturbated. I have, moreover, been struck with the fact that in those instances where a true stricture was present, as shown by the fibrous and dead white look when seen through the endoscope, that there was very much less sexual disturbance than in those cases where the contraction was due to a puffiness of the mucous membrane. Perhaps in those cases where the congestive condition only was present, if left alone, they might have degenerated into a true stricture, but I think this is merely a surmise, and I do not know that I have anything to offer as proof one way or another.

Another cause which I think oftentimes operates in these cases of sexual debility, is that in addition to this prostatic irritation, etc., an enlargement of the middle lobe of the prostate occurs, which by pressure either upon the urethra or upon the vasa deferentia produces an abnormal excitement upon the slightest occasion; as, for example, when sitting upon a hard chair, upon crossing the legs, or upon straining during defecation, all of these acts being followed by an acute burning sensation in the prostatic portion of the urethra, sometimes with the sensation as though an ejaculation was about to occur, and in some few instances really followed by an involuntary seminal emission. In these cases it is that we find not only premature emissions, but sometimes a total absence of erectile power, so complete as to make the surgeon believe that the patient is really impotent, were it not for the fact that at intervals the patient will have an erection on waking up, which, however, rapidly subsides as soon as he is awake, and which is seldom followed, at least not for a considerable interval, by any further erection.

Varicocele, I am inclined to believe, is frequently the cause of sexual debility, oftener than is at present believed; and in such cases as I have had under observation, I have noticed that as the varicocele increases the sexual power seems to have become less and less, until when the final stage is reached and the testis is atrophied, and nothing is felt in the scrotum but a bunch of veins, the patient is to all intents and purposes impotent, and, under these conditions, probably permanently so. I have, furthermore, noticed in these cases that where the varicocele is seen sufficiently early

to warrant an operation for its relief, it was followed by an improvement in the sexual functions and power.

Neuralgia of the testis is another cause which sometimes plays a part, but only, I think, because of the excessive pain which is one of the peculiar symptoms of this disease; the pain being so intense as to preclude a thought of anything else, and in that way producing imperfect erections, for in those instances where temporary or permanent relief is afforded, the sexual functions return, and are to all intents and purposes as good as they were before.

Tuberculosis of the genital tract does not produce any sexual disturbance unless the prostatic portion of the urethra or the testicles are invaded, and in these cases it seems to act less upon the function or erection than it does upon the premature emission, and subsequently by the lack of emission. It is in these instances that we often find the condition of azoospermism, and associated with this, under the microscope, the bacilli of tuberculosis are not infrequently found. This, however, is not common. Syphilis and gonorrhœa produce disturbance probably by some organic change occurring in the organs of generation, but in cases of tuberculosis the disturbance is produced probably by the breaking down of tissue either in the glandular portions of the prostate or in the body of the testis, producing either a plugging up of the epididymes or of the vasa deferentia, and so preventing the ejaculation of that portion of the spermatic fluid which contains the spermatozoa.

Syphilis in the earlier stages does not seem to have much influence upon the sexual function, but as the disease progresses and the seminal vesicles and the testicles are attacked with gummous infiltration, or gummata appear elsewhere in the uro-genital tract, we then find that the sexual powers become less, and, in some rare instances, may be almost entirely in abeyance, returning again, however, in the majority of cases, after vigorous antisyphilitic treatment. In these instances, not only is sexual debility present, but there is an absence of the spermatozoa in the seminal fluid, so that the patient suffers in a two-fold direction, being both impotent and sterile. The same holds true in gonorrhœa, not during its earlier stages, for then the inflammation is such

that erections are unpleasantly frequent and associated with great pain, but it is in the later stages, and especially after the disease has lasted for some time, inducing stricture, that the sexual functions become affected, and if a gonorrhœal epididymitis has ensued, which must, however, be double, then azo-spermism is the result, and of all of the varieties of azo-spermism this is the one which promises the least results from any method of cure, and the longer the blocking up of the epididymes has occurred, the less chances of fruitful semen. In these cases, apart from the irritation produced by the stricture, there is no debility; the patients are often as vigorous as ever. They have what seems to be a normal ejaculation, save and except that the semen is devoid of its functifying principle—in other words, these patients become sterile but are not impotent.

One other cause may sometimes induce sexual debility, and that is an affection of the rectum, whether it be hemorrhoids, which is not an uncommon cause of temporary debility, but long and deep fissures of the anus, which by irritation will produce reflex irritation of the urethra, and so result in premature emissions, and, in some rare cases, will induce a weakening and lessening of the powers of erection.

In enumerating these purely physical causes which I believe to be most frequent as pathological factors in this disease, I do not by any means intend to decry the mental or nervous effect which is produced upon patients. It is often most pronounced, and in many instances seems to be the most prominent feature in the disease, but I believe that the error which has been made by surgeons in laying too much stress on the nervous part and too little on the physical, has worked to the detriment of both patient and surgeon, and has driven the former into the hands of the charlatan, when the surgeon could have given better and more permanent relief, and I have trespassed on the time of the Society in order to call the attention to the physical causes which I have found in the cases that I have had the opportunity of examining and treating for sexual debility, the majority of which I believe to be perfectly curable at the hands of the surgeon.

The short time at my disposal has not allowed me to make more than a hurried sketch, calling your attention to the salient points in as few words

as possible; and now a word in regard to treatment:

For the first three, to wit, hyperaesthesia, stricture and varicocele, the treatment must depend largely upon local methods and not upon internal medication. Applications made through the endoscope, I believe, are far the best, and those applications range from nitrate of silver down through the various astringents to those which are purely sedative, such as cocaine and the like. I believe that the most serviceable treatment in the majority of instances is by the solution of nitrate of silver, from ten to thirty grains to the ounce, and even stronger. Sometimes I have used fifty grains to the ounce. The pain when this application is made to the deeper part of the canal, provided the solution is not allowed to run out towards the meatus, is very slight indeed, sometimes none at all, and I believe that the local application through the endoscope is preferable either to the method of applying nitrate of silver by the porte-caustique or the syringes of Ultzman, Keyes, and others, because the application can be made directly to the part, the superfluous moisture can be soaked up by the cotton tampons at the end of the application, and no obstruction occurs. I do not believe, from my experience, that solutions of nitrate of silver, even when strong, produce stricture, certainly not when made through the endoscope. Nitrate of silver has received a bad name, and I think, in some instances, undeservedly, for, when properly used, I am satisfied that it is a very valuable adjunct in the treatment of uro-genital diseases. In addition to this, the various solutions of zinc, the permanganate among others, tannin either of an aqueous solution, or better with glycerine, are frequently valuable adjuncts, and should be resorted to as occasion requires.

In cases where stricture or a spasmodic contraction is present, the question comes up with regard to operation or the use of sounds, and in these instances where the stricture, or rather the contraction, is of the congestive and purely irritable type, I much prefer the use of sounds, of the fullest size that the canal will admit, passed at intervals of from three to ten days, and I believe not only does it have the effect of dilating the canal, but it has a sedative action upon a nervous and irritable urethra. I should not be inclined in these cases

to pass the instrument cold; on the contrary, I am in the habit of using it as hot as the patient can conveniently endure. They can be passed either alternately or within a few days after the local applications are made, but that will vary, of course, with the individual features of each case, and with the surgeon's belief of what is required.

Should varicocele be the cause, operative procedure is the only method that offers any chance of success, and in these instances, I much prefer the operation by ablation of a portion of the scrotum rather than any attempt to tie the varicose veins. In these cases where tuberculosis, syphilis and gonorrhœa play a part, of course the internal treatment appropriate to these varieties of diseases is the only method that can be pursued, and in these instances the local treatment can be of little service.

The internal treatment I think plays a purely secondary part, and in instances where there seems to be a debilitated condition of the patient, a tonic may be, and undoubtedly is often, of service. As regards the so-called aphrodisiacs, I frankly confess I am somewhat skeptical of their value, and yet I have seen cases where I had reason to believe that good results followed, especially from the use of carefully prepared preparations of cocoa (erythroxyton coca) ergot, either alone or with iron, and occasionally damiana. In all instances when prescribing these preparations, it is well to have them made up by some responsible house, as so many worthless preparations of both coca and damiana have been put on the market, that unless the surgeon exercises some care in the selection of his drug, he is apt to be disappointed. I have for the past year tried fluid extract of *Sabal Serrulata* (the saw palmetto), and without committing myself to a positive opinion upon the subject, I have thought some patients were benefited by its use; but whatever the method of treatment be, it must be remembered that these people are a class who will try the patience and good temper of the surgeon, almost more than any other. I do not except cases of chronic urethritis. They are patients who should really be commiserated, should be treated with the utmost kindness, and be encouraged in every possible way that the surgeon can honestly and legitimately do.

To make a brief summary as a termination of this paper, let me state:

I. That the cases of sexual debility which are marked by imperfect erections and by premature emissions, are usually, if not entirely due to hyperæsthesia of some portion of the urethra.

II. That masturbation has very little, if anything, to do with it, beyond the fact that if indulged in to excess, it may induce a tendency towards this hyperæsthetic condition, but this is no more marked in masturbators than it is in those persons who indulge to excess in the venereal act.

III. That organic stricture has little, if anything, to do with it, but that associated with this hyperæsthetic condition, there is an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempt to pass instruments, oftentimes during the first act of micturition and at the time of connection.

IV. That varicocele plays no unimportant part in these cases.

V. That neuralgia of the testis, if a cause of this disease, induces it merely as a secondary consequence to the pain which is one of the distinguishing features of this disease.

VI. That tuberculosis, syphilis and gonorrhœa may also play their part, and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.

THE USELESSNESS OF A MYDRIATIC IN EXAMINING AN EYE FOR THE PURPOSE OF PRESCRIBING GLASSES.*

BY D. B. ST. JOHN ROOSA, M.D., LL.D.,
Surgeon to the Manhattan Eye and Ear Hospital; Prof.
in the New York Post-Graduate Medical School.

In 1876 I wrote a paper, which was read before the International Congress of Ophthalmology, on the relation of blepharitis ciliaris to ametropia. It was stated in that paper that many cases of this disease were connected with, and caused by, errors of refraction, and that the condition in such instances could not be cured unless the refraction was first corrected. This view caused some discussion, but I believe that its conclusions were

* Read by title before the Medical Society of the State of New York, February 7, 1894.

finally considered by experts in ophthalmic disease to be, in the main, accurate. The point was also then made that it was impossible, in a large number of cases occurring in young persons, to determine whether or not a refractive anomaly existed, unless paralysis of the ciliary muscle had been produced by the use of a mydriatic, and it was argued that the reason that many observers did not find this relation existing between blepharitis and ametropia was that they did not thoroughly test the refraction with the aid of a mydriatic. I still think that this view is correct, but I did not ask your attention for the purpose of saying any more upon this subject of the relation of certain diseases of the eyelids to uncorrected errors of refraction. I merely wished to bring to your attention, as preliminary to the present discussion, the fact that very early in my practice I resorted to the thorough use of a mydriatic before attempting to determine, in the case of young people with asthenopic symptoms, whether or not glasses should be worn, and if so, what. I continued this practice of using a mydriatic for the purpose of measuring the eye up to the year 1888, both in my hospital and private practice. It is a method of treatment entirely satisfactory in its final results, but it is extremely disagreeable to the patient; it involves a great deal of time, and it is tedious in the extreme to the practitioner. In many instances it was found to have been unnecessary, except that the positive determination that no considerable degree of astigmatism existed was made. It often settles the fact that there is no astigmatism sufficient to be corrected, and that only hyperopia or myopia, which can be very well determined by the ophthalmoscope, exists.

While in Paris, in 1887, and seeing a little of the work of Dr. E. Javal, I was greatly surprised to find that he, who had been an enthusiastic advocate of the use of atropine for as long a time if not longer than I had myself, and who was in the habit of prescribing glasses from the results obtained by the atropine, now, since he had perfected the ophthalmometer—the instrument for measuring the cornea—had entirely abandoned the practice. I found also that Dr. Bull, formerly on my staff, concurred in these views.

But this thorough use of atropine, which I believe was properly insisted upon as the only sure means of accurately determining the refraction,

was somewhat abused by those who recommended it when there was no apparent spasm of accommodation, and for persons in middle life or advanced years. After 1876, papers began to appear from neurologists and young ophthalmologists, showing that they used atropine in what I should term an indiscriminate way—for example, in persons beyond forty years of age, where there can be no question, except in entirely extraordinary and exceptional cases, of spasm of accommodation. These writers ignore the physiological principle of tone in a muscle. In other words, presbyopes, who needed nothing but a few minutes' testing with glasses, were put under the influence of atropine, and persons with an eye so nearly normal that its deviation from emmetropia could be expressed by a positive spherical glass of one or two diopters, were considered to be subjects for glasses because under atropine they would accept, say + 0.50 D., when really all the belladonna had done was to remove the tone of the muscle. Something must be allowed for this in every human eye. The attempt to convert an ordinary eye into an ideal one, which in some quarters is said to be the proper course, I deprecate, founding my opinions primarily upon the work of Donders and Loring, both of which authors dwelt properly, as it seems to me, on the natural tonicity of the ciliary muscle. Most observers have long since come to the conclusion that the hypermetropic eye is the average eye of the human race, excluding myopia, and that it is a condition which of itself can cause no inconvenience until presbyopia is reached, when to the congenital axial elongation of the eye must be added flattening of the lens and rigidity of the ciliary muscle caused by time. Then, as everybody knows, a glass will be required for the presbyopia plus the hypermetropia.

When I found Javal measuring the cornea, and being satisfied with that as a means of determining the refraction, I undertook the same practice myself, and after six years of experience I am convinced that the use of a mydriatic to determine what glass should be worn is entirely unnecessary if the ophthalmometer is used. The great object in using a mydriatic was not to determine how much hypermetropia existed—that can be approximately estimated, although not always with complete accuracy, with the ophthalmoscope—but it was used to determine if astigmatism existed, and

if so, of what degree. Now this can be determined in a very few moments in the vast majority of cases—in, I think, as large a proportion as ninety-nine out of a hundred—by measuring the cornea alone, for lenticular astigmatism, although it was the kind possessed by its great discoverer, Dr. Thomas Young, about ninety-five years ago, very rarely exists, and in general considerations it need not be taken into account. Early in the investigations of astigmatism, Donders showed just how much corneal astigmatism the lens would overcome by its oblique position. This observation has been verified by the work of Javal, many others, and myself. In a very large practice in refraction cases in the Manhattan Eye and Ear Hospital for the last three years, my staff and myself have not used a mydriatic, except in the most exceptional cases, for the purpose of testing patients for glasses. We have never had such satisfaction in our prescriptions, and we have relieved our patients of a great loss of time and ourselves of a great burden in work. I commend this method to the respectful consideration of my fellow ophthalmologists. If the ophthalmometer is used, and the difference between the vertical and horizontal meridians of the cornea is once fairly established, the rest of the prescription becomes a matter of a very short time. Besides this, I believe, as I have attempted to show in a paper published in the *Medical Record* (March 26, 1892), that in young persons with asthenopia, caused by an error of refraction, who have as much as a diopter of corneal astigmatism, it will usually be sufficient to correct the astigmatism, and to allow the hypermetropia to be cared for by the ciliary muscle.

NEURASTHENIA.

BY PROF. G. RAUZIER, OF MONTPELLIER.

Translated from the French, by D. Campbell Meyers, M.D., Toronto.

(Continued from April No.)

Therefore neurasthenia may affect, in the system, the functions of every organ. It may provoke symptoms of two kinds, symptoms of functional excitement or depression, the two varieties of affections succeeding or alternating to infinity in the same subject. This symptomatic

wealth, this abundance of symptoms, will not be found, one may readily understand, in all cases of neurasthenia. Few patients are affected in all their functions, more often, on the contrary, one or more organs alone become the seat of the disease.

Thence one may conceive the multiplicity of forms which may present themselves to the observation of the clinician. These different forms, related among themselves by the similarity of their symptoms, form their individuality from two chief sources: 1, The cause which provoked neurasthenia and imprinted its marks on the symptoms. 2, The predisposition of organs, every affection, whose localization is indefinite, being directed towards that system which is in a state of relative weakness.

The classifications proposed by authors errs, as a rule, in want of uniformity, a certain number of these divisions having as a base a symptomatic character, others an etiological character, whence the great difficulty of placing certain forms doubly characterized in either category. Beard describes seven forms: 1, cerebrasthenia; 2, myelasthenia; 3, the gastric form; 4, the genital form; 5, traumatic neurasthenia; 6, hemi neurasthenia; 7, hystero neurasthenia. Bouveret recognizes nine varieties. 1, cerebro-spinal neurasthenia; 2, cerebral neurasthenia (cerebrasthenia); 3, spinal neurasthenia (myelasthenia); 4, acute neurasthenia; 5, hereditary neurasthenia; 6, feminine neurasthenia; 7 genital neurasthenia; 8, hystero neurasthenia; 9, traumatic hystero neurasthenia. Levillian seeking to avoid the error we pointed out above, and making the preceding groups his study, proposes two very distinct classifications, the one comprising the clinical varieties (the common cerebro-spinal form, hemi-neurasthenia, cerebrasthenia, myelasthenia, cerebro-gastric neurasthenia, also cerebro-cardiac, and cerebro gastric neurosis, the sexual neurasthenia of Beard) the other uniting the etiological varieties (traumatic neurasthenia, hystero neurasthenia, hereditary neurasthenia, feminine neurasthenia, masculine and occupation neurasthenia. Pitres, pursuing the path of simplification, and taking as an exclusive base the localization of morbid affections, describes only six forms: 1, cerebral; 2, spinal; 3, neuralgic; 4, cardialgic; 5, gastro intestinal; 6, genital.

On our part we accept the classification of

Mathieu, which he states and justifies in the following manner :

Three clinical circumstances are above all to be considered, because their existence or absence immediately furnishes important data on the etiology of neuropathic condition and its probable evolution :

a. Neurasthenia is simple, exempt from all marked symptoms of degeneration, exempt from other superadded neurosis.

b. Neurasthenia is accompanied by certain symptoms well defined of degeneration.

c. To neurasthenia are added the symptoms of one or other nervous diseases (the most frequent examples is that of hystero neurasthenia). It furnishes, according to the predominating symptoms, the following varieties :

Nervous system.	}	Cerebro-spinal neurasthenia.
		Cerebral neurasthenia.
		Spinal neurasthenia.
		Peripheral neurasthenia.
Digestive organs -		Dyspeptic neurasthenia.
Circulatory organs, -		Cardiac neurasthenia.
Genito-urinary organs -		Genital neurasthenia.

Each localization furnishes mild and grave forms.

1. Cerebro-spinal neurasthenia answers to the preceding scheme ; it comprises the whole of the symptoms of the neurosis, to which we need not recur. Certainly one may include in this category a certain number of sub-varieties.

The hemi-neurasthenia of Beard, or *neurasthénia dimidiée* of Charcot, occupies one-half only of the body, or affects one side chiefly.

Hereditary neurasthenia "is distinguished by precocity at the outset of neuropathic phenomena, their intensity, the frequent co-existence of fantasies or of fears connected with a mental trouble which sometimes exceeds simple neurasthenia by its long duration and finally by its resistance to treatment."—(Mathieu.)

Feminine neurasthenia (Weir-Mitchell) is the form observed particularly among women affected by uterine lesions, or again after great griefs, or physical fatigues, not compensated by sufficient recuperation. It is characterized by an extreme cerebro-spinal depression, with nearly constant hypochondriacal manifestations. "Often these are *geignardes* (Charcot), whose life is but one

long complaint, in a monotonous key, for which anything serves as a pretext. Often also they think themselves misunderstood, and one finds at the same time among them neurasthenic depression and the torment of an unrecognized soul seeking a kindred spirit which it will probably never find."—(Mathieu.)

2. The cerebral form shows itself above all among subjects whose intellectual faculties have been overworked ; it shows itself in headache, insomnia, aboulia, vertigo, impossibility of working. To these symptoms are sometimes added, among those exhibiting a tendency to the psychoses, melancholia and fears.

3. The spinal form, most frequent among devotees of pleasure or subjects of certain intoxicants, shows itself in rachialgia, amyasthenia (having a preference for the lower limbs), and genital troubles. It answers to the old conception of spinal irritation. Spinal irritation, says Armaingaud, who has thoroughly studied it, is characterized by a pain, affecting the length of the vertebral column, most easily provoked by pressure on the spinous processes, presenting various irradiations and accompanied by a number of functional troubles : among others, local congestions in different parts of the body, and nearly always with loss of strength and emaciation. The author lays stress on the intensity of the rachialgia and the hyperæsthesia of the vertebral column to pressure, to the passage of a damp sponge hot or cold, to electricity ; pressure also reveals the presence of spots which are particularly painful. Some painful irradiations, of neuralgic form, without objective affections of the sensibility, may appear at different points of the peripheral nervous system, and be accompanied by a diffuse paresis, never ending in true paralysis ; of vaso-motor affections, etc. Sometimes the analogy of the symptoms with tabes is such as to have created the word *neurasthenic pseudo-tabes*, to characterize that condition, very different in its prognosis from sclerosis of the posterior cords.

4. The *peripheral form* manifests itself most often by more or less acute pains of rheumatic or neuralgic character. These pains are not accentuated by pressure, nor accompanied by a corresponding cutaneous hyperæsthesia ; they do not correspond with the course of the nerves, and may present themselves in the form of plaques or pain-

ful spots, localized in varying regions and by no means in harmony with regions anatomically or physiologically delimited.

When these pains are disseminated through nearly all parts of the economy, it is the *general neuralgia* of Valleix. When they are localized in one well-defined region, and maintain themselves there permanently, it is the *topoalgia* of Blocq, or monosymptomatic and painful neurasthenia. We would point out among these defined peripheral localizations of neurasthenia the *glosso-dynia* of Verneuil, with imaginary ulceration of the tongue, *coccygodynia*, *mammary algia*, certain *myalgias*, etc. There exists sometimes at the level of the painful spots, objective affections either of the sensibility or vaso-motor troubles.

5. The *dyspeptic form* (stomachic or intestinal) conforming to the digestive affections of various kinds. It shows itself sometimes by acute symptoms (simulating, in certain cases, typhilitis or perityphelitis), but generally presents a chronic evolution. Of all neurasthenic forms, this is the one which most frequently terminates in cachexia.

6. The *cardiac form* has been described under the name of cerebro-cardiac neuropathy (Krishaber). We have discussed it in the paragraph of accessory symptoms of neurasthenia.

Huchard has, quite recently, insisted on a special form of these cardiac affections, which he calls paroxysmal, painful arrhythmia (sometimes it is permanent) and which should not be confounded with neurasthenic angor.

7. The *genital form* (the sexual neurasthenia of Beard and the Germans) presents a condition of sexual excitement soon followed by a condition of depression with impotence, spermatorrhœa and chronic irritation of the prostate region. In the female this form of neurasthenia shows itself by lombo-abdominal neuralgia, pains in the hypogastric or iliac region, pruritus of the vulva, vaginismus and menstrual derangements.

B. Neurasthenia, in connection with signs of hereditary degeneration. The psychical trouble dominating this form of neurasthenia, consists of *phobias*.

Legrand du Saule has given of the most interesting among them, *the fear of spaces*, a magnificent and thrilling description.

"The fear of spaces, ordinarily compatible with all the appearances of the most robust health, is

frequently produced at the very moment that the neuropath leaves the street and arrives at a square, and shows itself by a sudden pang and a peculiar sensation about the heart. The patient, now the prey of an undefinable emotion, finds himself isolated from the entire world at the sight of the space which appears before him, and he frightens himself beyond measure in spite of the slight foundation of his fear, and in spite of the wisest and most comforting exhortations that he addresses to himself, spontaneously. He feels prostrated, does not dare to leave the sidewalk, makes no step either forward or back, neither advances nor recedes, trembles in all his limbs, pales, shivers, blushes, is covered with perspiration, is more and more alarmed, scarcely supports himself on his tottering limbs, and remains painfully convinced that he will never be able to face this void, this desert place, and cross the area, which presented itself. Let any one suddenly look down a yawning chasm, let them imagine themselves to be above a burning crater, let them believe that they are crossing Niagara on a tight rope, or that they feel themselves rolling off a precipice, and the impression felt would not be more painful, more terrifying than that induced by fear of spaces. Nothing however hinders the progress of the frightened man, who moves his feet without advancing; this is proved by the fact, that in order to dissipate his terror, to recall his normal quietude and restore his courage, there is only necessary the presence of a companion, the arm of a passer-by, the hand of a child, the appearance of the light of a lantern, the meeting of a carriage, the possible assistance of a weapon, the support of a cane or even the possession of an umbrella.

Let the agoraphobe approach a house, his courage returns; let him enter a narrow street, he is reassured at once, let him meet an acquaintance, he is himself again, let him no longer feel that he is no longer alone and his bravery returns. The idea of being left alone in the desert fills him with terror, and the feeling of assistance no matter how slight, appeases him without effort. The unexpected sight of an open place takes away his strength, and confidence based on the slightest support, a deception brings them back to him at once. There is no fear without the void, no calmness without the appearance of a semblance of protection.

Fear of spaces may be produced equally in streets where the shops are closed, in a church, at a concert, at the theatre, in the presence of long walls of a facade, monumental and smooth, of a tapering perspective, of a bridge with numerous arches, of a long vault sustained by columns, sometimes in a place where there is a crowd, at an open air meeting, in an enclosure open to the heavens, without ceiling, and even in a public vehicle. This state of anxiety, which consists above all in an absurd and exaggerated and sentiment of fear in front of the void, is generally accompanied by sudden weakness of the legs and transient circulatory superactivity, with vague creeping sensations, with a sensation of commencing torpor, of cold, heat, icy perspiration, tremblings, desire to weep, ridiculous apprehensions, of hypochondriacal ideas, of muffled lamentations and general trouble, truly painful with different alterations of facial color and physiognomic expression. The intelligence is sound and free will intact. Of what then is the patient afraid? Of wandering about, of weeping, of crying, of falling, of having a giddiness, of fainting, of being struck with apoplexy, of being considered a coward, of being a laughing stock, of passing for a fool, of wishing to go to the closet, of disappearing forever, of turning into nothing, but oftenist he is afraid—to be afraid.

Besides *agoraphobia*, or fear of open spaces, we will point out *claustrophobia*, or fear of enclosed spaces, the meeting of the two varieties constitute *topophobia*. *Astrophobia* is an immoderate fear of storms and lightnings; *anthrophobia*, or fear of men, causes the patient to fly from his fellow creatures; *monophobia*, or fear of being alone, deters him from isolating himself; *misophobia* is dread of fifth; *nosophobia* is fear of diseases.

There are yet fears of various kinds, fear of travelling by rail, of touching a door handle, of contact with such and such a metal, etc. Some patients fear everything (*pantophobia*), others, in short, have fear of being afraid (*phobophobia*).

Slight fears, easily allayed, exhibit themselves sometimes in simple neurasthenia, and do not imply an unfavorable prognosis, it is not the same with the grave, imperious, inveterate phobias, whose verifications would impose serious reservations on the intellectual future of the subject.

C. Hystero-neurasthenia. Neurasthenia can be

associated with different neuroses, epilepsy, migraine, Basedow's disease, but it is chiefly on hysteria that it is superposed in many cases. Above all it is following railway accidents that the two varieties of neurotic affections, whence the name, *railway-spine* given by the English (Brodie Erichsen) to those nervous manifestations. Neurasthenia, affecting ordinarily the cerebro spinal form, habitually precedes hysteria by some days or even weeks, then the latter appears, and the two neurotic diseases ally themselves closely, combining with one another (Charcot).

The Germans (Oppluheim Thomsen) have refused to accept the interpretation, now almost universally admitted, of nervous affections following tramrtism; now they make it a nervous disease in part, allied to hysteria, but not blending with it, *tramatic neuroses*.

We need not enter here into the details of that discussion. (*To be continued.*)

Selected Articles.

SLEEP, SLEEPLESSNESS AND HYPNOTICS.

(*Continued from April number.*)

Warmth, judiciously used, however, is attended with good results. The fact that so many of the insane sleep best on hot nights should not be lost sight of. In Griesinger's "Mental Pathology and Therapeutics," page 75 *et seq.*, sleep, in connection with insanity, is well considered, and he particularly compares insanity to dreaming.

Preyer originated the blunder that sleep was caused by a toxic substance in the blood, upon the inference that as fatigue was associated with sarcolactic acid in the muscles, the latter was the cause of the former. Pflüger regarded sleep as cerebral asphyxiation from excess of carbonic acid accumulation. On the other hand, recent experiments point to increased consumption of oxygen during sleep. Evidently, as a definite amount of nitrogenized hydro-carbonaceous matter is consumed in all waking effort, cessation of activity lessens this consumption, but not to the extent of arresting it altogether, for the inevitable result would be a disintegration of the tissues.

The complex albumen molecule, $C_{72} H_{112} N_{18} SO_{22}$, with its 225 atoms, in undergoing metabolic changes, adds to and subtracts from its number of atoms within a certain range, and maintains its life and potencies. Let us say that twenty-

five of its atoms are used up, exploded in exertion, and its limit of exhaustion has been reached. Plainly, these twenty-five atoms should be regained during comparative quiescence by other than toxic or asphyxiating means. In short, the cell eats while the colonial activity ceases, and this is the meaning, the end and aim of sleep. If, in addition, twenty five more atoms enter into the combination, making it a still more complex molecule, a margin of fifty atoms may thus be imagined as enabling extra exertion within safe limits. Destructive metabolism could be supposed to ensue from several hundred of these atoms being parted with.

The chemic composition of the hypnotics affords no clue to their *modus operandi*. The mere presence of nitrogen in many is negated by this element also occurring in ammonia and thousands of compounds with varying properties. Chlorin also appears as a food constituent in salt, as part of the anesthetic chloroform, and as a suffocant in its gaseous form. Neither the number nor the position of the atoms of carbon, hydrogen, nitrogen and oxygen in morphine explain why it differs from quinine which also contains these elements in other proportions.

Neither complexity nor simplicity of atomic combination guarantees any explanation of the mocular rationale, but in a general way the more useful drugs have a constitution admitting of more or less direct conversion into animal constituents, and yet this is far from being a safe universal guide, for some of the deadliest poisons, even in small quantities, resemble foods in their chemic structure.

In some instances, solubility modifies actions materially for better or worse, in others the looseness of the atomic make-up explains some effects, and the resistance to atomic splitting up, or the temperature necessary for decomposition, explains other effects. With what knowledge we possess we can formulate something in general from specific instances :

Alcohol, $C_2 H_6 O$, is rapidly assimilated and in a certain sense is a food. This rapid assimilation by reconstructing the tissue could account for its stimulant effect, and when there had previously been cell waste upon which the insomnia depended, the sleep-inducing properties of alcohol are accounted for. The stupidity that follows over-indulgence is precisely what would occur from cerebral tissue surfeit.

Morphine, $C_{17} H_{19} NO_3$, upon thorough consideration also falls into this dangerous food category. It, with alcohol, though less rapidly, enters into molecular combinations with nerve tissues and induces a certain exhilaration and subsequent dulling of the senses.

The exhilaration caused by oxygen and the stimulant effects and later anesthesia of nitrous

oxide gas, without doubt are owing to the rapid assimilation of these articles by the blood and nerve centres. The stimulant effects of all these agents could be ascribed to rapid atomic interchanges, such as occur with less swiftness and danger in the ordinary course of nutritive supply.

The warmer blooded birds take up oxygen more rapidly than mammals, and far more so than reptiles. The acidity of muscle and nerve substance in connection with blood alkalinity renders possible the conveyance of alkaloids, and make it likely that soluble alkaloidal hydrocarbons of the neurotic group, assimilable by the organism, have sufficiently close molecular resemblances to the acid protagon as to account for their mutual affinities and bio-chemistry.

In the constitution of protoplasm, as well as that of any compound whatever, there is a necessity for the absence of certain molecular groupings which destroy the combinations if integrity is to be preserved. The cell environment is reached by adaptability, and in the differentiation of cells, it is easily seen, that what would be nutrient to one may easily poison another by combustion conversion, as with sulphuric acid, or affinities in lesser degree existing between the toxicant and molecule.

The life of the cell depends upon the absence of these deleterious molecules for which there are affinities, precisely as animals must avoid fire. Prussic acid, $H C N$, presents the simplest example. The nitrogen therein is in a dangerously assimilable form, and its sudden surcharging of nerve centres with carbonized blood paralyzes the body. Even though the venous blood occurs after prussic has first caused the blood to appear to be arterialized, at least destructive chemic changes are instantly induced by this simply constructed poison. The action of nitro-glycerin and amyl nitrite exhibit the swiftness of union between the nitrogen and important structures. Nitrogen has a persistent tendency towards its free inert state, and this very disposition confers upon it great physiologic importance. On the other hand, oxygen has a great antipathy to uncombined existence. These two mechanically mixed ingredients of the air play complementary parts in biologic phenomena.

Certain drugs have special affinities for certain groups of nerves, and white pigs and sheep are said to be differently affected by vegetable poison from colored individuals, a fact accounted for, doubtless, by the presence or absence of pigment compounds, which have affinities for or resist the influence of certain poisons.

The antidotal action of chlorine gas in prussic acid poisoning may be due to the former directly lessening the surfeit (so to speak) imparted by the hydrocyanic acid. The sedative property of

small doses of the latter show that it has a nutritive value which larger doses exaggerated poisonously.

The theory that chloral, C_2HCl_3O , liberates chloroform in the blood is tenable notwithstanding the definite urochloralic and other urinary excretion after chloral ingestion, but how does chloroform, $CHCl_3$, cause anesthesia? Its solvent power over sulphur, phosphorus and fatty bodies, conjoined with its primarily intoxicating properties, might make it appear to combine slight nutrient with destructive effects, the latter acting later but more powerfully.

The greater safety of ether (sulphuric ether, $(C_2H_6)_2SO_4$) and its readily decomposing into alcohol, sulphurous acid and olefiant gas, together with its stimulating property in small doses, point to the nutrient action outweighing its toxic or to the relative proportion of each being within safer amounts in ether.

It is doubtful if the bromides become substitution compounds in any of the animal tissues, further than to pervade the secretions and lessen activity by taking the place of nutrient materials. About as free nitrogen dilutes the air and lessens the quantity of oxygen respired, so may the inert bromide salts saturate the circulation in place of other materials that could enter into combination. If bromide salt ingestion passes a certain point, distressing insomnia may result, probably from the anemia exceeding what ordinarily occurs in sleep. Chloral, also, in large doses may utterly fail to do anything but cause distressing wakefulness and gastric irritability, especially in senile debility associated with heart disease. The significance of this being that waste is but increased by the chloral. Alcoholics in such instances act promptly and beneficially for easily understood reasons.

Ergot has an indirect hypnotic effect through its contraction of the blood vessels, upon the muscles of which it acts directly. Winckler's discovery of a coloring matter in secale, closely resembling hematin, might mean that oxygenation of the involuntary muscles is accomplished by ergot, and the contractility is thereby induced.

Though, strictly speaking, phenacetin and phenocoll cannot be classed as hypnotics, their effects as sedatives and certain chemico-considerations make them specially interesting as neurotics.

The antipyretic effects of acetanilide and phenacetine when combined with acids are destroyed; the earliest discovery of the kind being that of Ehrlich, that the acid sulphone group abolished the affinities of certain substances which they previously possessed for the nervous system. The existence of so many alkaloids having this affinity, taken in that connection, afford hints that some of the combining efficacy of neurotics depend upon

the union of a base and radical in the nerve tissues, notwithstanding the fact that these alkaloids may be introduced into the system combined with sulphuric or other acids; such acidulation being looser than in the coal tar series.

An ingenious introduction of the basic glycocoll into the groups whence phenacetine is derived rendered it much more soluble, and to this extent increased its ease of administration without altering the antipyretic and analgesic properties of phenacetine when thus converted into phenocoll.

Unlike the majority of synthetical antipyretics, phenocoll, according to Kobert, of Dorpat, is not poisonous to animals and does not affect the blood. It has a slight stimulant effect upon the circulatory system. Phenacetine is closely allied, chemically, to acetanilide, and physiologically both phenacetine and phenocoll act as a modified acetanilide or antipyrine. What particular change in the construction accounts for this modification only great advances in bio-chemic knowledge will reveal, but it can be conjectured that differences in the closeness with which nitrogen, as well as other atoms are held in a compound, may unlock a molecule quicker or retard its entering into new combinations.

Considering the derivation of paraldehyde, its somnifacient influence might be regarded as similar to that caused by alcohol. The ordinary ethyl or acetic aldehyde being alcohol, minus two atoms of hydrogen, and paraldehyde is formed by the condensation of three molecules of aldehyde into one molecule. It is so easily split up, so sensitive to oxidizing agents, and so much care is required in securing a pure article, that with safer and better hypnotics in the field paraldehyde is not likely to come into general favor. Not only has the pungent aldehyde been found in it as an admixture but the poisonous amyldehyde also.

Urethane and its derivative, somnal, have been pretty well abandoned by physicians. "Antikamnia" owes its present popularity to advertising, and being but a mixture of acetanilide, bicarbonate of soda and caffeine, according to Helbing (*Modern Materia Medica*, p. 3), it needs no further mention.

Were it not for chloralamide, which is rapidly superseding all modern synthetically constructed hypnotics, sulphonal would have remained in high esteem. In treating the insane, sulphonal has the advantage of solubility in hot tea or coffee, and can therefore be given without the patient's knowledge. The common practice of administering the dry sulphonal leads to undesired effects, such as a prolonged but unsatisfactory drowsiness or stupidity usually the day after it is taken. The action of sulphonal has apparent reference to its alcoholic derivation through mercaptan. The derivatives, trional and tetronal, possess few, if any, advantages over the original drug, while it is

claimed that the latter sometimes caused vomiting.

The substitution of chloral for opium created an epoch in therapeutics, notwithstanding the fact that chloral was found to have very disagreeable after effects and some dangers in its use. The advent of sulphonal enabled chloral to be largely superseded, but finally the discovery of chloralamide affords us all the advantages of chloral in the absence of its disadvantages.

The poisonous dose of chloral hydrate is not established; small doses have caused death, and large doses have been tolerated. Idiosyncrasies cause wide variance in effects.

Chloralamide requires a slightly larger dose than chloral, but the former causes what resembles ordinary physiologic sleep to a far greater degree than is induced by chloral. In other respects the drugs are closely allied, except that the deleterious properties of chloral appear to be absent from the newer compound. Particularly the gastric irritation induced by chloral frequently destroys its usefulness, and chloralamide has no such influence upon the stomach, nor is it an irritant to any mucous membrane.

Some laboratory experiments of Kny of Strassburg, demonstrated that chloralamide was free from action upon the heart and digestive tract, nor did it cause congestion and the other unpleasant after effects of chloral, though he inferred that the latter was slowly released in the circulation from chloralamide, and its depressant effects were counteracted by the formamide which acted as a stimulant.

Thirty years ago, formiate of ammonium was used by Ramiskill in the London Hospital for the Epileptic and Paralytic. He considered it useful in chronic paralytic diseases with general torpor, and he thought that it had a special tendency to the nervous centres. Formic acid is a circulatory stimulant, but too energetic to be useful except when chemically combined. It is one of the fatty acid series and has been found to exist in small quantities in the spleen, pancreas, thymus, muscle and brain, and in leucocythemia in the blood, urine, sweat and marrow.

An important group of animal constituents, called the amino-acids, is derived from the fatty acids by replacing one or more hydrogen atoms by the radicle amidogen NH_2 . This includes leucin, tyrosin, glycocin, taurin, creatin.

As the amines, amides and amino-acids are nitrogenous organic compounds among the simpler organic proximate principles, it is a safe assertion to make that the union of the formamid with the chloral in chloralamid justifies the classing of this new preparation among the *nutrient hypnotics*; that is, among those like alcohol, which, when properly administered, supplies material that has been exhausted in the nervous centres, notwithstanding the superficial objection that some of

these organic compounds are decomposition products.

Reasonably, much of the toxic influence of chloroform may be ascribed to the solvent power of that anesthetic over sulphur, phosphorus and fatty bodies, as these substances are important ingredients of nerve tissue. Now, if this toxic effect is obtunded or prevented by the union of chloral with formamide through the former expending this deleterious solvent propensity upon the latter, and the formamide being so closely allied to the normal nitrogenous proximate principles as to act practically like a food, which we can all the readier assume from its slight stimulant effect upon the circulation, the combined nutriment and toxic effect of chloral in that drug and chloroform is replaced by an *almost wholly nutrient hypnotic in the compounding of chloralamide*.

Glycocoll (also known as glycocin, and amidocetic acid) is the base which united with the phenacetine group forms phenocoll and renders it soluble. This being an amino-acid, on the principle enunciated above, phenocoll should be a safer and more effective antipyretic and sedative than phenacetine.

The published attestations of physicians as to the usefulness of chloralamide are so numerous, but at the same time so uniform, that brief mention of most of the references would swell this article unduly.

There has been a notable absence of any disposition to decry the drug in any quarter worth attention. In the use of every hypnotic, as well as any other therapeutic agent, bungling administration occurs, but this should not discredit rational exhibition. We may as well inveigh against water because it drowns.

Briscoe, of Chicago, accounts for a few failures through some practitioners using hot liquids as a vehicle, when chloralamide should never be offered in any other than cold solution.

In my experience, the elixir has a delayed action as compared to the powder dissolved just before use, an effect for which I have not tried to account.

The facts that chloralamide is about one-half as expensive as sulphonal, and superior to it, one would imagine were inducements for hospitals to purchase it in preference to the older and costlier hypnotic, but in certain quarters the error prevails that chloralamide is only soluble in alcohol. This arises from the fact that in twenty parts of water, chloralamide dissolves very slowly at ordinary temperatures, between 60 and 70 degrees F. Where, for any reason, it is not desirable or convenient to use the small amount of alcohol, about a minim and a-half to the grain, in preparing it for use, the aqueous solution can be prepared beforehand, half a day, or kept in the dispensary stock in that form.

Brandy or raspberry syrup are the most used vehicles; a drop or two of dilute hydrochloric acid to the ordinary dose facilitating solution.

It is to be hoped that the mistake so often made in giving sulphonal dry, will not be made in chloralamide administration, as its action may be delayed until the next day and cause a stupid half wakefulness not at all desirable.

Dr. Joseph Collins contributed to the July, 1892, *Journal of Nervous and Mental Diseases*, an excellent review of his experience with chloralamide in insomnia associated with various troubles, such as phthisis, pneumonia, neurasthenia, alcoholic delirium, senility, chorea, sciatica, lithemic headache, overwork, opium habituation, meningitis, and reports that he was particularly struck with its efficacy in two conditions, viz., pain and excessive irritable activity of the brain.

An important feature he notes, in the treatment of certain cases, is to beware of giving drugs which will in any way militate against the excretion of deleterious matters from the system and lower the condition of vascularity, such as the preparations of opium and the bromides.

"In conditions where chloral is indicated," states Dr. Collins, "but some intervening symptom contra-indicates its use, such as weak heart and respiration, as in the asthenic stage of acute diseases, of the heart and lungs, chloralamide can be substituted with safety and with good results."

He sums up in favor of its safety and reliability, its absence of after-effects such as headaches, and its value as a hypnotic where pain or cerebral activity are prominent factors.

Taking other authors at random, we find that as to the time of action, personal idiosyncrasy determines differences, but to no greater degree than was observed with chloral, the average limit being from one-half to three hours intervening between the dose and its effect, the duration of sleep varying from two to nine hours.

In many forms of mental disease, chloralamide acted beneficially in relieving insomnia; regular sleep was induced in chronic alcoholics and in patients suffering from locomotor ataxia even when they had been taking large doses of morphine. Other ailments in which sleeplessness occurred were alleviated to the extent of sleep procuring by chloralamide as follows: Cardiac asthma, chorea, neuralgia, rectal carcinoma, hysteria, spinal disease, delirium of cerebral hæmorrhage, rheumatic fever, thoracic aneurism, gastric carcinoma, hepatic carcinoma, bronchitis, cephalalgia, chlorosis with mitral insufficiency, endocarditis and renal colic.

It has been effectively used as a sedative in sea-sickness, neuralgia, and the sufferings of gastric ulcer.

The United States Dispensary designated chloral as the most efficient soporific and the one

most often used, and claimed that for producing sleep no medicine equalled it except opium, and to this it was preferable as wanting the properties which render opium inapplicable in certain cases, as in active congestion and acute inflammation of the brain and to a certain degree in constipation of the bowels.

In the rapidly accumulating literature of the subject, we begin to note that where chloralamide appeared to be ineffective in a certain disorder, in the experience of one author, other physicians obtained good results from its administration in the same ailment. In short, the history of chloral discussion is repeating itself in some of the contradictory experiences, but with the advantage for the later drug, that, wherever chloral has been established as of use, chloralamide proves not only more satisfactory, but where through deleterious properties contra-indications for chloral using forbid its use in a large list of diseases, chloralamide has been proven to be perfectly safe. No hypnotic has won so universal favor in as short a period and without the arraignment against it of occasional unfortunate episodes.

The largest dose on record used at one time is reported by Dr. Lackersteen, *Medical News*, November 25, 1893. A patient swallowed a mixture containing 140 grains of chloralamide with about 40 grains of bromides and fully recovered from the stupor which followed.

Personally, I have found it useful in facial neuralgia in small doses, and often sleep was induced by from fifteen to thirty grains when pain had previously prevented rest, showing that chloralamide has sedative or analgesic effects.

The restlessness of anæmic states has been allayed by small doses, and in a few cases I have substituted chloralamide for the bromides in treating epilepsy with apparent benefit, alternating the drugs or using them conjointly so as to diminish the dose of each. It would require at least a year's experimentation in this disease with chloralamide to enable a more conclusive statement than that it has been satisfactory as far as used by me; but I have not excluded other medicines at these times except for such short periods in treating epileptics that not only will a lengthened period be required to determine how far chloralamide is useful in this ailment, but I would prefer to hear from numerous other physicians who may make similar trials before pronouncing unqualifiedly in favor of its continued use in epilepsy.

Against the distressing activity of hemichorea in adults, which destroys rest and prevents sleep for so long as to imperil life, I hope much from chloralamide as I had previously found that chloral was absolutely the only remedy that would afford the required sleep for a few hours at a time; had chloralamide been then known it could have been

continuously used where the chloral had to be withdrawn owing to the stomach irritability it induced, substituting a source of danger equally grave. Dr. Barrs, of Leeds, reports good effects from chloralamide in ordinary chorea. Some reports from psychiatric institutes venture statements to the effect that chloralamide is good in one psychosis and not in another. Now the trials have been far too few to enable such assertions to be extended generally.

There is a strong probability that a large percentage of all cases of insomnia in the insane can be relieved by judicious chloralamide exhibition, particularly if attention is paid to accompanying conditions, and general physiologic treatment is adopted at the same time. To merely impute the sleeplessness to brain disorder, and give a hypnotic without reference to the condition of the heart, liver, kidneys, or emunctories generally, would be extremely irrational, and would fully account for failures in some instances. At times I have found that the insane patient would be affected differently by the same dose from no discoverable cause, but where proper attention has been paid to the general bodily condition, as a rule, good results were secured with chloralamide.

In delirium tremens, it is only common sense to see that elimination is carried on properly, and often eliminants alone will end the furor of alcoholism.

In some of the congestive attacks of parietic dementia, ergot if anything, would prove more useful, but parietics will secure sleep from chloralamide ordinarily, as well as other patients.

I have found it useful in the sleeplessness and painful cerebral state of melancholia, and particularly so in the case of one recurrent melancholiac whose relapses were cut short by the prompt action of the drug.

In cerebral and spinal syphilis, pain is assuaged markedly by chloralamide, but of course it should not be given where there is a stuporous tendency, nor with expectation of anything but amelioration.

In the traumatic neuroses it is particularly valuable. Several cases of Erichsen's disease from concussion of the spine were enabled to secure sleep from chloralamide, when ergot, massages and hot water applications which had previously been helpful, had failed.

If the small doses of chloralamide, when substituted for bromide of potassium, are found to be generally applicable, I do not believe that ill effects can follow from the abuse of the chloralamide in this way, at all comparable to what has been experienced in the wretched overdosing of the bromides. At least the anæmia and mental hebetude produced by bromide will be escaped from by the substitution. And how far these small doses of chloralamide can be properly used, remains

to be ascertained, but my experience has been satisfactory enough to lead me to continue their use in many of the nervous affections where irritability or pain are prominent.

There is no such a thing as the chloral habit, which is much more readily stopped than the opium addiction, but whether it is too early to assert that there is or is not a chloralamide habit, certainly nothing denoting any liability to habituation has been prominently mentioned, though so far as that is concerned, any drug that proves serviceable in continued suffering may be used too long, and the only question of concern is what undesirable consequences may come from such prolonged use. If chloralamide is a reconstituent hypnotic, there can be no such bad effects following its over-indulgence as are recorded against opium and chloral.

It would be folly to expect that any single remedy for insomnia would be available in all instances, for just as sleepless states may be caused by any of the multitude of maladies to which the body is liable, so must there be numerous appropriate measures of relief, when relief is at all possible. The advice to seek and remove the cause of the sleeplessness is sensible enough, though in too many instances the cause is only conjecturable. Nevertheless, a rational system of hypnotic use can be secured on a physiologic basis, and with far more satisfactory results if we duly regard the cause of the loss of sleep and existing bodily conditions. For example, a dose of ergot in some hyperdermic states may relieve pain or cause sleep, by lessening the vascular tension upon which these disabilities depended. A hot bath may distribute the circulation, and act derivatively upon organs which, when congested, caused the distress and wakefulness. Massage acts similarly when scientifically applied, and when unskillfully made use of, may add to the discomfort; for example, if derivation from the head is set up by massage, it will relieve cerebral hyperemia, but add to cerebral anemia, so this method must be resorted to with full knowledge of the physiologic results aimed at.

In a general way, we may classify hypnotic action as accomplished by derivation, such as by removing irritative quantitative causes; by elimination of quantitative or qualitative causes, as of some toxic agent; reconstructive action by re-supplying parts in states of defective nutrition; sometimes by minimizing activity until rehabilitation can overtake waste with supply; by restoring normal function as with digitalis or alcoholics. The least desirable of all methods being such as merely stupefy and overload the circulation with effete or poisonous material, through interfering with elimination, or by destructive changes induced in nerve tissues, or the blood upon which the nerves depend for sustenance.

So eliminative functions should be kept in good repair, if possible, when almost any kind of a hypnosis is given, particularly such as are likely to add some toxic material to the system; but the ideal sleep procurer would be one that abstracted nothing from the nervous system that it contained normally, nor added thereto anything deleterious; and as sleep is a process of repair or feeding of the nerves and their ganglionic centres, still more effective would be whatever caused sleep by repair of such waste; and unless credible evidence to the contrary appears in the course of time, we are in possession of such a hypnotic as chloral-amide.—S. V. Cleaver, M.D., in *Jour. Am. Med. Assoc.*

DYSMENORRHOEA—ITS CAUSES, SYMPTOMS AND TREATMENT.

Gentlemen: The patient I am going to show you this morning has been operated on in the hospital of this college some eight weeks ago. She is twenty-five years of age, a widow, and came to me with a history of intense pain in the side and a very severe dysmenorrhœa. She has been suffering in this way for three years, has been married for four years, and has not given birth to a child.

When I came to examine her I found that both tubes and ovaries were very much prolapsed and rolled down in the cavity behind the broad ligament. The cervical portion of the uterus was small, the organ bent, and a stricture existed at the internal os.

I sent her to the hospital and performed the operation of dilatation. I curetted and packed the uterus, opened the abdomen, and broke up the adhesions about the organ. I tried to save the appendages for her, but has she had suffered from pelvic peritonitis, the fimbriated extremities of the tubes were bound down to the posterior surface of the ovary, and the anterior surface of the ovaries to the broad ligament posteriorly, so that the ovary was completely adherent to the surface of the tube. I found that both ovaries had undergone cystic degeneration with induration of the capsules. As there was nothing I could do for these organs with any prospect of cure, I removed them. She now comes here that we may see her condition and note the result.

As we have here a case that illustrates dysmenorrhœa, I want to say a few words on the subject. This is one of the most frequent pathological conditions in gynecology that you will be called upon for advice and treatment, and is a subject of very great importance. There are so many varieties of dysmenorrhœa that I hardly know where to begin. They are always difficult to relieve without surgical procedures, and even then you sometimes meet with failure.

You all know what is meant by the term dysmenorrhœa, which simply denotes painful menstruation. You have to arrive at the true cause of this trouble by the process of exclusion.

To make a diagnosis of the form of dysmenorrhœa in a young girl you have to proceed in a different manner than you would with a married woman. For you must bear in mind that dysmenorrhœa, means, so far as the patient is concerned, simply pain at menstruation, while in your mind it represents half a dozen different diseases; so you have to be careful making a diagnosis and selecting your treatment.

For that reason I generally begin my examination in the following way: I commence by asking the patient at what age she commenced to menstruate, the average age in this country being between thirteen and fourteen, according to my clinical experience.

The next question I ask is the duration of the flow, and the average here is between three and four days; but if it exceeds that time you have then to remember there is a menorrhagia present.

The next question is the amount of the flow and the color of the blood, whether it is pale or dark in color or bright red, in order to determine whether this painful form of menstruation is attended with loss of mucus or loss of blood. Then I ask the location of the pain complained of, and you will sometimes find the patient's statement on this subject very indefinite. The pain of dysmenorrhœa will be generally felt most intensely either over the pubic bone, in the back, or running down the legs. Patients say that it is most acute in one, or perhaps more than one, of these localities.

The next question that naturally follows in rotation, and which is most important in guiding you to a diagnosis, is at what time the pain commences, whether before, with, or after the flow. The answer to this question will enable you to locate the point from which the pain originates. Pain preceding the flow appears to be located directly over the pubic bone. Pain that disappears with the establishment of the flow is almost invariably due to a stricture of the internal os, to antelexion or deformity. Pain coming on with the flow and continuing with it, but disappearing with its cessation, almost invariably, so far as my clinical experience teaches me, is due to disease within the uterus.

Pain in the sides coming on before the flow and extending down the limbs is more frequently found in married women, who have had frequent childbirths, or have had a miscarriage. Such a pain I have found to be almost invariably associated with tubal and ovarian disease; and even in single women who have had no miscarriage, but have suffered from such a pain in the sides extending down the limbs, you will find ovarian disease

as a result of obstruction, the blood being forced back into the tubes from the uterine cavity.

The fourth symptom I usually look for is that of pain in the back. In women suffering from dysmenorrhœa who complain of pain in the back, associated frequently with pain on the top of the head, you will find one or another of the following conditions, or perhaps both confined, viz.: retroversion of the uterus and disease within that organ—a so-called fungoid endometritis. If I have the history of such a condition in a single woman, I am content to stop there till I examine her; but if in a married woman, then I go into a history of her married life and learn how many deliveries and miscarriages she has had, and when they took place; if a child has been born since the last miscarriage, etc. It is my experience that women who miscarry before they bear children are fewer in number than those who miscarry after they have borne children.

Now, you may have a dysmenorrhœa due to a soft thickened mucous membrane as the result of child-bearing and getting out of bed too early, or as the result of miscarriage; or you may have scar tissue at the internal os, through which you cannot pass a probe. You can readily see that you will get pre-menstrual pain in such a condition. The uterus is filled with blood, and as it contracts it gives rise to the same pain as in the expulsion of a fœtus. You may find the uterus normal in size and a cyst on its side, which will account for the dysmenorrhœa.

So from this you can readily see that you have to obtain all the points before you can make up your mind as to the form of dysmenorrhœa present in any given case. Then having determined upon the cause of the dysmenorrhœa, you can prescribe for your patient and give a fairly good prognosis. I am, however, always guarded in my statement with regard to the cure of any case. I in that way I do not disappoint the patient and hold her confidence, she obeys my instructions, and I am allowed time to treat whatever condition is present. I will now dwell a little while on the treatment of dysmenorrhœa, and in this connection I wish to say that I will allude only to three specific conditions, which are ante flexion in a girl, subinvolution in a married woman, and retroversion in either. If you have an ante flexion with a dysmenorrhœa in a virgin you have a difficult case to treat. It is a very difficult matter to treat such dysmenorrhœa, without rupturing the hymen. Now the subject of electricity comes up in this connection, and I speak of that first because I sometimes employ it first in these cases. I place the patient on her back, make a digital examination and find out the position of the uterus. Then one electrode fastened to the pad is placed on the abdomen, and the patient is turned over into Sims' position. Then with this Sims'

speculum, which you can pass into any girl's vagina without inflicting injury, I simply draw the hymen back so as to allow the air to enter, and that inflates the vaginal canal, and with my headmirror I inspect the cervix. I next introduce my other electrode into the os. I can now apply the electricity with the patient lying on her side, and I know that the electrode in the cervix is doing its work satisfactorily by the appearance of froth at the os. I begin with a current of 20 to 30 milliamperes and gradually increase that up to 50, but seldom go beyond that number. The application of a current of 50 milliamperes for a space of ten minutes at a time, twice a week, is my method of using electricity. Then after removing the electrode from the cervix I cleanse the vagina, and if there is tenderness about the uterus, I apply iodine to the parts. I then take a small glycerine tampon and place it in front of the cervix in such a manner that the glycerine shall act upon the anterior surface of the os. If after a few such treatments as this the patient has pain, I stop the use of the electricity for a time and give applications of iodine or ichthyol in glycerine.

If after two months' treatment the patient returns with the same symptoms, or with symptoms modified to a certain extent, I tell her that she has a stricture at the internal os, which is of so dense a character that it must be divided. Then at my office, or at her home if possible, I put her in Sims' position, cocaineize the parts, and with a ureterotome I cut the internal os in four different directions, and with Dr. Hanks' dilator I dilate the strictured part quite freely. Four days later I dilate a little more, until in a short time I am able to use a curette and scrape the mucous membrane of the uterus. Having scraped this membrane I pass in a strip of iodoform gauze and let the patient wear this as long as she may, repeating this procedure once a week until menstruation appears. Then I withdraw the gauze during the menstrual period. If the dysmenorrhœa be due to obstructive causes, the next menstruation will be an easy one.

But if, on the other hand, the case has been going on for years, and pain across the abdomen accompanies the pain in the side, then I do not promise a cure of the trouble, but, perhaps relief of the symptoms. Many patients come to me complaining of these conjoined symptoms, and invariably after giving them electricity, I apply iodine to the tubes and ovaries and curette the uterus. If a married woman who has borne children, but has not miscarried, comes to me suffering from the same condition, I simply advise her to go to bed and have an operation performed for the relief of these symptoms. If she has not a lacerated cervix, but a large subinvolved uterus, I treat the cervix as if it were lacerated, cut out the scar

tissue, and suture the lips of the wound, introducing gauze into the canal.

If, besides subinvolution, I find the tubes and ovaries diseased, I make no promise until I know what result will follow the treatment of these organs. If no good result follows, then I advise a laparotomy. If dysmenorrhœa exists combined with retroversion, the first thing for you to do is to restore that uterus, if possible, to a normal position, and if it is bound down by adhesions, then surgical interference is at once indicated.—Dr. A. Palmer Dudley, in *Internat. Jour. of Surg.*

MEDICAL NOTES.

Many cases of *Aortic Regurgitation*, Prof. Hare says, will be benefited by *digitalis*.

The best way to treat *Abscesses of the Liver*, Prof. Keen says, is by abdominal section and not by aspiration.

Dr. Wolff advises the use of calomel during the early stages of *Pneumonia* on account of its effect on the exudate.

In no other disease than *Pneumonia*, Prof. Wilson says, is the chill at the onset of the disease so constant and severe.

Prof. Keen says *Papillomata*, or warty tumors, very often, during the cancerous age of life, degenerate into epitheliomatous growths.

Prof. Brinton says the adhesive straps in a case of *Fracture of the Ribs* should be applied to the chest during the time of expiration.

Bromides combined with opium, Prof. Hare says, will often prevent the nauseating effects which *Opium* has on many persons.

Lavage of the Stomach, Prof. Montgomery says, will sometimes dislodge wind in the small intestines and also set up peristaltic movements.

In cases of *Alcoholism* in which nervous irritability is such as to require chloral as a sedative, Prof. Hare says strychnine should always be combined with the chloral.

The milk of *asafoetida*, with the addition of a few drops of turpentine and well mixed, Prof. Hare says, will often prove very useful in relieving *Flatulence* occurring in typhoid fever.

Prof. Parvin says *Tuberculosis*, if in the early stage, is often interrupted in its progress during a pregnancy; but if it be in the later stages it will be increased in its progress by a pregnancy.

Prof. Parvin says a *Thrombosis* of the vulva, which is due to varicose veins, should not be opened until at least three days after labor has

taken place, on account of the great danger of a hemorrhage taking place, which may prove fatal.

Prof. Hare does not believe that ergot possesses any value in the treatment of cases of *Hæmoptysis*, but that in many other cases it is a powerful drug to administer.

Dr. Da Costa says the *Radical Operation for Hernia* does not, as a rule, prove successful in patients who are past middle life, on account of the atrophy which the tissues have already undergone.

Prof. Parvin says the best local application for *Thrush* in the infant is to freely pencil the patches three to four times a day with a solution of borax, of the strength of twenty grains to the ounce.

Prof. Parvin says if *Leucæmia* develops in a pregnant woman, it is best to terminate the pregnancy early, as the ending of pregnancy seems to exert a favorable influence on the disease.

Prof. Parvin regards the fact that the presenting part, either late in pregnancy or early in labor, in the pelvic cavity is a strong proof that the presentation is neither face nor pelvic, but vertex.

Dr. Parvin says *Albuminuria* in the primigravida occurs generally at the end of the seventh or beginning of the eighth month, while in the multigravida it occurs generally at the beginning of the ninth month.

Prof. Keen says when there are chills and sweats, accompanied by high fever and other signs of the presence of pus in the economy, if no cause can be found the liver should be carefully examined for the presence of an *Abscess*.

Prof. Wilson does not think that caustic applications should be applied to the membrane in *Diphtheria*, nor does he think that the membrane should be detached by the aid of instruments. He prefers the application of a mild antiseptic spray.

The use of purgatives during an attack of *Puerperal Infection*, Prof. Parvin thinks, is seldom advisable excepting in the beginning of a peritoneal inflammation, when it will be beneficial to have a free and copious evacuation of the bowels by the use of salines.

As a spray to the membrane of *Diphtheria*, which will act as a solvent, Prof. Wilson recommends:—

R.—Olei eucalypti, f ʒ ij.
Sodii benzoatis, ʒ j.
Sodii bicarbonatis, ʒ ij.
Glycerini, f ʒ ij.
Aquæ calcis, q. s. ad Oij.—M.

Sig.—Apply as a spray to the membranes every half hour for from three to five minutes at a time.

RECENT PROGRESS IN THORACIC DISEASE.

TUBERCULOSIS AS A CAUSE OF PLEURITIC ADHESIONS.

Schleuber gives the results obtained from 106 autopsies, but 21 of which showed no pleural adhesions. Among the remaining 85 the adhesions could be attributed in a number of cases to affections of the lungs other than tuberculosis, or to cardiac disease. Leaving these cases out of consideration, there remained 57, in 33, or 57.9 per cent., of which the adhesions, from the microscopic examination, could be referred in all probability to a tuberculous cause. Schleuber is of the opinion that these figures would have been increased rather than diminished by the use of the microscope.

PECULIAR ODOR OF THE BREATH OF TUBERCULOUS PATIENTS.

Rosenbach calls attention to a peculiarity of the breath of tuberculous patients, slightly resembling that of mild cases of putrid bronchitis, but differing from it in having a disagreeably sweet quality. It may become apparent in the neighborhood of the patient even in the absence of expectoration. It adheres to expectorated matter but feebly, being probably dependent on some volatile substances. It is only present in the exhaled air, and thus becomes most evident when the patient coughs or breathes with open mouth. It is a sign of unfavorable prognostic significance, even though the other manifestations in the case appear favorable. It is often present when the destructive process is not marked, and is most noticeable when the physical signs are unobtrusive. It is almost always an associated manifestation of disseminated broncho-pneumonic consolidation. It is wanting in cases of extensive infiltration, when cavities have formed and also when the sputum is copious. In a large number of cases in which this symptom was observed hæmoptysis occurred. Night-sweats, anorexia and febrile exacerbations were also frequently noted. The phenomenon is of diagnostic significance, as it early indicates the occurrence of a morbid process in the lungs, and should therefore be sought for in all doubtful cases. To insure against a possible source of error, the mouth and teeth of the patient should be first thoroughly cleansed.

THE DISINFECTION OF TUBERCULOUSLY-INFECTED HOUSES.

Delepine and Ransome give the result of their efforts to disinfect rooms in which a phthisical patient has lived by chlorine or more correctly

euchlorine. Pieces of paper were perfectly sterilized in glass capsules, and then infected with tuberculous material, either sputum or pure cultivations of the bacillus (human in most cases, avian in a few). The capsules were sealed, the sputum or cultivation being allowed to dry on the paper, and were not opened until just before the acid was poured on the chlorate of potash, and were again sealed when the room was re-opened. Rabbits and guinea-pigs were then inoculated with small pieces of infected paper or superficial scrapings mixed with sterilized bouillon. In nine experiments made with three different kinds of sputum the results were unsatisfactory; in some cases complete disinfection seems to have been obtained, but the control experiments showed that some sputa were not as virulent as others. In six experiments made with pure cultures of the bacilli of human tuberculosis, distinct evidences of the disease were observed within three or four weeks after inoculation. They therefore conclude that this method of disinfection, as well as that with sulphurous acid, which they have also investigated, is ineffectual. From some laboratory experiments with an old method of disinfection (not given) they hope before long to give practical means of effectually disinfecting places that have been contaminated with tuberculous products.

TUBERCULOSIS OF THE BRONCHIAL GLANDS AND ITS RELATION TO THE TUBERCULOSIS OF CHILDHOOD.

Neumann sums up an interesting paper on this subject as follows:

Tuberculous infection in children is usually at first localized in the bronchial lymph glands. It is very common in the first years of life, and results from inhalation of the infectious material. This method of infection may be prevented by proper hygienic regulations, which, though at times difficult to obtain in private practice, should be demanded in all public institutions. From the bronchial glands infection either rapidly spreads through well-known anatomical paths or it remains latent for an indefinite period, until its activity is finally excited by some condition (catarrh or inflammation of the respiratory tract) in which the glands are secondarily affected. At times, however, it may remain permanently latent or cure result from calcification. Diagnosis is only possible in advanced cases, and only then when the condition of the gland is not masked by affections of other organs. So long as they are simply tuberculous, but not enlarged or adherent to neighboring organs, they give rise to no signs or symptoms, while, on the other hand, the process which started from them may have produced such marked pathological changes in their neighborhood as to conceal the original trouble. Even

when an autopsy has shown that diagnosis was possible, it has not always been made; nevertheless, cases comparatively frequent appear where a consideration of the possibility of an earlier infection (heredity, measles, etc.), combined with the rational and physical signs, makes their presence more or less probable. Especial weight is to be laid on the presence of a peculiar cough resembling pertussis in its paroxysmal character, and the presence of a very loud, indeterminate, though usually bronchial, respiratory murmur in the neighborhood of the upper thoracic vertebræ. The difficulty in diagnosis is well illustrated by a case reported by Stoll, occurring in a girl ten years old, in which the symptoms were so obscure that it was impossible to determine the seat of the disease until the autopsy, which showed a perforation of the trachea on a level with its bifurcation, through which a gland about the size of a walnut emptied itself. Beneath this large one were several others with softened centres. The trachea itself was obstructed by a plug of pus, situated above the perforation, which filled up the whole lumen and was probably the immediate cause of death.

BRADYCARDIA DURING CONVALESCENCE.

In speaking of the slow pulse (60 or less) which is sometimes met with during convalescence from acute diseases, Dehio says that we have little positive knowledge of the cause of its appearance or the anatomical changes which accompany it. With the establishment of convalescence the pulse falls with the temperature, but the fall continues below the normal rate until its beats number only sixty a minute or even decidedly less. This condition in mild cases lasts but a few days to a week, and, with this exception, the patient presents no noteworthy symptoms. The heart seems normal though the apex beat is weak, the pulse is easily compressed and often dicrotic, at times, also, slightly irregular. In the severe forms, however, the patient shows signs of great prostration, the lateral area of the heart's dulness is increased, its action is irregular and intermittent, and a systolic murmur is heard over the left ventricle. In order to determine whether this resulted from some change in the heart itself or was of central origin, Dehio injected hypodermically one-sixtieth to one-thirtieth of a grain of atropine, which has the power of paralyzing the cardiac terminations of the vagus nerve. In a mild case he found that the number of beats was increased to the same degree as under normal circumstances, while in the more severe forms this increase was much less marked. He therefore concludes that the cause is to be found in the heart itself, and not in some change in the nervous mechanism, such as an increased irritability of the vagus or an atonic condition of the medullary centre of the acceler-

ator sympathetic fibres, and is, therefore, an evidence of cardiac weakness, and of the same import as other symptoms (intercurrent attacks of rapid pulse, irregularity, palpitation) of this condition, many of which were present in his cases. The occurrence of this symptom is comparatively rare as he only met with eight cases in his hospital clinic during the past semester. He suggests the probability of its being due to the toxic action of some specific material produced in the organism during the course of an infectious disease which causes no anatomical change in the heart, but considers it probable that an individual predisposition also exists, otherwise it would be difficult to explain why it was not present in all convalescent patients and why it was not more common after severe infectious cases than after mild ones.

CURE OF EMPYEMA.

Aufrecht describes his progress through the various methods which have been devised for the treatment of empyema. After an experience with four cases he discarded aspiration as a means of cure, and practised incision and drainage, but has now reached the conclusion that resection of a rib is by far the most satisfactory proceeding, as it obviates the danger of hæmorrhage, allows free exit for masses of fibrin and prevents the too rapid closure of the opening, which by the simpler method could sometimes be kept open only by a silver tube. He selects a rib near the angle of the scapula, unless contra-indicated by pleural adhesions or by the very weak condition of the patient. In the latter case he chooses the axillary line, as there is much less chance of death during the operation if the dorsal position be maintained. Beside the preliminary puncture to ascertain the presence of pus, he is accustomed to make a second after resection through the free pleura. He recommends at first daily irrigation. Cure results from the fact that with each inspiration the lung collapsed by the operation must dilate if the size of the opening in the chest-wall is smaller than that of the primary bronchus leading to the part. In addition, however, it is necessary that the pleura itself should be in a condition to allow adhesions to form between its two surfaces. The slow subsidence of the pleural inflammation in some cases to the point where this is possible, explains their occasional protracted convalescence.—George G. Sears, M.D., in *Boston Med. and Surg. Jour.*

Prof. Hare says that there is no drug in medicine that will give as much relief as the *Spirits of Chloroform*, in the dose of from twenty to thirty drops, to a patient suffering from abdominal pain; and it possesses also the advantage over opium that it does not constipate.

SOME PRACTICAL POINTS IN INFANT FEEDING.

Louis Fisher, M.D., in the *Amer. Medico-Surg. Bull.*, says: First, always try to feed the child with "its own" mother's milk. A child may receive both breasts alternately at one meal if the appetite warrants it. Never have a baby fed by the milk of its mother if the latter suffer with general debility or tuberculosis. Extremely nervous mothers should not nurse their babies.

Syphilitic babies (hereditary) can only be nursed by their own mothers, owing to the risk of infecting the wet-nurse. Very frequently the life of the child is dependent on its being nursed by its mother in syphilis.

(a) The return of menstruation is no contra-indication to the continuation of nursing.

(b) The moment a woman is pregnant nursing should be stopped.

(c) Children should not be nursed at night unless for some special reason.

(d) Weaning should take place gradually, and only in the eighth to the tenth month.

(e) It is understood that weaning should not be commenced during the hot summer weather.

The main factor in determining the time of weaning is "weighing." Children must be weaned when, although in perfect good health, they remain below normal weight.

(f) Prolonged nursing (useless) will induce rhachitis.

2.—If, for various reasons, a child cannot be nursed by its mother, we then resort to the wet-nurse.

(a) She must be carefully examined as to her physical condition; tuberculosis, all chronic disorders and diseases would prevent proper nursing. Hereditary nervous troubles, epilepsy, syphilis, would exclude nursing.

Milk requires microscopic examination to determine amount of fat, the condition of the emulsion, etc.

(b) It is a good point to try to procure a wet-nurse suckling a child about as old as the one we wish her to nurse, although it is quite common to find nurses who have older children than the one they wish to nurse, and to find the latter doing well.

(c) The proof of the usefulness of the wet-nurse is the condition of the baby after some time. If the child thrives it will increase in weight. Hence scales must be frequently used.

3.—Artificial substitutes for breast milk:

(a) Never give any food preparation containing starch during the first three months.

Cow's milk.—There is a great difference between human and cow's milk—hence we must dilute accordingly.

Dilute—in order to make it as near mother's milk as possible—by adding substances which will make the milk easily digestible and not curdling.

Alkalis and acids should not be used, or only to correct pathological conditions. Add farinaceous substances:

a) Oatmeal gruel where constipation exists.

(b) Barley gruel where tendency to diarrhoea exists.

It is advisable to use shells of the cereals, as they contain a certain quantity of albuminoids.

Sugar is added by using sacch. lactis; salt is added by using ordinary table salt.

Certain dangers of feeding by cow's milk, and their avoidance:

Possible transmission of tuberculosis, owing to which fact it is advisable to feed from several cows and not from a single cow—contrary to the general opinion.

The milk must be boiled, and thoroughly so, in order to destroy one of the most frequent contaminations, namely, micro-organisms.

Boiling methods have been improved upon by introduction of sterilization by Prof. Soxhlet, and since then by partial sterilization called pasteurization.—*Med. and Surg. Rep.*

TREATMENT OF PUERPERAL CONVULSIONS BY HYPODERMIC INJECTIONS OF SALT SOLUTION.—The above mode of treatment of puerperal eclampsia is the one now adopted in the lying-in wards of the Lariboisière Hospital by Dr. Porak, physician-accoucheur of that institution. The salt injections are said to act beneficially by mechanically diluting the toxins in the blood and by favoring their elimination through the kidneys, the secretion of which the injections re-establish or increase. The quantity and quality of urine passed in these cases is, in fact, of great prognostic importance. When the urine is abundant and limpid the toxemia is mild, and the physician may trust to symptomatic treatment by means of chloroform and chloral administered simultaneously. (Six successful cases of this kind are cited in the recent thesis by Dr. Bernheim, one of Dr. Porak's pupils.) In every case, however, where the urine is either completely suppressed, or is scanty and dark colored, recourse must be had to salt water hypodermics, either singly or associated with venesection. In Dr. Porak's wards the *modus operandi* is as follows: The solution employed for each injection is one liter of sterilized water, to which have been added from seven to seven and a half grams of chloride of sodium. This is poured into a hand-spray apparatus of which the longer tube ends in a hollow needle; or a syphon apparatus may be employed. The solution must be maintained at a temperature of from 37.5° to 38° C. The skin of

one of the buttocks having been carefully disinfected, the needle is plunged into the areolar tissue and the salt solution is introduced. The parts near the needle quickly become indurated and the skin becomes pale. Gentle massage is practiced to favor absorption. In this way one liter is injected, the operation occupying twenty minutes. Should distension become exaggerated before the injection is completed, the residue of the liquid is introduced into the other buttock. This novel treatment has been tried on eight patients, in all of whom the urine was scanty. Seven were eclamptic and the eighth suffered from dyspnoic form of uræmia. In each instance one or two salt injections were the means of re-establishing the urinary flow and of suppressing more or less promptly the convulsions and the dyspnoea in the uræmic woman. Six patients recovered. Of the two women who died, one was admitted in a moribund state, and the other, in whom the attacks had ceased and consciousness had returned, had died at home, where her husband had obstinately insisted on removing her.—*The Lancet*.

THE THERAPEUTICS OF GLYCOZONE, COMPOSITION AND CHARACTERISTICS.—Glycozone is defined by its discoverer, Mr. Ch. Marchand, to be a stable compound, resulting from the chemical reaction that takes place when c. p. glycerine is submitted, under certain conditions, to the action of fifteen times its own volume of ozone, under normal atmospheric pressure at a temperature of 0°C.

The necessity of using c. p. glycerine is imperative, as a presence of the water or other foreign matter in the glycerine causes the production in the resulting compound of formic acid, glyceric acid, and other secondary products, that have a harmful effect upon animal tissue.

Glycozone has a pleasant, sweetish taste. Being hygroscopic, it must be kept in tightly-corked bottles, and, as long as it is kept in this condition, it does not deteriorate at a temperature of even 100°F.

Antagonists and Incompatibles.—Glycozone, like peroxide of hydrogen, is a powerful oxidizing agent, although its action is not as rapid or as energetic in this respect as the latter compound. Consequently, we cannot safely prescribe it combined with any other drugs or chemical substances. Contact with metallic utensils decomposes it. We must, therefore, use glass or hard rubber vessels and syringes when administering it.

Physiological Action.—When taken into the mouth and stomach, glycozone causes a feeling of warmth. It excites a flow of saliva and stimulates the gastric secretions. Being hygroscopic, it attracts to itself water from the surrounding tissues, but not with sufficient power to effect harm. This property is due solely to the glycerine

base which enters into the composition. In very large doses, one or two ounces, it causes a feeling of distress in the epigastrium, and is followed by loose, copious, watery stools, which are accompanied by severe cramps.

No effect is noted on the kidneys, the liver or the heart. Glycozone is undoubtedly slowly decomposed in the stomach, ozone being liberated and the glycerine uniting with the water from the tissues. The morbid elements with which it comes in contact probably hasten this decomposition, and in so doing are themselves oxidized and destroyed. The free ozone in the stomach resulting from the decomposition of glycozone aids the digestive process by its presence.

Therapy.—Glycozone is, in the opinion of the writer, the best known agent for the treatment of gastric ulcer. It is also one of the best remedies for the treatment of the stomach catarrh of chronic alcoholism, and for chronic gastric catarrh from other causes. It is excellent for atonic dyspepsia, and for acid dyspepsia. The writer has seen very gratifying results from its use in these distressing maladies.—Cyrus Edson, M. D., in *Times and Register*.

A NEW METHOD OF USING POLITZER'S APPARATUS.—Those who have had occasion to use the Politzer bag to inflate the middle ear are well aware how difficult it is to cause the patient to swallow at the proper moment.

The general custom is to ask the patient to sound certain vowels or to swallow a mouthful of water, because in uttering these sounds, and during the act of deglutition, the soft palate is applied to the posterior wall of the pharynx. The fact remains, however, that the naso-pharyngeal cavity is only partially excluded by these means, and then only for a most brief—frequently too brief—period.

As the Politzer method of clearing the Eustachian tube is frequently of material importance, it may not be amiss to call attention to a novel and more simple way of preventing the air inflated into the nose from escaping through the pharynx instead of passing into the tympanic cavity, suggested by the *Medical Press and Circular*, as follows:

“As the clearing of the Eustachian tube is now very much in vogue, and, moreover, in many instances very essential to the treatment of certain diseases of the auditory apparatus, it may be well to mention a novel and more simple method of attaining the object in view as arrived at by Doctor Boydan, in the *Medical Times and Hospital Gazette*. This gentleman suggests that the patient be directed to take a deep inspiration and then slowly blow out the air through a small aperture between the closed lips.”

The rationale of procedure is that, so long as

the patient blows, the velum palati remains in contact with the posterior wall of the pharynx, and Politzerization can be performed without the slightest difficulty.—*Med. Age.*

A BLOODLESS OPERATION FOR HÆMORRHOIDS.—Manley, *Boston Med. and Surg. Jour.*, has examined the rectum in a considerable number of cases, both dead and living, where the gut was supposed to be healthy, and has found in more than 50 per cent. venous varices of the rectum. He considers that the hæmorrhoidal dilatation in man is a physiologically degenerate condition, which in late life is a source of no inconvenience, but which at middle age is often attended by or associated with such complications as to render it a distinct pathological lesion. He says that this view is supported by the fact that cutting out, injecting, or ligating off sundry hæmorrhoidal masses will not in all cases cure the disease. When an operation is requisite he recommends that the following be performed: First, the bowel is emptied by a purgative given the evening before, and on the morning of the operation the parts are thoroughly cleansed and made aseptic. Then a solution of cocaine is injected subcutaneously so as to render the anal region anæsthetic. The sphincter is then dilated in the usual way and the hæmorrhoidal masses carefully dried. Each hæmorrhoid is seized separately, close to its base, firmly between the tips of the thumb, index, and middle fingers, first put on a moderate but full stretch, then twisted, and finally so completely crushed that it is reduced to a pulp and none of the investing tunics remain except the mucous membrane and its under stratum of fibrous tissue. When this has been completed the entire mass is pressed up inside the sphincter, a suppository of opium introduced, a pad and bandage applied, and the patient returned to the bed. An active but painless inflammation follows, and in two or three weeks atrophy and absorption have so reduced the vascular masses that nothing remains but their shrunken stems. Thirty-two cases have been treated in this way, all with very satisfactory results, recurrence apparently not taking place. For this operation the author claims the following advantages: (1) The operation may be performed with a less number of assistants, and is very simple in its *technique*. (2) As there is no division of the tissues the danger of infection, of abscess, ulceration, and fistula are eliminated. (3) There is no danger from the immediate loss of blood during the operation, or of serious secondary hæmorrhage.—*Brit. Med. Jour.*

THERAPEUTICS OF VIBURNUM PRUNIFOLIUM.—As a uterine tonic, black haw has no equal; it is specific in preventing abortion, and if the waters have not broken it accomplishes the desired result.

In habitual abortion it does not always succeed the first time, but by continuing its use it usually succeeds the second time.

In one case a lady had miscarried four times. The fourth time she used viburnum without results. The fifth time the agent was used, and the catastrophe was averted at the fourth month. But during the next two months the patient did not feel well, and decreased in size instead of increasing. At the expiration of that time, pains came on, which were encouraged, and the woman delivered of a small fetus fully two months dead *in utero*.

In another case the fetus died at from three to five months in each of three pregnancies, and the death was announced from two to four weeks later by the tendency to miscarriage. This could be checked by viburnum, but the agent was withdrawn the third time for obvious reasons. The lady is now three months pregnant, and is being fed with concentrated foods and the compound phosphates to preserve the life of the fetus.

Viburnum is efficacious in dysmenorrhœa of whatever character. It is safe and reliable in after-pains, promoting involution. Goss gives viburnum at the time of the painful period. Wood claims there is danger of increasing the uterine contraction by large doses, but this has never been observed, though its marked effect in checking uterine hæmorrhage frequently has been manifested. He gives the agent in smaller doses, and claims equally good results; he advises one-drop doses in singultus. Schatz, on the contrary, believes that large doses decrease uterine contractions.—*Chicago Medical Times.*

A NEW PATHOLOGY AND TREATMENT OF NERVOUS CATARRH.—*Jour. Med. Association.* The writer believes that hay fever is due mainly to an excess of uric acid in the blood, and has treated cases on this theory, with good results. By doses of acid at night and in the morning, the matinal attacks of sneezing and nasal stenosis were broken up. Dilute sulphuric acid was first tried, but acid phosphate was found more satisfactory. Nitro-glycerin, nitrite of sodium, nitrite of amyl, etc., produce parallel effects. Opium, iron, and lead diminish the alkalinity of the blood and reduce the amount of uric acid. Quinine is contra-indicated. For temporary use in the beginning of nervous catarrh or common colds a mixture of atropine and morphine, one part to fifty, is valuable. The ordinary adult dose of this mixture is one-sixteenth to one-eighth of a grain, repeated in an hour or two if the dose does not relieve the sneezing and the other symptoms. The author dispenses the remedy so that its composition is not known to the patients. As a spray a solution of camphor and menthol, one to three per cent. in benzoïnol, is recommended. The patient

should avoid, as far as possible, meats, sweets, beer, wine, etc., limiting the diet largely to fruits, vegetables, milk, etc. From two to six grains of salicylate of sodium every day or two for two weeks to a month before the regular hay-fever season, will keep the acid in the body down to the normal amount. Any local organic disease should receive appropriate treatment.—*Internal Jour. Surg.*

SULFONAL IN THE TREATMENT OF THE INSANE.

—Dr. John N. Scally (Maryland Hospital for the Insane) reports as follows, concerning the action of sulfonal:

"In treatment at this hospital, sulfonal has been used for its hypnotic effects in the stages of excitement during attacks of acute mania, mania following epilepsy, recurrent mania, chronic mania, and also in melancholia.

"It has not been our custom to give it regularly every day, but only at those times when, owing to the extreme restlessness and motor excitability of patients, sleep is denied them. In the management of acutely maniacal patients just admitted, when it is necessary to secure immediate rest, and, as is often the case, when the patients' very lives demand it, sulfonal has not failed in any case in which it has been used. Given in drachm doses, preferably in whisky. Not only has it secured from six to eight hours of sound sleep, but it has produced quite a decided amount of motor sedation, lasting from eight to twelve hours after waking. In each case sleep was obtained within one hour after administration, and in none was any bad after-effects noticed.

"Three of our cases, two being acute mania and one epileptic mania, furnish evidence of the value of sulfonal as a prompt and reliable hypnotic, when given in sufficiently large doses. In the first two cases, both patients had been given morphine injections and other hypnotics by their family physicians, with no appreciable effect. In both cases sulfonal acted promptly. In the third case, sulfonal was found to act much more promptly than bromidia, paraldehyde or morphia, all of which had been previously given."—*Albany Med. Annals.*

PEROXIDE OF HYDROGEN IN CONJUNCTIVITIS.—

Lautenbach, *Therap. Gazette*, advocates the use of peroxide of hydrogen in conjunctivitis. He has been quite successful in the treatment of this troublesome disease, by the following method: From 10 to 30 drops of the solution, full strength, is instilled at the outer canthus of eye, and with the fingers a degree of massage is applied over the entire surface of both eyelids. A second, third or fourth application can be made if necessary. In trachomatous cases the eyelids should be everted and rubbed with rubber end of the eye-dropper.

A saturated solution of boric acid is then used to irrigate conjunctival cul-de-sac. The inflamed surfaces are thus cleansed and ready for whatever application is necessary. The treatment is not intrusted to the patient but is performed by the surgeon himself, once or twice a day, or a few times a week, according to indications. Dr. Lautenbach says it is important to have peroxide test beyond ten volumes, that it should not lose its oxygen on slight change of temperature, and most important of all, that it should not contain any free acid. Undue amount of free acid causes pain and untoward effects. On account of the uncertainty of preparations fit for use, Marchand's should always be procured. The lids should be everted and thorough exposure of conjunctiva had, it is then cleansed by warm solution of boric acid.—*Med. Fortnightly.*

"Doc."—If it has been your misfortune to be called "Doc," and if this recognition has become at all general among your friends, you might as well move to some other place. A man may be called a thief, a liar and a dead beat, and yet he may prosper and live upon the fat of the land. But once let him be called "Doc" and his professional success is at an end. We would prefer to spend a night in the station house, so far as our professional success is concerned, rather than to have our friends notice our approach by saying, "There comes Doc." If a man calls you "Doc" you need never expect a penny from him for any professional services you could render. His answer is sure to be, "All right, Doc, in a few days that will be all right." "Doc" means disaster. "Doc" is the culmination of all calamity. "Doc" is a catastrophe given at one stroke. "Doc" is the warning that we have reached the extreme limit of our usefulness. "Doc" is the hand which points us to the next town. Shun it, my young friend, as you would flee from a Kansas cyclone or a prairie fire. Knock the man down who first dares speak it to you; and call upon the whole medical profession for vindication of your righteous deed.—*National Med. Review.*

SANMETTO IN CYSTIC AND PROSTATIC TROUBLES and in diseases of the mucous membrane of a chronic character. I have not been in the habit of endorsing proprietary medicines, but *Sanmetto* is such an elegant pharmaceutical combination, that I must make an exception in its favor. I have used several bottles of it in my practice, and have obtained most gratifying, and I may say, *surprising* results. In cystic and prostatic troubles it will not disappoint the practitioner. I have found it useful in all diseases of the mucous membranes of a chronic character. I could not get along without it.—IRA D. BROWN, M.D., Woodsport, N.Y.

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical
Science, Criticism and News.

Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address, DR. J. L. DAVISON, 12 Charles St., Toronto.

Advertisements inserted on the most liberal terms. All Letters and Remittances to be addressed to DR. C. SHEARD, 320 Jarvis St., Toronto.

AGENTS.—DAWSON BROS., Montreal; J. & A. McMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MARLER, 23 Rue Richer, Paris.

TORONTO, MAY, 1894.

The LANCET has the Largest Circulation of any
Medical Journal in Canada.

MENSTRUATION.

In a paper by Dr. F. Curtis, of New York, which opened the debate on Menstruation at the late meeting of the New York State Medical Society, the author stated that the influence of menstruation is a possible factor in most of the morbid conditions to which women are subject between the periods of puberty and the menopause. Its importance has been more than ever appreciated since the development of the art of abdominal surgery. The evolution of animal life from the lower to the higher signifies increased complexity of structure and function. The differentiation of the genital organs in individuals of separate sex begins very early in the scale of animal life, and the functions connected with those organs become most marked as we ascend the scale. The phenomena connected with the impulse to reproduction are as clearly defined as any in the entire range of animal activity, and demonstrate the important relation which that impulse bears to physical existence. Changes in behavior and appearance signalize its presence in the highest and the lowest animals. In the higher mammalia there is also a discharge of mucus or mucus and blood from the genital passage. In the apes and monkeys the discharge from the genital passage is periodical, and suggests menstruation. In women there is not only the reproductive impulse and the bloody discharge, but there are recurrences at regular and relatively frequent intervals. There may also be the reproductive impulse

and impregnation without the bloody discharge, almost immediately after the conclusion of a previous pregnancy, and there may even be the continually recurring bloody discharge without the reproductive impulse. There has been much speculation as to the cause for the recurrence of menstruation at monthly intervals. Pouchet, Pflüger and others have propounded theories in explanation. The ovulation theory seems reasonable in many cases, but is not of universal application. A satisfactory explanation is yet to be afforded. Menstruation is one of the evidences of womanhood, but not the only one. A woman who does not menstruate, or who has never menstruated, is physically defective, but the defect is not necessarily irremediable. A woman who has never menstruated should not marry until the cause has been ascertained, and if possible removed.

An analysis of 200 cases in the writer's records, gave the earliest period as ten and the latest as twenty years. The average for the 200 cases was 14.5 years. No function of the body shows a wider range and variety of phenomena than menstruation, none is more frequently disturbed. This is probably due to the complex conditions of civilized life, for the variations are few where civilization is absent. Increase in the blood tension of the pelvic circulation is an almost invariable accompaniment of menstruation. The vessels of the endometrium offer the least resistance, hence the discharge of blood from this source. With the blood is mingled débris from the broken vessels, epithelium from the uterus and vagina, and glandular secretion. These are the products of menstruation. The duration of menstruation is subject to many fluctuations, and has almost as many types as the number of days which it consumes. A complete menstrual period includes, not only the flow, but the *molimina* or accessory phenomena, which may precede the flow by many hours.

In the one-day type the blood is scanty and watery, and there is usually pain in various localities. It occurs in women with imperfectly developed genital organs in those who are anæmic and physically weak.

In the two-days' type the blood may be abundant and of natural appearance the first day, while the second it may be scanty and watery. Pain is usually present as in the one-day type.

In the three-days' type the conditions as to flow may be quite natural and normal from beginning to end, the menstrual wave advancing to its maximum and then receding. There may or may not be pain. Profuse hæmorrhage seldom occurs.

In the four-days' type the conditions may also be quite normal as to flow, pain, and general or local disturbance. But there are also cases in which the hæmorrhage is abundant, the uterus being the seat of disease of greater or less extent. Pain is seldom a prominent feature. The type which continues five to seven days is not usually as marked as the preceding ones. The last day or two are often marked by very little loss of blood. In some cases there is a cessation of the flow on the third or fourth day, then an interval of a few hours, and then another period of flowing lasting one to three days. If the flow is profuse lasting five to seven days, or longer, uterine disease of a more or less serious character is likely to be present.

With women who are in robust health and without physical deformity, the discharge of blood may be the only intimation that anything out of the usual course is transpiring, but with vast numbers of women in civilized life, menstruation means not only a discharge of blood in greater or less abundance, but a multiplicity of attendant discomforts and annoyances, which may amount to intense physical or mental suffering. The unpleasant sensations or *molimina* are due mainly to the combined action and reaction of the vascular and nervous systems, especially to undue vascular tension and congestion. Thus we obtain the well-known variety of sensations in the pelvic organs, liver, kidneys, stomach, intestines, brain and skin. The mental functions, digestion, secretion and assimilation may also share in the disturbances, and the statement of the far-reaching possibilities of menstruation for annoyance is sustained. This should teach us to be on our guard, and anticipate if possible, the evils which may arise, keeping the patient under the most favorable conditions possible before and during the entire performance of the menstrual function. The family physician should devote more attention than has heretofore been the custom, to instructing those who are under his care concerning the precautions which they should exercise with respect to menstruation. The common errors and imprudence in that direction should no longer be allowed, without his vigorous and persistent protest.

THE PREVENTION OF PHTHISIS.

"One of the most striking features of the age is the rapidity with which new ideas are established. The theory which is timidly advanced to-day, becomes the accepted doctrine of to-morrow.

"It will be interesting to the workers of fifty years hence to note what were our ideas at the present time, thirteen years after the discovery of Koch's bacillus, with regard to the prevention of phthisis." Thus writes an observer in the *Medical Press and Circular*, March 14th. It is a strange fact that notwithstanding the prevalence of the disease, and the attention which its study has attracted, the true nature of the disease has been but recently understood, and brought under the search-light of science. The lectures of the last generation were clever clinical pictures of the disease, but gave no hope in treatment. This is now changed, and phthisis is singled out as one of the early conquests of preventive medicine. Such a result has been brought about by several factors, among which the following are chief:

First, the registration of deaths, making it possible to study disease in a mass. Secondly, the great experimental advance made about 1840, which proved that tubercle could be reproduced in animals inoculated with tuberculous matter. Then came the crowning discovery by the illustrious Koch, which clearly demonstrated the fact that tuberculosis depended for its existence upon a specific bacillus. Not much can be said about the value of curative measures in this disease; the most important results of research lie in the impetus given to the study of its prevention. It is well known that tubercle bacilli exist in the dust of rooms inhabited by consumptives, that the organisms exist in the flesh and milk of infected animals, especially cows, that the sputa of consumptives is scattered broadcast, and is probably a source of infection to man and animals.

Guided by these and other considerations, the attacks of sanitarians have been mainly directed against the micro-organism as the root of the evil. Infected clothing has to be sterilized, while ordinary handkerchiefs have to be replaced by paper, which is afterwards destroyed. All sputum is destroyed after being collected in cups charged

with some efficient antiseptic. Sanitary authorities advocate a vigorous inspection of markets and dairies, with power to destroy infected food supplies. The idea that phthisis should be notified as an infectious disease has been before the sanitary world for some years, and some are going so far as to advocate the prohibition of marriage where a phthisical tendency exists. It would seem from the standpoint of our present knowledge of the disease, that the only hope of eliminating this scourge from our midst, is by taking as our guide the motto, "An ounce of prevention is worth a pound of cure."

MEDICAL EXAMINATIONS.

TRINITY MEDICAL COLLEGE.

Final Fellowship Degree. Certificates of Honor.—Candidates who obtained 75 per cent and over; Prosper D. White, T. G. Devitt, Geo. H. Field, James Semple, A. K. Ferguson, C. B. Shuttleworth, A. L. Danard, H. R. Frank, Thos. Kerr.

Sixty per cent. and over.—T. M. Manes, C. D. Parfitt, C. C. Field, J. McMaster (B.A.), E. L. Procter, J. L. Bradley, W. H. Millen, H. E. Armstrong, J. T. Somerville, H. D. Livingstone, W. W. McQueen, S. H. Murphy (B.A.), M. S. Lane.

Passed.—D. Thomson, R. R. MacFarlane, C. H. Thomas, C. M. Kingstone, A. G. Ashton Fletcher.

Dr. Sheard's prize in Physiology for the first year, J. S. McEachern.

Scholarships.—The 1st First Year's Scholarship, \$50, J. S. McEachern; the 2nd First Year's Scholarship, \$30, C. A. Campbell; the 3rd First Year's Scholarship, \$20, F. A. Scott; the 1st Second Year's Scholarship, \$50, J. R. McRae; the 2nd Second Year's Scholarship, \$30, V. A. Hart.

Medals.—The Second Trinity Silver Medal, Geo. Henry Field; the First Trinity Silver Medal, Thos. G. Devitt; the Trinity Gold Medal, P. D. White.

TRINITY UNIVERSITY.

M.D., C.M.—*Class I*—Gold medal and certificate of honor, C. B. Shuttleworth; silver medal and certificate of honor, C. D. Parfitt.

Certificates of Honor.—A. L. Danard, A. K. Ferguson, *æq.*; H. R. Frank, S. H. Field, T. G. Devitt, J. S. Goodfellow, E. L. Procter, *æq.*; J. L. Bradley, C. C. Field. *Class I*—T. Kerr, J. McMaster, J. Semple, *æq.*; H. E. Armstrong, J. D. Windell, H. N. Rutledge, *æq.*; J. R. Mencke, W. H. Millen, M. Baker, H. D. Livingstone. *Class II*—S. H. Murphy, C. H. Thomas, M. S. Lane, J. D. Leith, T. C. Hodgson, D. A. McClenahan, W. H. Scott, J. Park, J. T. Somerville, F. W. Smith, C. M. Kingstone, P. D. White, E. R. Brown, F. A. White, A. Galloway, T. Agnew, W. W. McQueen, J. S. Matheson, E. D. Graham, A. G. A. Fletcher, T. A. Manes. *Class III*—H. H. Sinclair, Miss J. S. Shirra, G. M. Ferris, W. B. Boyd, Miss N. Rodger, D. Thomson, R. R. Macfarlane, W. H. Alexander, S. N. Insley, Miss G. W. Hulet, T. Wickett, T. W. H. Young, F. S. Nicholson, W. J. Bray, Miss E. A. A. Burt, W. A. Ball, W. W. Bredin (M.B., 1873).

M'GILL UNIVERSITY.

Final Examination for M.D., C.M.—A. T. Bazin, W. G. M. Byers, A. R. Colvin, A. Davidson, R. E. Davis, W. F. Drysdale, A. S. Estey, J. W. Evans, W. Ferguson, E. S. Fowler, F. M. Fry, B.A., J. A. Fulton, C. W. F. Gorrell, G. Hamilton, J. P. Hanington, E. C. Hart, W. Henderson, W. G. Hepworth, P. A. Holahan, B.A., H. M. Jacques, J. F. Kearns, H. McL. Kinghorn, B.A., W. O. Lamly, J. F. Lewis, G. S. MacCarthy, J. McCrea, J. T. McLaren, J. A. McLaughlin, C. M. McLean, L. Y. McIntosh, L. F. McKenzie, G. H. Manchester, G. H. Mathewson, B.A., W. Mitchell, A. C. Nicholls, M.A., E. J. O'Connor, C. L. Ogden, B.A., J. Pritchard, B.A., J. Reeves, A. Richardson, H. J. Richardson, F. E. Rimer, A. A. Robertson, B.A., D. W. Ross, H. Ross, J. J. Ross, J. H. Scammell, W. H. Scott, E. M. Sharpe, H. S. Shaw, A. T. Shillington, W. A. Stenning, R. D. Wilson, G. G. L. Wolf, B.A., H. E. York.

Honors, Medals and Prizes.—The Holmes Medal, Andrew Armour Robertson, L.A., Montreal, Que. The Final Prize, Albert George Nicholls, M.A., Montreal, Que. The Primary Prize, William Nassau Kendrick, Spring Valley, Minn. The Sutherland Medal, Dougall Robins, B.A., Montreal, Que. The Clemesha Prize, Allan Davidson, Burns, Ont.

Professors and Demonstrators' Prizes.—The

Botany Prize, J. G. McDougall, New Glasgow, N.S. The Clinical Chemistry Prize, A. A. Robertson, B.A., Montreal. The Obstetrics Prize, L. Y. McIntosh, Strathmore, Ont. The Senior Anatomy Prize, R. O. Ross, B.A., Margaree, Ont. The Junior Anatomy Prize, C. B. Keenan, Ottawa, Ont.

Correspondence.

LONDON MEDICAL SOCIETY,

London, April, 6, 1894.

To the President and Members of the Ontario Medical Council:

GENTLEMEN:—The London Medical Society hereby appeals to the Medical Council to devise, if possible, some means of abolishing or restricting the system of contract or lodge practice.

This Society, in common with the profession in general, recognizes the necessity of some steps being taken to check this evil. The Medical Council has rendered valuable service in protecting the profession and the public from *unlicensed* practitioners. There has, however, grown up within the ranks of licentiates themselves this pernicious system which is making greater inroads upon the field of regular practice than all forms of quackery combined; and this Society but voices the current sentiment of the profession in condemning the system, and appeals to the Council as the guardians of the profession to adopt some means of abolishing or minimizing the evil.

The Society begs to offer the following suggestions:

1. Apply for legislative authority to prohibit contract practice. With the prevailing contract rates at \$1 and \$1.50 per member this prohibition might be shown to be in the interest of the public as well as the profession, inasmuch as indifferent service is a natural result of inadequate remuneration, or,

2. Apply for legislative power to fix a minimum tariff of contract rates. The Dominion Medical Monthly for December, '93, claims on the authority of a distinguished actuary, that the proper remuneration for contract practice in Canada is \$4 a year per member, or,

3. Apply to the Legislature for power to frame and enforce a code of medical ethics, with a view to control the evil, or,

4. Address an appeal to every registered practitioner to discountenance the system. The influence of such an appeal coming from the redresentative body of the profession, would tend to bring the practice into disrepute.

Signed on behalf of the London Medical Society,

J. H. GARDINER, M. D.,

President.

OCTAVIUS WELD, M. D.,

Secretary.

CONFUSION OF GASTRIC AND INTESTINAL DYSPEPSIA.—Prof. Germain Sée, *La France Médicale*, that a third of those patients who were thought to be dyspeptics, and their trouble of stomachic origin are actually sufferers from intestinal disease. This holds good, especially in women, for a careful examination both by physical and chemical diagnostic measures reveals good gastric function and no dilatation, while they have gone from one physician to another and have been treated for dyspepsia. These dyspeptics are not suffering from a gastric disease, for their whole trouble lies in the intestine, and pre-eminently in the large intestine, *Med. and Surg. Rep.* It deserves the name of muco-membranous enteritis. The small intestine in such cases is healthy. The muco-membranous enteritis is characterized by disturbances in the functions of the colon, gaseous fermentation, dilatation of this intestine, but nothing reveals it with certainty other than the passage of mucous, glairy, ribbon-shaped or cylindrical masses, with the feces often unperceived. These mucous products are also frequently accompanied by the hardened residue of undigested food. Treatment consists in evacuation by mechanical means, as olive oil or senna, but not by purgation, calming the pains by the bromide of calcium or strontium or cannabis indica, but not by opium and its preparations. Fermentation and the formation of gas may be limited by the phosphate, the baborate or the salicylate of soda, never by benzo-naphthol. The diet is that of one in health, except that the presence of habitual constipation or incidental diarrhoea alter it. In general, hearty foods, as ham, pork, game, boiled eggs, are easily digested, while milk is tolerated with difficulty. Potatoes, either mashed or boiled, as well as rice, are easily digested, though fruits are of

no advantage. Water and tea are permissible as beverages. Gaseous waters are contra-indicated on account of their containing carbonic acid gas. Alcohol, being in large measure absorbed by the stomach, is best left alone, unless temporarily, when digestion is bad. Then a hot sling is of service, while red and white wines are not to be allowed.

THE LONGINGS OF PREGNANT WOMEN.—Arthur Giles, M.D., says *N. Y. Jour. Gyn.*, that "longings" fall into two ancient divisions according as the objects longed for are:—(1) Natural and healthy; (2) unnatural and unhealthy.

The former class is here alone considered, the data being based on particulars of 300 cases.

The popular view of longings is stated, and the principal foods longed for are tabulated, to ascertain the relation between sickness and longings in general, and various classes of foods in particular.

Three explanations of the causes of longings:—

1. That they are due to a desire for something to check the feeling of nausea. This applies especially to sour things.

2. That they are the expression of an instinctive want for some class of food in the altered condition of pregnancy.

3. The author thinks, that in many cases they are due to a kind of auto-suggestion prompted by a popular tradition, and gives evidence in support of this view.

It was shown by a table that the frequency of longings markedly decreases as parity increases.

This view receives support from several considerations:—

1. The better educated among the women had longings much less frequently than the others.

2. Among primipara, longings occur in twenty per cent. more cases among married than among single women.

3. Among married women, longings occur just twice as often during the first pregnancy as in the second, third or fourth; while there is a steady diminution of frequency of longings as parity increases, till among women with ten or more children longings are quite exceptional. I only found one in thirteen of such cases.

And so, while a certain number of cases of longings are probably rightly explained on physiological grounds, I think that a certain other num-

ber are more properly regarded as due to a superstitious tradition. As far as concerns the mother's longings merely, the popular idea is no doubt harmless enough. But in view of the ignorance that prevails as to the feeding of infants, and the already too great infant mortality, it becomes important that a belief, which allows of infants a few days old being fed on pork, fish, lobsters and even more unnatural things, should be discouraged.

THE DANGERS OF HYPNOTISM.—Prof. Grainger Stewart, of Edinburgh University, in discussing the merits of hypnotism as a therapeutic agent, lays down the following propositions, *Hosp. Gaz.*:—1, That hypnotic conditions of all varieties are practically a diseased state of the nervous system, an artificial neurosis; 2, that hypnotism is undoubtedly able to modify certain morbid processes of the nervous system, particularly those of a functional kind; 3, that in certain conditions results undoubtedly favourable, at least for the time, had been obtained by hypnotic treatment; but, 4, that in every case hypnotic treatment involves hazard to the nervous system, that those who are most susceptible to its influence are the most apt to suffer, and that though it might free the patient from one set of symptoms it is apt to make him the victim of many others. He considers that hypnotism should be employed very rarely to a very moderate extent, and only after careful study of the patient's condition. We would even go farther than Professor Stewart, and say that no one should employ hypnotism as a therapeutic agent under any circumstances.

RESTRICT MEAT IN EPILEPSY.—Dr. William H. Thompson had long thought, *Med. Rec.*, that more light could be thrown upon the subject of functional nervous diseases by chemistry, than by pathological anatomy. The striking feature of intermittency pertaining to functional nervous diseases, such as epilepsy and migraine, certainly deserved study. It was in marked contrast with what was observed in organic nervous diseases. Considering these facts, he had always felt a great interest in the question of auto-infection from the alimentary canal in functional nervous disorders. For years it had been his custom to inquire carefully into the condition of the intestinal functions in epileptics. One of the first questions he put

was, whether the patient's breath was offensive before, during or after an attack, and in about 30 per cent. of the cases, the friends had given an affirmative answer. In about 40 per cent. there had been evidence of flatulence and other intestinal disturbance; in a small per cent. there had been diarrhoea. Treatment based on this knowledge has given considerable encouragement. Regarding the diet of epileptics he has been in the habit for years of cutting off nearly all flesh food, relying on milk for the nitrogenous element, especially in the form of matzoon or fermented milk, and a moderate amount of vegetable food. Peas and beans increase the albumin in the urine in chronic Bright's disease, and are apt to aggravate any renal trouble. Probably beans increase intestinal purification, aggravate kidney troubles, and enhance the dangers of convulsive nervous disorders. There is a great difference between nitrogenous food as found in milk and in flesh. The fact that almost all carnivorous animals die in convulsions, and that the feline tribe are peculiarly liable to fits, gives some reason for believing that a meat diet is not favorable for epileptics.

CRYSITIS IN WOMEN.—*Am. Jour. of Gyn.*—**Brandenburg Treatment.**—In the way of prophylaxis, the first great requisite is a thoroughly aseptic catheter. The example set by Küstner at the lying-in hospital at Jena is worthy of imitation by all. He uses a catheter made of common glass tubing, open and carefully smoothed at both ends; annealed and slightly curved at the proximal end for entrance into the urethra, and more strongly curved at the distal end, so as to easily receive the urine in any appropriate vessel. Since the introduction of the above simple invention, the occurrence of a case of septic cystitis at Jena has become a *rara avis*. Each patient has her own catheter, which after use can be easily and thoroughly cleansed. Irrigation of the vesical cavity is necessary when the cystitis does not improve under medical treatment, when it is chronic or when it is due to the introduction of septic material into the bladder. In mild cases, several irrigations weekly are sufficient; but in severe cases it may be necessary to irrigate every few hours. In the milder, use solutions of boracic acid, or weak solution of silver nitrate, the latter always followed by a solution of sodium chloride.

to neutralize the action of the caustic; in the more severe cases use a stronger solution of the silver nitrate. In acute cystitis a restriction of diet is necessary, but in chronic cases the most generous diet possible should be given to build up the constitution and strengthen the patient; giving her an abundance of fresh air with moderate exercises.

SYMPHYSEOTOMY.—Varnier sums up, *Annales de Gyn. et Obstet.*, the present status of symphyseotomy by tabulating 124 cases as follows:—Mothers, 112 recovered; 12 died. Children, 92 lived; 32 died. Of the mothers, eight died from causes clearly disconnected with the operation. Of the remaining four, one died of septicæmia; one of sphacelus of the vulva and vagina; one of cellulitis and peritonitis, due to the use of a saw and to forcible introduction of the hand and arm in order to obtain version; one of hæmorrhage and shock of operation and of laceration of the perinæum, vulva and bladder. In regard to the infant mortality, five cases should be eliminated where the operation had been done in place of embryotomy; 97 cases of living children remain. Of the 27 remaining deaths, seven were due to causes not results of operation; 11 to mishaps with forceps, or in version; seven in succession to incomplete section; one to prolonged extraction due to distortion of the right arm; one to cerebral lesion due to prolonged pressure on the head.

Conclusion.—1. The operation, properly performed, does not entail immediate or consecutive disorders of the sacro-iliac synchondroses. 2. In pelves not extremely contracted, the enlargement resulting from the operation is sufficient for a living child at term to pass through. 3. The finding and cutting of the symphysis presents no great difficulties; only three cases out of 125 are reported where the operation has failed in this. 4. No especially dangerous venous hæmorrhages are apt to be encountered. 5. The anterior rents of soft parts may be avoided if the accoucheur remembers that after section the inferior strait is oval transversely and not of the normal shape.

THE ELECTRICAL TREATMENT OF INFANTILE PARALYSIS.—Dr. Lewis Jones read this paper, *Brit. Med. Jour.* Since his appointment in the electri-

cal department of St. Batholomew's Hospital he had had opportunities of observing cases of infantile paralysis over long periods of time, and he formulated the following conclusions in respect of the results to be obtained by the electrical treatment: 1. It is important in every case of infantile paralysis which has lasted over four weeks to try electrical treatment, continuing it for six months or a year. 2. It is an exception for a muscle to be so completely destroyed by poliomyelitis as to have no functional fibres left. 3. Great development of the remaining fibres may be gained by persevering stimulation of them. 4. Where the electrical reactions are reduced to the very lowest flicker, or even entirely abolished, some improvement may still be hoped for. 5. Where the electrical relations are not altered in quality it is not good practice to leave the case to take care of itself. 6. Electricity acts only as a stimulant, but it is superior as such to any mechanical treatment by rubbing or massage, though it may advantageously be combined with these. 7. The form of electrical stimulation to be employed is of less importance than persistence in its employment. 8. The induction coil, with or without the bath, is easily arranged for use by the mother or nurse.

STRICHNINE NITRATE HYPODERMICALLY IN ALCOHOLISM.—In an interesting paper by Dr. William B. Breed, of Syracuse, N. Y., read before the Onondaga County Medical Association, the author lays down the following as his conclusions, *Med. News* :—

1. That we have in this drug a remedy that actually, for a period as yet undetermined, removes the desire for alcoholic stimulation in the chronic inebriate, and that *without the least effort on his part*.

2. A remedy that removes the distress and gnawing at the epigastrium, so common upon the withdrawal of alcohol.

3. A remedy that tones up the nervous system, allays the insomnia, the flighty and other bad feelings in the head, the mental disturbances, and the tremulous agitation and uncertainty of voluntary motions due to the withdrawal of stimulants.

4. A remedy that brings back the appetite and general physical vigor of the body.

5. A remedy that temporarily transforms a wholly demoralized creature into a man.

6. A remedy that is of great value in acute attacks of alcoholism.

7. Incidentally, a remedy that is an exceedingly good and safe heart-tonic.

8. More than all, a remedy that exerts a moral influence upon the patient, giving him what he had before wholly lost, to wit: Hope, enthusiasm self-confidence, and courage, where before was despondency, abandonment, and despair; a steady, straightforward gaze, and a bright, youthful expression of the eye, which replaces the shamefaced, sneaking, apologetic air of total depravity of the chronic inebriate.

9. We have in the nitrate of strichnine *not* a remedy that will oblige a man to abstain from drink if he does not want to do so, and such subjects do not deserve one. From the results obtained by the gold cure, the silver-ash cure, the Keeley cure, etc., we may conclude that we have a remedy that is as efficient as any of these, and much safer—a remedy, moreover, that is not secret and can be used by men who know the action of drugs and can use them with discretion and safety to the patient.

There is no reason why the public, which places its life in our hands daily, should be obliged to offer up sacrifices upon the shrine of quackery, when men can be treated privately, safely and efficiently by any family physician, and avoid publicity, danger and expense.

Perhaps we have not a specific; probably not, but we are as near to it as the quacks are; and if such cases of doubtful, if not suspicious, death, as the one which occurred here lately, can be avoided, it is right that the public should, through us, know it and profit by it.

From a scientific standpoint, these few cases afford but scanty statistics from which to draw conclusions. But if, from a humane standpoint, as much good can be done in all cases as in these few, we have done much to better the condition of our fellow-men.

TUBERCULOUS MENINGITIS CURED BY DRAINAGE.—Dr. W. Wallis Ord and Mr. H. F. Waterhouse read notes, *Br. Med. Jour.*, of a case of tuberculous meningitis in a child, aged 5, relieved by drainage. The child was admitted in an apathetic condition, with double optic neuritis. From time to time she uttered a piercing scream,

and the *tâche cérébrale* was well marked. Symptoms of intracranial pressure having supervened and the child being on the point, apparently, of passing into a condition of coma, Mr. Waterhouse trephined through the cerebellar fossa of the occipital bone, giving exit to a small quantity of fluid. A drainage tube was left in, and the wound was closed, the fragments of bone being replaced by Macewen's method. The child did well, and the symptoms subsided, though at one time the wound seemed to have been infected by tubercle. The question of diagnosis was discussed, and it was pointed out that for success to be hoped for, it was necessary not to wait till the child was comatose.

INDICATIONS FOR TREATMENT OF ANGINA PECTORIS.—Dr. J. Burney Yeo summarizes the treatment of angina pectoris, as follows (*Boston Med. and Surg. Jour.*):

1. To maintain or improve, when defective, the general nutrition; to avoid all strain, physical and emotional, and to relieve cardiac feebleness and excessive effort.

2. To relieve dyspeptic conditions and flatulent or fæcal distentions of the stomach and intestines.

3. To forbid the habitual consumption of agents which may exercise a toxic action on the heart, such as tea, coffee, alcohol, tobacco, etc., or that which may introduce or develop toxins in the alimentary canal.

4. To avoid and remove all gouty and other blood contaminations.

5. To give such tonic remedies as may improve the cardiac tone and lessen existing tendency to cardio-vascular degeneration.

6. To relieve the paroxysmal attacks by sedatives and stimulants.

DR. PAUL GARNIER, of Paris, has made a special study of those slum children that are the offspring of habitual drunkards, *Med. and Surg. Rep.* He says: "There is a flaw in the very nature of these young wretches that the psychologist sees clearly and notes with apprehension—the absence of affectionate emotions, and where they did not become lunatics they show 'insensibility and pitilessness.'"

TREATMENT OF TONSILLITIS, *Med. Press*:—

R—Ol. eucalyptus glob., . . . ℥ xv.

Spt. camphor, ʒ jss.

Tinct. guaiac., ʒ iijss.

Glycerine, q. s. ad. ʒ j.

Ten drops on sugar to dissolve in the mouth, every hour or two.

Books and Pamphlets.

A STANDARD DICTIONARY OF THE ENGLISH LANGUAGE. New York: Funk & Wagnals Co. Toronto: 11 Richmond Street.

We have received the first volume of this magnificent work, and partly as a duty to the publishers and more, perhaps, as a pleasure, have spent a great deal of time in studying it.

Space will not permit us to give even a few of the very many points of excellence of this work. It is the best and most complete dictionary of the English language we have ever seen.

Having said this, little more need be said. We may state, however, that the publishers have spared no expense to make it what it is; the cash outlay to the completion of this first volume being nearly \$500,000.

The staff of editors is a most imposing one, comprising, we should imagine, the bulk of the best American scholarship in the various subjects treated; that is, all subjects that can possibly be treated of in a dictionary.

It is sold only by subscription at the following prices:

Single Volume Edition—Half Russia, \$12; full Russia, \$14; full morocco, \$18.

Two Volume Edition—Half Russia, \$7.50 per volume, \$15 per set; full Russia, \$8.50 per volume, \$17 per set; full morocco, \$11 per volume, \$22 per set.

The above prices include Denison's Patent Reference Index.

THE YEAR-BOOK OF TREATMENT FOR 1884. In a series of twenty-four chapters, by eminent specialists. In one 12 mo. volume of 497 pages. Cloth, \$1.50. Philadelphia: Lea Brothers & Co. 1894. Toronto: Carveth & Co.

This work by eminent specialists is again with us. It is only necessary to mention the names of Mitchell Bruce, Dudley Buxton, W. J. Walsham, and Edmund Owens among the twenty-four editors, to warrant the quality of the book's contents.