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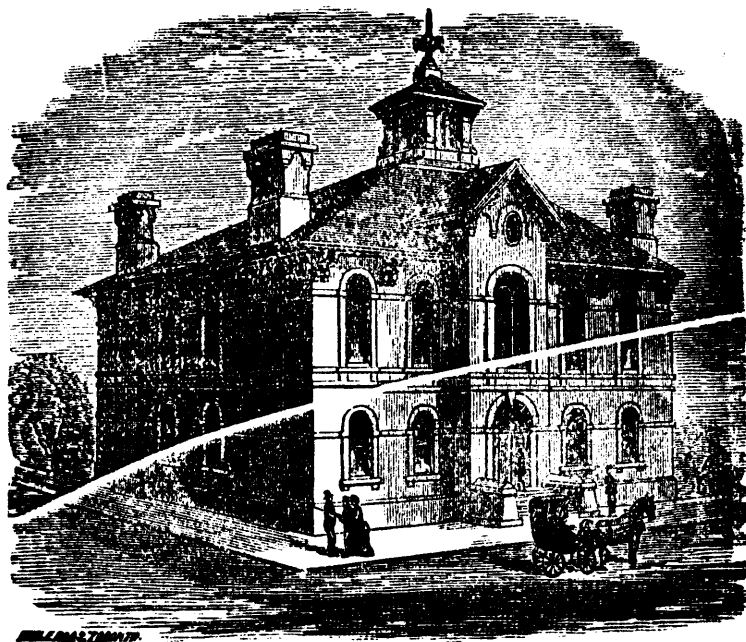
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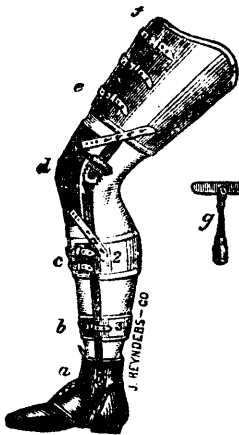
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Selections: Medicine.

THE DOMESTIC TREATMENT OF INSANITY.

BY STANLEY HAYNES, M.D.

(Continued from October Number.)

Much trouble is sometimes experienced in persuading patients who believe their food is poisoned, that they are full of various substances, that they cannot swallow, or who have other such delusions, to take a sufficient quantity of aliment. Very often the intestines require to be relieved from distension or acrid secretions; in such cases enemata suitable to the symptoms, sulphate of magnesia, croton oil, turpentine with castor oil, assafœtida, or other remedies, will often remove the objections to taking food. Fœtor of the breath frequently results from the ingestion of too little food, and then is removed by a good meal; it is as well to mention this because it might be supposed to indicate the necessity for a purgative when one would be decidedly injurious.

Alimentation should never be forced if it can be effected by reasoning and persuasion. Some patients will take their meals voluntarily when not watched, or when allowed to steal it, who positively refuse it if they suspect they are being noticed. When it becomes necessary to feed against the will of the patient, there are three modes at our choice: food can be given by the mouth, nose, and rectum. Feeding by enemata is seldom practicable when meals are refused. Alimentation by the mouth is more rapid than by the nose, and, naturally, is the favourite method; sometimes, though seldom, the patient will take food from a spoon or a

spout. When the patient resists there is usually some trouble to the operator and pain to the patient in getting the mouth open and passing a tube to the stomach. It is frequently necessary to pass the tube beyond the voluntary muscles of the pharynx, to prevent the patient ejecting the fluid. The use of the stomach pump for alimentation is so disagreeable to patient and to operator, that I never use one if I can obtain a feeding bottle, or even a funnel to place in the end of the tube: the tube being inserted the fluid is poured down it, care being taken to regulate the flow so that the stomach may receive its contents gradually, and therefore be less liable to become irritable. The third method—that of feeding through the nostril—is the easiest in a refractory patient, although not the quickest: a nose-tube or funnel is passed along the floor of a nostril, the mouth being kept closed; the food must fall into the œsophagus; the feeding bottle, or a sauce-boat, or a jug, is the most convenient receptacle for the food; care must be taken to permit intervals for swallowing and breathing, lest any of the fluid enter the larynx.

Sometimes the treatment of a case is almost limited to alimentation. All asylum physicians know that numerous cases require hardly anything beyond careful nursing and feeding to ensure their recovery. In cases of insanity due to anæmic, debilitated states, champagne and nutrients induce sleep, and so act as the best sedatives we can give.

The use of *baths* is determined, to a great extent, by the state of the skin. A bath at the temperature of 95° F. is a good sedative in sthenic cases and is often succeeded by sound sleep. The duration of its employment varies

according to the pulse and appearance of the patient, but it should not be continued more than half-an-hour. When the pulse falls or diminishes in hardness, or if the patient becomes pale, the bath must be discontinued. Whenever a warm bath is given to a maniacal patient the head should be kept cold by a wet towel wrapped round it and often wetted: a thin stream of cold water continuously poured from a height (affusion) is a simple and better plan; an easy mode of getting this is to have a skein of worsted hanging over the edge of a vessel full of water. The shower bath is so frequently regarded by patients as a punishment, the idea of which towards the sane is so revolting, that it is seldom used, although an excellent means of allaying excitement; when applied the feet should be in warm water, and the shower should not last longer than one minute. If there be any tendency to congestion of the lungs or other viscera, the shower bath should be used cautiously, if at all, on account of internal congestion retarding the return of blood from the head: in such cases the shower should be to the head alone, by causing the patient to lie down.

The *mustard bath* is most valuable in inducing sleep, and will be found of most benefit when there are symptoms of cerebral congestion. It is made by throwing two handfuls of mustard into a bath of 95° temperature, or, better, by mixing the mustard in a basinful of boiling water, and then stirring the contents into the bath. The length of time for this bath will depend upon the state of the pulse and skin, but unless the pulse sinks too much it is advisable to continue the bath until the skin has become well reddened. The patient is then placed in bed and silence is maintained. Very often this simple treatment produces sound and refreshing sleep and so does incalculable good. Whenever the mustard bath is used care must be taken to protect the genitals by a wet towel firmly fastened around them. Sometimes it is difficult to get or to give the bath: in such cases I have found a very good plan is to wrap the patient in a sheet which has been saturated with a mixture of mustard and hot water, the same precaution being taken as with the bath, and similar effects being produced.

A soothing and easy mode of causing or continuing sleep, most applicable and often efficacious in asthenic cases, is to use a pillow case stuffed with fresh hops.

Medicinal sedatives.—It is bad treatment to give sedatives to patients to keep them quiet: they should not be given with that object, if we wish to cure our patients, but only to cause sleep when this is deficient.

The question of sleep is of paramount importance in the successful treatment of insanity. Failing to cause it by the giving of food when this has been taken in insufficient quantity, or by the change of circulation resultant on hot baths or application of mustard sheets, we must administer sedatives.

Chloral hydrate is the most valuable hypnotic we possess, producing sound sleep in those with the prodromata of mental disorder, and causing the most excited, troublesome patients to get as much sleep as we wish. Dr. Clouston gave it in 30-grain doses thrice daily for more than a week without interfering with appetite, digestion, or intestinal functions. To a most violently excited general paralytic he gave ʒj. every night, causing ten, twelve, or fourteen hours' sleep without any apparent ill effect. For simple insomnia he found ʒj. doses sufficient in most cases, and 30 grains usually caused sound sleep: he had never failed with chloral to overcome sleeplessness. From doses of 50 and 60 grains he had not had any bad results. Mr. Wadsworth found ʒj. doses, in porter, an excellent mode of giving it to obstinate patients refusing food and medicines, and that sleep, lasting from eight to ten hours, was produced.

Chloral does not appear, nor could this be expected, to have a direct curative effect in insanity; it causes a sleep whence the patient awakes with a good appetite, which, with corresponding digestion, is so essential in recent or maniacal attacks. My favourite formula for giving chloral is with tincture of orange peel in ʒij. of cinnamon water, and a little syrup added, if Ferris' syrup of chloral is not used.

Opium.—If the derivatives of opium be used, they should be at night only. Dr. Clouston ascertained that if given during the day opium soon loses its effect, that the pulse is lessened in strength, the average temperature diminishes,

the patients lose weight, and the vital powers are decreased. In long continued feeding cases a dose of morphia at bedtime is often very useful, and in melancholia and emotional insanity with depression it is sometimes invaluable. Acetate of morphia may be injected hypodermically with excellent effects when the patient will not swallow anything: a sleepless, restless, noisy, destructive, unwilling patient can easily be sent to sleep by this means; the moral effect is sometimes most valuable. I have found glycerine the best solvent for salts of morphia, because the solution neither dries up nor crystallizes (10 grains in a drachm.)

Cannabis Indica.—Dr. Clouston, before the introduction of chloral, most carefully investigated the effects of the various remedies then known, and ascertained that a combination of tincture of *Cannabis Indica* and bromide of potassium (half a drachm of each) was efficacious in allaying excitement and diminishing temperature in 90 per cent. of the patients to whom he gave the mixture, while the appetite and digestion were, so far from being interfered with, so good that the patients gained in weight, although the treatment of some cases was continued during nine months. This experience of Dr. Clouston is still important, inasmuch as we may not always be able to use chloral, and may in some cases wish to diminish excitement during the daytime and to limit the employment of chloral for obtaining sleep at night.

Bromide of Potassium has been already referred to. It remains to mention that it is a most valuable remedy for epilepsy. Dr. Clouston gave 25 grains of it thrice daily for two years to seventeen epileptics, with great improvement in their condition.

Iodide of Potassium in ʒj. doses has sometimes remarkably benefitted the milder cases of puerperal and climacteric insanity. In syphilitic cases, and where, we presume, there is some thickening of the cerebral membranes, the iodide, steadily given in full doses, does much good.

Ergot of Rye.—In the treatment of recurrent mania, chronic mania with lucid intervals, and in epileptic mania, Dr. Crichton Browne has found ergot of rye "almost uniformly efficacious in reducing excitement, in shorten-

ing attacks, in widening the intervals between them, occasionally in altogether preventing their recurrence, and in averting that perilous exhaustion by which excitement is so often succeeded." He gave the liquid extract in ʒj. or the tincture in ʒi—ij. doses every four hours when epileptic violence was existing, and says, "It exerts a prompt and energetic effect."

Digitalis is frequently found singularly useful in destructive cases, especially in general paresis. It is advisable, notwithstanding the large doses of drugs tolerated, as a rule, by the insane, to begin this in doses of not more than *m x.* of the tincture to a man, or *m vi.* to a woman; it is easy to watch its effects and to increase the doses if necessary and advisable to *m xxx.*, *lx.*, or even *xc.* Dr. Lockhart Robertson has found a combination of digitalis with morphia very efficacious in occasional violent attacks of excitement.

Calabar Bean.—In the excitement of general paresis, Dr. Crichton Browne has ascertained that the extract, in doses of gr. $\frac{1}{4}$ to gr. i. had a rapid and powerful calmative action. Observation of the condition of the pupils will be a valuable guide in the indications for the administration of the *physostigma venenosum*.

Whisky, in four-ounce doses, was found by Dr. Clouston to lower the temperature very much, to slightly quicken the pulse, and in many asthenic cases to calm the patients. Dr. Yellowlees writes, "In many cases a liberal addition of stimulants is the best sedative we can give."

Beef Tea was also examined as a therapeutic agent by Dr. Clouston, who observed that it slightly lowers the temperature, lowers and strengthens the pulse.

In the foregoing sketch I have endeavoured to bring together, in a very condensed form, some of the more salient points in the treatment of lunacy, as pursued by the most recent investigators. Had I been granted more time for the reading of this paper I would have outlined many other and important topics relating to the subject, such as the advantages as well as the drawbacks of domestic treatment, the merits of asylums, the relations between physical states and mental symptoms, the latency of disease in the insane, the removal of causes of

lunacy, restraint, the experiences of various authorities, the use of purgatives, general and local bleeding, counter-irritation, antimony, and mercury. Then I would have ventured to indicate some cautions and limits concerning certificates and the mode of examining patients, to draw attention to the risks to the sanity of households where patients are treated, and have mentioned the legal steps and precautions necessary with each place of treatment, whether at home, in hospitals, or in private or public asylums. My excuses for outlining the home care of lunacy before the members of this society are that much has been done of late to increase our knowledge of successful treatment, and that many of those who are fully occupied in general practice have little opportunity for investigating the deductions of those working in a special field.—*Practitioner.*

THE THERAPEUTICS OF EPILEPSY.

BY ALLAN MCLANE HAMILTON, M.D.

Visiting Physician to Epileptic and Paralytic Hospital, Blackwell's Island, New York City, etc.

The object of this paper is the discussion of the present method of treating that most discouraging and imperfectly understood form of disease, Epilepsy. I wish more particularly to consider the value of the bromides, and at the same time to detail recent investigations undertaken to support a statement I made at the last meeting of the American Neurological Association, where I advocated the *medium dose*, and endeavoured then to show that of late there is an unwise tendency to administer these drugs in dangerous quantities.

I may be pardoned, perhaps, in calling attention to certain practical points which may appear unimportant to some, but an experience gained from the management of a great many cases teaches me they are to be carefully considered in selecting a plan of treatment. These simple indications, I am convinced, are too often overlooked, even by painstaking and careful medical men. I allude to the necessity for discovering the exciting cause. I am every day made to feel that the idiopathic cases do not form so large a proportion as they were once thought to. With this belief I am satisfied

that empiricism and routine management are bad methods. Any one who examines all his cases thoroughly will recognize the delicate shades in epilepsy, variations which are exhibited in other diseases presenting more pronounced and better defined symptoms; consequently there are evidences of pathological action, which are not always grouped alike, and consequently all cases are not to be treated in the same manner. I ascribe the moderate success I have had in the management of this disease to the recognition of these differences.

Not only may obstinate epilepsy result from masturbation, but it may be due to many of the diseases of women, and is produced by other eccentric irritations of various kinds, or by centric irritation, such as may be associated with toxæmia.

Sir Charles Locock (*Med. Times and Gazette*, May 23, 1853,) called attention to many cases that he had treated where uterine irritation was the exciting cause; and I think others have had the same experience. In one of Locock's cases the patient was affected particularly at the menstrual periods.

Some of these peripheral causes are curious in the extreme. Through the kindness of Dr. Gibney, of New York, I was enabled to see a child who had accidentally injured her ear with her parasol, the brass tip of which remained for some time imbedded in the external auditory meatus. As a result, convulsions of an epileptic character were caused, and it was not until some time afterward that the foreign body was discovered and removed. In another case I treated, the epilepsy was unmistakably due to a bad habit the woman had of wearing a number of heavy garments about her hips, which produced some uterine change. When this condition of affairs was noticed, and the skirts removed, she immediately recovered. At the root of many epilepsies, as well as other neuroses, are reflex causes—the starting point being the organs of digestion, or those contained in the pelvis. Of course there are varieties of epilepsy of an idiopathic nature, or others caused by traumatism or organic disease; and these will defy the best directed efforts of the physicians, and we can do nothing.

We should not lose sight of syphilitic epi-

lepsy where pain always precedes the attack. It is generally curable.

In prescribing for our patient there are five indications to observe :

1. Removal of exciting cause, if possible.
2. The diminution of exaggerated reflex susceptibility of the medulla.
3. Equalization of cranial circulation.
4. Abortion of paroxysms.
5. Improvement of general condition.

For the accomplishment of these, it is imperative that a judicious and discreet selection of drugs should be made ; and as those which are the most effective I may mention :

The Bromides : Sodium, Potassium, Calcium, Lithium, Iron.

Belladonna.

Digitalis.

Strychnine.

Ergot.

Arsenic.

Amyl Nitrite.

Tri-Nitro-Glycerine.

Cod Liver Oil.

I have not classified these remedies, as it is unnecessary to do so ; but will now say a word in regard to their usefulness :

No one drug can be declared a specific—as I am sorry to see has been done—and we must not be too eager to accept the sanguine results of certain over-enthusiastic authorities, and be governed thereby. I allude more especially to the almost universal use of the bromides, to the exclusion of everything else, and also to their employment in quantities, which often ruin the patients, and at any rate produce a condition of diminished vitality—which is inconsistent with any hope of success. Radcliffe's idea in this respect is a good one : "There is reason to believe that the therapeutics of convulsion must be based upon the notion that vital power has to be reinforced, and not upon the contrary opinion." What the proper dose is, has not been clearly settled by any one. There are neurologists who believe in toxic doses, and there are others who prescribe quantities which are almost small enough to be inert. In England it has been the custom to prefer the very small doses. I have seen the prescription of a very distinguished general practitioner, who

thinks five grains of the bromide of potassium a sufficient dose. Ringer recommends from 30—60 grains in the day ; Radcliffe, 45 grains ; Russell Reynolds, 30—90 grains ; Bartholow, 30—240 ; and Hammond, 90—240 grains during the day.

Handfield Jones remarks that there is a great difference in the tolerance of individuals in regard to the bromides—some persons not being able to stand five grains, while others will not be affected by doses of less than forty grains in amount.

My own experience has taught me that the best effect can be gained by the repeated administration of sixty grains in the twenty-four hours. The larger doses produce rapid bromism, while a medium dose seems to be better appropriated, but will do just as much mischief in the way of bromism as the larger ones, if given for a length of time. My records show me that the average time for development of symptoms of this kind is about three months, while anæsthesia of the fauces is produced in a few weeks, or even a much shorter time ; and I agree with others that it is necessary to produce this condition before we can say that the medicine has produced its physiological effect. Brown-Séquard considers the appearance of acne to be an indication that the medicine has begun to do its work, in which opinion he is joined by Dr. Putnam-Jacobi. Voisin considers the "point of saturation to be indicated by the anæsthesia of the pharynx and nares, so that in one case nausea is not produced by titillation with a spoon, and in the other sneezing and weeping does not follow the introduction of a straw into the nasal cavity." I should consider the latter a rather severe test. According to Danton the bromides act as vascular medicaments, diminishing excito-motor power. They act on the unstriped muscular fibre, producing local anæmia and moderating excitation resulting from temporary or permanent congestion. "They are agents that pass very rapidly into the blood (Ringer), and consequently their effects are very immediate, and they accumulate till the point of saturation is reached before they are eliminated in anything like considerable amounts." We are all aware that repeated and large doses of these drugs are followed by

a most disagreeable and pernicious state of affairs. Voisin has referred to two forms of poisoning, which he has divided into the slow and rapid. In the first the complexion becomes muddy, the eyes sunken, sight and hearing poor, and memory obscure. The patient cannot write, and cannot express himself, as he forgets words—there is tremulousness. In the other variety of the *slow* form there is dementia, or delirium with maniacal outbursts. Ataxia is also a feature of this variety. In the *rapid* form—that with which we are most familiar—somnia, headache, uncertain walk, difficulty of speech, loss of expression, “fishiness” of the eyes, drooling of saliva, etc., etc., are the ordinary symptoms.

Various grades of toxæmia, or even a state which Voisin calls the “cachexie bromique,” and which terminates in a typhoid condition, may result from a reckless use of this drug.

As regards the variety of bromide, I think the sodic is the most reliable and stable; the potassic salt varying very much in strength. The others either have a tendency to deliquesce, or are expensive. It will be advisable to keep the solution in a tight-stoppered bottle, and have fresh quantities put up constantly, as it is very apt to undergo changes—in which the bromine is evolved. And now a word regarding the time of administration. It has been shown repeatedly that these salts are much better absorbed when the stomach is empty. I have found also that a heavy dose at night is apt to do more good than if the amount prescribed is equally divided up through the day. In a great many patients I have found the attacks to occur at the waking hour, and I suppose this is due to the sudden change in the cerebral circulation. A mild diffusive stimulant has overcome this, and in many cases ward off the attack. I direct my patients who have their convulsion at this time to keep a glass of sherry or a small quantity of Spts. Ammonizæ Aromaticus near at hand, to be taken before arising. Cold douches to the head are valuable. If the attacks be irregular, it will be found necessary to divide up the dose.

The treatment of the disease in women should be directed as well to the pelvic organs. It will be found that the bromides will markedly

affect the flow, and relieve the pain or uneasiness which is connected with the menstrual period. Locally, I have found that cold applied for a few minutes daily over the ovaries, will modify the attacks should they be connected with irritation of any of the pelvic viscera. The progress of the disease should be soon modified by the doses I have recommended, and it will be seen by the table condensed from that prepared by Dr. Hollis and published in the *British Medical Journal*, that even smaller doses modified or cured the majority of the cases he cites. At the Epileptic and Paralytic Hospital, where most of the cases are the very worst that can be collected as regards chronicity, I find that sixty grains a day will cut short the attacks of a great many patients, and I have cured a number of private patients by this method. Dr. Hollis' cases were not selected, and are evidently hospital patients, like my own. (We omit the tabulations.)

The other observations are selected from my note book, and are illustrative of the efficacy of the dose I have advocated. Bromism occurred in spite of all I could do in most of them, though it was a mild form and under control. They were all patients of the better class, and, of course, had all the advantages of comfortable homes, attentive friends, substantial food and good air, although many of them were inclined to over-eating, as in fact all epileptics are. In this respect there is an advantage in favour of the poorer patients, who cannot obtain rich food.—*Chicago Med. Jour. and Examiner.*

(To be continued.)

THE STRAND TO BE PAVED WITH WOOD.—It is with great satisfaction we chronicle the success of the movement to secure immunity from noise for the Strand by paving that thoroughfare with wood. We make no apology for having fought the *local* battle in these columns, because the principle asserted is one of universal application. Wherever there is noise from a crowded and constant traffic, wood-paving is not only a merciful precaution, but a necessity. The wear and waste of nerve-power, fretted away by ceaseless irritation during the day and sleeplessness at night, is so serious, that a remedy at any price is demanded by common prudence, and a remedy which will remove the cause must be priceless.—*London Lancet.*

NOTES RELATIVE TO NOCTURNAL INCONTINENCE OF URINE, AND ITS TREATMENT.

BY WILLIAM A. HAMMOND, M.D.,

Professor of Diseases of the Mind and Nervous System in the University of New York, etc.

Perhaps no one affection of childhood is attended with more inconvenience and discomfort than nocturnal enuresis, and few are so obstinate in resisting the treatment sanctioned by routine and tradition. For several years past I have given considerable attention to the subject, and with the hope that the results obtained may be of value to the profession, I am induced to communicate them in brief.

From several concomitant circumstances, I am led to the belief that in the *beginning*, when not the result of carelessness in not taking the child from bed in order that the bladder may be properly emptied, nocturnal incontinence of urine is often either choreic or epileptic in its origin. In a small number of cases, children do not acquire the power of retaining the urine through the night; but setting these aside, as well as those in which education has not been attempted, I am satisfied of the presence of either the choreic or epileptic condition in the great majority of the remaining cases. It is not necessary that there should be other manifestations of these morbid states in order that acceptance should be accorded to this view, for it is well known that there are many forms of aborted attacks of both diseases. Nevertheless, it will often be found that there are other phenomena which serve to indicate unerringly the true state of the case. Among these may be mentioned grinding of the teeth, twitching of the muscles, rolling of the eye-balls, stupor, moaning, night terrors, etc., as well as fully developed symptoms occurring during wakefulness. But however it may originate, nocturnal incontinence of urine is very apt to become habitual even after the primary cause has disappeared, and these causes are not infrequently met with in adults in whom there appears to be during sleep an absolute insensibility to the excitation caused by repletion of the bladder. Indeed, a few cases have come under my notice in which this insensibility existed during wakefulness,

there being no other abnormal phenomenon. The first intimation which the patient in such instances experiences is the contact of the warm urine with the external surface of the body, and that sensation is at once sufficient to arouse the will into the action of contracting the sphincter. There is, therefore, no absolute paralysis of the sphincter, but there is an entire loss in it of the power to be reflectively, or, more properly, especially controlled. One of these cases was that of a gentleman of social tastes whose position was rendered extremely miserable by the existence of the weakness in question. Society had closed doors for him, places of amusement were out of the question, and even business could not be conducted without the inevitable India-rubber urinal which he was obliged to wear to avoid absolute disgrace. In his early youth, this gentleman was subject to chorea; and it was then that the incontinence of urine made its appearance. The chorea had long since disappeared, but the urinary trouble remained in spite of all means adopted for its cure.

But without further discussion of the pathology of the affection, I pass at once to the practical points of its treatment:

From whatever cause induced, nocturnal incontinence of urine consists in an excessively irritable condition of the sphincter of the bladder. The usual relation existing between the two spinal functions, the one contracting the sphincter and the other relaxing it, is disturbed, and the latter preponderates. There is accordingly an excessive degree of excitability in the direction of relaxation, and the immediate seat of the cause is doubtless to be found in that part of the spinal cord in nervous relation with the part in question. It is to the spinal cord, therefore, that our therapeutical measures should be directed, and these should consist in the employment of those means which are known to lessen the excitability of this nerve centre.

I have found the following plan of treatment so efficacious that, though there are others which are at times followed by success, I have for several years past adopted it exclusively:

1. Supposing the patient, as is generally the case, to be a child, the bladder should be

emptied on going to bed, and then two or three times afterwards the patient should be taken up and again made to urinate.

2. Sleeping on the back should be prevented. The prone position is one which, of all others, increases the amount of blood in the cord, and hence augments its irritability.

3. The following prescription should be given for several months—three or four at least—if stopped sooner the affection is liable to return :
 R. Zinci bromidi, ꝯss. Ergotae ext. fl., ꝯiv. M. ft. sol. Dose, ten drops three times a day, increased five drops every month. Thus for the first month ten drops are taken three times a day ; for the second month, fifteen drops three times a day ; for the third, twenty drops, and so on. It is preferably administered after meals, being less apt then to excite nausea or vomiting. Should either of those symptoms prove troublesome, the ensuing two or three doses may be somewhat smaller.

Children of from four to twelve years of age can take the foregoing quantities without disturbance of the general health, and even for adults it is not often necessary to increase them except in the way of augmenting the doses by five drops every two weeks instead of every month.

It will almost invariably be found that by these means the incontinence of urine is cured and the general health of the patient much improved, but occasionally a case is met with in which the bromide of zinc is not well tolerated. It proves irritating to the stomach, and induces a peculiar cachexia, characterized by emaciation, paleness of the complexion, a dull expression of the face, dryness and roughness of the skin, obstinate constipation, etc. In such instances the bromide of iron may be substituted for the zinc compound with advantage. It should be given in the form of a syrup (ferri bromidi, ꝯi., syrupus simplicis, ꝯvi.), in doses beginning with five grains three times a day, gradually increased to fifteen or twenty. A teaspoonful of the syrup, made according to the above formula, contains about ten grains of the bromide of iron. The dose, therefore, to start with, is half a teaspoonful three times a day, increased gradually, till at the end of three or

four months the patient is taking a teaspoonful and a half or two teaspoonfuls of the medicine. With each dose of the bromide of iron the fluid extract of ergot should be given separately, and like it should be gradually increased from ten drops three times a day to a drachm as often. The two medicines can not be kept mixed together for any length of time without the bromide of iron being decomposed and the ergot also injured.

In the nocturnal incontinence of urine occurring in adults the principles of treatment should be similar, but instead of the bromide of zinc the bromide of either potassium, sodium, or calcium should be employed, and it is not necessary to give the remedy in augmenting doses. One ounce of either of the compounds mentioned should be dissolved in four fluid ounces of the fluid extract of ergot, and of the mixture a teaspoonful should be given thrice daily. In extreme cases blisters to the skin are valuable adjuncts, and in several recent instances I have made successful use of the actual cautery to the dorso-lumbar region. As in children, the treatment must be directed to the emptying of the bladder late at night before retiring to bed, the prone position must as scrupulously be avoided, and the remedies should be continued for several months.

It must be clearly understood that these notes do not refer to the incontinence of urine which results from paralysis of the sphincter of the bladder, so frequent a phenomenon in certain organic diseases of the spinal cord. In such cases, though ergot is, to a certain extent, useful, the main reliance is to be placed upon the preparations of belladonna.

There is also a hysterical incontinence of urine, which, though not embraced within the present category, I may say yields readily to the bromides and ergot as recommended above. If in such cases there is reason to believe that the sphincter is paralyzed (and the fact may be definitely known by the inability of the will to constrict the sphincter), a few drops of the tincture of belladonna—ten or twelve, for instance—may be administered in conjunction with the other remedies, and counter-irritation may be advantageously applied to the spine.—*Ohio Medical and Surgical Journal.*

SYMPTOMS OF ALBUMINURIA.

BY T. LAUDER BRUNTON, M.D., F.R.S.

The symptoms of albuminuria are those of anæmia, and we often suspect the presence of the disease from the mere look of the patient before we have addressed a question to him or applied a single instrument of physical diagnosis. There is not only paleness from the general want of blood, but there is a greater tendency to œdema than in other forms of anæmia, so that the face is not only pale, but puffy, pasty, or doughy looking, with a tendency to swelling about the lower eyelids. The ankles and shins are frequently œdematous and pit on pressure, and there may also be accumulations of fluid in one or other of the serous cavities. These appearances in a patient at once arouse a suspicion of albuminuria, and we proceed to test them by examining the urine. In a state of health this secretion should be absolutely free from albumen. We detect the presence of this abnormal constituent in two ways: 1st. By boiling; and, 2nd, by adding nitric acid. On boiling urine containing albumen, coagulation takes place, and according to the quantity present we have either a faint haze giving an opalescence to the liquid, a heavy coagulum, or any intermediate condition between these two. There are some fallacies in this test, however, which require attention, for ignorance of them may lead us to imagine that there is no albumen when it is really present, or to fancy it there when the urine is completely free from it. The first fallacy is that serum-albumen forms compounds both with alkalis and acids, to which the names of alkali-albumen and acid-albumen have been given respectively. Now either of these compounds are coagulated by heat, and although serum-albumen itself is readily coagulated by boiling, yet if acids or alkalis are present when we begin to heat it, the very warmth of the liquid, as we gradually raise its temperature, causes the albumen to combine with the acids or alkalis and form acid-albumen, or alkali-albumen. Thus it may happen that by the time we reach the temperature at which the albumen should be precipitated it is no longer present in its original condition, its combinations being already complete.

Thus, if the urine be very strongly acid, or very strongly alkaline, we may get these compounds formed, and then heat produces no coagulation, although albumen is present. We therefore ascertain the reaction of the urine by means of litmus paper before applying heat. As the tissues of the body are all alkaline, it is very unlikely that the urine will contain so much free acid as to produce acid-albumen, and indeed such a condition is almost never found except in persons who have been taking large quantities of mineral acids. In such a case we would add sufficient alkali merely to neutralise the acid before we boiled the urine, but this is so rarely necessary that we generally disregard this source of error. Excessive alkalinity, however, is not so uncommon, and we very frequently have to add a few drops of acetic acid to the urine so as to render it slightly acid before boiling.

This addition of acid, however, serves a double purpose, and not only enables us to detect the albumen more certainly when it is present, but prevents us from mistaking other things for it when it is absent.

In some urines alkaline phosphates or carbonates are precipitated by heat and may be mistaken for albumen, but a drop or two of acetic or nitric acid prevents their precipitation, or if added after they have already been thrown down dissolves them again and causes the urine which they have clouded to become clear again.

It is thus evident that heat alone without acid is an insufficient test for albumen, and nitric acid alone without heat is also unsatisfactory and may be deceptive; but nitric acid coagulates albumen and causes a haze or coagulum just like heat. If the urine contain a large quantity of urea, the nitric acid may cause the formation of a crystalline precipitate of nitrate of urea, which is, however, but rarely mistaken for albumen. But if urates be present in large proportion, one is much more likely to fall into error, for the nitric acid drives out uric acid from its combinations with soda or potash, and free uric acid being much less soluble than urates a precipitate is formed which is much more likely than the urea one to be mistaken for albumen. A little heat now applied to the urine causes either urea or uric

acid to redissolve, and the urine clouded by them to clear; but it has no effect on the haze or coagulum produced by albumen.

In testing for albumen, then, the best method of proceeding is to allow three or four drops of nitric acid to trickle down the side of the test tube containing the urine. If no haze appears we may conclude that the urine is free from albumen. It won't do to pour in acid until the test tube is half full, for it is possible that if only a little albumen is present it may be converted into acid-albumen and dissolved by the concentrated acid. If a cloudiness appears we must not at once conclude that it is due to albumen, but must warm the urine over a spirit lamp. If it is really albuminous the opacity will remain, but if the cloud is due to urea or uric acid it will disappear.

So much for the symptoms of albuminuria, which are paleness and pastiness of the face, a tendency to œdema and dropsy, complaints of weakness, shortness of breath, dyspepsia, nervous symptoms, and, I may add, occasionally palpitation.—*Practitioner.*

(To be continued.)

ON THE EXPECTANT TREATMENT OF CHOREA.

BY E. B. GRAY, M.D.; AND H. M. TUCKWELL, M.D.,

Physicians to the Radcliffe Infirmary, Oxford.

Nearly five years have elapsed since we (*The Lancet*) published a series of cases of chorea, in the treatment of which all medicines had been withheld, and reliance had been placed solely on nursing and good diet. We then showed by a comparison of the average duration of cases treated with arsenic and other routine drugs, that the expectant treatment was at least as successful as the treatment by medicine. Since that time we have continued to work in the same direction, and are now able to record twenty more cases, in which the whole natural duration of the disease uninfluenced by medicine has been accurately estimated. In every instance the parents or friends were closely questioned as to the earliest appearance of twitching, and the patient was kept under observation till all irregular movements had ceased.

* * * * *

Remarks.—In our former communication we showed that the average duration of chorea treated on the expectant plan was, as far as our observations had then gone, from ten to eleven weeks; and that the average duration of chorea treated with arsenic gradually increasing doses, according to Begbie's plan, was likewise from ten to eleven weeks, the difference, if any, being slightly in favour of the expectant plan. We also compared these results with the estimate of Dr Hillier, who, in his work on Diseases of Children, gives the mean duration of thirty cases treated with arsenic, &c., as "about ten weeks;" and with Sée's estimate of "sixty-nine days," as the average duration of 117 cases treated with various medicines.

Of the twenty cases above recorded, the average duration is found to be rather over nine weeks, a still more favourable result than that before given. Or, taking the average of the whole thirty-eight cases published in this and the previous paper, we find nine weeks and six days to be the average duration of chorea treated without medicine. It is singular that this corresponds with Sée's average to a day.

Case 20 is worthy of special notice, in that it presented to view many of the worst features of chorea in its fatal form. The convulsions, so violent as to jerk the child over a high wall of pillows, like a fish, on to the floor, the body sore and fissured from friction, the rapid wasting, the wild delirium—were just the symptoms present in other cases which we have seen die in this infirmary, when plied with all sorts of active medicines. A very noteworthy point is the rapid improvement which took place naturally on the ninth and tenth days of the attack. Had a believer in arsenic been called in on the evening of the ninth day, and ordered large doses of Fowler's solution, the return of sleep and subsidence of the convulsions would, doubtless, have been attributed to the arsenic or to any other drug—brounide of potassium, succus conii, Calabar bean, zinc, iron, chloral, chloroform, &c.—which might have been ordered at that lucky, or unlucky, moment. This natural and restorative sleep might well be compared to the sleep which ushers in recovery in delirium tremens, and comes best of itself when a patient is well nursed and nourished, and kept free from all kinds of narcotics. An isolated ward; a good nurse; a large crib, well padded round, and walled in with pillows; plenty of nutritious food, without stimulants,—on these we shall feel inclined to rely in the treatment of severe chorea, till we obtain more conclusive evidence than has yet been adduced that the disease can, in the slightest degree, be favourably influenced by any medicine as yet discovered.—*London Lancet.*

Surgery.

DISARTICULATION OF THE KNEE-JOINT, LUXATED BACKWARD IN CONSEQUENCE OF CHRONIC INFLAMMATION, &c.

CLINICAL LECTURE BY PROFESSOR LEWIS A. SAYRE, M.D.

CASE I.—Mary Cashen, aged twelve years, resides in First street, New York. The patient's friends state that when she was seven years of age she fell from a sofa, striking on her left knee, which accident was immediately followed by a severe inflammation of that joint. It swelled immensely, and in a few months became much distorted and the leg contracted, when she was taken to Dr. Knight's hospital, on Forty-second street, where she was treated for a long time by liniments, plasters, etc., but no extension was ever applied to it to prevent its muscular contraction. She was afterward taken to the Woman's Hospital, where a female surgeon divided the tendons, but was not successful in straightening the leg. Abscesses formed in and around the joint, opening in various positions, as you see by the different, numerous cicatrices around the limb, both above the knee, over the patella, and several more of them, as you observe, down the leg, some inches below the calf, and on the lower third of the tibia, through which a probe passes, but does not come in contact with dead bone, with the single exception of the sinus over the patella. You see the leg in its present position as she lies on the table before you. I have not yet administered the anæsthetic, for the reason that there are several important points to which I wish to draw your attention. You observe that the position of the leg corresponds exactly to the drawings and the various plaster models that I have shown to you in my lectures on chronic diseases of the knee-joint.

Here is a curious case, showing the principles that I have already laid down to you as of universal application in the treatment of all diseases of the joints, namely, extension and counter-extension, for the purpose of overcoming reflex muscular contraction. I suppose you think that I am always *dinging* on the same subject; but you will acknowledge that you cannot have it dinged into your head too often, when you see such results as this every day brought before us.

If it had been dinged into the heads of practitioners years ago, it would have saved those deformities which are daily presented to us. Remember, now and forever, that in all diseased joints, no matter what joint—ankle, knee, hip, back, any joint—one of the necessary results of all inflammation is reflex muscular contraction; and that the muscles, in their contraction, distort and disfigure the limb in one way and another, according to the strength and power of the muscles involved in the contraction; that the muscles, distorting the limb one way or another, according to their strength, guide the deformity according to their superior capacity for contraction. That is all that there is about it. Besides the distortion so caused, the muscles, by this very compression and contraction, compel the parts to be pressed together more than they should be, and the constant, continued pressure on the parts interferes with the normal circulation of the blood in these parts, and absorption takes place as a consequence of the pressure. Consequently, the bones that are being thus brought together firmly, on account of muscular contraction, are absorbed more rapidly at the point of pressure than at any other point. This is the principal means of causing the bone's displacement. In this particular case, the knee is completely luxated backward, and rotated outward. In every one of these old chronically diseased knees you find the sub-luxation with the external rotation which you see in this case. The reason why it is rotated outwardly is on account of the constant contraction of the biceps muscle, which, having only one single point of action, is externally pressing at one particular spot, and absorption takes place more rapidly than on the inner side, although on the inner side there are four muscles acting continuously. Yet, as they have different points of attachment, the points of pressure are changed. Thus the parts never become so continuously irritated as if the pressure were persistent, or on one particular spot. At least, that is the only way I can account for this form of rotation.

In this case you will observe that in consequence of the long continuance of the disease, and the subsequent absorption of bone tissue, the luxation is made complete instead of being partial, as is usual in most cases.

In the treatment of these cases, no mat-

ter what your constitutional treatment is, if you believe that the child is poisoned by some constitutional taint, get it out of the child; there are a dozen ways, but your local treatment is necessary. The indication in all diseases of the joint is to overcome the tendency to contraction by extension and counter-extension. If the patient gets well, he will get well with a useful limb. Neglect this treatment, and the result will be a useless limb, as you see here.

In our patient, as she is before you now, you see that there are several sinuses on the thigh and over and beyond the knee, some three or four inches down on the tibia, through which the probe passes with great readiness. The flexible probe passes up the thigh beyond the popliteal space, and escapes some three or four inches up in the knee. One opening in the patella passes down to diseased bone. Through this opening, she says, some carious bone escaped, and there is still some necrosis going on, but not to any great extent. Water injected into any one of these sinuses escapes from the others, showing that they connect; but only the one through the patella leads to dead bone.

Now, if this little child had been operated on in proper time, it would be perfectly justifiable to exsect this knee-joint. But the leg is so much shorter than the other that if I exsected it, I should only make her a little short leg, five or six inches shorter than the other. She might have some sort of an artificial foot constructed, but to keep such a foot in repair would cost more money than she can command. Without it, her mode of progression would be of the dot-and-go-one sort. But inasmuch as this girl will have to earn her own living, and as the leg is already so short, and more bone would be taken away in the operation, though she has a good foot below, I doubt very much the propriety of attempting an exsection. The next thing is amputation, and where to do it.

If there is much disease in the thigh, it will become a necessity to amputate at the thigh. It seems to me that nature has nearly cured the disease by exfoliation, and that this little discharge from the upper portion of the sinus, around the thigh, must come from the leg below; and when I press my hand upon her femur, in this manner, against the end—you see she has a good end—the patella is turned around, over the end

of the condyles of the femur, in just the position to make a good stump; and if it was perfectly healthy, as a matter of course, this would be the best thing to do. If no dead bone exists in the femur, I think a stump can be formed with little trouble. I press with firmness upon the patella, and get no indication of pain. I have, therefore, made up my mind simply to disarticulate this leg from its new attachment behind the knee-joint. It is not properly an amputation at the knee-joint, because the leg is dislocated, and simply attached to the popliteal space; and when I hold the femur firmly, you can all probably see that the leg has a certain amount of motion, showing merely that fleshy attachments exist to this new articular facet. I propose to make two lateral skin flaps, turn them aside, disarticulate the leg, and bring the flaps together on the posterior side. It is barely possible that the bone may be so diseased that we shall be compelled to perform amputation higher up.

I believe the girl's chances will be bettered by simply cutting away this useless appendage. The suppuration, which is caused by the abscess burrowing in the leg, is exhausting her, and the sinuses will, of course, have a free drainage from the new opening we are going to make; then they will close up.

Dr. Minor asks me why I do not exsect this knee. Perhaps he did not understand me when I gave my reasons before. If she were a millionaire, as I do not think she is, she could afford to get an artificial leg, and a fancy foot to it, but it would cost too much to keep it in repair all the time. The diseased leg is already four inches shorter than the other, and to take off two inches more would leave her with a little short leg, utterly useless for locomotion without some fancy apparatus, which she cannot afford. With the stump that I propose to make she could wear a peg leg, and be enabled to earn her living, and it would be more economical for her; that is one reason; and another reason is the risk in the operation. There is always some danger in the exsection of a knee in a broken-down constitution like this: and opening the cancellous structure of bone is, of course, attended with more or less danger. In a broken-down child, with a leg fixed as hers is (she is now 12 years old, and five months sick, and pretty well used up by constant suppuration), I would feel that there is greater risk

in making an exsection of the bone than I do in simply disarticulating and taking the limb away from its false attachment. These are the reasons, Doctor; are they satisfactory?

Dr. Minor—"They are."

Dr. Sayre—"Thank you."

The operation was performed by making the usual lateral skin flaps, the incisions commencing at a point slightly below the insertion of the ligamentum patellæ, anteriorly, and terminating at the popliteal space, posteriorly. The remains of the patella were luxated so far forward, and so firmly attached to the condyles of the femur, as to make an excellent end to the stump, and to cause the flaps to meet posteriorly. The posterior part of the femur, between the condyles, was found to be completely eroded, and the end of the tibia also somewhat damaged. Some difficulty was experienced in taking up the arteries, not only on account of their not spurting (Esmarch's bandage was used in this operation), but also on account of their diminished calibre.

Dr. Sayre said of this:—

The artery tied is so very small that I have some suspicions about its being the only one there. If it is the only large artery, it is the smallest popliteal artery that I have ever seen in a child twelve years old. It is barely possible that it may be the only artery which Dr. Pell has put a string around, yet it is so small that I can hardly persuade myself that it is the main vessel.

Now, you will observe what a beautiful stump is made by this operation. There will be simply a linear cicatrix on the posterior part of the leg when the wound is healed. The attachment of the patella is not at all disturbed. It remains fastened to the end of the femur, where it has been so many years since the leg was luxated backward. I therefore leave things as they are, and bring those stitches together, and leave a little hole at the bottom part for the drainage vessels to pass through. You can all see that there is a ligature on the popliteal artery. The only way in which I can account for its extremely small size is the pressure of the leg back against it.

I now proceed to put in my stitches and draw these adhesive strips between the stitches. I always cut my adhesive strips narrow, so that they lie between the stitches

and do not have to be removed. At the end of forty-eight hours I take the scissors and nick the stitches, and remove them, leaving the adhesive plasters to retain the flaps in position till the recovery is perfect. This may be called, emphatically, a bloodless operation, according to Esmarch's plan, hardly ten drops of blood being lost.

CASE 2.—E. K., aged twelve months. Inflammation of the knee-joint. Cause unknown. Mother noticed the leg slightly bent at the knee, backward and laterally, some four months ago.

Dr. Sayre—Four months ago, from some cause, the mother knows not what, the child's knee-joint became involved, and even in this little baby you will observe that this characteristic eversion of the foot is beginning to occur. Of course, in a little plump young one like this, you cannot see the deformity so distinctly, but you can see the flexion and eversion, and the leg beginning to be turned outward.

What do you require for the purpose of rectifying these two different phases of the deformity? Simply what I am now applying, extension, and at the same time lifting the leg forward by an extending force, posteriorly; first extending the limb as you now see I am doing; and now, while I pull the leg downward, I put my hand posteriorly, and bring the leg forward, so as to overcome this tendency to sub-luxation. You see what a change I have made already in that child's leg. Now, the proper thing to do for this little fellow is to apply two forces, as I have indicated, and these two forces acting in conjunction give perfect and instant relief as soon as you have made the angle of extension in exactly the right direction.

The wise reviewer of my book, in the *Archives of Clinical Surgery*, states that he cannot understand how I can ever reduce a deformed knee-joint by making the extension in the line as represented in the engraving on page 200 of my book. Well, it is simply because that wise man has not read the book with much care, or he would have certainly learned how it could be done. I tried to state as distinctly as possible, that the line of extension should be made in the particular form which gives the most perfect ease to the patient. Whether the extension is made in this, that, or the other direction, it matters not; you will soon find out the

direction of extension which will give your patient the most perfect rest. You change the direction of your extension as the limb changes its position, until you get it perfectly straight at last, and then it is perfectly fit to apply the instrument, by means of which the patient is enabled to go about out of doors and exercise. I had hoped that I had made the explanation in my book perfectly clear, without the necessity of making numberless illustrations to illustrate every case that comes up. But it can all be expressed in a single sentence: The extension should be made in the line of the deformity, changing it by degrees until the limb is straightened. I hope that you will have intelligence to comprehend that.

I have not got that leg in the proper position as you will observe. Well now, I will fix it in a cheap and economical way, by taking a newspaper and making a couple of splints out of it by folding the paper in ten or twenty thicknesses. The splints are about the length of the child's leg, and two inches broad. These I cover with adhesive plaster, sticky side out, so as to cause it to adhere to the leg. Then with a roller bandage I fasten these splints to the leg, one in front and the other behind, allowing the splints to face in as the bandage follows up the leg, so as to cause them to lie evenly. On reaching the knee I cause my assistant to make extension, then I continue the bandage the rest of the way up the limb. The plaster, you will observe, prevents slipping, and the paper splint, though very weak, has yet sufficient strength to keep up the extension. But in order to make the limb perfectly secure, I take these two strips of tin, which are roughly perforated, so as to present jagged surfaces to engage in the bandages above and below, and utterly prevent slipping; an idea which is due I believe to Dr. Fluher, formerly one of the house staff of this hospital. One such strip is placed over the limb in front and another behind, being secured by a roller bandage. So long as they are held firmly in position, and their parallelism maintained by their adhesion to the splint below and the roller above, motion of the knee is impossible.

You now observe that this child's limb is straight, and at the same time I can press against his heels, moving his body without giving the slightest pain. He is, therefore, in fit condition to be carried about, getting

the advantage of out-door exercise, and his leg is without the slightest degree of deformity. How long it will take for the child to recover no one can say. The after-treatment must be conducted according to the necessity of the case; but the principle of extension and counter-extension is one that you must never forget.

In the contrast between these two children, you see in the one case that the limb has been rendered perfectly natural in position. Had the same principle been applied to the first case, it would have saved the necessity of that amputation, thus sacrificing a limb that would now have been useful. She would have been saved twelve years of agonising suffering, and prostration from excessive suppuration, which she has gone through.—*Medical and Surgical Record.*

TREATMENT OF ACNE.

La France Médicale says:—M. Rodet, of Lyons, prescribes the following treatment in acne. Friction is to be made every evening over the acne papules, with the following ointment:

R Adipis, ʒv;
Sulphuris,
Tannin, āā gr. viij ad xv.—M.

In the morning the face is to be bathed with warm water to which a little bay rum has been added, the proportion being increased from day to day until it amounts to one-third. M. Doyen, of Lyons, recommends bathing with the following:

R Aq. destillat., fʒx;
Hydrarg. bichlor., gr. xxx;
Tinct. lavandulæ, fʒiiss.—M.

Mr. Hardy uses this formula:

R Aquæ, fʒx;
Potassii sulphuret.,
Tinct. benzoini, āā ʒiiss.—M.

Two teaspoonfuls in a glass of warm water to be used externally. For the treatment of acne erythematosum (*couperose*), Hardy suggests the following:

R Hydrarg. protiod., gr. iss ad. ii;
Ung. aq. rosæ, ʒiv.—M.

In the fluid and concrete forms of sebaceous acne, Hardy uses the following glycerole:

R Glycerine, fʒxv;
Aquæ rosæ, fʒiiss;

Tannin, ʒi.—M. Sig.—Use externally.—*Philadelphia Medical Times.*

AMPUTATION OF THE ARM BY MEANS OF THE ELASTIC LIGATURE.

In the *Lyon Médicale* this operation is recorded as performed by Prof. O. G. Silvestri, of Vicenza. Surgeons naturally hesitate to perform resection or amputation in cases of white swelling of the knee or elbow. The process not being arrested on account of inadequate remedial measures, the patient loses strength, and becomes extremely emaciated; it is at this period of the disease that the operation is usually performed, though the general condition of the patient would almost contraindicate any active interference.

Silvestri, who first introduced the elastic compression known under the name of "Esmarch's method," has proposed the employment of the elastic ligature in the above cases, and has published a case in which the result was most gratifying. It was that of a young man, twenty-two years old, of a scrofulous constitution, who for six months had suffered from caries of the sixth, seventh, eighth, and ninth ribs, in their convexities; there was complete caries of the left elbow-joint, and the right hand was threatened with the same condition. There were high fever, colliquative sweats, and diarrhœa, which would yield to no treatment; absolute anorexia, intense pains in the elbow, and extreme emaciation. Though the condition of the elbow-joint indicated an operation, the feebleness of the patient contraindicated it. But, as the patient was urgent to have something done, Silvestri, with the consent of his colleagues, resolved to apply the elastic ligature.

On the 8th of May, 1874, accordingly, the patient's arm, below the insertion of the deltoid, was enveloped with a gum-elastic band, about two millimetres in diameter, and covered with silk thread. Twenty turns of the band were made, the latter being always kept in its greatest extension, and the two ends were tied with a silk band. The patient received seven and a half grammes of chloral, which produced sleep. No pain was experienced. The pressure exercised, calculated according to the elasticity of the band, was equal to twenty-one kilogrammes at each point, consequently forty-two kilogrammes for the whole diameter. The pulse, at the

time of operation, was 100; five hours after, 112; and six hours after, 100. There was no fever on the following day; the sweats and diarrhœa ceased, and the appetite returned. Milk diet was ordered, under which the patient soon began to gain flesh.

Gradually the bands penetrated the soft tissues, and at the same time lost their parallelism. The circumference of the arm, where the bands were applied, was eighteen centimetres at the time of operation; four days after it was eleven centimetres; six days after, ten and a half centimetres, and ten centimetres on the 26th of May. On the evening of May 29th it was found to be nine and one-quarter centimetres, and on June 3rd it was reduced to eight centimetres.

On June 18th the arm and bands fell off spontaneously, the process having lasted forty days. The stump, in its upper portion, had cicatrized. The remaining portion was dressed with dry lint. The further course of the case was favourable.

The author draws the following conclusions:

1. The compression exercised intercepts all communication between the limb and the rest of the body; the morbid material from the seat of disease cannot, therefore, enter the circulation; furthermore, drainage from the morbid *foyer* ceases.
2. There is no loss of blood.
3. Cicatrization takes place slowly, and the patient bears it easily.
4. The patient's forces are economized.

The author does not hesitate to employ this method in all those cases where the general condition of the patient offers no prospect of success to the performance of a bloody operation.—*N. Y. Medical Journal*.

EXSECTION OF THE PANCREAS.—In the *American Medical Weekly* for November 11 is reported a case of Western surgery which we believe stands unrivalled, although Dr. Justin, who operated, must share the credit not only with Dr. B. B. Allen, of Sebastopol, California, who attended to and reports the case, but also with the unknown individual who handled the knife so skilfully, and with the mule-like obstinacy of the constitution of the patient operated upon. The case was that of an Indian who was stabbed in a number of places, from one of which the pancreas had protruded twelve hours before the arrival of the physician. As this protruded part was gangrenous, the remaining seven inches were exsected. The report of the case was made twenty-one days after operation; at which time the ligatures had come away and the wounds completely cicatrized, the patient being to all observation well.—*Phil. Med. Times*.

Midwifery.

THE RELATIONS OF ALBUMINURIA TO PREGNANCY.

BY W. H. MARTIN, M.D.

(Excerpt from Proceedings of Medical Society, King's Co., N.Y.)

The title of this paper to be accurate should be less comprehensive; as it is my purpose merely to relate a case in illustration of the following propositions:—

I. That pregnancy in its earliest stages may induce albuminuria.*

II. That, inasmuch as this effect is apparent long before the uterus is sufficiently enlarged to interfere, by its size, with the renal circulation, the influence of pregnancy in producing albuminuria must be vital and not mechanical.

III. That in some cases the death of the ovum, even before its removal from the uterus, will relieve uræmic symptoms that had previously been severe and progressive.

In October, 1871, Mrs. —, of this city, was attacked, at the end of the eighth month of her third pregnancy, with uræmic convulsions. She was delivered of a living child by the late Dr. H. S. Smith, and, although for a time in an apparently desperate condition, made a perfect recovery. The albuminuria had been recognized early (*how early, I regret I am unable to say*), and had been treated by Dr. Smith with his usual prompt thoroughness. In *five weeks* from the delivery the doctor's notes report the urine normal and the lady perfectly well.

In April, 1873—having passed a single period only—Mrs. — consulted Dr. Smith for relief from distressing headache, disturbances of vision, nausea, etc. The doctor, discovering albumen in the urine (I find no reference to casts) applied the usual remedies without benefit, and as he refused to interfere further at this early period, she, in her desperation, as she says, went to some quack in New York city, who—according to her own very intelligent, and, I think, reliable account—introduced a stiff sound into the uterus once every week for seven successive weeks. The first application was attended with slight hæmorrhage, and followed by a watery flow which lasted some hours. The other appli-

* The term albuminuria is used to indicate a general pathological condition, one of whose symptoms is the appearance of albumen in the urine.

cations had no result of any kind, except the seventh, which was followed by violent hæmorrhage, and the next day she was delivered of what Dr. Smith considered a three-months' fœtus. Mrs. — assures me (and Dr. Smith corroborated her statement) that after the *first* application of the sound, the symptoms, which had been so severe as to urge her to the dangerous expedient of consulting a quack, disappeared, so that for the five weeks previous to her delivery she felt almost well. Albumen and casts had disappeared from her urine the first time that Dr. Smith examined it after her recovery.

She remained perfectly well and perfectly regular until May, 1875, when she missed a period. Albumen appeared in the urine, and she suffered from headache and nausea to such an extent that Dr. Smith, after consultation, resorted to the use of the sound, and in June, relieved her of what he pronounced to be a *two-months'* ovum. Although she had severe flooding she recovered thoroughly and rapidly. The examination of the urine, in which Dr. Smith was assisted by Dr. Segur, showed a perfect restoration to the normal at the end of three weeks.

Mrs. — continued well and menstruated regularly up to the 24th of May, 1876. She missed in June, and during July was feeling very badly. By the first of September she presented the following symptoms: severe and persistent headache, frontal and occipital; muscæ volitantes and bright flashes interfered with vision, and the outline of objects seemed so indistinct that she could read but a few minutes at a time. There were present also: insomnia, total anorexia, almost constant nausea, and a general nervous irritability which made her absolutely wretched. I thought I could detect a slight puffiness of the lower eyelid and fulness behind the ankle-joint, but if œdema did exist it was very slight. She was passing large quantities of urine of a sp. gr. of 1010. Dr. Segur examined it for me on the 18th, and found albumen over one-eighth, and numerous granular and hyaline casts; no blood globules. Her symptoms grew worse in spite of treatment, and she begged earnestly for relief. On the 22nd, in consultation with Dr. E. S. Dunster, Professor of Obstetrics, etc., in the University of

Michigan, it was determined that interference was necessary. On the 25th I introduced a flexible sound to the fundus, a depth of three and one-half inches; a little watery fluid tinged with blood followed the sound on its withdrawal. No other result ensuing, the sound was used again on the 27th and on the 29th. On the first of October, a small carbolized sponge tent was introduced into the cervix and allowed to remain twenty-four hours. On the fifth of October—nine days after the first introduction of the sound—Dr. Segur examined the urine carefully and was surprised to find but one granular and comparatively few hyaline casts. Heat and nitric acid produced a very light cloud of albumen which settled at the bottom of the test tube into too small a compass to be measured. The urine was passed less frequently and less copiously, sp. gr. 1013. Mrs. — had almost no headache after the 26th, was out every day, and called herself well. All this time there was no discharge from the vagina, and no pain, and it was not until the 15th of October, twenty-one days after the first introduction of the sound, that the uterus attempted to expel its contents. On the evening of the 15th hæmorrhage commenced, and continued so profusely that, after applying a tampon with persulphate of iron, I called Dr. Skene to my assistance; and on the next morning he removed the contents of the uterus with the curette. The ovum escaped detection, although looked for with great care. The sac which contained it was examined by Dr. Segur, who found everything normal except that the villi of the chorion were less prominent than usual, the attached surface appearing to the naked eye almost smooth; there was no fatty degeneration. Mrs. — had a rapid and uninterrupted recovery. Just two weeks after having been for hours in a condition such that the slightest movement produced syncope, she went to the Centennial Exhibition at Philadelphia, where she remained some days. She told me, upon her return, that she had “seen everything, had walked miles every day and was perfectly well.” There was certainly nothing in her appearance to contradict the last part of her assertion. Her urine—examined on the 25th, ten days after the womb had been emptied—

showed no trace of albumen, and Dr. Segur was able to discover only a few hyaline casts. Examined again on the 21st of this month, the report is no albumen and no casts.

My comments upon this case will be confined to its bearing upon the three propositions already stated.

I. That pregnancy was the sole cause of albuminuria in this case seems to be indisputable. Mrs. — is certainly not the subject of Bright's disease. Examination of the urinary deposits fails to give evidence of either inflammatory changes or of fatty degeneration of the kidney. Her general condition— one of perfect health as far as can be discovered— would seem to indicate that her kidneys must be rarely perfect in structure to have successfully resisted the *four* separate invitations to disease by which they have been visited. Mrs. — is almost reckless in exposing herself to wet and cold, and often alternates weeks of sedentary occupation with days of excessive and fatiguing exercise. And yet there have been no variations in her history from the strict level of health, except during her pregnancies. She has told me that the only sickness she has had since childhood was an attack of bronchitis. Again, it may be worth while to note that, if what the books tell us be true, namely, that latent Bright's disease predisposes its pregnant victims to abort, she should have evidenced a tendency to abortion, instead of offering such extreme resistance to its induction. The albuminuria began with each pregnancy and ceased with its arrest. The only question, therefore, that could be raised, is as to the existence of some other cause coincident and concurrent with pregnancy, and yet independent of it. This question I will dismiss by saying that the existence of such a cause, if not impossible, is certainly incapable of proof.

It may then be fairly inferred from this case that pregnancy, before it has advanced two months, can and does produce albuminuria.

II. The *fact* of causation being proved, the question as to the *mode* of causation must be met. Why and how does the presence in the uterus for less than two months, of a fertilized ovum, alter the function and structure of the kidney to such an extent as to determine the

appearance in the urine of albumen and casts? (The development of so-called uræmic symptoms, as it depends upon alteration of the kidney function, however produced, opens a different question, which has been successfully investigated, and need not detain us.) In studying the way in which pregnancy produces albuminuria, we are compelled to leave the open field of fact and proof, and to enter the misty region of theory and inference. In the first place, recorded observations as to the earliest period at which albuminuria has been detected, are very few; moreover, the belief that it does not appear until the pressure of the enlarged uterus upon the venous circulation affords an apparently easy explanation, is so general, that I have looked almost in vain for assistance from authorities on obstetrics. I find little evidence that the occurrence of albuminuria before the fourth month of pregnancy has ever been recognised except as a result of original pre-existing disease of the kidney. And yet, while these writers speak of the pressure of the uterus as the most *obvious* solution of the phenomena of albuminuria, some of them refuse to accept it as the only and inevitable explanation; and refer, for the most part vaguely, to the possible existence of other causes as potent as pressure.

Dr. Tyler Smith, speaking of cases occurring as early as the fourth or fifth month, is "inclined to think" the albuminuria due to "sympathetic irritation of the kidney by the gravid uterus, of the same kind as that excited in the salivary glands, the mammæ, thyroid, etc."

Dr. Fordyce Barker says that, "while there is probably much truth in the present theory, it does not contain the whole truth, and it does not even include all of the mechanical causes." But he pursues the subject no farther. He relates a case, however, in which albuminuria was apparently, (he thinks undoubtedly) produced in the last month of pregnancy by exposure to cold; was relieved by treatment before delivery, and re-appeared *during* delivery, excited, as he says, by the parturient act. This case is interesting in this connection only in that it shows that the albuminuria was relieved without the removal of the pressure. Other writers on obstetrics have entered more fully, if not

more satisfactorily, into this subject, but it would little profit us to examine their theories, especially as most of them are applicable only to the later months of pregnancy.

By going outside of the range of obstetrical literature, we ought to gain information suited to our purpose. But although material is abundant it is not to us easily available, and for this reason, that, independent of specific kidney lesion, the diseases which are now known to be attended by albuminuria are so numerous, and pathologically so distinct, that we are puzzled in the endeavour to make analogy and comparison useful in testing the causative influence of pregnancy. It is hard to believe, for instance, that the conditions under which albuminuria is produced by valvular diseases of the heart on one hand, and by diphtheria on the other, are identical, or even similar. That scarlatinal poison and that pregnancy both cause albuminuria is proved; but that both cause it by originating exactly the same kind of disturbance eludes demonstration. It is rather a "begging of the question" to assert that each produces changes in the blood, and that it is useless to seek beyond these wholly indeterminate changes for a mode of causation. It is easier to suppose that each disease, or each group of diseases (if they can be grouped ætiologically or otherwise) has a peculiar power, and exerts it in a peculiar way, than it is to suppose the existence of some one essential condition to which all equally give rise, *i. e.*, one single and immediate cause of albuminuria. Let us then leave an unprofitable line of investigation, and, discarding all arguments based on analogy, try to discover what there is in pregnancy by itself which excites the kidney to the production of albuminuria.

When an ovum is fertilized a profound impression must be made upon the nervous centres which preside over the processes of nutrition. The rapid and complex growth of the foetus; the establishment of a new vascular system (as it may be termed) for its support; the remarkable development of the uterus to make it serve as a suitable home for its growing infancy, and an efficient means of expulsion at its maturity, demand large applications of nutritive force. The medium through which these

impulses are transformed into actions is the great sympathetic nerve. The first steps toward any change of nutrition are accomplished by the agency of the vaso-motor nerves. The blood being ready to furnish material, the capillary circulation must be made ready to take it up. And this condition of excitation must be maintained by the action of the sympathetic nerves during the whole time that an extra supply is needed. Now anatomists tell us that the uterus is supplied with organic nerves from the spermatic plexus; they tell us also that the spermatic plexus is derived chiefly from the renal plexus. With this close anatomical relation is there not also a close physiological and pathological association? The impulse sent forth by the common nerve centre over one set of nerves to one organ may sometimes (be sufficiently intense to) react and send a similar impulse through another set of nerves to another closely related organ. A sort of internal reflex action may in this way be propagated from the uterus to the kidney.

Dr. Dalton, in his physiology, divides the reflex actions in which the great sympathetic is concerned, into three kinds. The third kind he describes as "reflex actions taking place through the system from one part of the internal organs to another." Under this heading he says: "The mutual action of the digestive, urinary and internal generative organs upon each other takes place entirely through the medium of the sympathetic ganglia and their nerves. The variations of the capillary circulation in different abdominal viscera, corresponding with the state of activity or repose of their associated organs, are to be referred to a similar nervous influence."

The uterus and the kidney are certainly "associated organs;" and it is, therefore, at least probable, that an influence derived from the unusual nutritive activity in the uterus may be reflected from the nervous centre through the renal nerves; and being continuous, may stimulate or alter the interstitial circulation of the kidney in such a way as to produce albuminuria. This explanation, I am convinced, is nearer the truth than any other with which I am acquainted. The idea that pregnancy might produce changes in nutrition, and so affect the

kidney, is not new, but I have never seen it stated exactly as I have given it. The theory is simple, and involves no more of obscurity than all theories must which depend on reflex action. It is also general in its application. Perhaps it may not account for every theory as completely as it seems to do for mine, and yet I cannot now recall any observed condition belonging to the albuminuria of pregnancy which it would fail to explain. I am at least willing to accept it as a reasonable explanation of the mode in which pregnancy produces albuminuria.

III. The consideration of the third proposition need not detain us long. The history of the case I have detailed presents the following testimony: In two different pregnancies uræmic symptoms, which had been severe, disappeared almost immediately after the use of measures to destroy the ovum. In both cases there was an interval (in one of five weeks, in the other of twenty-one days,) between the operation and the removal of the contents of the uterus; and yet the signs of albuminuria diminished as rapidly *during* this interval as they did after it. It seems evident, therefore, that the albuminuria depended upon the *life* of the ovum, not upon its mere presence, and certainly not upon the size of the uterus. The meaning of this is plain when viewed in the light of the theory of causation that I have advanced. While the ovum is alive various active processes are at work, the influence of which upon the kidney I have attempted to indicate. As soon as the ovum dies the increased activity of nutrition demanded for its growth is no longer needed; and, as nature is rarely wasteful of her powers, the nerve impulse to activity is no longer given. When direct action ceases, reflex action, which is born of it, must cease also; and the albuminuria ends with the process by which it was excited. For these reasons, then, I find it easy to believe that the death of the ovum puts an end to the albuminuria.

In conclusion, I would say that this subject deserves closer examination than it has received. And if the investigations of more competent observers establish principles to supplant my crude suggestions, I shall be happy if my case started the inquiry, even though it be no longer an illustration of the propositions I have attempted to defend.

THE MECHANISM OF SPONTANEOUS VERSION.

In the *Annales de Gynécologie* for June, 1876, Dr. Geneuil relates the following case:—A woman, aged twenty-eight, who had previously had three children, and had a full-sized pelvis, was pregnant for the fourth time. At full term slight labour pains commenced about midnight. By noon on the next day the pains had assumed an expulsive character, and the membranes ruptured in the presence of a midwife who was attending, and who then detected an abnormal presentation. Dr. Geneuil, on being summoned, found the left arm, swollen and blue, hanging from the vulva, the foetal head being in the right iliac fossa. The os was tightly closed round the shoulder, and the hand could not be introduced into the uterus. Dr. Geneuil therefore decided that it would be impossible to attempt version, and resolved to perform embryotomy. At the end of half an hour, having made his preparations, he laid his hand upon the uterus, and was astonished to find that on the left side there was strong contraction, while upon the right there was none. Thinking, therefore, that since the pelvis was large, spontaneous version might be accomplished, he left the case to nature. By 4 p.m. the shoulder began gradually to recede, and by 4.30 p.m. the breech was presenting. The contractions then became uniform on the two sides of the uterus, soon increased in vigour, and at ten minutes past five a dead female child, rather above the average size, was expelled. The author believes that his observation in this case explains the mechanism by which spontaneous version is accomplished, and that the powerful contractions on the left side of the uterus forced the breech down, while its comparative laxity on the right side allowed the head, lying in the right iliac fossa, to recede.—*Obstet. Jour.*

EXAMINATION OF "PAIN KILLERS."—By Joseph J. Pierron, Ph. C.—*Perry Davis' Pain Killer*. In a bottle sold for a dollar. Spirit of camphor, about two fluid ounces; tincture of capsicum, about one fluid ounce; guaiac, one-half ounce; myrrh, colour; and three fluid ounces of alcohol.—*Peninsular Jour. of Med.*

CHRONIC INVERSIO UTERI.

Dr. White, of Buffalo, read a paper, at the International Congress, on "Chronic Inversion of the Uterus." He has met with twelve cases since 1858, when he first successfully operated for the reduction of a case of twelve years' standing, and he had succeeded in reducing every case he has met with. From his experience in this operation, he believes that every case, of whatever standing, may be reduced. Failure to reduce heretofore has consisted in a lack of keeping up pressure upon the inverted organ for a sufficient length of time. The average duration of the operation in his hands has been over an hour, and the cases operated upon have been of all degrees of standing, from six months to twenty-two years. The patient should be placed on her back, with the thighs flexed and feet and knees supported by assistants. The rectum and bladder should be emptied beforehand, and the patient anesthetized. He uses a repository, one end of which consists of a cup-shaped piece of India-rubber placed upon a hard-rubber stem, about eight inches long, and curved to meet the requirements of the pelvis, while attached to the proximal extremity is a steel spring, conical in shape, the base of which is intended to be placed against the breast. By this means the hand is relieved, and during the operation should encircle the inverted uterus resting in the cup-shaped extremity, and thus direct the power applied. The gradual pressure will stretch the vagina, whose upper extremity will retract, the cervix thus permitting the passage of the fundus. When that has once passed to the level of the os, a large rectal bougie may be substituted, and the pressure continued until the organ is entirely replaced. Except in recent cases, Dr. White does not believe that pressure applied to the fundus will produce "dimpling" of it, and he considers the reduction of the organ, as a whole, necessary.—*Philad. Med. Times*, Sept. 16, 1876.

PROFESSOR ROGER HENNEY, of Anderson's University, Glasgow, died at Whitehall, Bothwell, on the 22nd Oct., aged sixty-eight.

JAUNDICE DURING PREGNANCY AND ITS EFFECTS UPON MOTHER AND CHILD.

BY E. H. MONKS, L.R.C.P., WIGAN.

CASE I.—Mrs. W., of a strong constitution, had had four previous confinements. This time, when eight months advanced in pregnancy, she suffered from jaundice. She was delivered of a dead child prematurely; and, in a few hours after delivery, the patient died.

CASE II.—Mrs. F. suffered in a similar manner to Case I. The treatment consisted of the usual remedies prescribed in jaundice. Premature delivery took place; the child was dead. After delivery the patient lost consciousness, and died in six hours.

CASE III.—Mrs. A. was admitted into the Infirmary at Wigan, suffering from jaundice, with the usual symptoms, on April 13th. On examination the liver was found to be greatly enlarged. She had severe pain in the right side, extending to the back. She was advanced six or seven months in pregnancy. For fourteen days she grew worse. The patient was certain on the 27th that the child was dead. On the 29th, she appeared much better. On the 30th, Mr. Monks was summoned by the house surgeon, who thought she was dying. On his arrival she had rallied, but the pulse was rapid, and could not be counted. On May 1st, she appeared as well as she was on April 27th. On May 3rd, Mr. Monks tried to induce premature labour. On the 6th, she was delivered of a dead male child, at about seven months. Decomposition was just commencing. The patient was very faint; in about half an hour, she revived; and was delivered about eleven o'clock. She died at half-past two.

Dr. Stainthorpe had seen a similar case, which was fatal.—*Obstetrical Journal*.

RETURN OF THE SECRETION OF MILK.—It is well known to foreigners resident in China that the Chinese women who have borne children are able to excite anew the secretion of milk years after the last child had been weaned. Dr. Muller reports two cases of this curious phenomenon that were observed by him. A woman, aged 30 years, whose breasts

were completely retracted, and had been inactive for six years, took a child six months old, which she placed frequently to her breasts, confining herself, at the same time, to a special diet. Ten days later the milk began to be secreted, and after six weeks Dr. Muller found the breasts firm and well developed, and pressure caused a stream of milk to flow out. The menses ceased while this lactation continued. The general health was very good. By similar means the secretion of milk was re-established in a woman 40 years of age, whose youngest child was 9 years old, and had not been nursed for 6 years. In this case menstruation did not stop, but it became less abundant. In a third case, the attempt to re-establish the secretion of milk excited such disturbances of the general health, that it had to be discontinued. In the two first cases the milk was carefully examined and found to be normal; its specific gravity was 1030.—*N. Y. Medical Record*.

NON-EXISTENCE OF MUCUS IN THE URINE.—
—M. C. Méhu contributes an article on this subject to the *Bull. Gén. de Thérap.*, 1876, v. 2, p. 161, in which he shows that the substance usually known as urinary mucus consists, ordinarily, merely of epithelial or organic detritus, sperm, pus, phosphates, urates, or a mixture of these. In other words, that substance visible to the naked eye, and designated *mucus*, is nothing more than the normal or pathological sediment of the urine. Its aspect varies infinitely with the nature of the elements which go to make it up, and with the acid or alkaline condition of this liquid. Mucus contains mucine; the urine does not contain this substance. Finally, solutions of mucine, like those of sugar or albumen, offer nothing appreciable to the eye. It is, therefore, erroneous to give the name *mucus* to a detritus epithelial or otherwise in nature.

AN IRON CALCULUS.—A man in Paris recently passed a urethral (?) calculus the size of a hazel-nut. Its passage was attended by severe nephritic colics. M. Cazenave found, on examination; that it was entirely composed of almost pure peroxide of iron.—*N. Y. Med. Record*.

Materia Medica.

ON A MODE OF GENERATING SULPHUROUS ACID FOR USE AS A DISINFECTANT, &c.

BY THOMAS W. KEATES,

Consulting Chemist to the Metropolitan Board of Works, &c.

From the remotest time, burning sulphur has been employed to fumigate and purify infected air, and to destroy fermentative and putrefactive action. There is no agent more powerful in its effects than this. Unlike chlorine, it not only acts as a disinfectant or destroyer of disease-germs and of the results of putrefaction, but it is also a powerful preservative agent, and, like carbolic acid, is a preventive of chemical changes in dead organic matter of every kind.

Although the value of sulphurous acid is thoroughly understood, its use is necessarily limited by the difficulty which exists in the way of producing it in a form in which it can be readily applied. The ordinary method of generating it by burning sulphur is cumbrous and very uncertain, owing to the difficulty of keeping up the combustion; there are also many situations in which the process cannot be carried on at all, and under the best circumstances it is inconvenient and but little under control. The evolution of the gas from its solution in water is scarcely more convenient, while it is much less effective; indeed, it may be said that there is no ready, convenient, and easily controllable way of producing this valuable agent in use at present; and this is the more remarkable when it is considered what a ready and simple means we really have at hand for this purpose.

Most of the readers of *The Lancet* are no doubt familiar, at least theoretically, with the substance called bisulphide of carbon. This is a compound of one atom of carbon with two atoms of sulphur (C, S^2); it is a dense, mobile liquid, heavier than water, and intensely inflammable, burning in the air like spirit of wine. During combustion the constituents of the bisulphide combine with the oxygen of the air, producing sulphurous and carbonic acid gases; but as 100 parts contain, by weight, as much as eighty-four parts of sulphur, which will give, in burning, 168 parts of sulphurous acid, it will

be seen that the volume of this gas from a given quantity of bisulphide greatly exceeds that of the carbonic acid, and is comparatively very large. Suppose the above quantities to be in grains; as 100 cubic inches of sulphurous acid weigh 68.5 grains, the 168 grains will measure upwards of 245 cubic inches, or about one-seventh of a cubic foot, which is the volume of sulphurous acid obtainable from 100 grains of bisulphide.

The bisulphide of carbon can be burned in a common spirit lamp, and in that case the products are sulphurous acid and carbonic acid only, in relative proportion to the atomic composition of the bisulphide, as I have stated; but by a modification of the method of burning, the amount of sulphurous acid produced in a given time can be regulated to any desired extent.

It is a property of the bisulphide of carbon to dissolve in fat oils and hydrocarbon liquids, such as petroleum; so by mixing it with any one of these liquids and burning the mixture in a properly constructed oil or petroleum lamp, sulphurous acid will be generated with the other usual products of the combustion of such materials, and in proportion to the quantity of bisulphide present in the mixture of combustible liquids: any proportionate quantity of sulphurous acid can in this way be thrown into an atmosphere, and the action may be continued for any length of time.

As the sulphurous gas is generated *pari passu* during the combustion of the bisulphide, it diffuses itself in the air, which in a short time will become completely impregnated with it. In a room containing about 1,300 cubic feet of air it was found that by burning 280 grains of the bisulphide the atmosphere was so far charged with sulphurous acid that it was impossible to remain in the room for more than a few seconds. In five minutes after the lamp was lighted litmus paper began to be reddened at some distance from it; in ten minutes the air had become very oppressive, and the litmus paper was reddened in the extreme corners of the room; in fifteen minutes the air was so charged with the gas that it could scarcely be breathed, and in twenty minutes it was unbearable. In that time, as I have said, 280 grains

of bisulphide were consumed in a simple wick lamp.

Sulphurous acid generated in this manner can be applied with facility to the disinfection of any place or object. In the case of rooms in which infectious or contagious disease has prevailed, it is only necessary to light the lamp and allow it to burn until the atmosphere has become impregnated with the gas to any desired extent, and then to remove or extinguish it just like a common spirit-lamp. In the simple form of apparatus which I suggest for this purpose, the lamp is enclosed in a metal case, about three inches in diameter and eight or nine inches high, furnished with holes near the bottom for the admission of air, and others in the top for the emission of the sulphurous gas.* This can be conveniently moved about, and placed, while the lamp is burning, in almost any locality. Receptacles for infected clothing, or the clothes or linen used in connection with disease, or carriages which have conveyed fever or other patients, can be thoroughly purified without difficulty and with very little trouble. For the disinfection of ships, too, the lamp is particularly suitable, as it can be carried into the remotest part of a ship and burned without the least danger, and with the certainty of effecting its object completely.

It must be observed that the bisulphide of carbon is extremely volatile, having its boiling point as low as 102° F.; it is therefore necessary that the lamp in which it is burned should be furnished with a well-fitting screw-cap, to prevent the liquid from evaporating, and at the same time to keep its peculiar odour from escaping. This odour is often very nauseous, but the bisulphide is now manufactured by Messrs. C. Price & Co., of Thames-street, so pure, that it possesses very little smell, and can be used without the least inconvenience.—
London Lancet.

TORONTO SCHOOL OF MEDICINE—One hundred and three students have entered their names at this school for the Session of 1876-77. Of these forty-eight are freshmen.

* This apparatus is made by Messrs. How & Co., of St. Bride's-street, Ludgate-circus.

PHYSOSTIGMA FABÆ IN THE CONVULSIVE DISEASES OF CHILDREN.

Dr. G. S. Trezevant, of Columbia, having found no reference in the books, to the use of this drug in the class of cases indicated, places on record (*Trans. S. Carolina Med. Assn., 1876*) several illustrative cases—all of which show that the effects of the drug are prompt in affording relief. The remedy was suggested by the benefit which the reporter had derived from its use in a case of tetanus, and in numerous cases of cerebro-spinal meningitis.

West says, in reference to the convulsions of children, that: "The great reason of their frequency is, no doubt, to be found in the predominance of the spinal over the cerebral system in early life. In adults, the controlling power of the brain checks the display of those reflex movements which become at once evident if disease heightens the excitability of the spinal cord, or cuts off the influence of the brain from the paralyzed limb, or if sleep suspends the influence for a season." Such being the peculiarity of childhood, if we possess an agent capable of neutralizing and keeping in check this predominance of the spinal over the cerebral system, by controlling the reflex activity of the spinal cord, it would prove of vast service in our treatment of infantile diseases, complicated with convulsions.

In June, 1875, an infant, æt. five months, had cholera infantum, followed by an obstinate diarrhœa, which improved until a relapse occurred on July 2nd. Upon checking the diarrhœa, a tympanitic condition of the bowels ensued, and opisthotonos, so decided as to make a complete arch, which effectually prevented swallowing. Dr. T. ordered alcoholic extract of physostigma, gr. $\frac{1}{32}$ to be given at once; repeat the dose in two hours if not relieved. An hour after the second dose, the Doctor found the patient completely relaxed and able to nurse, and, without further relapse, she slowly recovered.

March 9, 1876. A boy, æt. eleven months, had capillary bronchitis. Two days later, the disease was not improved; but the child was in general convulsions; temperature 104. 5° F.; respiration, 80. To relieve the convulsions, Dr. T. ordered one grain of the extract of the bean to be rubbed up with thirty minims each of glycerine and water. Of this one drachm solution, three minims were given in a teaspoonful of water. No decided effects having occurred within three-quarters of an hour, the dose was repeated, thus administering $\frac{1}{16}$ th grain of the extract within an hour. Two hours after the

last dose, the child was conscious and was trying to nurse; the convulsions had entirely ceased an hour earlier. The child remained entirely free from convulsions for four hours, when there was a slight threat, upon the occurrence of which the Doctor ordered a repetition of the dose, to be continued every three hours if needed. Two doses were given during the night, and there were no more convulsions. There was no improvement, however, in the lung, and the child died on the 13th. The Doctor thinks "it sufficiently evident that the convulsive paroxysms were controlled" by the remedy.

M. Bouchut (*Bulletin General de Therapeutique*) gives the results of 437 experiments, performed with eserin, the active principle of calabar bean, the subjects of which experiments were children from 7 to 12 years of age, suffering from cholera in all stages and varieties. The medicine was sometimes administered by the mouth, sometimes hypodermically; dose from $\frac{1}{3}$ to $\frac{1}{6}$ th of a grain; the physiological effects produced by $\frac{1}{4}$ th grain, injected under the skin, were pallor, nausea, salivation, intense *malaise*, and occasionally vomiting; no colic or *diarrhoea* occurred; pupils often remained unaffected, sometimes dilated, sometimes contracted, always active; abundant perspiration was sometimes noticed; retinal veins were contracted and the fundus of the eye pale. The most disagreeable symptom which occurred was an enfeeblement, or even paralysis of the diaphragm; no unpleasant sequelæ were observed. The most suitable dose for hypodermic use is $\frac{1}{8}$ th of a grain; this never causes any disagreeable effects, and may be repeated twice or three times a day. Next, as regards the remedial effects of the drug, the *choreic* movements are invariably arrested, as long as the physiological effects of the injection lasts; when this has passed off they return, but usually in a less severe form. Daily injections cure the disease in an average period of ten days.

Dr. McLaurin, (*Edinburgh Journal*, vol. II, page 319) reports a remarkable case of *tonic convulsions*, which persisted for many months—the fits recurring several times a day. There was no loss of consciousness, but rigidity of the limbs, the head being drawn towards the left shoulder, and twitching of the features of the same side. Every remedy was fully tried in vain, and the condition of the patient was growing steadily worse, when it was determined to try physostigma. The dose was gradually increased, until the equivalent of 4 grains of the bean was taken four times a day; it reduced the pulse temporarily to 58, and excited a gastric uneasiness, which is peculiar to its operation, but the pupil remained unaffected, and from the first the patient slept better at night; then

the intervals between the paroxysms became longer and the attacks less severe, until at the end of five or six weeks, they ceased altogether.

In another case, reported by the same party, in the *London Lancet*, a little girl $4\frac{1}{2}$ years old, who had had convulsions four or five times a day for nine months, not a single attack occurred after the first dose of the medicine. Why should we not find this drug efficacious in puerperal eclampsia?

Dr. Frayser says the anæsthetic effects of physostigma may be applied to the treatment of all nervous diseases.

In a case of *chorea*, supervening upon an attack of cerebro-spinal meningitis, Dr. T. has seen great benefit derived from $\frac{1}{2}$ th of a grain of the solid extract given three times a day to a child nine years of age; and in the two cases referred to above, the excessive irritability of the bowels seemed to be decidedly lessened. — *Virginia Medical Monthly*.

PRECAUTIONS IN THE USE OF SALICYLIC ACID.

—After relating some cases of rheumatism in most of which the acid had been very useful, and one in which it had not, and after noting its effect in reducing the temperature, and in one case, he says, of producing intermittent pulse, the author proceeds:—

These cases, although perhaps too few to serve as a basis to any positive conclusions, lead to the belief that in acute rheumatism of adults Salicylic Acid should be administered in doses of five grains every three hours, for two days; and then, if the effect is not apparent, five grains every two hours, and even every hour for another forty-eight hours at the most, unless vomiting first supervenes. If, however, on the second, third, or fourth day profuse perspiration comes on, with reduction of pulse and heat of skin, the temperature will have to be accurately observed at intervals of six or eight hours; and when it comes down to 99 F., the remedy will have to be suspended and Quinine given instead; and if the thermometer marks a lowering below the normal, with brandy and Carbonate of Ammonia freely to sustain the vital powers. With such precautions, treating the case, so to speak, *with thermometer in hand*, we shall probably be able to avoid severe and dangerous prostration, which in a weak patient, and in cases seriously complicated, might be followed by fatal results.

It appears obvious that the remarkable power this non-poisonous antiseptic seems to possess of controlling rheumatic fever, will bring, if it shall be proved that it exists, great support to that theory of the origin of certain diseases which my observations and my experiments induce me to embrace. (Richardson from *Germ. di Med. Mil.*;—*Gaz. Med. Ital.*)

[We have given Salicylic Acid in doses of fifteen grains, four times a day, to a young lady of fifteen years. There may, however, be a temptation to adulteration of the drug, owing to its high price.—ED.]

TREATMENT OF OPIUM POISONING BY LIQ. AMMONIÆ.

From the *Gazzetta Medica Italiana*.

Among the cases seen at the clinic (Rome), one of poisoning by morphine deserves special mention.

A woman, 22 years of age, the wife of a pharmacist, swallowed, with the intention of committing suicide, a (un)certain quantity (how much could not be ascertained) of hydrochlorate of morphia about a quarter to ten in the morning. At eleven a.m., of the same day, she was brought to the clinic; she was insensible, the face was livid and swollen, the pupils contracted, and the lips (mucous surfaces) and extremities cyanotic. It was impossible to arouse the consciousness by the strongest stimulants. A bladder of ice was applied to the head, strong sinapisms to the extremities, and the application of electricity over the ganglia of the cervical sympathetic was also tried. But all in vain; the woman seemed lost. Then the Professor caused to be introduced into the patient's stomach, by means of an œsophageal tube, a few grammes of "*liquore anisato d'ammonio*," and immediately the woman regained her senses, and in a short time recovered completely.

ERUPTIONS PRODUCED BY QUINIA.—In the *Journal de Thérapeutique*, No. 8, 1876, Dumas relates the case of a woman suffering from facial neuralgia, who, after having taken only 30 centigrammes ($4\frac{1}{2}$ grains) of sulphate of quinine, was seized with a paroxysm of asthma, coryza, fever, and violent itchiness over the whole surface of the body, accompanied by an eruption of urticaria, and further by a peculiar eruption formed by red spots like a scarlatina rash, and on some parts by papules. On four different occasions the patient suffered from the same symptoms after taking quinine.—*London Medical Record*.

Medical Jurisprudence.

THE MIDDLE-EAR OF NEONATI IN ITS MEDICO-LEGAL ASPECT.

Resumé and general conclusions of a medico-legal study, by Dr. Gellé:—

1. In the fœtus the middle-ear is full of a gelatinous smegma, and contains no air.
 2. At the moment of birth this smegma disappears, and in its place air enters the cavity of the tympanum.
 3. This is due to the act of respiration, and the derivation of blood to the vascular territory opened up to the circulation; the thick reddish smegma grows pale and is absorbed; it was a body; there now remains but a coating.
 4. The auricular cavity is little by little filled with air from without. The cries and sucking efforts favour, in their turn, respiration, and the aeration of the tympanic cavity.
 5. The time necessary to complete this condition depends upon the activity of respiration.
 6. When all proceeds well, the transformation takes place in a few moments; rarely it occupies some hours—twelve at most.
- On the other hand, if respiration is feeble, if asphyxia, rapid or slow, takes place, the aeration of the tympanic cavity is incomplete—exists only on one side or not at all. In these cases the contents of the cavity are mixed, the foetal condition being still pretty clearly shown, spite of the ascertained presence of air; it is the combination analogous to that observed in asphyxiated lungs.

* * * * *

8. When the examination of the lungs is impossible, or gives uncertain results, the medical expert will be able to find, in the examination of the ear, signs confirmatory or negatory of the presence of air and of respiration.

9. Besides, this examination of the middle ear of the *neonatus* will aid us to judge of the kind of death, of its cause, whether by hæmorrhage or by asphyxia, &c., &c.; and so, also, of the time when death took place, if before or after birth, if before or after the first inspirations.

* * * * *

12. Death by hæmorrhage can induce, through

anemia, the artificial production of the cavity of the ear; it is necessary to remember this source of error.

13. On account of insufflation of the *meonatus* in a state of apparent death, one may be able to find in the tympanic cavities, or in one, of them, sero-sanguineous liquid, more or less mixed with air, without the foetal character having entirely disappeared. The mechanism of the penetration of the air being in this case entirely different, the general and local circulatory phenomena not having travelled with equal pace, there will be found even in this ambiguous mixture a characteristic of the foetal condition.

14. Aural catarrh often exists at the time of birth.

15. This is a serious obstacle to the transformation (æration) of tympanic cavity.

I . Also it is opposed to the entrance of air, because it induces hypertrophy and hyperplasia of the mucous membrane of the tympanic cavity.

17. Often, after birth, the action of the air transforms the simple catarrh into *purulent otitis neonati*.

* * * * *

22. In an examination made a long time after the time of the crime, or of burial, * * thanks to the resistance which this smegma presents to decomposition and putrefaction, justice will still know the truth, and the absence of respiratory life may be victoriously demonstrated; the value of this criterion seems to be incontestable.

23. In case of infanticide by hæmorrhage, the practitioner will have to calculate the part which this cause of error plays in the disappearance of the tympanic contents.

24. Through the cranial wall it will be necessary to cast the first *coup d'œil* on the contents of the cavity; but, before opening it, we should adopt the precaution of puncturing, under water, the *membrana tympani*, and seeing whether there arise, through the puncture, any bubbles of air, mixed with bloody serum. The temporals being taken out, they ought not to be washed nor put into any solution, but simply placed on a little cloth, wet with phlegmatic water; the whole being put into a vessel well closed and sealed, till it is examined.—*Tribuna Med.—Gaz. Med. Ital.*

Translations.

MODERN UROLOGY.

BY M. CH. OZANAM.

In the first part of this work, the only one which, it appears to us, would interest our readers, M. Ozanam presents in concise form certain results of the study of the urine as applied to symptomatology. The profound contempt that the sobriquet of *Urine Doctor*, applied to a certain class of empirics and charlatans, has for some years inspired, ought not still to lead us to neglect the study of the important secretion of the kidneys. The greatest physicians of all ages have endeavoured to find in the urine elucidation in the diagnosis of disease. Their uroscopy was chiefly founded upon (an observation of) its physical qualities: colour, smell, taste, appearance, precipitates, and deposits. They distinguished the urine of potation, that of digestion, and that of the blood or depuratory urine. But, in our day, chemical and spectral analysis, the use of the microscope, and the study of densities have conferred upon the urine a fresh importance by making us to recognize in it sometimes the cause, sometimes the effect of a whole host of various diseases and complaints. The study of *blue urine*, of *albuminuria*, of *diabetes*, of *glycosuria*, of *inosuria*, and of *phosphaturia* has been the means of so much progress in the science that one can only glimpse at the collective importance of a secretion in which, so to speak, all the products of the economy "fall into line." The same is true of the study of *uræmia* and of *uricæmia*, and of the discovery of *urochrome* of *uropittine*, and of omicholic acid by Thudichum.

Thus it is that we now know that in *cerebral affections* there is a great waste of *phosphoric acid* passed off by the kidneys, a loss which reaches from 2.49 to 3.93 per cent. in the twenty-four hours. The same holds good of the *chloride of sodium*, which the urine carries off in abundance in cases of cerebral softening, whence the indication to give to these patients both phosphorus and sea salt as remedies. Melanotic tumours communicate to the urine a deep tint, of sepia (black) colour, and the microscope reveals in it the presence of pigmentary granula-

tions, whilst the evaporation of a few drops of the urine will then produce hortensia (rose) coloured crystals.

Albuminous Urines, according to modern investigations, are an important diagnostic and prognostic sign in several diseases. They serve to differentiate at the commencement between malignant cholera, in which they are found, and mild attacks of cholera and cholerae, in which they are wanting. They distinguish, in the same manner, malignant diphtheria from its benign forms and from membranous angina.

Phosphaturia, in its turn, affords the surgeon very valuable indications in some affections. Thus, when a patient suffering from cataract presents, at the same time, evidences of phosphaturia, be sure that, if you operate, destruction (sinking) of the eye will follow. This therapeutic indication is not, on account of its being negative, the less useful to know.

In *cirrhosis of the liver* and *pylephlebitis*—that is to say, destruction, partial or complete, of the venaporta—there is glycosuria by day and not by night, so that, in this case, the glycosuria points to hepatic obstruction, and not to diabetes. In the course of *Phthisis*, increase of the urates is a sign of serious aggravation of the disease. In *Addison's disease*, (bronze disease), the urine contains a third less of urea than in the normal state, perhaps 13 to 20 grammes (195 to 300 grains) in the 24 hours, instead of 26 to 36 (390 to 540 grains), according to age. It contains indigo besides in tenfold proportion to the normal state.

Thus it is, again, that the presence of indican in the urine, during the course of an affection of the liver, ought to diagnosticate a cancer of that organ.

And if I wished to show, further, the importance that urological science has acquired in the last few years, I could take, in this connection, here, for example, oxaluria, that is to say, the presence in the urine of oxalate of lime, the result of the incomplete oxidation of uric acid. This condition of oxaluria is constant in pulmonary affections, pneumonia, catarrh, acute military phthisis, intermittent fever, the end of typhoid fever, glanders, chlorosis, melancholia, and apoplexies, when they are severe. It is absent in the beginning of typhoid fever, sta-

tionary phthisis, intestinal catarrh, acute rheumatism, pharyngitis, dysentery, and incipient cancer. See then its importance from a diagnostic and prognostic point of view.

Oxaluria determines the diagnosis, sometimes very difficult, between incipient typhoid fever, where it is wanting, and intermittent fever, and acute phthisis, where it is present.

If a young man, suffering from debility, presents a condition of oxaluria, without evident cause, he ought to be suspected of spermatorrhœa.

If a young man, affected with nocturnal nervous phenomena without spermatorrhœa, presents oxaluria, you may affirm that his attacks are epileptic. If an anæmic patient, with great debility, have oxalic deposits in his urine, suspect acute phthisis.

If, subsequent to an apoplexy, oxaluria appear, fear a latent pneumonia.

If, after a pleurisy, oxaluria persist, you have to encounter a phthisis still latent.

If oxaluria appear in the course of cancer of the stomach, it is an evidence of the commencement of ulceration.

If, in the case of a melancholic patient or a maniac, the oxaluria disappear, announce an approaching cure or, at least, a great amelioration.—(*Bulletin de la Société hom. de France.*)—(*Lyon Médicale.*)—(*L'Union Médicale du Canada.*)

THE INTRODUCTION OF IRON INTO THE ECONOMY BY THE HYPODERMIC METHOD.

Translated from the *Revista Médico Quirúrgica*, of Buenos Ayres.

In anæmia perniciosa, when the absorption of medicaments by the stomach is impossible, Prof. Haguénin, of Zurich, does not hesitate to administer them by sub-cutaneous injection. He employs a formula in which the pyrophosphate of iron, mixed with the sulphate of ammoniac (?) in the proportion of ten parts to fifty of distilled water, so that a common Pravaz syringe contains three centigrammes of iron. Immediately following the injection, a redness of the skin is observed, swelling, and some slight cardiac symptoms, but all promptly disappear, and the general condition improves.—*From Correspondenzell für schv. Herzte, No. 11.*

ON ALCOHOL AS A CAUSE OF GENERAL GANGLIONIC HYPERTROPHY AND LEUCOCYTHEMIA.

Translated from the *Revista Médico Quirúrgica*.

M. Rivier read a communication on the diseases produced by alcoholic excesses, showing that the degenerations and perversions of nutrition which alcohol gives rise to in various organs have been perfectly studied in the liver. The observations made are interesting from the point of view of ganglionic alterations from alcoholic intemperance, and he concludes his note by calling attention to patients in the wards in which alcohol had produced retinal and meningeal hæmorrhage, cirrhosis of the kidney, and secondarily, a general ganglionic hypertrophy, which remained for a long time without affecting the character of the blood, and complicated at the end of twenty years with a leucocythemia, which accelerated the fatal termination by the consequent cachexia. Alcohol produces cerebral lesions; according to the author, these lesions hasten the course of the leukæmia, and, under the influence of this disorder, the alterations of the liver and spleen develop, and he concludes by making the two following deductions:—1st. Alcohol exercises a direct influence upon the lymphatic system, and may occasion general ganglionic hypertrophy and leucocythemia. 2nd. In certain cases, cerebral lesions hasten the course of this disease.—*From El Progreso Médico.*

(*From Le Progrès Médical.*)

At the meeting of the "Société de Biologie," on the 24th June, M. Poncet communicated, in the name of M. Berger, an army surgeon, a very interesting observation. It occurred in a child who had swallowed an ear of corn; sometime afterwards it gave rise to a pneumonia, then an abscess of the posterior thoracic wall. One day the ear showed itself opposite the opening of the fistula; it was easily extracted, and the child recovered. At a meeting of the same society, on the 15th of July, the President, M. Claude Bernard, in reporting the results of his studies on anesthesia in animals and vegetables, and the effects of etherization upon plants, said: "Anæsthesia is then a general phenomenon which appears with the same

characteristics in plants and animals, and acts upon all the tissues. What is the cause of anæsthesia? It is probable that it is by modifying protoplasm that it arrests vital motion. If one judge of it from what takes place in the muscles, this would be pre-eminently a phenomenon of coagulation." At the session of the "Académie de Médecine," on 18th July, M. Depaul presented to his colleagues the uterus of a woman who had died some hours after delivery. An arterial injection that had been made, enabled them to see that the arteries of the uterine tissue are really much more capacious than the vessels from which they arise. This arrangement confirms what the speaker had said to that effect in the discussion upon the bruit de souffie uterine.

CURIOUS CASE OF RUPTURE OF URETHRA.

In the *Revista Médico-Quirúrgica (Buenos Ayres)*, the case is reported of a man who had suffered for many months from blennorrhœa. The urethritis had become chronic; and the stream of urine gave no evidence of stricture. He began to engage again in sexual intercourse, and set up a more acute urethritis. This again subsided to the chronic condition, and he repeated and continued in his sexual excesses. These were, however, soon brought to an end by rupture of the urethra and violent hæmorrhage from the part, so great as to render him quite faint. Extravasation of urine followed, and then gangrene of the scrotum and integument of penis. After a long course of treatment the patient recovered.

ANTISEPTIC TREATMENT IN THE CURE OF WOUNDS.

From the Revista Médico Quirúrgica Buenos Ayres.

M. Lavrey lately presented to the Academy of Sciences, of Paris, an article by Dr. Minich, Surgeon-in-chief to the Vienna Hospital, in which the Doctor announces his preference for the sulphite of soda over carbolic and salicylic acids, in the treatment of wounds and erysipelas. According to the showing of the author of the article the favourable results of this new treatment have been manifested in a large number of cases; and he prefers it to anything heretofore known, as safer, simpler, and economical.—(*Anales de la Sociedad Anatómica Española*).

A NEW METHOD OF INSUFFLATION OF THE MIDDLE EAR.

From a report of the proceedings of the *Société de Chirurgie* on the 4th Oct., as published in the *Paris Médicale*, we see that a discussion took place on M. Ronstan's method of inflating the middle ear by means of a bent tube, one end of which is placed in the mouth, the other in the nostril, (a method which we noticed in a previous number). The patient blows the air into the nasal fossæ, and thence into the Eustachian tubes, whilst the *velum palati* is raised.

M. Tillaux remarked that he found the process of Valsalva more simple. But the forcible efforts made by many persons in the process, provoking cerebral congestion, may go far to bring about various accidents. M. Tillaux seems to prefer Politzer's method to Ronstan's, and maintains that an intelligent patient can use the former, as well as the latter, without surgical aid.

[It seems to us, however, that Ronstan's method, if it should prove as efficient in overcoming an obstinate Eustachian tube as Politzer's, will be much less complicated, and hence more practicable with most patients, and the cost without the air-bag will be less than with it. We have had an opportunity of testing it on two patients, as well as on our own editorial ears, in their normal condition, and find it requires less effort than Valsalva's, and acts more readily; but it does not appear to us to have the same force as Politzer's.

DISEASES OF THE NASAL FOSSÆ.—MEDICATED BOUGIES.

Chronic Catarrh of the nasal fossæ has been successively treated by the inhalation of medicated liquids and vapours; by the insufflation of various powders, and lastly by nasal douches of simple or slightly astringent waters. This last method, lauded, especially, in France, by Duplay, is known in Germany under the name of Weber's method. Grave charges have been made against it, especially by the aural surgeons. Knapp, Gruber, Politzer have attributed to it numerous cases of suppurative inflammation of the middle ear: a patient in Knapp's clinic had even died of this disease, set up by the

penetration of the fluid into the cavity of the tympanum. We ourselves have seen, in Politzer's dispensary, a patient who, while using the nasal douche, had been suddenly seized with a sharp pain in the ear, followed by an acute catarrh of the tympanic cavity with suppuration and mastoid abscess. Another, less serious, inconvenience from the nasal douche is frontal headache, caused by the forcible projection of the fluid into the superior meatus. At the session of the Medical Society of Vienna, on the 16th of June, 1876, Dr. Catti proposed to substitute for the nasal douche the employment of medicated bougies, so much esteemed in the treatment of urethritis. The nasal bougies, from ten to fifteen centimetres long by about four millimetres in breadth, rounded at one end, are composed of 0 gr. '02 of sulphate of zinc, or 0 gr. '03 of extract of rhatany, made up with gelatin. By virtue of their flexibility these sticks of gelatin are easily introduced, and fill up all the sinuosities of the nasal fossæ. Half an hour is sufficient for the complete liquefaction of the bougie. The liquid is retained in the nasal fossæ by a dosil of charpie, which plugs the openings of the nares; a slight inclination of the head forwards prevents its dropping into the pharynx. Dr. Catti, relying upon an experience of two months, has been able to cite numerous cases of cure by this means. Apropos of this communication, Dr. Fieber's assistant, physician to the general hospital of Vienna, declares that he has made use of similar bougies for a long time, and affords additional testimony as to their indubitable efficacy.—*L. Thaon (de Nice), Progrès Médical.*

DIPHTHERIA — EXPULSION OF FALSE MEMBRANES. ABORTION—CHILD LIVING.

By M. Michel, *Hospital Interne.*

Translated from *Le Progrès Médical.*

At the meeting of the Anatomical Society in April, M. Michel showed two tubular false membranes, more than ten centimetres in length, and branched at their lower extremities, like the bronchus they had obstructed. They were emitted by a woman, who soon aborted (at the eighth month of her pregnancy). The child is living, and presents no trace of diphtheria.

OF PARALYSIS IN THE SIDE CORRESPONDING TO
THE CEREBRAL LESION.

To show the existence of this paralysis, Brown-Séqard reports a series of experiments on animals and many clinical facts. The best means of producing paralysis is by cauterizing with red hot iron the part of the surface of a cerebral hemisphere. The posterior, middle and anterior lobes have the power of generating this paralysis, the anterior less than the others. The deeper parts, as the walls of the lateral ventricles, the corpus striatum, the thalamus opticus have also the power. The paralysis produced, if the cauterization is light, is seen in one of the limbs, or both, on the side corresponding to the lesion; at other times it appears in the face, in the neck, and in the abdomen. If the cauterization of the surface of the brain is extensive and very deep, there is a paralysis of the four limbs, now more intense in the thoracic, now, in the abdominal, but always more severe in the side opposite to the lesion.

Passing to clinical facts, the author has collected more than 200. Burdach, in 258 cases of paralysis, has been able to establish that 15 were in the side corresponding to the lesion of the brain; Wasse reports 26 cases; Bayle and Dechambre 10. The author does not lay so much stress on the number of cases, but on the special character of some, as the following: In a case in which a pistol ball traversed the right side of the brain, from the posterior part to the superior part of the forehead, and at the distance of 4 centimetres from the median line of the occipital bone, and 2 from that of the frontal, there was paralysis of the same side. It is impossible, he says, not to admit a lesion of the three right cerebral lobes above the lateral ventricle. The lesion must have been in parts not very vascular, without effusion into the ventricle of the opposite side.

According to the author, from so many proofs there is not only demonstrated the insufficiency of the old theory of the motor fibres, but it is, moreover, proved that one-half of the brain is sufficient for the movement of both sides of the body.—(*Il Morgagni e Arch. Ital. per le Mal. New.—Gaz. Med. Ital.*)

THE CANADIAN

Journal of Medical Science,

A Monthly Journal of British and Foreign Medical
Science, Criticism, and News.

TO CORRESPONDENTS.—*We shall be glad to receive from our friends everywhere, current medical news of general interest. Secretaries of Country or Territorial medical associations will oblige by sending their addresses to the corresponding editor.*

TORONTO, JANUARY, 1877.

UNIVERSITY DISAFFILIATION.

However strange it may appear for the wolf and lamb to drink at the same spring, yet not more so is it than to see the *Globe* and *Mail* join hands in attacking the Ontario Government. How insufferably they must have been bored, before two such incorrigible antagonists would agree to harp on the same chord. It would seem as if the very existence of some of the Medical Schools depends upon their affiliation with the University of Toronto, so piteous is the wail at its loss.

It is strange, however, that the value of the affiliation was only discovered when it was swept away, for, surely, it must have been prized very lightly by those who now mourn so sadly, when we find that, in an aggregate of 257 who graduated in medicine at the University of Toronto, between the years 1855 and 1876, only four were from Victoria College, four from Trinity College, and three from Queen's College, while 236 were from the Toronto School of Medicine. During the same period, 611 graduated in Victoria College, 82 in Trinity College, and 264 in Queen's College.

Now, since the Act of 1873 placed a large measure of the responsibility for the success of the University in the hands of the graduates in convocation, and as all the late affiliations had been effected under the old *regime*, we hold that the Government could not do otherwise than remove all existing obstructions, so that the new Senate and Convocation could model and work the University in conformity with the spirit of the amended Act, and in such a way as

would be more likely to conduce to its success and usefulness.

The University, being thus freed from its supposed encumbrances, those who are presumed to have most interest in its welfare can now go to work, untrammelled, and build up an institution more in accordance with the genius of the age, and, possibly, better adapted to the wants of the country.

There is nothing in the present Act to prevent a re-affiliation, but each application for such will have to be considered on its own merits by those who are made responsible for the successful working of the University, and, as all but two of the disaffiliated Colleges have notified the Minister of Education that, being connected with other Universities, they have no desire for affiliation with that of Toronto, the duty of deciding upon any future applications in that direction will be comparatively easy.

We do not see how the control of the University could be placed on a wider basis than it is at present, or one more likely to ensure a proper regard for the interests of the whole people, seeing that all matters relating to its management, and its connection with other institutions, must be approved, first by the Senate, then by Convocation, and finally sanctioned by the Lieutenant-Governor in Council.

If such a governing body cannot be trusted to do what is best for all parties, without the dictation of a few restless and carping wire-pullers, the morality of the country must be at a very low ebb indeed.

Now that the University is free from all former affiliations, it is competent for the Senate and Convocation to establish such conditions for any future alliance as may appear best calculated to advance the general good, and we have no doubt that, as all their acts must be confirmed by the Governor in Council, before they can have effect, the interests of all parties will be most fully protected.

There is a statement in one of the city papers which, if uncontradicted, might lead to misapprehension in regard to the Toronto School of Medicine.

That School only sends ONE representative to the University Senate, and if the graduates in

Arts and Medicine of the University, throughout the country, elect four members of the Toronto School to represent them on the Senate, in preference to those connected with other institutions, it only proves that the efforts put forth by these gentlemen for the elevation of the profession, for the maintenance of a high standard of education, and for the support and integrity of the Provincial University, are recognised by its friends and alumni.

AQUA PUNCTURE.—Several paragraphs have been copied by us from our exchanges on this subject, and we were induced to give the method a trial, in a case of sciatica now under treatment. On some occasions we injected four or five syringes of warm water, and on other occasions we used cold, the syringe holding half a drachm. Under the most careful observation, we could detect no difference between the effects of the warm and the cold injections, unless it was that one produced more pain than the other, and one was more useless than the other, but for the life of us we could not decide which. Our patient was very glad when we went back to the morphia injection, although he did not know that we were experimenting on him. Our opinion is that Aqua Puncture is absolutely worthless for the relief of pain, and each separate injection produced a violent, burning, stretching pain in the part, which lasted for three-quarters of an hour, and was followed by *no* relief to the neuralgia.

PALMAM QUI MERUIT FERAT.—In our November number we omitted to credit the article on "The Radical Cure of Inguinal Hernia," by C. F. Gay, M. D., to the *Archives of Clinical Surgery*, for October. In our October number the article on "The Use of Drainage Tubes in the treatment of Amputation of the Breast," was taken from the *Archives of Clinical Surgery* for August. The cases were reported for that journal by T. A. Ashby, M. D., Resident Physician of University Hospital, Baltimore.

CORRECTION.—In the article on Phosphide of Zinc, in our last issue, a typographical error made the quantity of phosphide of zinc, in the formula given at the end, read "grain $I\frac{1}{10}$," instead of simply "grain $\frac{1}{10}$."

BOOK NOTICES.

"On Coughs, Consumption, and Diet in Disease." By HORACE DOBELL, M. D. F.R.M. C.S., etc., Philadelphia. D. G. Brinton, 115 S. 7th Street.

"Notes on Syphilis in the Insane." By W. JULIUS MICKLE, M.D., Medical Superintendent, Grove Hall Asylum, London. Part II.

We append a curiosity in the way of book reviews. It is taken from the *Edinburgh Medical Journal* for Nov., 1876, and is upon "A Contribution to the Treatment of Uterine Versions and Flexions. By Ephraim Cutter, A.M., M.D. Second edition. Boston, 1876." It is given *in extenso*. "Second edition. Weeds do thrive, even under the patronage of Dr. Gaillard Thomas, Questionable preface, bad anatomy, bad woodcuts, bad pathology, bad treatment. We recommend our readers not to buy this book." The trumpet of this reviewer gives forth no uncertain sound.

RETURN OF AN ANCIENT DISINFECTANT.—

The oldest disinfecting process on record is burning sulphur. When Ulysses had slain the suitors of Penelope, he burned "purifying sulphur" in the blood-stained hall. Perhaps none better has since been found. The *Lancet* remarks that, in the second edition of a pamphlet on the subject of burning sulphur fires in epidemics of cholera, Surgeon-Major Dr. Tuson, of the Indian Medical Service, gives several illustrative examples from his own experience of the efficacy of this method of procedure. He states that he has, on four occasions, observed the marked effect of sulphur fires in arresting the progress of the disease. Attention to certain points is considered of consequence. All the fires should be lighted at one and the same time, and the sulphur be sprinkled on them simultaneously. The piles of wood should be good large heaps, so as to last several hours—they should be placed at distances of from forty to fifty yards, to surround a village, particularly to the windward of it, and in places where cholera has its habitat. The fires should be kept up for twenty-four or forty-eight hours, at least.—*Med. and Surg. Rep.*

Communications.

To the Editor of the CANADIAN JOURNAL OF MEDICAL SCIENCE.

ANTISEPTIC SURGERY.

The subject of antiseptic surgery, and the question of the cause of putrefaction and of suppuration, have obtained some notoriety, of late, by a lecture, delivered by Prof. Tyndall, at Glasgow, and published in a popular journal, upon "Fermentation and its Bearings on the Phenomena of Disease;" and also by the appearance of Prof. Lister, the father of "antiseptic surgery," at the International Medical Congress, held in Philadelphia in September. In the capacity of Chairman of the Surgical Section, Prof. Lister endeavoured, in season and out of season, to press upon his hearers his theory and practice with regard to the treatment of wounds; in doing which, the urbanity and courtesy of the section was somewhat tried. The assiduity and determination of Prof. Lister and some of his enthusiastic, but often inexperienced followers, are very remarkable. In this day of change and reform in the medical profession, and with the receptive spirit characteristic of a liberal body of men, one would suppose that any theory or practice, if based on science and common sense, would not require so much missionary work. If Prof. Lister would convert his colleague, Prof. Spence, who occupies the Chair of Surgery in the Edinburgh University, and account for the fact that that surgeon, by the power of nature, aided by cleanliness, is, at least, quite as successful as Prof. Lister is, with all his "fixings," he might stand a better chance as a preacher abroad, and his neophytes might air their hobby to better advantage.

Prof. Tyndall's lecture is a carefully-prepared argument against spontaneous generation in any form; and, in support of his doctrine, he has occasion to refer to Prof. Lister's practice, and declares that he has secured a "specific against putrefaction and all its deadly consequences." From this, it might be supposed that the medical profession, or a majority of its members, had accepted Lister's views. Because a surgeon employs carbolic acid, or similar agents, in the treatment of wounds, is no proof that he believes

Lister's theory of germ putrefaction and suppuratation. The fact is that comparatively few hold that belief. Against a comparatively small number who have adopted his method, a large number have rejected it, with the conviction that other treatment, less troublesome, is quite as, if not more, successful. The fact that the representative surgeons at the Congress referred to, after patiently and closely listening to his exposition, (and a leading surgeon of New York told Prof. Lister that the Americans were not ignorant of his teachings,) refused to endorse his doctrine, is sufficient proof that, in the United States, his views are not believed in. And I have yet to learn that they are by any of the experienced and leading surgeons in Canada.

No one, however, we believe, disputes the views of Pasteur as to the presence of germs in the air; and the nature of fermentation, as described by Tyndall, may be quite true. The analogy between fermentation and zymosis has long been recognised. But the question is: Have these theories or facts anything to do with putrefaction? Is it true, or untrue, that putrefaction cannot take place without the presence of germs? Is it a fact that animal organic matter, when deprived of vitality, will remain undecomposed for an unlimited time, unless bacteria seize upon it, and that no chemical power or physical force can reduce it to its original elements? Decomposing organic matter, we know, by daily observation, is the abode of a low, degraded animal life, and the soil in which low forms of vegetable life take root and grow. But, are we to regard this as the cause or result of putrefaction? Now, if it be admitted that putrefaction may take place as a chemical process, in the absolute absence of bacteria, it is begging the question to say that their presence is ever necessary. Where is the surgeon who has not seen putrefaction take place beneath an unbroken integument? This fact was accounted for by Prof. Hodgen, the reporter on this subject at the Congress, on the supposition that the bacteria reached the place of putrefaction through the stomach or lungs, and the blood. He also declared that bacteria had been found in wounds beneath Prof. Lister's

most elaborate and carefully-prepared dressing. This explanation of Prof. Hodgen's was certainly plausible, when we accept the doctrine of *contagium* by zymosis; but, as the writer then pointed out, if this be true, Lister's external appliances are utterly useless. The swarming organisms may laugh at the locked front door, when the back one is wide open. But, Prof. Lister took occasion to repudiate this doctrine; and no wonder. For, if true, Lister's occupation would be gone. But, in repudiating this view of the matter, it became necessary to make the admission which he did, that putrefaction does not always depend upon bacteria, but may take place as a chemical process. The writer then submitted to the section, and he now submits, that, if it ever occurs without the influence of bacteria, it is impossible to prove that their presence is ever necessary. In practice, it is no uncommon experience of surgeons to see wounds of all kinds heal rapidly without putrefaction, although no steps are taken to place a barrier to the entrance of air-germs, or to destroy those which may have lodged in the part. At the meeting of the Canadian Medical Association in Toronto, last August, and also at the Medical Congress, the writer spoke of two cases he had had under his care in the Toronto General Hospital. As a result of a railway accident, two men had been injured—both in the legs. They were placed side by side in the ward. One had severe bruised wounds; the other, severe bruises, but no wound. There was no solution of continuity of the skin. The man with the wound was treated with water dressing, and healing took place rapidly, with remarkably little suppuration. The other man did not do so well. After a few days, it was found that suppuration had taken place in the bruised part. Upon opening these abscesses, for there were several, the pus was found to be highly fetid, indicating putrefaction. It was the relating of these cases which caused Prof. Hodgen to make the statement above given, and Prof. Lister to admit that putrefaction may take place independently of bacteria.

In the domain of physics, we find the laws of nature always orderly. In the domain of animal and vegetable life, certain laws prevail;

outside of that, chemical laws bear sway. In the process of germination, growth, development, and sustenance, we have an invariable order of nature. But, when a body, which has been formed by vital processes, ceases to possess vitality, then, it is submitted, that body comes under the rule of chemical laws. And it is in the order of nature that such a body should be resolved into its original elements, unless some other chemical power be applied to prevent it, as in the use of common salt to preserve meat, and carbolic acid to prevent putrefaction.

Respectfully,

WM. CANNIFF, M.D.,
M.R.C.S., England.

Toronto, 13th Dec., 1876.

[We have long entertained the belief that the cleanliness and care had more to do with the success of Lister's method than the special virtues of carbolic acid had.—ED.]

ATROPIA AS AN ANTIDOTE TO HYDROCYANIC ACID. Jackson. (*Druggists' Circular*, Jan., 1876.) In experimenting on dogs, Dr. J. says: Sulphate of atropia, in doses of one-fourth of a grain to one grain, injected under the skin, gave prompt relief in every case, even when large doses of the acid had been given. When the two poisons are administered at the same time none of the effects of prussic acid are developed; but if as much as a grain of sulphate of atropia be injected, all the symptoms of atropia poisoning are observed. In some instances the antidote was withheld until the animal would fall down, and the respirations would be as few as six per minute, the dog being unconscious, then one-fourth grain of the antidote would relieve him immediately.—*Chicago Med. Journal and Examiner*.

MEDICAL SOCIETY OF LONDON.—On Monday, the 6th inst., a general meeting of this Society was held, Mr. W. Adams, President, in the chair. Amongst others a most important resolution was proposed by Dr. Hare, seconded by Dr. Lawson, and unanimously carried by the Society, to exclude persons of the female sex from either becoming fellows of the Society or from being introduced to it as visitors.

Miscellaneous.

EXTRACT FROM ORDER IN COUNCIL.—“That the several Schools of Medicine, affiliated or claiming to be affiliated with the University of Toronto by the Report of the Senate of the year 1854, be no longer considered affiliated with the University, and that said former affiliations be deemed to cease at the expiration of the Academic year now current.

REMEDY FOR DANDRUFF.—A French physician (*Apoth. Zig.*) claims to cure this troublesome affliction by applying a solution of chloral hydrate, containing 5 per cent. of the latter, by means of a sponge, and repeating it every morning. If the hair has fallen out in consequence of the dandruff, it is claimed that the said hair will reappear in a month.—*N. Y. Medical Record*.

CAUSE OF DECAY OF THE TEETH.—Dr. L. B. Palmer, of New York, has been led to conclude from a series of experiments that the decay of teeth is not, as is generally supposed, due to acids, but to alkalies. With alkalies he reproduced decay of the teeth as it is seen in the mouth, but was unable to do so by acids. With the assistance of an electric current, acids simply acted on and destroyed the whole of the enamel.—*N. Y. Medical Record*, from *Am. Jour. of Dent. Sc.*

POISONING BY MEDICINAL DOSE OF IODIDE OF POTASSIUM (*The Medical Press and Circular*, August 2, 1876).—Dr. Charles Drysdale reports the case of a man, æt. 36, who was suffering with right hemiplegia, which had evidently been caused by an embolism, as there were abnormal sounds of the valves of the heart. As some symptoms in addition pointed to dilatation of the ascending arch of the aorta, he had on three several occasions prescribed ten-grain doses of the iodide of potassium thrice daily in water. On the first two occasions the effect was to produce a crop of acne-like pustules on the face. The last trial, which lasted three days, brought forth an alarming-looking eruption on the backs of the hands, as well as on the face and chest. Blebs were formed containing a bloody fluid, which lasted without desiccating for some weeks.

THE ROYAL SOCIETY.—The following is the award of medals for the present year by the Council of the Society :—The Copley Medal to Professor Claude Bernard, For. Mem. R. S., for his numerous contributions to the science of physiology ; a Royal Medal to Mr. William Froude, F.R.S., for his researches, both theoretical and experimental, on the behaviour of ships, their oscillations, their resistance, and their propulsion ; a Royal Medal to Sir Wyville Thomson, for his successful direction of the scientific investigations carried on by Her Majesty's ship *Challenger* ; the Rumford Medal to Mr. Pierre Jules César Janssen, For. Mem. R.S., for his numerous and important researches in the radiation and absorption of light, carried on chiefly by means of the spectroscope. The medals will be presented at the anniversary meeting of the Society on the 30th inst.—*London Lancet*.

CONGENITAL STRIPED-MUSCLE SARCOMA OF THE KIDNEY.—The kidneys (Virchow's *Archiv*, Bd. lxx.) were from a child which was healthy during the first twelve months after birth, then sickened, and died three months later. Both kidneys were invaded by tumours, which were found on microscopical examination to be composed of striped muscular fibres. The fibres were small, long, and interwoven. A sarcolemma was not discovered. In other parts, but not so plentifully, the typical structure of a sarcoma was found. This is the first time that these very rare tumours—striped muscle sarcomata—have been found in the parenchyma of the kidney, where their presence constitutes a veritable monstrosity. The fact that both kidneys were affected tends to show, according to Cohnheim, that there was an original faulty growth, and not a metastasis. It is impossible to understand what the histological elements were that formed the point of departure for the muscular fibres.—*London Med. Record*.

EFFECTS OF CUTANEOUS IRRITATION ON THE KIDNEYS.—Between the skin and the kidneys, both excretory organs, there undoubtedly exist relations of a peculiar kind, altogether independent of the vicarious or compensatory offices they are able to perform for each other. A

distinguished German physiologist, Herr Wolkenstein, has recently published the results of a long series of experiments designed to throw light on this obscure subject :—The experiments were all performed on healthy rabbits. A superficial area of twenty-five square centimetres having been shaved, various irritants, such as oil of mustard, tincture of iodine, mercurial ointment, croton oil, solution of tartarated antimony, &c., were applied to the skin. The urine was collected and examined at frequent intervals. The application of the milder irritants was followed by slight and transient albuminuria, without any evidence of structural change in the renal tissues. When the skin was more severely irritated the urine contained a larger proportion of albumen, together with renal epithelia and casts. Death not unfrequently occurred preceded by convulsions, probably of uraemic origin. Microscopic examination of the kidneys showed the appearances characteristic of acute parenchymatous inflammation. This artificial nephritis was attended by increased frequency of the cardiac and respiratory movements. The urine was diminished in quantity ; it contained more urea and less chlorine than in health. Wolkenstein ascribes the renal disorder to two different sets of causes. The irritant may be absorbed into the blood and exert a selective action on the epithelial elements of the kidney or on the walls of the renal capillaries (as, e.g., cantharides) ; or the fever induced by the inflammatory process in the skin may give rise to constitutional effects, of which the nephritis may be one.

INSANITY.—The late war has not left us all its legacies—the next generation will bear its cruel stamp. Excess in all its forms is a national sin : in eating and drinking, in gambling and extravagance, in the rush of social emulation, and the mad excitements of wealth and ambition. Men are dropping around us every day, with paralysis and apoplexy. Hundreds are yearly added to the rolls of the insane, whose families are ruined, their wives broken-hearted, their children thrown as waifs on the tossing sea of destiny.

Let us take comfort that science can do so

much to heal the wounds of the brain, and break down the barriers between the mind and body. The venerable Dr. Chipley utters these words of consolation and of hope:—

“There is, in fact, a power in man to prevent or control insanity, and it fails chiefly when it has been misdirected in the earlier periods of life. This power is rarely efficient unless it has been developed and strengthened by education; and hence the poor and unschooled are the greatest sufferers from the most terrible of all human afflictions. For example, the educated and the uninstructed are alike the subjects of illusions; but the trained mind of one will recognize their true character, and adopt suitable measures to correct the morbid condition on which they depend; while the other, unable to reason, will accept them as real. The illusions may be precisely the same, yet the one subject is sane, and the other insane. The difference is in the organ of self-control. Vagaries intrude themselves upon all minds, but the man of self-control represses them, and seeks fresh impressions from without—the weak man yields to them, and is lost.”

Let our children be brought up in sound and healthful habits of mind and body. Let us rein in the passions that would enslave us. Let us not flee the wretched lunatic as one accursed of God, the object of curiosity or of horror; but rather enfold him in the arms of a charity and a sweet compassion, whose great Exemplar did not disdain to “heal the sick.”—*(Grissom, in Virginia Medical Monthly.)*

THE COUNTRY DOCTOR.—The “country doctor” has comparatively few advantages; for while his practice embraces the whole range of medical and surgical service, his opportunities for outside aid and improvement are meagre and limited. His resources are his self-reliant skill and faculty, his native good sense and good judgment, and what there is in him of heroic worth and virtue. With no ready chance for mutual consent, he stands alone; and he must of necessity be plucky, sharp of observation, cautious, yet with quick sense of apprehension. He must be capable of acting at once, of doing the right thing at the right time, and of doing it as per-

fectly as possible. A human life hangs in the balance, and with what of courage, insight, and ability there is in him, he must wrestle alone with the danger. Circumstances and exigencies like these ripen his native qualities, and bring him occasions which test the temper of his mental fibre as well as his firmness and force of character.

Then, again, this work, with all its demands and difficulties, comes under the immediate notice of every one. The country practitioner goes at once to the front, to be seen and known of all. His qualities as a man, his capability to perform successfully the duties of his calling, will be sharply criticised by all. The people among whom he dwells belong mostly to that great middle class which holds together the extremes of society; intelligent people, capable of forming correct judgments. Before such judges stands the “country doctor,” and there is no chance for hiding behind subterfuges, or for shirking responsibilities. No petty artifices will excuse blunders or stupidity; sharp eyes follow him everywhere, constantly observing, and discerning “what manner of man he is.”

Dr. Samuel Johnson, in his criticism on Dr. Akenside, the poet, says, “A physician in a great city seems to be the mere plaything of fortune; his degree of reputation is for the most part totally casual. They that employ him know not his deficiencies.” In the country the case is far different. There the analysis of character and ability is more complete; for there that distinction is less which comes from position and wealth; and every one, rich or poor, man or woman, counts at a full rate in the expression of opinions.

But an attractive feature of country practice grows out of the free, yet respectful, intercourse, which constitutes one of the main sources of pleasure and help of country life. Known by every one, if intelligent and educated, possessing a warm heart and generous sympathies, “the country doctor” gains respect, esteem, and love. He, in turn, learns to know his people—even better than they know themselves. He knows them from birth—“knows what stock they are made of;” knows their constitution, their habits of life, their social and moral qualities, and their secrets, too.

and, "king of health in his own regions," thus understands full well how to manage their physical ills deftly and safely. To them he is the friend, the comforter, and the adviser; and he becomes, what is growing rare in cities, the family doctor, in whom all confidences meet and rest, and in whom all hopes of human aid are centred in times of trial, sorrow, and impending dissolution.—*Boston Journal of Chemistry*.—*Peninsular Med. Jour.*

THE GERM THEORY OF DISEASE AND VIVISECTION.—On October 19th, Professor Tyndall opened the winter course of popular scientific lectures in Glasgow. He chose the process of fermentation as the subject of address, and in connection therewith discussed the germ theory of epidemic disease. Two hundred years ago, he said, Robert Boyle wrote in his essay on the Pathological Part of Physic, "that he that thoroughly understands the nature of ferments and fermentations shall probably be much better able than he that ignores them to give a fair account of divers phenomena of several diseases (as well fevers as others) which will, perhaps, be never properly understood without an insight into the doctrine of fermentations." But it was only in this our day that men were beginning to realize the truth of these pregnant words. In the domain of surgery, Professor Lister, of Edinburgh, had demonstrated in his antiseptic treatment that the putrefaction of wounds was to be averted by the destruction of bacteria. Passing from surgery to the domain of medicine, he said the conviction was spreading and growing daily in strength, that reproductive parasitic life was at the root of epidemic disease—that living ferments finding lodgment in the body increased there and multiplied, directly ruining the tissue on which they subsisted, or destroying life indirectly by the generation of poisonous compounds within the body. This conclusion, which came to us with a presumption almost amounting to demonstration, had been clinched by the fact that virulently infective diseases had been discovered with which living organisms were as closely and as indissolubly connected as the growth of torula was with the fermentation of beer. And here he

wished to utter a warning to well-meaning people. We had now reached a phase of this question when it was of the very last importance that light should once for all be thrown upon the manner in which contagious and infectious diseases take root and spread. To this end the action of various ferments upon the organs and tissues of the living body must be studied, the habit of each special organism concerned in the production of each specific disease must be determined, and the mode by which its germs are spread abroad as sources of further infection. It was only by such rigidly accurate inquiries that we could obtain final and complete mastery over these destroyers. Hence, while abhorring cruelty of all kinds, while shrinking sympathetically from all animal suffering—suffering which his own pursuits never called upon him to inflict, an unbiased survey of the field of research now opening out before the physiologist caused him to conclude that no greater calamity could befall the human race than the stoppage of experimental inquiry in this direction. A lady whose philanthropy had rendered her illustrious said to him some time ago that science was becoming immoral; that the researches of the past, unlike those of the present, were carried on without cruelty. He replied to her that the science of Kepler and Newton, to which she referred, dealt with the laws and phenomena of inorganic matter, but that one great advance made by modern science was in the direction of biology or the science of life, and that in this new direction scientific inquiry, though at the outset pursued at the cost of some temporary suffering, would in the end prove a thousand times more beneficent than it had hitherto been. It was exceedingly important that such assemblies as that which he was addressing should see clearly the issues at stake in such questions as this, and that the properly informed common sense of the community should temper, if not restrain, the rashness of those who, meaning to be tender, would virtually enact the most hideous cruelty by the imposition of shortsighted restrictions upon physiological investigation. It was a modern instance of zeal for God, but not according to knowledge, the excesses of which zeal an instructed public opinion must correct.—*Mail*:

APPOINTMENTS.

W. F. Scott, M.D., McGill College, Hull, Canada, has been admitted M.R.C.S. Eng.

Milton M. Tucker, M.D., Toronto, likewise.

William Hanover, of the Village of Almonte, Esq., M.D., to be an Associate Coroner in and for the County of Lanark.

Robert George Brett, of the village of Arkona, Esquire, M. D., to be an Associate Coroner in and for the County of Lambton.

John McBain, of the village of Martintown, Esquire, M. D., to be an Associate Coroner in and for the United Counties of Stormont, Dundas, and Glengarry.

Alfred Bray, of the village of Angus, Esquire, M. D., to be an Associate Coroner in and for the County of Simcoe.

James T. Munro, of the village of Notfield, Esquire, M. D., to be an Associate Coroner in and for the United Counties of Stormont, Dundas, and Glengarry.

Births, Marriages, and Deaths.

BIRTH.

On the 7th December, at 47, Gould Street, the wife of H. E. Buchan, M.A., M.D., of a daughter.

DEATH.

On Saturday morning, the 2nd November, at the residence of Dr. Barrick, 97, Bond Street, William Newcombe, Jr., aged 18 years, eldest and only son of Dr. William Newcombe, of this city.

International Exhibition, Phila., 1876.

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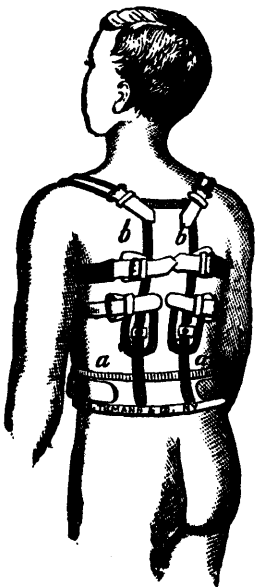
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This dietetic, first offered to the Medical Profession of the United States in 1871, has, in the meantime, been fully tested by them, and through them it has acquired its present position. We desire to submit brief extracts from the testimonials of some of these well-known medical gentlemen for the consideration of the profession in Canada. Any further evidence of the value of the Meat Juice than is contained in this summary of results from its use will appear unnecessary.

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Our Circular—Book—with extended reports, and the recommendations and directions of the practice of the United States, will be forwarded by us, when requested. To the trade we will send our price-letter when advised. The Meat Juice may be obtained in any of the cities of the United States, and in Montreal and Toronto.

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TESTIMONIALS.

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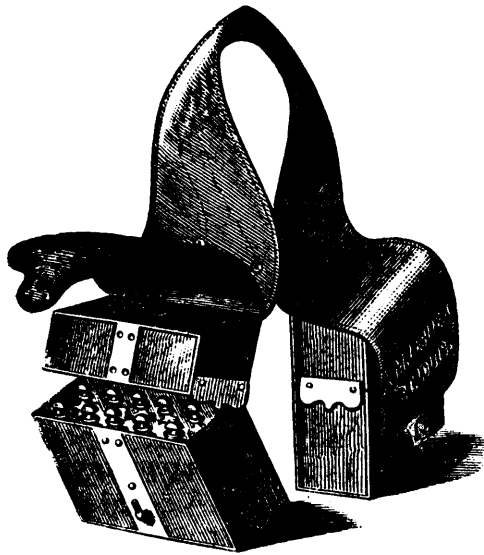
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