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NURSING THE INSANE.

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(*Concluded.*)

At this point we may fittingly introduce the subject of occupation, which has done so much to revolutionize the treatment of the insane, to banish objectionable restraint, and to mitigate almost every symptom the insane present. By occupation is meant anything that takes up your patient's time and diverts his mind in useful and pleasant ways. Idleness and loafing are a curse to the insane as to the sane. Almost every patient is better employed in some way, and, moreover, it lightens your tasks. The amount and value of the work done are but secondary. The first consideration is to find some suitable employment, no matter how simple, that will have its salutary effect by exercising his mental and bodily powers. If the work done is useful, all the better; but whatever he does should be for his own good alone. Unless better employment is found, patients are apt to occupy themselves thinking of their delusions, in noise or violent demonstrations, pacing the floor, indulging secret vices, in gossip or constant Bible reading, going from bad to worse. By employing you introduce new thoughts into the mind to crowd objectionable ones out. One's thoughts are not changed by an effort of the will, but by inviting others in. Occupation finds suitable outlets for morbid energy, and turns restless movements into healthy channels. It arrests the deterioration to which insane brains tend, and even in settled dementia prevents degraded habits. It re-educates the dement's brain.

Whatever work is provided it should be congenial. Find what best suits and interests each case, and let there be variety. It may be housework, or toil in the garden, farm or workshop, writing, drawing, or anything he can do, even to picking oakum. It is easier perhaps to find work for women. They can sew, knit, mend, make flowers or a fancy present for some one. Outdoor work is best for men. It is a harder task in private than in hospital to find work to do, but encourage all to do something. They may see to their own clothing and keep their apartments in order, and thus be made to feel they are adding to their own comforts. Men have not much taste for this, but they can do a little at it, perhaps add to the decoration of their rooms or take charge of some plants. Here let me say the old idea of robbing the invalid's quarters of all its furnishings is exploded. They should be made as cosy and attractive as taste can devise, with whatever is pleasing to the eye, and gives comfort to the body.

It will cost effort to induce some to work, but you will be rewarded. The best nurse is the one who has the most done by the patients, although it might often be easier to do it yourself. It is not the thing, however, for the nurse to sit idly by. She should at least appear to join in with them. Make them enjoy the working hour by chatting and joking over your task, so that they come not to regard it as irksome. On a few, you may have to hold a check. Some try to do too much, though the tendency is the other way with most. Maniacs go to excess in everything; or some delusion may make patients work harder than is wise. Overwork may cause sleeplessness. Your duty is to coax the idle to industrious ways, and not overtask the willing. Some may be too feeble and old to work, and may need rest and nursing more. But even such may do a little something to their advantage, and can be read to or their minds diverted in some way.

But occupation means more than work. It includes also the spending of some time in amusement, for it is not beneficial to have your patient always drudging, his life unbroken by variety. The idea is to make his days as natural and pleasant as possible, having some work and some indulgence in innocent pastimes. But see that it is not all play. Games

indulged in exclusively will cause anyone to degenerate. For entertainment you can conjure up lots of desirable things,—games, music, pictures and scrap books, walks, drives, etc. Attending places of amusement when possible will help strengthen self-control, for a patient will often pull himself together when strangers are about.

The will is usually disordered in insanity more or less. Self-control may be altogether lost. Ladies who have done most improper things while insane have told me that they knew they were doing them, they knew they were wrong but they were utterly powerless to check themselves. So you see the lunatic often knows the difference between right and wrong, but is yet irresponsible for his acts.

We shall now refer to certain habits and morbid impulses of the mentally diseased, and what the nurse may do with them. When these are the offspring of the disordered mind they should be repressed as much as possible, and correct habits and self-restraint inculcated. Training to proper habits promotes comfort and mental improvement. It saves yourself trouble, and redounds to your credit.

You will meet with wet and dirty habits, either due to the mental state or to paralysis, and these are the cases hospital nurses dislike most; but in model institutions they rarely are let persist in such troublesome ways. The dirty habit s often result from forgetfulness, and you must think for your patient. When it is the fault of the mind, more than you would think can be done by training to have nature's calls attended to at set times in the proper way. When the "guards" are powerless from paralysis, you can add to the comfort by changing the clothes and bathing when soiled. The danger of scalding must be kept in mind. Those who have involuntary evacuations may be prevented from filthiness by the use of warm water injections and the catheter at intervals. Dements will give the most trouble from these habits, but excited patients may not micturate properly from sheer inattention, and depressed patients from indifference, and hence get into bad habits.

Masturbation is another common result of insanity too often set down as a cause by the knowing public. Hard work by day and watchfulness by night will go far to counteract it.

Another habit that some, oftenest dements, have is that of picking up valueless articles and accumulating heaps of rubbish. It is not always wisdom to take from them harmless collections, as they may find pleasure therein, fancying perhaps rags are silks, and pebbles, diamonds. However, the bed, clothing and other possessions should be systematically searched, best without the patient's knowledge, for objectionable articles, or better still keep such out of their way.

Untidiness will confront you in almost every patient. The general tendency of the insane is to slovenliness in dress and neglect of personal appearance; and as mental enfeeblement increases, these will become more marked. For many of these patients you will have to do much of the thinking, and see to it that they are properly protected by seasonable clothing. Encourage the untidy to be neat and orderly about their own persons and their rooms, and to live like the outside world. Many of them can be trained to self help. A little extra pains at the beginning will repay you. Never abandon your efforts with any patient towards improving him in every way.

Some want to dress fantastically, in keeping with their delusions. Indeed, there are few who do not affect some peculiarity of style; a bit of ribbon, or a grotesque hat may betray their mind's condition. Years ago they had an ugly old Queen in a certain asylum, who, covered with buttons and tinsel, levied taxes on all the subjects who visited her, and the tidbits she got thereby well rewarded her pains. Under better management she was shorn of her toggery, and was the better for it, and the effect on her fellow-patients was for good.

Disorderliness in eating is another habit for correction. Some, and especially paralytic dements, are wont to eat ravenously, stealing from others, cramming huge pieces into their mouths and bolting them. Guard against this, as, good manners aside, they may choke, and will not be the first case in Canada either. It may be advisable to mince their food beforehand. Some are so careless you may have to protect their clothing like a child's. Others you may have to keep from making a meal of the dessert or prodigal use of the sugar, butter, etc. Other poor creatures will swallow leaves,

rags, ashes, etc. Like a baby, everything goes to their mouths. It may be in these cases the special sense of taste is abolished. As serious injury may accrue from the habit, prevent it.

There may be mischievous and destructive propensities to be checked. While some patients are destructive only when violent, others are maliciously so, and will do their best to escape your omnipresent eye, and glory in their deviltry. They will tear up clothing and bedding, hide it, or throw it out of windows or down the closet. They will destroy anything they find, and often spoil the walls. Watchfulness is all that should be used to mend such cases and keeping them at work, so that Satan cannot find them mischief.

There is an impulse in some to break glass, which they cannot resist, though they get badly cut. Therefore screen their windows and have pictures unglazed. In some hospitals they have the light coming only through the roof of rooms for such patients. They may not be violent or otherwise destructive.

The disposition to burn things or to steal is seen in others. These symptoms have wrongly been magnified so as to name the diseases from them as pyro and kleptomania. An attempt is occasionally made to thus cloak crime and shield rich sinners. But these evidences of insanity are rarely the only ones in a patient. Paretic dements are often thievish under the delusion that what they take is their own, for they are prone to fancy they own the earth. In these cases again occupation will come to the rescue.

There are patients who are given to mutilating their bodies, and these are often inspired. You can't be too careful in keeping all weapons away. A common form of self-injury is to stick needles or glass into the skin. If you find a patient with delusions of mutilation, guard against its occurrence; thus one may declare his eyes offend, and he tries to pluck them out.

We shall next turn to symptoms rather bodily than mental. It may not have occurred to you that in dealing with the mind physical symptoms would cut any figure. But on reflection you will see that the connection between mind and body is so close that it cannot be otherwise. While the brain is

safely lodged within its bony chamber, it is in intimate communication with the other organs, which convey to it impressions that either soothe or annoy, comfort or distress. Bodily disorders are often the starting point of mental. A fit of the blues may be due to a torpid liver, and many diseases can irritate the brain and derange its functions, of which one is mind. And the mind can react on the body with equal vigor. We know how worry may retard digestion, and fear affect the heart. Nearly every recent case of insanity manifests many symptoms of disordered bodily functions. In referring to the body in insanity my task is lightened by the fact that you are already familiar with general nursing. My remarks, therefore, need only be supplementary. So if you take up the care of the insane your present knowledge need not be shelved, for the insane are very liable to the ills of sane flesh as a complication, which with the physical symptoms of their peculiar malady may demand your skill. Your efforts, then, must be largely directed in measures that will improve the general health. It is not all moral treatment. All that tends to promote the bodily welfare directly benefits the mental. The brain indeed is so situated that we cannot treat it directly as we do many other diseased organs. The most stable recoveries are those in which the bodily and mental conditions make equal progress.

I can pass over things with the benefit of which you are acquainted, particularly hygienic measures, as the necessity of ventilation, cleanliness, etc., warning you that sanitary surroundings are apt to be neglected with the insane. The friends want to have the windows fastened down, the shutters shut and doors closed if the patient is any way troublesome.

Loss of weight is the rule with the insane, in whom wear and tear is excessive. Rarely will you meet an acute case in which the patient has not fallen away in flesh and color. So that everything possible must be done to restore the lost, for once your patient begins to gain in weight his mind will likely soon show signs of improvement. It is well to have him weighed weekly. The weight is an index to the bodily health and a clue to the patient's condition. If the weight be regained and the mind becomes no better, you may usually consider the case beyond cure. But until you have

built him up, hope and strive on. Patients can't fatten too soon or too fast, nor can you have too great faith in the "gospel of fatness."

This naturally leads us to consider some points regarding food and feeding. To see that plenty of proper food is taken will be a most important duty, perhaps half the battle. Except in cases already hinted at, there will be greater probability of too little being eaten than too much. Excited maniacs can assimilate from 6 to 10 times the quantity of food needed in health to make good the waste going on. Some who come near death's door from exhaustion are tided over the crisis by food with sleep. A foul tongue does not indicate less food. Most cases will get sufficient in three square meals of digestible, mixed food. But others may need something between. Then, and in most acute cases, milk is your sheet anchor. No culinary preparations are so useful as those into which milk and eggs largely enter. The more ways your skill can present these the better. All the tempting things you prepare for the invalid have a place as variety, but let no abominable nicknacks supplant milk. Need I tell you that, just as for the sane, the food should be well prepared and attractively served. Many are keenly sensitive about this, and if some lack refinement, their minds will be improved by displaying it to them.

Refusal of food, either absolute or partial, is common. It may not be taken because of inattention, as in mania, where the patient is too busy to eat. In such a case perhaps you can only give a little at a time, but repeat often during moments of least excitement, for few cases need nutrition more. As a rule, their refusal is not persistent. It is oftener declined because of the delusions of the melancholiac. But by studying your patient, some way may be found to meet his whims and fancies. One who suspects poisonous designs may take eggs in the shell or potatoes in their jackets. By cooking in his presence he may be convinced his meal is poison free. He may eat what has been got ready for some one else, or off your plate. He may take it if you will first sample it to show it has not been tampered with. It is well at times for the nurse to affect indifference about giving food, for then the patient thinks she has no ends to serve.

Thus may frankness and indifference disarm suspicion. One who thinks it wicked to eat will swallow if you put food in his mouth with a pretence at force. *His* conscience will be then clear. One who fancies himself unworthy or is unwilling to dine with others, may eat alone or take food after the rest leave. One will eat if he can steal food or pick it up unobserved. If so he should be given the opportunity, and you may leave food within his reach. One will eat if you put crackers in his pockets. Another, if let do it in his own way, *e.g.*, standing. Some from delusions eat certain kinds of food only so that they do not get variety enough. Some will take liquids readily, but refuse solids. In such cases let what they take be as rich as possible. Thus tact can do much to persuade patients to take nourishment, and you will see one nurse succeed in this where another fails. But if no way can be found to offset their delusions, then they must be fed mechanically as a last resort, and that too before they have gone too far towards starvation.

As forcible feeding is not without its risks, it should only be done under the immediate direction of the physician. It is found necessary to make use of it almost daily in large hospitals, some patients being fed thus for months. The plan adopted is by means of a soft rubber tube passed through the nose or mouth, and several nurses are usually needed to overcome resistance. Some have a trick of trying to regurgitate the food that is thus given, for whom you must be on the lookout. Rectal alimentation is not much employed, but it may have a good moral effect, the patient eating after one such operation to avoid the humiliation.

Sleep is quite constantly affected in insanity, insomnia being one of the first symptoms to appear, and what little sleep is got is disturbed by horrid dreams. It has been said if a man sleep well he will not go insane, no matter what causes exist to drive him out of his head. Like other bodily organs, the health of the brain is best maintained by exercise and rest in proper proportions. Sleep is the brain's rest, its closing for repairs. So we find a mental break down is preceded by interference with sleep, the mind working on without interruption, and this condition is apt to prevail during the acute stage. Sometimes insane patients seem to

pass weeks without apparent sleep, which I need not say makes us anxious ; when sleep returns we look for the approach of recovery. It will be your duty to note carefully the duration and quality of the sleep your patient gets, and encourage sleeping habits by every means your art can suggest. The past few years have witnessed the birth of many useful hypnotics, but the ideal one has yet to come forth. They are abused by some in insane cases, when what may be called chemical restraint is used, as in the old asylum days, when the night watch went his rounds armed with a chloral bottle to silence the noisy ones.

Open air exercise is the best sleep inducer. Not only is it that, but so necessary for your patient's general welfare that I would call your special attention to it. If at all able, and most are, your patient should get out some portion of each day, even if only for a turn in the yard. One of the chief difficulties in home treatment is the objection of friends to exhibiting the invalid out of doors. But you must insist on it. In the summer time most of the day should be spent in the fields or lawns, while in winter shorter walks can be taken. You must exercise your judgment to avoid fatigue; too much fresh air they can't have, but they may over-exercise. Also avoid loitering where strangers may guy them. Not only is the blood thus better oxygenated, but the patient's mind is diverted by what he sees, and injurious thoughts banished. In every case fresh air will prove profitable, stimulating the downcast, calming the restless and aiding digestion.

Melancholic patients often object to going outdoors, but their well-being demands it. However, patients' protests are to be duly weighed. Their objections are not always imaginary. Every word and act of your patient is not an insane one. Don't fall into that error.

While exercise is so advantageous, prolonged rest in bed may be indicated. In acute mania, especially, physical exhaustion may be extreme, and is often improved by confining to bed and nursing as you would a delirious fever patient. It may require a couple of nurses to keep the patient there, but merely fastening the sheet to the mattress may suffice. Some when wildly excited are quieter when

left in bed. Seeing no variety, their thoughts become less confused. The objections to bed treatment are the danger of suicide or of falling into lazy and untidy habits.

The general sensibility is often remarkably altered in the insane. It may be so lost that wounds are not felt. Maniacs are often insensible to temperature, so you must be careful in applying heat or cold, else some would let hot applications stay on till serious blistering occurred; also to try the temperature of the bath. You will be surprised how much clothing they can dispense with on cold nights, and yet seem none the worse. In some cases you will find difficulty in keeping clothes on at all. On the other hand, many are cold-blooded, and require extra clothing.

Constipation with its train of evils is a common thing with the insane, and the condition of the bowels should be carefully looked after. Excitement or depression may subside after a free movement of the bowels.

There are some patients liable to accidents from the brittleness of the bones. This is the case with paretic dements. Unfortunately they are often pugnacious, and if handled roughly the consequences may be a fracture. Their bones may be broken when no rough measures have been used.

The temperature is not usually abnormal. When you wish to ascertain it, in many cases it may be foolish to try and insert the thermometer in the mouth, for it may be broken in a struggle, or bitten in two, and the pieces swallowed, or otherwise unsatisfactory. If you have any doubt as to his behavior, place it in the axilla and hold it there yourself.

While not within our province to-night to discuss medication, it may be said that while physic is often secondary to the means for cure already cited, tonics and sedatives are sometimes of great value, and it may be very important that they get the benefit of medicine ordered. You must therefore see that it is swallowed, for some will throw it away, if left to take it when they wish; others will hoard it. Some will try to keep it in the mouth, to spit it out when your back is turned. Some apathetic ones have been known to accumulate quite a few pills under the tongue. Patients may

refuse outright to take medicine, either because they think they are well and need none, or on account of some delusions, that it displeases God to take it, etc. Only the slightest amount of force is justifiable to get such patients to swallow. Holding the mouth and nose are reprehensible practices. If great force is used, it will do more harm than any good in the dose can counteract. Always, too, give medicine as such, and don't deceive.

If medicine will not be taken, it may be necessary to give it rectally. If an enema has to be given by force plenty of help will be needed to avoid injury. At least one fatality has occurred therefrom. With frenzied patients you should always use your eyes.

The bath will not only be indicated for hygienic reasons, but therapeutically. The warm bath with or without cold to the head often acts like a charm to calm the restless and induce sleep. Patience and tact will often overcome curious objections they may raise to ablutions. If the patient fears the tub and will use a sponge and water, it is better to humor him.

You will have observed from all that has been said that while they have things in common, some of the differences between nursing insane patients and those you have been accustomed to are as follows:—

Nursing the insane involves a double responsibility, for both mind and body demand attention. The day may come when it will be regarded the loftiest branch of nursing, as it entails the care of the mind, the dome of thought, the most vital part of a man. You must nurse the whole patient, rather than attend to some one part of the body. Moral treatment will be more requisite. He will depend on you for mental guidance. He is like a child in many ways, and may copy your example. In insanity you depend less on what the patient tells you of his bodily symptoms. He may not notice real troubles, and his mind may be filled with imaginary ones. Unexpected changes will occur more frequently than in bodily diseases, when you will have to act on your own responsibility. More will depend on you and less on the doctor than in ordinary cases. There will be less surgical work and less medicine to give, and fewer sick in

bed; more annoying behavior on the part of the patient and more physical labor. Your time will be occupied very differently. But with these and other differences there is no more difficulty about it than many cases you undertake now. And I know no greater pleasure that can come to you than to see a patient restored to himself and his friends, and that largely through your efforts.

You will be interested in some comparison between home and hospital care, for you will thus get some idea of what kind of cases may be left to you in private. For while many may be treated at home, more have to be sent to institutions, for a variety of reasons. While enumerating the advantages of a hospital, you will see there are many things done there that you can practice in the home to a greater or less extent. I will be glad if any false ideas you may have of an insane hospital are corrected. One of the proofs of the erroneous ideas abroad is this: Not seldom recovered patients are loath to leave the friends made there. Few but become content in the Hospital after a little time.

In former times, when insanity was regarded as a visitation of God or the devil, or the man moonstruck or lovecracked, or anything but ill, the poor victim wandered about, the sport or terror of children, no attempt being made to restore. If dangerous, he was treated to a cage and straw. But thanks to certain philanthropists, asylums have since sprung up to receive the deranged, and in our day we see these being converted into hospitals. The day of the corridors destitute of ornament, cheerless and uninviting has gone by.

In hospitals there is every advantage skill and experience can suggest, at little expense; the patient remains there without anxiety to friends, more than they need have about their money in the Bank of Montreal. To avoid the publicity asylum life is supposed to entail, relatives excuse themselves by saying the association with lunatics must be injurious. They never think their patient as bad as others. But superintendents do not huddle patients together promiscuously, and, besides, mingling with others is the best thing for some. From being all taken up with self, they grow less introspective when they find others afflicted like themselves, and may even take to criticizing their neighbors' errors. With

questionable humanity, they prefer to keep the insane at home in an attic perhaps, without doctor or nurse, cared for only by a servant. Lest the afflicted ones be seen, they are kept indoors, which tells on their health, and crystallizes their infirmity. When they get so troublesome that they can no longer be kept in the house, they are consigned to an asylum for the rest of their existence, cure being out of the question. An asylum often offers more privacy than can be secured at home, for servants will gossip over family failings. The discipline and regular routine of asylum life cultivates self-control. Instead of the patient acting in accord with his own sweet will, regular ways of living must be followed. The patient may be kept under observation better in a hospital. There are more to do it. Hospital life is good for some, because they will exercise greater self-restraint among strangers. Patients may be calm in a hospital, who run riot at home. The unruly one will resist interference with his liberty in his own house, where he has been master. When he finds servants disobey, and that he is a prisoner instead of lord of his castle, he will become so vexed that he will not likely accede to any proper treatment. Sick parents don't want their children to control them. It is well often for other reasons that a patient be removed from his relatives, for whether it is because insanity is an hereditary disease or not, they usually make the worst sort of attendants. Relatives can't be calm in the presence of suffering, and they are apt to threaten the excited and tell the depressed to brace up. A strange nurse going in will often do away with all this.

A hospital may be good because it withdraws the man from scenes associated with his delusions and takes him from the home circle. But of course that can be done without going to hospital. Again, removal from home may substitute real for fancied troubles. The morbid thoughts which at home crowded his brain may be replaced by home-sickness beneficially. Hospital care is needed often either to protect the patient from himself or others, and in many cases where it is not essential for safety, it may be for cure. Even when unnecessary, it may be expedient, on account of his influence at home on children or others of unstable mind. His example, the anxiety and worry are hurtful. It may be expedient to

withdraw from the marital relation, for sexual excitement is in some cases marked, and indulgence an obstacle to recovery; or it may be expedient for society's sake, he may grow dangerous or a source of scandal, demoralizing the community with his queer ways for boys to jeer at.

But while the hospital has so many advantages, there are many cases that can be treated as well, and some better, at home; or where home is objectionable, in some suitable house, preferably in the country. Most recent curable cases should when practicable be given at least a trial at home. The idea is altogether too prevalent that as soon as evidence of insanity is seen, its victim must be hurried to a hospital. True, if he cannot receive treatment at home because of poverty or anything else, he cannot be committed there too soon. For insanity is not a disease that cannot be arrested when once it has set in, and the earlier treatment is begun the brighter are prospects of recovery. Unfortunately, owing to prejudice, patients are kept at home till the curable stage has gone by.

Many poor sensitive families shrink from the formalities that must be gone through to pass the hospital door. The law prevents asylum treatment in many incipient cases until the disorder has gained such ground as to leave no doubt of their state. Precautions meant to protect often affect the patient most injuriously. The Government is penny wise and pound foolish in this matter, and is creating chronics to be supported for years.

If private attention can be afforded, then the advantages of both plans of treatment will have to be weighed. Though we see to-day patients of all classes rushing to general hospitals for every ache, the insane hospital has not got so popular. Indeed, it may pay you to specialize, for while bodily cases grow fewer, insane ones increase, and friends will be more and more inclined to keep at home if they find patients can do as well there.

A difficulty at times encountered in private is to get the patient to submit to any kind of treatment, for he will not admit anything is wrong. But this and other difficulties may be overcome often, and after recovery he will more readily forgive restraint imposed at home than in an asylum.

In the home the risks are greater, but many of them may be obviated. Windows may be checked, rooms should be prepared on the ground floor, likely weapons kept out of the way, etc.

In private you will have less assistance and more responsibility. The other members of the household may bother you more than the patient. There is no disease of which the laity know less, but of which they think they know more, than insanity. Relatives are often suspicious of your conduct, or frightened, or fussy, or obstructive. So you must needs be firm and carry out the orders of the physician only, and he will see to it that the patient is left solely to your management. Because of the proximity of meddlesome relations, and for other reasons, it is often desirable that the patient should be removed to other quarters, preferably some good farm house. After the acute stage has passed, such change of scene and removal from surroundings of which the patient is weary will complete his recovery.

In conclusion, little need be added regarding your personal qualifications. Doubtless you have had instructions ad nauseam as to what a model nurse should be, and by this time exemplify that character from day to day. But I will say that every good quality now possessed you will find use for in insane nursing. Especially will you find tact helpful in diverting the patient's mind and managing the case. You may find it of value on the very threshold, and your success may largely depend on the first impression made. When called in, you may find the patient will have nothing to say to you as a nurse, but may converse with you as a friend. He will likely be jealous of the intrusion of strangers, and not admit his need of advice or nursing. It is well to listen to all he has to say attentively, without at first making many inquiries, which he is apt to look on suspiciously. Don't treat his aberrations lightly, but rather sympathize with him. By and by he may be got to admit some disorder, such as sleeplessness, for which he will submit to treatment, and thus tact carries the day.

Sympathy you will find has a great influence on the insane mind. But coddling and a display of warmth of affection are often injurious. Sympathy should find expression in deeds rather than words, and you will gain his confidence

thereby. Hold not aloof, but join heartily in his work and play, and thus will a bond spring up between you that will do more for his cure than medicine. You will often find among the insane most enjoyable and talented companions, for genius is closely allied to insanity. Your patient may be extremely grateful to you for your kindness after recovery. Besides, it is well to bear in mind that your wildest patient may remember everything that happened while he was not himself, and after he gets well may remind you of some unkind word said when you forgot yourself for a moment.

Firmness in the nurse is specially helpful to the wavering mind. Some patients are more docile with one nurse than another, simply because they have found out her will is law. There is no need to be domineering, only decided. There is a temptation to abuse the authority one is given over such patients. But let it be cloaked with gentleness and good temper, as the hand of power is hid by the soft glove.

Deception is not allowable or necessary in managing these patients. It destroys our influence. If truth won't answer, then use force, which, rightly exercised, leaves no sting behind. This needs underlining, for the first thing that occurs to some is to resort to deception with the patients. They are often deceitful themselves, but quick to see it in others, therefore it is the more necessary they should have a good example set. Never promise what you can't fulfill.

You will need to keep in play all your habits of observation, and study your patient. In the absence of any information from pulse and temperature, the doctor will be guided largely by what you tell him, for the patient may act quite differently from usual in his presence, and may talk to you but not to him. Besides, your carefulness gives confidence to the relatives.

Fear is a feeling that must be a stranger to you. Be cautious, but not fearful. A lunatic will take advantage of a coward. You will also gather from the symptoms of insanity how much cheerfulness will do to help the sufferer.

Above all, ever remember insanity is a disease, and that the conduct is a symptom. If one is long associated with the victims of this terrible malady, he is apt to forget that they are suffering from ailment of any kind. This is perhaps because

one sees patients as they are, not as they were before disease made them irritable and troublesome. But you will think otherwise if you reflect that the unfortunate patient might be one of ourselves, for insanity is no respecter of persons, and is as apt to dwell in the palace of the prince as in the hut of the lowliest peasant. One would not think of taking to heart the absurd things said by a delirious fever patient, and really it is just as wrong to be nettled by the remarks of the insane. Think of the best friend you have, the most refined, gentle and winning of your acquaintances. As she was when you knew her you could not imagine her doing or saying or even thinking a mean thing. Picture her again transformed by disease of the brain into a wretched, annoying, unlovable creature, not as a result of any fault of her own;—think of her as being given to the care of utter strangers, cut off from all her old friends,—and would you not be anxious that they should understand that she must not be held responsible for her actions, that they should be kind to her—more than kind; and would you not resent any cruelty practised on your friend? This is the attitude taken by the relatives of patients. This is the attitude the conscientious nurse must take.

DIPLO-STREPTOCOCCIC PUERPERAL INFECTION TREATED WITH MARMOREK'S SERUM.

By A. J. RICHER, M.D.,
Lecturer in Physiology University of Bishop's College.

On the 1st Dec., 1896 (2.45 a.m.), I delivered Mrs. L., aged 33, of her fourth child, transverse position, turning under anaesthesia; delivery by the feet was only accomplished after a great deal of effort, the death of the child being the result. Placenta was expelled in its entirety, no vaginal or cervical laceration; the mother being very much exhausted, no intra-uterine douche was given until seven hours following delivery.

Two months previous to the confinement, one of the children, a boy of 5 1|2 years of age, had developed scarlet fever, but was at once removed to the Civic Hospital, where he died nearly four weeks after his admission; the day following his removal to the hospital the house had been disinfected by the health authorities, and all felt more or less secure, es-

pecially as the other two children had not in the meantime developed the disease.

The first day following confinement patient felt rather "done up" as she put it, and in fact her pulse had not the volume I should have hoped for, so I ordered brandy and strychnine, which improved the condition somewhat. On the morning of the second day her temperature rose to 100° while the lochia seemed quite normal both in quantity and quality; they were not offensive, yet being somewhat suspicious on account of rising temperature, I ordered creolin douches every four hours, and same evening temperature had fallen to 99 1|5°, only to rise again on the morning of the third day to 100°, evening 101 2|5°, morning of the fourth day 103 1|5° and in the evening to 105 1|5°. On the morning of the fourth day lochia were more scanty and gave out a slight smell and were more viscid; examined microscopically they contained in great numbers large diplococci resisting the Gram stain as well as streptococci in much lesser numbers, and these two varieties existed to the exclusion of all other forms of micro-organisms. Early that morning patient had had a chill, not very severe, but every now and again throughout the day complained of occasional chilliness and rather severe headache. The vulva and cervix showed no false membrane, but were the seat of active hyperaemia.

She had had on the evening of the second day a full dose of castor oil, which produced three stools on the third day and two on the fourth day; the abdomen was not distended much, nor over-tender. Feeling satisfied that I had a case of puerperal septicaemia to deal with, and knowing I had streptococci to fight against, I thought it wise to assail these in particular; and should the diplococci show signs of resistance, I trusted in the use of internal sustaining treatment and stimulation of the phagocytes to dispose of them. My sole pre-occupation was the streptococcus.

On the evening of the fourth day I injected ten C.C. of Marmorek's serum in the loose abdominal tissue. Next morning temperature had fallen to 101 2|5°, but rose again in the evening to 103°, and the next morning fell to 102°, rising the same evening to 103° again, when I decided to give another injection of five C.C., the temperature falling in twelve hours to 98°, and oscillating for the next two days between 98° and

100°, when again on the morning of the 9th day the temperature shot up to 103°, and in the evening to 103 4|5°, when the diplococci, though now in the company of various bacilli- I decided to give another injection of four C.C. of serum; but this time at the request of the patient (who had complained of pain at the seat of inoculation under the binder), I made the injection in the left gluteal region deeply, and in spite of all antiseptic precautions, an abscess developed at the seat of inoculation, from the pus of which a diplococcus was found in every way identical with the one found associated with the streptococcus of the lochia, but this time in a state of purity. The lochia examined on the day following third injection of serum showed the absence of the streptococci but the persistence of the diplococci, though now in the company of various bacilli which appeared to be saprophytic. The abscess was freely incised, and filled up in the course of three weeks without giving rise to any unusual symptom. The temperature oscillations following the third injection, which continued for five days (when abscess was incised), may be attributed to the development of the abscess, the cause of which was probably autogenetic, especially as the injection had been intra-muscular and the anti-toxine being one directed against a different micro-organism,—the streptococcus. From the 21st day the temperature remained about normal, and the patient made a slow but good recovery. Beginning at 5th day, brandy, strychnine (1|30 gr. doses) and proto-nuclein tablets were administered, and creolin douches twice daily were given. Haematuria though slight followed the second serum injection, but gradually disappeared.

The appended chart shows that the falls in the temperature were in no way ascribable to the medical treatment, as any appreciable lowering of the temperature was only observed after each injection of Marmorek's serum. The respirations were noted from time to time, and always found to be in the same ratio with the pulse, following closely its characters, and for this reason were not recorded in appended chart.

I omitted to mention that on the 6th day following confinement, the patient's eldest child, a boy of nearly seven years of age, developed a typical erysipelas of left cheek, which subsided by painting the affected area with guaiacol and internal use of quinine and iron. How was this child infected? possibly through the caresses of the mother during the

first three days following confinement, as the nurse had the greatest trouble to keep the child away from the mother during that time.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF
J. BRADFORD McCONNELL, M.D.
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THE ACTIVE CONSTITUENT OF THE THYROID GLAND.

Dr. Robert Hutchison, in the *British Medical Journal*, Jan. 23rd, 1897, gives the clinical evidence in support of his views that the colloid substance is the only part of the gland medicinally active. The proteids of the glands he finds are two in number, a nucleo-albumin and colloid matters; the latter contains phosphorus and iodine. The extractives resemble those of other organs The specific action of the gland he claims is stimulation of general metabolism and increase in the oxidation processes in the body—clinically manifested by progressive loss of weight, slight rise of temperature and pulse, and increased excretion of urea and carbonic acid. In three cases of myxœdema, tests of these constituents were made. The extractives were found to be inert, as well as the nucleo-albumin. Pure colloid matter which exists in the proportion of 1 gm. (dry) in 10 gms. of fresh thyroid he finds is the active constituent. It is made up of two parts—a proteid and a non-proteid. The former had the action of the colloid in a lesser degree, while the latter is active in minute doses. Hence he concludes that the colloid matter is the active portion of the glands, and exists in all the preparations found to be effective, and that it should be prescribed in preference to the gland as a whole. The advantages are constancy in dose, purity of the remedy, the freedom from taste and odor, smallness of dose, rapidity of absorption, and is more economical.

THE MARAGLIANO SERUM.

Statistics have placed it beyond doubt that as many as one million cases of diphtheria have already been cured by the Behring serum, and there is ground for believing

that antitoxin would have scored a still greater success had it oftener been applied before the diphtheria poison had established a fatal foothold. The same results may yet be attained by the Maragliano serum in pulmonary phthisis; but the nature of this latter disease is such that the antitoxin can never assert its power so rapidly and so decisively as in diphtheria. It is in private practice that Dr. Maragliano and his followers have had most success, and for reasons that are obvious. In such cases the tuberculous patient generally sees the consultant in good time; he is surrounded, as a rule, with the comforts and the careful tendance of home; and he can often reinforce the cure by change of scene. In hospital practice, on the other hand, the patient, in ninety-nine cases out of a hundred, is far gone in the disease; his strength has been reduced by pyrexia or hæmoptysis; his nights have been impaired by harassing cough; and his resisting power is often low through mal-nutrition. And yet even in this latter less favorable type of case Dr. Maragliano has had most encouraging success. His followers have been not less fortunate.

Dr. De Renzi, the dean of Italian clinicians, who for twenty-nine years has held the chair of clinical medicine at Naples, announces that he has had forty-four cases of cure by the Maragliano serum in his wards, and equally gratifying results in his private practice. Like all others of his colleagues who have used the antitoxin, he found its efficacy most marked when the patient was seen early and when complications were at their minimum. One lesson he profited by in his clinic, and that was (as Maragliano himself had inculcated) not to despair when even 200 injections had failed to achieve the effect desired. He observed, indeed, that while improvement had declared itself even in the most intractable cases, he had only to suspend the treatment for a brief interval to witness the rapid exacerbation of all the symptoms and to resume the injections in all haste. Serotherapy, said Dr. De Renzi to a colleague the other day, has a great future. It is rational and physiologic; it corresponds to what we moderns understand by the surviving physiologic forces.

In his own clinic Dr. De Renzi had had convincing proof of the action of the Maragliano serum "*contro le proteine tubercolari.*" With the "tuberculin" of Koch inoculated in phthisical patients to the amount of five milligrams he had obtained a strong reaction; but applying the same "tuberculin" to patients already under the Maragliano treatment the reaction was much less strong, showing that, *pro tanto*, they had become immunized against the "*proteine tubercolari.*" In proportion as he increased the number of

injections of the Maragliano serum, he augmented the immunity against the action of the tuberculous poison, until after thirty or forty injections the reaction to the same dose of tuberculin was barely appreciable or entirely non-existent.

Dr. P. Schivardi, who reports these views of the Neapolitan consultant, adds that in Dr. De Renzi's opinion there is no remedy for phthisis superior to the Maragliano serum. It seldom fails to relieve, and if applied in time and persevered with under reasonably favorable conditions it almost invariably results in cure.—*The Medical and Surgical Reporter.*

INVESTIGATIONS ON THE APPLICATION OF THE PHONENDOSCOPE OF BIANCHI.

(*Münchener Medicinische Wochenschrift*, November 10, 1896. *International Medical Magazine.*) By B. F. Egger, M.D.

After first stating a personal objection that sounds caused by rubbing parts of the instrument are conveyed to the ear with painful intensity, Egger reports an elaborate series of experiments that were suggested by the absence of metallic sound in certain intrathoracic sounds as heard though the phonendoscope. By these he determined that the instrument was incapable of transmitting sounds of greater vibratory rapidity than six thousand per minute, or even less. Tones of lower intensity were magnified. As a result, certain high-pitched heart-murmurs are absolutely inaudible, and amphoric breathing is imperfectly heard or converted into ordinary bronchial breathing. In conclusion, he calls attention to the fact that the attempt to outline the organs by rubbing is inaccurate, inasmuch as the change of note occurs at a certain distance from the staff without particular relation to the border of the organ, as can be proven by experiments on the thigh.

THE SURGICAL TREATMENT OF FOCAL EPILEPSY.

(*American Journal of the Medical Sciences*, October, 1896. *International Medical Magazine.*) By B. Sachs, M.D., and A. G. Gerster, M.D.

The authors report the results of their observations of nineteen cases of partial epilepsy. They include not only the cases of traumatic origin, but also those in which localized convulsions were associated with other diseases, especially with early infantile cerebral palsies. In only a single case

could death be attributed directly to the operation. We are informed that the return of the attacks during the first few days following an operation by no means proves that the surgical procedure has been a failure. The paralysis produced by the excision of a diseased portion of the motor area was found to be merely transitory, probably because this area had ceded its functions to neighboring, healthy portions of the cortex.

They draw the following conclusions:

1. Surgical interference is advisable in those cases of partial epilepsy in which not more than one or, at the utmost, two years have elapsed since the traumatic injury or the beginning of the disease which has given rise to the convulsive seizures.

2. In cases of depression or other injury of the skull, surgical interference is warranted even though a number of years have elapsed; but the prospect of recovery is brighter the shorter the period of time since the injury.

3. Simple trephining may prove sufficient in a number of cases, and particularly in those in which there is an injury to the skull or in which a cystic condition is the main cause of the epilepsy.

4. Excision of cortical tissue is advisable if the epilepsy has lasted but a short time, and if the symptoms point to a strictly circumscribed focus of disease.

5. Since such cortical lesions are often of a microscopical character, excision should be practised even if the tissue appears to be perfectly normal at the time of operation; but the greatest caution should be exercised in order to make sure that the proper area is removed.

6. Surgical interference for the cure of epilepsy associated with infantile cerebral palsies may be attempted, particularly if too long an interval has not elapsed since the beginning of the palsy.

7. In cases of epilepsy of long standing, in which there is in all probability a widespread degeneration of the association-fibres, every surgical procedure is useless.—*Review of Medicine.*

ALCOHOL AND POPULAR MEDICINES.

In the report of the Massachusetts State Board of Health are found the following statements of the percentage of alcohol as an ingredient of nerve stimulants and blood purifiers: Ayer's Sarsaparilla 26.2 per cent., Hood's Sarsaparilla 18.8 per cent., Paine's Celery Compound 21 per cent., and Greene's Nervura 17.2. Malt liquors contain from 1.5 to 8 per cent. of alcohol, wines from 8 to 20 per cent., while

ardent spirits, of which whisky is a type, contains from 45 to 60 per cent. of acohol. Among the wines it is only old Port that contains more than 17 per cent. of alcohol. It is therefore apparent that these "nerve stimulants" and "blood purifiers" out-rank wines in the amount of alcohol, while Ayer's Sarsaparilla reaches almost the proportion that should classify it as "ardent." No wonder great benefit is claimed for these universally used "remedies." The man or woman who is benefited by a draught of "Schnapps" cannot fail of rejuvenation by a dose of these medical "Schnapps." Better take your whisky straight.—*Medical Arena.*

THE ABUSE OF DIGITALIS.

W. T. English says (*Med. and Surg. Rep.; Medicine*) that digitalis is one of the most abused drugs of the materia medica. It appears that in the minds of a large number of the medical profession the pathological range of its application has no limitations. There is a very general want of agreement as to the conditions in which it is applicable, as well as the amount that should be considered a proper dose. Notwithstanding accepted theories and well established facts which should control its exhibition, digitalis has been exhibited in every malady in the catalogue of diseases, and is consequently made the subject of unwarrantable criticism and ever-increasing abuse.

Because it is claimed that in digitalis we have a drug which increases the force of the heart and contracts the vessels of the periphery—except those of the kidneys—it is employed indiscriminately as an ideal diuretic in Bright's disease, notwithstanding the contra-indications observable in capillary tension and cordy pulse. Such irrational therapeutics can result in naught but harm. It seems almost foolhardy to use it in chronic nephritis accompanied with high peripheral blood-pressure, as it usually is, unless preceded by a short course of nitro-glycerin to relieve the peripheral tension.

A fact that is not only forgotten but frequently ignored is, that in normal conditions the heart muscle adjusts itself to the demands made upon it. In those whose vocations force them into the extremes of bodily exertion, the heart becomes muscular in proportion to the demands. In response to temporary or protracted influences that perturb the heart and induce over-exercise without diminution of tonicity of the myocardium, as in functional or reflex disorders, the same result follows. Digitalis is often administered under these circumstances to steady or quiet the cardiac tumult. In the author's opinion, this is a flagrant abuse of a good medicine and an

unpardonable sin against the heart. It is but an added goad to an already overworked organ. Moreover, if the stomach, whence the disturbing impulses often proceed, is already irritated, the presence of digitalis will augment the difficulties in geometric ratio by increasing nausea and heightening the cephalalgia and other symptoms of gastric distress. Cardiac arythmia of myopathic origin, or reflex, toxic, or nervous in its nature, cannot present a reasonable cause for employing digitalis. If it be exhibited in palpitation due to neurotic conditions, there will be a possibility of converting the curable disorder into an incurable malady.

One of the most universal abuses of digitalis is the habit of prescribing it for a patient without advising him to abstain from exercise while under its influence. There are very few physicians who have not been disappointed by its results from the counteracting influence of exercise. All patients taking digitalis should live in perfect physical and mental quietude, as otherwise there is danger of adding to the perils of the diseased conditions demanding its use.

In mitral regurgitation there is a time when the administration of digitalis achieves its greatest clinical good. The opportunities for its good action are often permitted to pass by on the one hand, and upon the other the drug is sometimes administered so prematurely that its most effective opportunities are lost. It must be remembered that in mitral regurgitation the two chambers of the heart are practically one, and increased vigor of the ventricle augments its suction power during diastole as well as its propulsive energy in systole. Through this dual service the engorged pulmonary circulation is unburdened and the anæmia in front is also relieved. This is the only condition in which it can secure such results.

In aortic regurgitation it is sometimes employed in a thoughtless and careless manner. It is a dangerous medicine, and often harmful in this valvular malady. If the diastole is increased and prolonged, the period of regurgitation and its force are augmented, and the difficulties multiply.

The only excuse for prescribing it in aortic stenosis is to give vigor to the myocardium when the tendency to dilatation is pronounced. If it slows the action of the heart notably, it may add to the valvular systole or occasion tetanic contraction.

It is deplorable to see a well-informed physician employing it in conditions of compensation. Many a case of benign hypertrophy has thus been goaded into myocardial weariness and weakness that disabled the heart from keeping up its work. In the absence of dropsy, in all cases where the urine is voided freely, there is little, if any, call for digitalis.

THE WEARING OF VEILS, AND ITS EFFECTS.

The *Boston Medical & Surgical Journal* for December 3rd publishes an article on this subject, by Dr. Casey A. Wood, in which the author remarks that, although we hear and occasionally read of the ill effects produced by veils upon the eyesight, very little has been done in the way of determining the exact degree of interference with vision which these ornamental and occasionally useful protectors bring about.

The fact that the wearing of veils is productive of weak eyesight, headaches, and sometimes vertigo and nausea is, he says, within the experience of every ophthalmologist. Not only are these effects produced by the eye strain consequent upon the added efforts made by one or both eyes to see through or around an obstruction, but the irregular figuring on the veil itself is, in some instances, a source of annoyance to the wearer. As in other cases of abuse, the author remarks, the burden rests heaviest upon the weakest eyes, and probably the reason why one encounters so comparatively few instances of asthenopia directly due to veil-wearing is that the embarrassed eyes are able to overcome the additional strain where the vision is normal, the oculo-muscular system in proper equilibrium, and the general health good.

Dr. Wood had a dozen typical specimens selected for him for the purpose of demonstrating the extent to which veils of various kinds influenced the eyesight, and made a number of experiments with them, the most important of which he gives an account of, with the following results :

1. Every description of veils affects more or less the ability to see distinctly, both at a distance and near at hand.

2. The most objectionable kind is the dotted veil, although the influence of this variety for evil is more marked in some samples than in others.

3. Other things being equal, in undotted and non-figured veils, vision is interfered with in direct proportion to the number of meshes to the square inch.

4. The texture of the veil plays an important part in the amount and kind of eye strain produced by the veil. When the sides of the mesh are single, compact threads, the eye is embarrassed very much less in its effort to distinguish objects than when double threads are employed.

5. The least objectionable veil is that without dots, sprays or other figures, but with large regular meshes made with single, compact threads.

It is not a necessary consequence of the wearing of veils that eye symptoms should result, continues Dr. Wood, for a healthy body resists the strain of an impediment to vision just as it does other deleterious agents ; and it is only when from

other causes the eyesight is weakened that the wearing of an objectionable veil proves immediately and obviously hurtful. Dr. Wood states that he has noted many cases of headache and painful vision, as well as other ocular symptoms, produced by veil-wearing in persons whose eyes are not overstrong; and he believes that this practice is one of the agents, not perhaps always recognized, that contribute to ocular discomfort, and it is not the part of wisdom to compel our visual organs to overcome unnecessary obstacles in the effort to see.

It has been urged in defence of veils, he says, that they are often required for the protection of the face, to keep the hair in order, or to retain the hat in place. If the happiness and comfort of members of the gentler sex are thus bound up in veil-wearing, he adds, they should at least give preference to those veils that do the least harm.

But what excuse can be urged, he asks, for that not uncommon offence, the attempt to read through this unnatural screen? And yet such exhibitions are of every-day and every-night occurrence in places of public resort—street cars, railway trains, churches, theatres, concert halls, club rooms, etc.—thus adding to the injury of defective distant vision the insult of eye strain for near work.—*The Woman's Medical Journal.*

OBSTETRICS.

IN CHARGE OF

H. L. REDDY, M.D., L. R. C. P., London,

Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

SULPHATE OF QUININE IN LABOUR.

Schwab (*Revue Obstet. et Gync.*) vaunts the efficiency of quinine as an oxytocic. Whenever he has given it in the course of a simple lingering labor it has awaked or accelerated uterine contractions. Quinine, he maintains, stimulates uterine fibres when once they have begun to contract of their own accord. Unlike ergot, it does not set contractions going; hence it is not an abortifacient. Quinine has one distinct advantage over ergot: the contractions which it sets going retain their normal intermittent character. It acts rapidly—within twenty-five minutes as a rule. Large doses are needed; Schwab gives a gramme, that is, 15 2|5 gr. in two "cachets," taken at an interval of ten minutes. He prescribes these two doses of sulphate of quinine particularly when the membranes are ruptured, and it is advisable that the labor should be ended as soon as possible. It is harmless to mother and child alike, since, should it fail, dilators or forceps may be used, and there is no difficulty from the tonic

contractions caused by ergot. Schwab warns obstetricians that, as the placenta comes away, when quinine has been used there is a slight tendency to internal haemorrhage. Coules, as long ago as 1888, advocated quinine in abortion with retention of foetal relics. Schwab has given the drug in three such cases with good results, the relics being quickly expelled, but he cannot feel sure how far the quinine contributed to the good result until further experience. Of its direct value in labor he has no doubt.

PLACENTA PRÆVIA.

Heil, *(L'Obstét.)* describes the practice now adopted at the Heidelberg Maternity in dealing with placenta praevia. The membranes are first ruptured so as to bring down the head. When dilatation is complete there is no doubt what ought to be done. But if the os remains narrow, and in cases where the haemorrhage begins before labor, antiseptic plugging of the vagina and cervix is indicated. Braxton Hicks' method is dangerous for the child, but quite allowable if it be dead or hardly viable, or if the mother be in immediate danger. Heil notes 28 placenta praevia labors, 29 children being born; 4 mothers died (14.28 per cent.); 14 had high temperatures; in 10 of these the tampon had been employed; out of the remaining 14 where there was no fever the tampon had been inserted in 6. Out of the 29 children, 19 (65.5 per cent.) were at full term, 9 delivered dead, 4 died within twenty-four hours of birth, and 16 (55.1 per cent.) survived. In 2 cases admitted with complete dilatation both mother and child were saved. Out of 19 children at term that were living when labor began, 11 were delivered alive by turning, whilst in 8 cases the tampon was applied till dilatation was complete, only 1 child being lost, and in that instance the pelvis was rachitic: all 8 mothers were saved. These statistics are favorable to the tampon.

DELIVERY IN THE MORIBUND.

Decio *(Univ. Med. Mag.)* publishes a table of 18 labors, in which women apparently in a dying condition were delivered per vias naturales; of these, six children, including one of a pair of twins, seem to have lived. Five were born dead. The remainder expired soon after delivery. Turning after various methods was exclusively the means employed in all cases. In six the mothers were suffering from eclampsia; of these, five recovered, including the twin labor case. Three had cerebral apoplexy; of these, two recovered. Two with advanced phthisis survived for a few weeks. Four were flooding from placenta praevia; of these, three were saved. One with pulmonary congestion recovered. One bleeding from an internal wound was saved, and one injured by a fall died.

DIAGNOSIS OF PREGNANCY BY THE SHAPE OF URINARY PHOSPHATES.

Parke in *Am. Gyn. & Obstet. Jour.* finds as a result of his researches, when conception occurs, the triple phosphates in the urine change their form. They lose their feathery appearance, the change beginning at the tip and progressing towards the base. One side only may be affected, or both, leaving only the shaft and perhaps a few fragments adhering to it. The shaft assumes a beaded or jointed appearance. These changes commence within 20 days after conception, and are most marked in the early months and almost absent in the later months. When the death of the foetus occurs, the phosphates resume their normal appearance. This change in form of the urinary phosphates being recognizable very early, it is of the greatest value when other signs are of the least reliability or wanting. A diagnosis may be made without examining patient or her suspecting it.

CONSTANT IRRIGATION IN SEPTIC PUERPERAL CASES.

Gliakoff in the *Jour. de Med. Mil.* describes a method for the treatment of puerperal cases, by constant irrigation of the uterus with solutions of carbolic acid and permanganate of potash. A one p. c. solution of carbolic acid was first employed, and followed by a weak solution of permanganate of potash having a rose color. The irrigating fluid was kept at 104° F., and allowed to flow for six hours. The results were excellent. Only one patient out of twenty-eight thus treated died, and she was not treated until three weeks after labor, and had pyaemia.

ALBUMINURIA IN PREGNANT AND PUERPERAL WOMEN.

Dr. Eklund *(Edin. Med. Jour.)* believes that midwives' handbooks should call attention to the necessity for examining the urine of every pregnant woman. If the urine be found to contain albumin, the midwife should be competent to order hot baths, flannel underwear, rest in the recumbent posture, mild diuretics and laxatives, beef tea with parsley, seltzer water with boiling milk, milk food, boiled fruit, weak coffee, tea and chocolate, compound liquorice powder, etc. If this hygienic treatment does not within a certain time, say a month, cause a disappearance of the albumin, a physician should be called. It is a matter of great importance that the pregnant woman should learn to procure for herself daily evacuations of the bowels, especially towards the end of pregnancy and in the beginning of labor. For this purpose dietetic means

should be employed chiefly; but in case of failure, mild aperients should be used, such as cascara, senna, frangula, compound liquorice powder and enemata of salt and water. Of the very greatest importance during pregnancy, and especially during the puerperal state, is the care of the kidneys, the avoidance of all that would tend to increase the functional activity of these organs, the maintenance of equilibrium and the proper division of labor between the skin, digestive apparatus and the kidneys. If any organ can bear a greater exercise of function it is the skin, and next in order of tolerance the intestinal tract, the lungs are far more sensitive, but the kidneys most of all. No puerperal woman should be permitted to leave her bed until her urine is free from albumin.

ECLAMPSIA AND THE MILK TREATMENT.

Ferre *(L'Obstet.)* regards the milk treatment to be most efficient from a prophylactic point of view in the treatment of puerperal convulsions, although it does not necessarily cause the other alarming symptoms besides the convulsions to disappear. He has never seen convulsions in a patient subjected for over a week to milk diet nor any other trouble of toxic origin. The alleged disappearance of albuminuria on the other hand does not necessarily occur.

Ferré speaks with equal decision on this point, declaring that he has never seen so much as an appreciable diminution of albumin even after prolonged milk diet. The same is the fact with the oedema. The above facts are emphasized because he is aware how some obstetricians have very naturally given up milk diet on account of persistence of the albuminura and oedema. Such a step is a mistake, for if the treatment be continued, labor will proceed without any convulsions coming on, though the legs remain swollen and the urine albuminous.

Medical Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, November 9th, 1896.

GEORGE WILKINS, M.D., PRESIDENT, IN THE CHAIR.

HYPOPLASIA OF ONE KIDNEY.

Dr. J. G. ADAMI read a paper on this subject, illustrating his remarks by two specimens.

Dr. WYATT JOHNSTON referred to five cases in his experience where there was absence or hypoplasia of one kidney. In one of these the death was due to a rupture of the remaining kidney, and in another the removal of the functionally active kidney was followed by anuria and death.

SERUM DIAGNOSIS IN TYPHOID FEVER.

Drs. WYATT JOHNSTON and MACTAGGART communicated the result of three hundred and ninety observations on the serum reaction of typhoid. These were made, partly in hospital cases, and partly in cases when samples were received at the laboratory of the Board of Health of the Province of Quebec. The results obtained were shown in the following table:

Total cases of genuine or suspected typhoid	431
Positive Results.—Decision on first examination. (Of these, complete reaction in 112; partial reaction, 6. Three of these before the third day)	118
Doubtful on first examination; decisive on second examination. (Of these, 4 were first examined before sixth day)	5
Total positive results	123
Negative Results.—Decisive cases proved by subsequent history to be something other than typhoid, viz.: meningitis, malaria, pneumonia, constipation, etc	14
Negative Results remaining in doubt.—Mild cases of typhoid first examined during convalescence	3
Primary examination negative, clinical history typhoid, no re-examination	2
Severe fever of typhoid type, negative results both by Widal and the dry method (examined three times)	1
Total negative results in cases of possible typhoid	6

They considered that about 90 per cent. of successful results could be obtained by the method in public health laboratory work, although typical hospital cases gave a much higher percentage. They had never met with a typical reaction apart from typhoid fever.

Dr. ADAMI congratulated Dr. Johnston on having worked out this simple method of diagnosis in typhoid fever. Although the author of the paper had endeavored to show that Dunham had been the originator of the serum reaction for typhoid, and that Widal had first popularized it, Dr. Adami thought that Dr. Johnston deserved still greater credit for having devised this simple test

which was so generally applicable. It was evident that Widal was wrong in contending that the dried blood was not so good for examination as fluid blood. Without doubt this method would come into general employment in the health offices of cities throughout America and eventually in Europe.

Dr. H. A. LAFLEUR drew the attention of the Society to the great value of the test in differentiating the various febrile conditions grouped under the name of febricula. This term was mainly a cloak for our ignorance, and included among other things a certain number of cases of mild or abortive typhoid. If in any given case of so-called febricula the typhoid reaction of Widal was present, one should be on the watch for a possible relapse and should exercise caution in feeding.

Dr. J. B. MCCONNELL thought this an important method of detecting typhoid fever, not only in the earliest stages but in masked forms. Typhoid fever had so many anomalous forms, epidemics varied so much in their character, and difficulties in diagnosis were so frequent, that it certainly was to be regarded as a very great advance. In a few cases which he had sent to Dr. Johnston the diagnosis had been made at once. He had had a case recently in which he found it especially useful, it was a case of supposed malarial fever, but the symptoms also resembled those of typhoid. The patient had been in one of the city hospitals, and had been discharged as being better, but he still felt ill, and went around, until at the end of three weeks he came to the Western Hospital. He had frequent chills and perfect intermissions of fever, some enlargement of the spleen with great depression, but no characteristic spots. An examination of the blood for plasmodia was negative except one slide which gave some evidence of the parasite, and this added to the difficulty of coming to a conclusion. The diazo reaction was present. A positive diagnosis was made by submitting a sample of the blood to Dr. Johnston The man died, as most cases of ambulatory typhoid do, and the post mortem examination fully confirmed the serum diagnosis of typhoid fever.

Dr. F. G. FINLEY, speaking of the value of this method in cases of so-called febricula, cited a case which was brought into the hospital a few days previously with all the symptoms of typhoid, although they were not pronounced enough to enable him to come to a decision. He submitted a sample of the blood to Dr. Johnston, who reported that it gave the reaction.

The PRESIDENT thought that probably the first case on which Dr. Johnston had tried this reaction had been a patient of his who came to the hospital some time in September, presenting symptoms of typhoid. He had shortly before read an account in the *Progrès Médical* of Dieulafoy's attempt to make a diagnosis by this method.

Dr. JOHNSTON, in reply, said that in his first case the examination had been made at the request of Dr. Wilkins. In mild cases, clinically doubtful and when the reaction was ill marked, the corroborative evidence obtained by bacteriological examination of the stools should be very valuable. The dry blood method had appeared to offer certain advantages for public health laboratory work, but was not necessary for hospital work. Dieulafoy had brought Widal's work before the Académie de Médecine, but had not himself modified the technique.

BACTERIOLOGICAL METHOD OF DIAGNOSIS IN LEPROSY.

Drs. WYATT JOHNSTON and W. H. JAMIESON read a communication on this subject, and exhibited slides illustrating this method.

Stated Meeting, November 20th, 1896.

J. G. ADAMI, M.D., FIRST VICE-PRESIDENT, IN THE CHAIR.

THE PRESENCE OF TUBERCLE BACILLI IN FÆCES FROM A NON-TUBERCULOUS INTESTINE.

Dr. C. F. MARTIN read for Dr. R. B. SHAW and himself a report of this case.

Dr. GORDON CAMPBELL thought this was an extremely interesting case. When one considered the difficulty often experienced in detecting tubercle bacilli in the stools in cases of tuberculous disease of the intestine, the fact that they had here passed through in sufficient numbers to lead to the diagnosis of that disease seemed remarkable. He asked for more particulars regarding the number found.

Dr. R. B. SHAW, in reply, stated that the bacilli were sufficiently numerous for three to be within the field of the microscope at one time.

Dr. J. G. ADAMI alluded to the fact that mucus was a very insoluble substance, and was acted on but slightly by the intestinal juices. This and the small quantity of fæces passed were two considerations which favored the finding of the bacilli in the present case.

CONGENITAL DILATATION OF THE COLON.

Dr. C. F. MARTIN exhibited specimens from this case and read the report.

Dr. WESLEY MILLS drew attention to the dilatation of the colon sometimes occurring in the insane, which he attributed to their inattention and want of regularity in their habits, together with the dullness of their senses. He referred to one case reported by him in a paper on hibernation, where the dilatation was evidently produced by accumulation of fæcal matter.

Stated Meeting, December 4th, 1896.

GEORGE WILKINS, M.D., PRESIDENT, IN THE CHAIR.

IMPETIGO CONTAGIOSA.

D. G. E. ARMSTRONG reported this case as follows :

This young man was admitted to the Montreal General Hospital on the 12th November, 1896. He was nineteen years of age, and single.

This rash is now, as the result of treatment, much less distinct than on admission. It appeared first about six weeks before he was admitted to the hospital. It was first noticed on the lower part of the abdomen, then on the buttocks, afterwards extending to the lower extremities. A little later it appeared on the arms and in the axillæ. The back, chest and face have almost entirely

escaped. In its geographical distribution then, it does not follow any special order, except that it is most abundant on those parts of the body most likely to be infected by the patient himself in scratching. It has from the first been intensely itchy. No parasites were found on his body or clothing. He has lived in a rather crowded boarding house, but no other inmates of the house have suffered from any skin disease so far as he knows.

He is a leather cutter by trade, and has generally been in fairly good health. Uses alcohol and tobacco. Has had three attacks of gonorrhœa within the last twelve months, the last attack appearing fifteen days ago. There is no rheumatic or tubercular history.

The rash appears at first as slightly elevated papules which are very itchy, and after the irritation of scratching develop into pustules, and these rupture and form these thick crusts which you see. Several of them may be seen running together. The flexor and extensor surfaces seem to be about equally affected. The glands in the groin and the epitrochlear glands are enlarged. When admitted to the hospital the lower abdomen, buttocks and thighs were one mass of scabs. There was also a scab about the middle of the dorsum of the penis. This case has had added interest in the hospital, from the fact that different views as to its nature have been held by different members of the Hospital staff.

On the one hand it is contended that the rash is a syphilide, and the sore on the penis, the primary lesion. Against this theory is the patient's positive and persistent statement that the sore on the penis only appeared two weeks after the rash on the abdomen. Also it may be urged that there is no sore throat or falling of hair.

I have regarded the case as an impetigo, but just what was the source of infection I have not been able to determine with any degree of certainty. It has, to me, the appearance of a case of neglected scabies, but no furrows or parasite have been discovered. He is rapidly improving, however, under the daily inunction of sulphur ointment and hot baths. The sites of the crust you notice are red, but hardly can be called copper colored. I think the case of considerable clinical interest, and shall be glad to hear an expression of opinion from the members as to its nature.

A Series of Cases of Pelvic Hæmatomata.

Drs. Wm. Gardner and C. F. Martin read a paper on this subject.

Some Points in the Treatment of Potts' Disease.

Dr. C. W. Wilson read a paper on this subject.

Dr. T. G. Roddick thought Dr. Wilson had covered the ground very thoroughly, and agreed with almost everything he had said in regard to treatment. Mr. Howard Marsh's plan of keeping these cases in a recumbent position, a treatment which has stood the test of seventeen years, Dr. Roddick thought was the most satisfactory of any. With regard to Sayre's jacket he had given it a thorough trial. Having been present in Manchester when Dr. Sayre first demonstrated its use, he became very enthusiastic about it, and provided himself with this means of treating cases. He now felt that the fixation secured by it was not sufficient to give

quite satisfactory results, and he had abandoned it for a modification of Taylor's spring jacket, the great difficulty of which was in getting it made properly.

For the abscesses he felt that aspiration should be practised once or twice before they were opened, and that injections of iodoform as mentioned by Dr. Wilson were beneficial. For the paralysis which so often occurred he first tried the recumbent treatment, and cited a case as evidence of its value.

Dr. G. E. ARMSTRONG, referring to the apparatus shown by Dr. Wilson, thought it a very satisfactory one. He had found it no easy matter to keep children quiet in bed. The length of time the apparatus should be worn was an important point. He felt that the children should be kept in bed until the disease had ceased to be progressive, and the process of repair had begun. He had yet to be convinced that the head and shoulders could be adequately supported by any apparatus up to the present devised. A jury mast controlled the movements of the head and neck, but did not support the former. No apparatus that would altogether lift the head and take its weight from diseased cervical vertebræ could be borne for any length of time. The same was pretty much the case with apparatus to support the shoulders in mid-dorsal disease. It controlled movement, but did not carry the shoulders and head.

BURSITIS OF THE KNEE.

Dr. R. C. KIRKPATRICK exhibited two enormously hypertrophied bursæ which he had removed from the knees of an elderly woman. They had been present for a number of years, but had grown more rapidly of late.

Stated Meeting, December 12th, 1896.

GEO. WILKINS, M.D., PRESIDENT, IN THE CHAIR.

SPINA BIFIDA, OPERATION WITH TRANSPLANTATION OF BONE TO CLOSE THE ORIFICE.

Dr. G. E. ARMSTRONG exhibited a child upon whom he had performed this operation.

Dr. WYATT JOHNSTON had seen the part removed, and thought it consisted of atrophic nerve elements, some showing multipolar cells.

Dr. J. B. MCCONNELL pointed out that the benefit which might accrue from an operation depended upon the nature of the tumor, and that it might be misleading to have a favorable result reported in regard to a case of spina bifida, unless the variety was indicated. For where it was a simple meningocele, there was no difficulty, but in a hydro-myelocele, in which the sac consisted of the flattened-out spinal cord, and in meningo-myelocele the condition was generally considered to be one in which operation was not to be recommended, as it was likely to endanger the patient.

VESICAL CALCULI.

Dr. WILLIAM GARDNER exhibited a collection of calculi and sand removed from the bladder of a woman of 70, a patient of Dr. J. T. Finnie, of this city. There were thirteen stones, all facetted, of

the size of chestnuts, besides numerous others smaller, of all sizes down to that of a grain of the finest sand. The patient had suffered for the last twenty years from procidentia uteri. The displacement had not prevented her being active, and had not apparently caused very much suffering until within the last few weeks. Four or five weeks previous to operation she contracted pneumonia, from which, notwithstanding her advanced age, she recovered. During convalescence she began to suffer intensely from pelvic tenesmus with violent pain. The urine was fetid and turbid. On handling the completely prolapsed pelvic organs the sensation conveyed was that of a bag of marbles. The stones were removed through an incision made in the base of the bladder by the knife of the thermo-cautery, care being taken to avoid the muscular fibres at the vesico-urethral orifice. None of the calculi were encysted; the bladder, however, was succulated in parts. It was thoroughly irrigated with warm boracic acid solution. The cut edges of the vesical and vaginal mucosa were then brought together by a continuous fine catgut suture. The narrator said that the case was unique in his experience. Calculus of the urinary bladder was extremely rare in women, but in this case the extraordinary accumulation, which must have been forming during a period of several years, was very remarkable. The operation of cystotomy was selected for the removal of the stones in this case, for the reason, that the alternative procedure of dilatation of the urethra would inevitably, especially in the tissues of an old woman, have resulted in permanent incurable incontinence of urine from destruction of the sphincter of the bladder. The incision was kept open to drain and rest the bladder, so facilitating the cure of the cystitis. When the cystitis had been cured and the parts otherwise became healthy, the closure of the artifical fistula would be a comparatively easy operation. The relief to the symptoms had been complete.

Appended was a report of the weight and chemical composition of the stones, by Dr. Ruttan, Professor of Practical Chemistry in the Medical Faculty of McGill University.

"The total weight of the calculi (almost dry) was 265 grammes (or 9 ounces, 150 grains). I find that each of the larger calculi has a nucleus of uric acid, stratified with a little phosphate; when examined under a lens, the nucleus is surrounded by a deep layer of mixed phosphates of lime, being chiefly neutral calcium phosphate, and quite free from uric acid, the next layer is chiefly uric acid, but also has fine lines of phosphate in it, and it tends to break into layers. Outside of this is the outer coating, white, composed of phosphates, chiefly triple phosphate carrying a little uric acid. The fine calculi, seed-like forms are uric acid, and facetted like biliary calculi. All show the marks of having grown in a confined space and of having been closely packed. All calculi from the size of a pea to the largest have the history of the larger ones above."

Dr. F. J. SHEPHERD asked if the inflammation was considered due to the presence of the calculi or to the prolapsus. If due to the former he did not understand the necessity of keeping up drainage, as in the male bladder removal of the cause is followed by the cure of the inflammation.

Dr. J. C. WEBSTER said that there was no analogy between the male bladder containing calculi and the female viscus in the condi-

tion of prolapsus described by Dr. Gardner. The anatomical conditions as shown by frozen sections were entirely different. In the female, the most dependent part of the bladder being below the urethral orifice acted as a *cul-de-sac* for the intention of stinking urine. He had seen one somewhat similar case, but there had been no large calculi present. The bladder was drained, and subsequently an operation performed for the prolapse.

Dr. GARDNER replied that immediate closing of the bladder was carried out in a healthy organ, but in such cases as these he preferred to follow the rule, as laid down by Emmet, and drain.

TYPHOID PERFORATION.

Dr. G. E. ARMSTRONG reported a case of operation for perforation of the bowel in typhoid fever, and Dr. Wyatt Johnston exhibited specimens from the case.

Dr. J. G. ADAMI stated that Dr. Armstrong's case was the sixth in which the operation might be said to have been followed by a certain amount of success, as the patient had lived for six weeks after its performance. Of the six cases, four had been reported from America.

He drew attention to several interesting points. First, with regard to the part played by the omentum. When, some time previously, he had read a paper on this subject, Dr. Lafleur had pointed out how rarely protective adhesions followed perforation in typhoid fever, as there was but little inflammatory lymph thrown out. Here, however, this part was played by a little tag of omentum which closed in the wound. It must be admitted that in typhoid generally, there was singularly little power of repair of wounds or perforations. This being so, it was inevitable that all operastion in typhoid must be attended with but doubtful success, and there must be a large number of failures. Hence other auxiliaries to repair must be sought after. He would suggest that the formation of an artificial anus above the usual region of ulcers, that is four to six inches above the valve, with rectal feeding, might insure physiological rest and prevent irritation of the lower part of the gut by fæces. He asked Dr. Armstrong whether such a course was feasible.

Dr. T. G. RODDICK said the same idea of putting that diseased part at rest, by forming an artificial anus, had occurred to him during the reading of the paper. This, with careful drainage, would make it almost impossible for ulceration to progress. It remained a question, whether the change of diet from milk to animal broths, etc., affected the ultimate result. He had pleasure in congratulating Dr. Armstrong on his success in closing the original perforation, and in thus prolonging to such a degree the life of his patient.

Dr. W. GARDNER asked if anything had been done in the way of securing the omentum to the opening, or where the latter was scanty of turning down a portion and suturing it over the opening. He had noticed in Dr. Johnston's account of autopsies on three cases, that the sutures had held firm, so probably the patient had died from the effects of the peritonitis.

Dr. F. J. SHEPHERD had hoped that this was going to be one of the successful cases, but the difficulties were very great. It was

a question, whether the original peritoneal inflammation had not continued in spite of the careful washing out. Patients suffering from typhoid had not much reparative power, and when there was no tendency to repair, operation was almost hopeless. In most operations of this character the patient was operated on too late, and died a few hours afterwards.

Dr. F. G. FINLEY thought the case presented a great number of features of interest. Such as, the early date at which perforation had occurred, the tenth day. This was the third case he had seen operated on, and the other two had died within a few hours from shock. This patient's condition had presented some difficulties, in that the temperature had kept up so long there seemed some doubt whether it was due to the fever or to sepsis, and, acting on the latter supposition, later on it was thought advisable to give him more food to keep up his strength. The autopsy showed, however, that the typhoid had persisted to the fiftieth day.

He considered that the chances of recovery were much greater in these early cases where the patient was not exhausted by three weeks or more of fever.

Dr. ARMSTRONG, in reply, said, in regard to the time at which the operation should be done, that he considered that the opening should be closed as soon as possible after the shock following the perforation had passed off. He also thought it would be good practice to give a hypodermic of morphia once a definite diagnosis of perforation had been made. This would arrest peristalsis, prevent diffusion of the septic matter from the bowel, and conserve the patient's strength.

With regard to an artificial anus, the difficulty would be to provide room for efficient drainage without making another opening.

Dr. Adami's idea of cutting off the typhoid area could not be carried out, as it was impossible to get away from the ulcer area. Perforations occurred over the whole length of the bowel from the beginning of the ileum to the sigmoid flexure.

Undoubtedly the chances of recovery were better after convalescence was established, and the patient was able to take food to keep up his strength, instead of having both the fever and the operation to contend with at one and the same time.

ON THE INFLUENCE OF THE AGE OF THE TEST CULTURE UPON TYPHOID SERUM REACTIONS.

Drs. WYATT JOHNSTON and D. D. MACTAGGART said that they had met with pseudo-reactions sufficiently decided to give rise to error in diagnosis in non-typhoid blood, when the cultures were too active. Pfeiffer states that typhoid serum can be diluted to a point where, though it would no longer give a reaction with virulent culture, it would still do so with an attenuated one. Drs. Johnston and MacTaggart find the reverse to be the case. In working with cultures highly virulent by transplanting them daily during a period of several weeks or months, they found that such cultures became peculiarly sensitive, so that even a few hours delay in transplanting produced, so to speak, a kind of premature decay. With such cultures a decided clumping was in three cases not typhoidal, obtainable when they were 24 to 30 hours old, while none occurred with the same culture from 12 to 20 hours old. The clumping in these cases

was not that of the typical, complete reaction, but was sufficiently close to simulate a partial reaction.

When the bouillon culture was made from a stock culture kept at room temperature for a week or more, a few hours or days difference in the age appeared to have comparatively little effect on the result as far as the occurrence of pseudo-reactions was concerned. *

In doubtful cases the best safeguard against being deceived by pseudo-reactions was that recommended by Widal, of very free dilution of the blood, to a point (1 to 30 or 1 to 50), where only genuine typhoid blood would react, as pseudo-reactions were most liable to occur with relatively concentrated solutions. Drs. Johnston and MacTaggart stated that in 400 blood examinations so far they had not yet met with the typical, complete serum reactions under conditions which excluded genuine typhoid fever, and had only met with one severe case apparently of genuine typhoid when they could not readily obtain it during the height of the attack.

Dr. C. F. MARTIN stated that, in conjunction with Dr. H. B. YATES, he had examined the dried blood from all the patients in one of the medical wards of the Royal Victoria Hospital, the specimens having been collected by Dr. Argue, who had sent them on numbered slips of paper and retained the key to the diagnosis. They were thus enabled to make a fair test of the value of the method, and as a preliminary investigation they employed a five days' old typhoid culture, and had allowed the dried blood to remain untouched for ten days prior to employing the test.

The cases were of the most varied nature, and among them were five of typhoid fever. When the complete examination of all the series had been made, the results were compared with the key of the house physician with the following result :—

In not one of the typhoid cases had there been a strong, positive reaction at the end of 4 hours. In two there had been a typical reaction within five minutes, which, in one instance, passed off after a few hours, and, in the other, had become so modified as to be named merely a partial reaction, *i.e.*, although agglutination was present, there was considerable motion in many isolated bacilli. In the other three specimens from typhoid patients, there was no change in the hanging drop after five minutes, while in half an hour a partial reaction was manifest, either by agglutination, or by general cessation, which in 24 hours had not become sufficiently typical to yield a positive diagnosis. When they obtained, within 24 hours, some definite agglutination with isolated motile bacilli elsewhere, they called this a weak reaction, and obtained it to a more or less marked degree in one case each of aortic disease, rheumatism, pernicious anæmia, and gastric neurosis, in two cases of venereal disease, and in a case of tuberculosis.

In the other cases the results were quite negative. In endeavoring to establish the relation between these remarkable results and their technique, Drs. Martin and Yates concluded that the fault lay either in the age of the culture used, the long exposure of the blood, or, as Dr. Johnston had already suggested, the insufficient dilution of the serum employed. Their investigations being merely com-

* With attenuated cultures grown at room temperatures and transplanted at intervals of about one month, these pseudo-reactions do not occur.

menced they were not as yet prepared to definitely state the causes.

With reference to diabetes, they had examined two cases, and found in both instances a positive reaction within ten minutes, which, however, soon again disappeared, leaving after 24 hours absolutely no agglutination or cessation of motion.

Dr. JOHNSTON said, in reply, that a partial reaction did not, in his opinion, justify a positive diagnosis. Also, unless the blood was freely diluted, pseudo-reactions were liable to occur with virulent cultures. Sometimes in very early stages of genuine typhoid only a partial reaction might be obtainable.

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Editorial.

BRITISH MEDICAL ASSOCIATION.

Owing to the fact that the meeting of the General Council of the Association was delayed, we are still ignorant of the names of those selected to give the general addresses and to be office holders in the various sections in the forthcoming meeting. We can only here repeat that the local executive in Montreal has throughout felt that it will be highly conducive to the success of the meeting if leaders of the profession in the Old Country, rather than Canadians, be chosen to occupy the leading positions in connection with the forthcoming meeting. This, not from any disbelief in the abilities of Montrealers and other Canadians being able to prove themselves worthy occupants of the positions, but from a belief that the known presence of well-known men will attract to Montreal a greater number both of Canadians and of practitioners from Great Britain and the Colonies in general. Judging from information recently received from Dr. Roddick, the President-elect, he has found the authorities in England most anxious to aid in making the meeting successful along the lines suggested by the Local Executive. Dr. Roddick left Montreal on the 1st January, and devoted some weeks in England to the business of the Association; he was received with open arms, and a dinner was given in his honor.

The dinner was given to Dr. Roddick by members of the Council at the Grand Hotel. Dr. Robert Saundby, President of the Council, was in the chair, and proposed the toast of their guest, Dr. Roddick, who was given a hearty British welcome. He spoke of the sacrifice he had made in undertaking this long journey, made in order to have a personal conference to complete the arrangements for the coming meeting in Montreal. Dr. Roddick replied at length, thanking them for the honor conferred upon him, and spoke of the efforts that had been made by a number of Canadian physicians to induce the Association to meet in Canada, and suggested that the coming to Canada next summer of the two great scientific associations of Britain was getting in the thin edge of the wedge of genuine imperialism. He then spoke of the attractions which would be offered to the members here, and pleaded for a large representation of the Association from across the water.

Not only was Dr. Roddick able to post the officials of the Association with all necessary information concerning what has been done in Canada, but he was able by personal interviews to secure the attendance and active co-operation of many who are first and foremost in the profession.

Since our last issue we have received from England the exact wording of the resolution of the Council of the Association, stating who are and who are not eligible to be members and to attend the meetings of the Association. This resolution was passed two years ago, and inasmuch as we hear on all sides that very large numbers of members of our profession in the United States are proposing to attend the Montreal meeting, it may be well again to point out that however much the Local Executive desires to welcome American practitioners, its hands are tied. Those visiting Montreal must either be members or invited guests if they are to enjoy the privileges of the meeting, and only British subjects can be members. The resolution runs as follows:—

Resolved:—That while recognizing it as both a duty and a pleasure to accord a hearty welcome to Foreign Medical Practitioners attending the Annual General Meeting of the Association, the Council is of opinion and is advised that it cannot extend to such practitioners the privilege of

actual membership, having agreed to the origin and constitution of the Association, and to the fact that, in the opinion of the Council, the word "qualified" in By-Law No. 1 means British subjects who are registered or entitled to be registered in the Medical Register of Great Britain or Ireland, or British subjects residing in any part of the British Dominions who are legally entitled to practice in such dominions, and that such definitions cannot be further extended.

Since our last issue also, the Excursions Sub-Committee has obtained most favorable terms from the G. T. R. and the C. P. R. companies. They offer to the Association and its guests to convey them at half fare as far as Sarnia on the one system and Port Arthur on the other. In addition, the C. P. R. will give the same rates to those wishing to cross the Continent. Return tickets will be given from Montreal to Vancouver for one single fare, and the privilege of stopping over at the leading places of interest along the route. The Committee has not as yet received absolute information from the Railway Companies as to whether these terms apply to Canadian members of the Association as well as to members from other parts, but the inference is that this is the case.

The Local Entertainment Sub-Committee has also been busy, and proposes to give members fond of exercise opportunities of showing their powers in golf, tennis, etc., against the visiting members from Great Britain. It is quite prepared also to have a Lacrosse match, provided a sufficient number of members from the other side are acquainted with the game. Lacrosse, we may add, has of late years made considerable strides in the north of England and of Ireland and again around London.

Arrangements have already been made for a Ladies' Committee to entertain the wives and daughters of visiting members.

We learn from Toronto that a most attractive excursion through the Niagara peninsula, Kingston and the Thousand Isles has been arranged for those attending the Meeting of the British Association for the Advancement of Science, and intending to be present also at the Montreal Meeting. Reduced rates have been given by all companies to those coming to Montreal by New York.

The Canadian Pacific Railway offers a return ticket from Hong Kong, Shanghai, Yokohama for £63, with a time limit of six months.

A tastefully arranged plan of the Victoria Rink with circulars has been sent to possible exhibitors by the Museum Committee.

THE AMERICAN MEDICO-SURGICAL BULLETIN.

This Journal has been changed from a weekly to a semi-monthly, and the subscription price has been reduced to one dollar a year. Robert G. Eccles, M.D., is the Editor, and is supported by a large staff of collaborators.

This is one of the best conducted journals of the United States, and at the low subscription price at which it is now placed becomes the best investment for the money now available. We wish it every success, and feel assured that it only has to be known in its present style to secure a wide circulation.

FORMALDEHYD AS A DISINFECTANT.

The Medical Review of January 30th, 1897, refers to the testing of this method by the St. Louis Board of Health. Evidence, it states, is accumulating pointing to the conclusion that formaldehyd gas is undoubtedly the simplest, most practicable and powerful germicide for the disinfection of houses and all kinds of articles. The usual method of producing this gas is by passing methyl alcohol over red hot platinum; the product is said to be irritating if breathed, and carbon dioxide is also formed. An improved process is mentioned by which this objectionable feature is avoided. It has been suggested by Drs. Rosenberg and Offerman, and consists in the vaporization of a sixty per cent. solution of formaldehyd in methylic alcohol. The *Review* states that Dr. C. F. Robinson, of Brunswick, Maine, has a simplified method of producing it by means of a lamp he has invented. It has proved so successful that the Legislature of Maine has enacted a law requiring formaldehyd to be used in all cases where fumigation is necessary.

A very great stride will be made in the prevention of disease if a really effective germicide exists in formaldehyd gas. The inutility of sulphur fumigation as ordinarily carried

out is now generally concurred in. We hope our "at ease in Zion" health authorities in Montreal will sense the possibilities here referred to, and not be slow in informing themselves of and adopting a measure which promises such advantages, with apparent simplicity of application.

Formaline is a 40 per cent. solution of paraformaldehyde in water. Its antiseptic powers are said to be equal to that of corrosive sublimate. Formic aldehyde is a gas, and is a powerful penetrating germicide, one part in a thousand of air will in 24 hours destroy all micro-organisms, and in strengths of 2 to 3 per cent. will do so in about a quarter of an hour. It is also a deodorant, and is non-destructive to clothing or instruments. Formaline in strengths of ½ to 4 per cent. is now one of the most popular medical antiseptic applications in surgical practice.

PUERPERAL ECLAMPSIA; ITS ETIOLOGY AND TREATMENT.

Dr. William Warren Potter, of Buffalo, read a paper on this subject at the 91st Annual Meeting of the Medical Society of the State of New York, Albany, Jan. 26, 1897.

He said, *inter alia*, that we seem to have arrived at the renaissance of eclamptic literature, that while the subject is being discussed in magazine articles and societies, it would not answer for this Society to keep silent.

Though the pathogenesis of eclampsia is still unsettled, we are certain that it is a condition *sui generis*, pertaining only to the puerperal state, and that to describe, as formerly, three varieties—hysterical, epileptic and apoplectic—is erroneous as to pathology and causation as well as misleading in treatment.

The kidney plays an important office in the economy of the eclamptic. If it fails to eliminate toxins, symptoms are promptly presented in the pregnant woman. Renal insufficiency is a usual accompaniment of the eclamptic state. Over-production of toxins and under-elimination by the kidney is a short route to an eclamptic seizure. However, many women with albuminuria escape eclampsia and many eclamptics fail to exhibit albuminous urine.

The microbic theory of eclampsia has not yet been demonstrated. The toxæmic theory in the present state of

our knowledge furnishes the best working hypothesis for prevention or cure.

Treatment should be classified into (*a*) preventive, and (*b*) curative. The preventive treatment should be subdivided into medicinal and hygienic; and the curative into medicinal and obstetric. A qualitative and quantitative analysis of the urine must be made at the onset. If there is defective elimination something must be done speedily to correct a faulty relationship between nutrition and excretion. One of the surest ways to control progressive toxæmia is to place the woman upon an exclusive milk diet. This will also serve to flush the kidneys and thus favor elimination. Distilled water is one of the best diuretics; it increases activity and supplies material—two important elements. In the pre-eclamptic state, when there is a full pulse with tendency to cyanosis, one good full bleeding may be permissible, but its repetition should be regarded with suspicion. If there is high arterial tension—vasomotor spasm—glonoin in full doses is valuable.

When eclampsia is fully established the first indication is to control the convulsions. Full chloroform anæsthesia may serve a good purpose. If the convulsions are not promptly controlled the uterus must be speedily emptied. This constitutes the most important method of dealing with eclampsia. Two lives are at stake, and by addressing ourselves assiduously to speedy delivery of the fœtus we contribute in the largest manner to the conservation of both.

Rapid dilatation first with steel dilators, if need be, then with manual stretching of the os and cervix, followed by the forceps, is the nearest approach to idealism. Only rarely can the deep incision of Duhrssen be required. Cæsarean section should be reserved for extreme complications, as deformed pelvis, or to preserve the fœtus when the mother's condition is hopeless. Veratrum viride is dangerous, uncertain and deceptive in action.

In eclampsia of pregnancy, *i.e.*, prior to term, the aseptic bougie, introduced to the fundus and coiled within the vagina, may be employed to induce labor. Finally, to promote the elimination of toxic material diuresis, catharsis, and diaphoresis should not be forgotten; neither should the hot air bath, nor the hot pack be overlooked.

LABORATORY OF THE BOARD OF HEALTH OF THE PROVINCE OF QUEBEC.

Circular on attenuated test cultures as a safeguard against pseudo-reactions in serum diagnosis of typhoid by the dried blood method.

MONTREAL, 7th January, 1897.

To the President of the Board of Health of the Province of Quebec.

Sir,

In my work in serum diagnosis done jointly with Dr. D. D. MacTaggart, we recently met with a series of peculiar partial reactions, in which the dried blood solution from many perfectly healthy persons gave a very decided agglutination. The blood serum from the same persons was found much less liable to give these pseudo-reactions. This made it less easy to exclude other febrile diseases, and as with this test accuracy in the negative diagnosis is of great practical importance, others who may meet with similar pseudo-reactions will be interested in learning how they may be avoided.

These pseudo-reactions were not encountered in our earlier cases when attenuated cultures were used. They began to appear when we employed a short time virulent cultures, and disappeared again on resuming the use of attenuated ones. Active, virulent cultures intensified by daily transplantation and growth at the body temperature were therefore not suitable for the dried blood test. Where only active cultures are employed, we do not think that the dried blood method can be considered to have had a fair trial.

The explanation of this difference appears to be that the serum contains relatively less of the substances causing agglutination than solution of the entire blood. Hence solutions of the entire blood react more intensely to test than solutions of the blood serum alone. This was the reverse of what we had anticipated.

It is found that old laboratory stock cultures kept at room temperature, and transplanted at intervals of about one month, give us the best result. Bouillon test cultures grown from this stock for 12 to 24 hours at body temperature are found to react decisively with solutions of typhoid blood or

typhoid serum, the reaction being as a rule well marked within 15 minutes. With non-typhoid blooding serum solutions, the same test cultures give no reaction even after 24 or 48 hours contact. Intra-peritoneal injection of 1 c. c. of such living bouillon culture produces in guinea pigs a marked blood reaction and immunity without much disturbance of health. We find that the best results in cases of dried blood are obtained with cultures where the motion as seen under the microscope is of a rapid gliding character, but free from darting movements. If the movement is sluggish owing to too great attenuation of the culture, a few daily transplantations at body temperature will make it more active. Exact estimation of the degree of dilution has not been found necessary for ordinary diagnostic work when attenuated cultures are used. A very faint tint in the drop examined usually indicates sufficient strength. The solution should not be thick and viscid.

All the results which I have reported (*N. Y. Medical Journal*, Oct. 31, 1896, and *British Medical Journal*, Dec. 5, 1896) were obtained with attenuated cultures. A report giving some additional technical details has been prepared, and can be sent to any who desire further information.

I remain, yours respectfully,

WYATT JOHNSTON,

Bacteriologist to the Board of Health Province Quebec.

ASSOCIATED PHYSICIANS AND SURGEONS OF SANTA CLARA VALLEY.

San José, Cal., Dec. 18th, 1896.

Dear Sir,

We ask you to give publicity to this letter and accompanying resolutions, to the end that in all communities afflicted with the pestiferous practice of lodge doctoring, physicians may be encouraged to assert their independence through organization.

Here, in Santa Clara County, Cal., containing 70,000 population, all the physicians of the County, numbering 124, have entered the compact that has ridden us of a slavish evil, and wrought independence and freedom for the practitioners of medicine. Investigation shows that medical compensation for lodge work averages about 15 cents on the dollar.

Even respectable lodge physicians feel a sense of degradation in giving their services for 15 cents on the dollar, and the ever-increasing spread of these alleged charitable institutions is absolutely destructive to the business of other physicians.

The main incentive of the persons who band themselves together in lodges is to get cheap doctoring; they are willing to take but not to give. They belong to protective unions, and the same right should not be denied physicians. Ninety-nine per cent. of these people are able to pay reasonable fees to physicians, but will not do so as long as a few doctors in every community for the sake of immediate gain can be induced to stand as driven guys to the lodge politicians. No preacher or lawyer would give his services to these people for 15 cents on the dollar. No grocery store or merchandise firm would contract to supply these lodges with goods at 15 cents on the dollar of actual worth.

The remedy indicated in the subjoined resolutions is simple and manifestly efficacious, depending upon the personal honor and free will of those concerned. Where one doctor temporarily profits by contract work, the business and ethical rights of fifty others are violated; hence an overwhelming *esprit de corps* is created among physicians which will sustain a strict observance of the pledge.

LINCOLN COTHRAN, M.D.,
Secretary.

RESOLUTIONS.

Adopted by the Physicians of Santa Clara County.

WHEREAS, Rendering professional services at a stipulated fee per capita per annum is derogatory to the dignity of the medical profession, we, the undersigned physicians and surgeons of Santa Clara County, California, enter into the following agreement:

FIRST.—We mutually, jointly, and individually, pledge our word of honor not to enter into any contract or agreement, or renew any existing contract or agreement, either written, verbal or implied, to render medical or surgical services to any lodge, society, association or organization.

SECOND.—We will not render medical or surgical services to the members of the above mentioned bodies for less compensation than we charge the general public for similar services.

THIRD.—This agreement shall not be construed to affect existing contracts between physicians and surgeons and the above mentioned bodies.

FOURTH.—These pledges shall take effect and be in force for a term of three (3) years from and after May 22, 1896.

This agreement shall not apply to hospitals and purely public charitable institutions.

Book Reviews.

Le Langage Ecrit.—Par le Docteur P. Keraval. (Written Language, by Dr. P. Keraval.) 1 vol. in 16, 200 pages; Soc. d'Editions Scientifiques, 4, rue Antoine Dubois, Paris. Price 7 fcs 50.

This is a work of psycho-physiology, and will prove especially useful to the neurologist. The first chapter is devoted to the characters, words and phrases of the following languages: Hebrew, Arabic, Russian, Sanscrit, Chinese, Japanese, Egyptian, and Sino-Japanese. The second chapter embraces the mental images corresponding to these languages. The third chapter is devoted to explaining the development of these images in the evolution of humanity and the development of writing. The fourth chapter treats of the laws governing written language, in reality a sort of psycho-physiological grammar, the ground-work of the language. The fifth and six chapters treat of the mechanism of reading, the different centres in the brain as well as the different pathological conditions connected with written and spoken language.

Hygiene et Traitement du Diabete.—Par le Dr. E. Monin. Soc. d'Editions Scientifiques, 4, rue Antoine Dubois, Paris. (Hygiene and Treatment of Diabetes, by Dr. E. Monin, Paris.) Price, 3 fcs.

This monograph treats in a most practical manner the subject of Diabetes, giving in a very condensed form the old as well as the new theories upon the causation of the disease, going into the subject of hygiene and treatment in a most practical and concise way. A most useful formulary is appended, which will be found very beneficial to the practitioner, who is often at a loss to find in his pharmacopœia a combination which may prove beneficial.

Elements d'Analyse Chimique Medicale Appliquee aux Recherches Cliniques. Par le Docteur Sonnié-Moret. 1 vol. in 16, 236 pages. Prix 6 fcs. Soc. d'Editions Scientifiques, 4, rue Antoine Dubois, Paris. (Elements of Clinical Analysis, by Dr. Sonnié-Moret, Paris.)

This volume of 236 pages contains what the most exacting clinician would require in the way of practical methods of chemically analyzing the urine, the blood, serous exudations, gastric juice, bile, saliva calculi, milk and butter. Dr. Sonnié-Moret has treated the subject from the standpoint of the clinician, and brings his methods and manipulations to the level of a clinical laboratory, which need only be a modest one, this fact alone making the book valuable, as most of the authors preceding him seem to have forgotten that practicing medical men do not always have an elaborately furnished laboratory and a great deal of time in which to make the most minute chemical tests which are not always the most useful for the practitioner.

De la Nature de L'Epilepsie.—Par le Dr. Fr. Hallager. (On the Nature of Epilepsy, by Dr. Fr. Hallager, Viborg, Danemark.) 1 vol., 180 pages. Price 5 fcs. Société d'Editions Scientifiques, 4, rue Antoine Dubois, Paris.

In his treatise upon the subject, Dr. Hallager classifies the different forms in two classes, *i.e.*, epilepsy due to lesions of the cortex and reflex epilepsy; he also devotes a goodly portion of his work to experimental epilepsy, and quite a few pages to the symptoms of epilepsy and post-epileptic phenomena. The bibliographical references show that he has treated the subject in a most thorough manner, and his tabulation of reported cases is most comprehensible; in reality, it is a most valuable volume.

PUBLISHERS DEPARTMENT.

ARTIFICIAL SOMNAMBULISM.

Two fundamental elements constitute personality—memory and character. In the latter respect, as to character, induced somnambulism is not perhaps always clearly distinguishable from the waking state. It frequently happens that the somnambulist does not relinquish the character that he had before he was put to sleep. The reasons are manifold. This does not, however, hold for the second element of personality—memory. It has long been said that memory supplies the chief sign by which the new state may be distinguished from the normal state. The somnambulist shows, in fact, a curious modification in the range of his memory; the same regular phenomena of amnesia may be produced in him as occur in the spontaneous variations of personality.

Two propositions sum up the principal modifications of memory which accompany induced hypnotic somnambulism: first, the subject recalls during his waking state none of the events which happened during somnambulism; and second, on the other hand, when put in the somnambulistic state, he may remember not only the previous somnambulistic states, but also events belonging to his waking state. It follows that memory attains its maximum extent in somnambulism, since it then embraces two psychological existences at once, as the normal memory never does. It may even be remarked that the somnambulist, when he endeavors to recollect certain particulars, has better memory than the same person awake. Gurney has shown, moreover, from studies of hysterical patients, that somnambulistic states may persist in the waking life; that the somnambulistic ego, the second condition, is not always completely effaced when the waking state returns, but survives, co-exists with normal thought, and gives rise to complex phenomena of division of consciousness.—*From Plural States of Being, by* ALFRED BINET, *in Appletons' Popular Science Monthly for February.*

The weekly issue of *The Living Age*, bearing date Feb. 13, is the Monthly Supplement number, and, including the supplement, contains 96 pages. Among its most striking features are "All Souls' Eve in Lower Brittany," a delightful sketch of the customs and folk-lore of the Breton peasants, translated for *The Living Age* from the French of Anatole le Braz; the first part of "The Land of Suspense," Mrs. Oliphant's latest story of the seen and unseen; a passage from Mrs. Steel's stirring story of the great mutiny, "On the Face of the Waters"; Herbert Spencer on "The Fallacies of Socialism"; a discussion of "Political Ideals and Realties in Spain," by Emilio Castelar, translated for *The Living Age*; and a paper by W. Holman Hunt on "Religion and Art."

The "Monthly Supplement," giving Readings from American Magazines, Readings from New Books, and a List of the Books of the Month, adds a valuable feature to *The Living Age*, which its readers will be quick to appreciate, and with the translations from eminent continental authors, on prominent questions of the day, fairly doubles the value of the Magazine which, before these additions were made, was well worth the subscription price of $6.00 a year.

The Living Age Co., Boston, are the publishers.

THE PRESIDENT'S DAILY ROUTINE.

Ex-President Harrison has written of "A Day with the President at his Desk" for the March *Ladies' Home Journal*. The article is said to be singularly interesting in the detail with which it describes the wearisome routine of the President. It is said that General Harrison, in this article, has delivered himself with great directness and vigor, relative to the annoyances that are visited upon a Chief Executive by persistent office-seekers, and he suggests a unique plan, by which the President's burdens in that direction could be greatly lightened, and he be enabled to devote more attention to more important matters. A feature of the article that will have a timely interest to those ambitious to serve the country under the incoming administration describes very fully how the President makes appointments to office. "A Day with the President at his Desk" is unique in being the first time that the daily life of the President has been described by one who has filled the exalted office. Articles upon the social and domestic life of the President by General Harrison will follow in successive issues of the *Journal*.

The January (1897) number of the *Alienist and Neurologist* contains "Insane Heredity; Insane and Consanguine Marriages, etc.," by Dr. H. P. Stearns; "Analgesia of the Ulnar Nerve in the Insane," by Dr. Arrigo Ciannone; "Report of a Case of Brain Syphilis Heroically Treated with Mercury, Followed by a Mercurial Neuritis and Recovery," by William C. Krauss, M.D.; "Interaction of Somatic and Psychic Disorder," by Jas. G. Kiernan, M.D., Chicago; "Imperative Conceptions," a note by C. H. Hughes, M.D.; "Defence of Modern Psychiatry," by Dr. Wm. Hirsch, New York; "Cyclone Neuroses," by C. H. Hughes, M.D., St. Louis; "On the Effects of Extirpation of the Parathyroid Glands," note by Prof. G. Vassale and Dr. F. Generali; "The Stigmata of Degeneration—A Cursory Editorial Critique," and the usual Editorials, Selections, Reviews, Book Notices, Etc. C. H. Hughes, M.D., Editor, 3857 Olive Street, St. Louis, Mo. Subscription $5.00 per annum; single copies, $1.50.

From U. S. Commissioner of Education, the Hon. Wm. T. Harris's very suggestive "The New Education" to Miss Genevieve Thorndike Clark's "On the Threshold: a Psychic Experience" is a far cry, but the February *Arena* spans the gap, providing much and most diversified entertainment on the way.