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Original Communications.

A REVIEW OF THE TREATMENT OF FIBROIDS OF THE UTERUS.*

BY G. S. RENNIE, M.D., L. R. C. P. L., HAMILTON.

The treatment is best considered under the head of Medical, including Electricity, and Surgical.

Medical.—We have at present no remedy that will act upon fibroid tumors, so as to cause their disintegration and absorption.

Ergot of Rye, however, is a very important remedy in fibroids. It acts beneficially in two ways: 1st. It checks their nutrition by diminishing the amount of blood sent into them. 2nd. It favors their pedunculation and expulsion.

These two effects are due to the action of the drug on the unstriped muscular fibres of the walls of the uterus, and coats of the blood vessels. The best results are obtained from ergot, when the drug is administered hypodermically, and in suitable cases. By suitable cases, I mean those in which the tumor is intra-mural or submucous; it must be surrounded by layers of muscular fibre sufficiently developed to be capable of contraction.

Hydrastis Canadensis, given in doses from η 15 up to ζ iv, will usually check the hæmorrhage, but it has no influence on the size of the tumor.

Bromide of Potassium and other remedies have been used with a varying amount of success.

Electricity.—The treatment of fibroids of the uterus by electricity, was about three years ago brought prominently before the profession by Dr. Apostoli, and it is still on trial; as yet we have not sufficient data to come to any conclusion, as to its real value.

If we take Apostoli's figures they are most pleas-

*Read before the Hamilton Medical and Surgical Journal Club.

ing: he says that in 278 cases he has treated, 95 times out of 100, permanent benefit has followed, with a suppression of all the miseries connected with such tumors. Now what are these miseries: hæmorrhages, troubles of menstruation, dysmenorrhœa, nervous disturbances, direct pains in the growth itself, and from mechanical pressure, and the annoying series of reflexes

Cutter records 50 cases, with the following results: 11 cured, 3 relieved, 25 arrested, 4 fatal and 7 without benefit.

Skene Keith mentions 13 cases in all, of which he says, the tumor was reduced and symptoms relieved.

Thos. Keith, 100 cases, in every one of which he says the tumor was reduced in size, hæmorrhage and pain checked, and general health improved.

These results are most pleasing, but against them can be cited numerous cases that have not been benefited in any way. *Apostoli*, *Massay* and others, say, that this method of treatment has met with failures because the gynæcologists do not know how to apply the treatment properly; but this, to my mind, is not a reasonable statement. After a discussion following a paper on this subject by *Dr. Townsend*, before the American Gynæcological Society, the conclusion arrived at was, that the results obtained by *Apostoli* and the *Keiths* had not been got by others who had used it in a large number of cases, nor could any better results be obtained by electricity than by rest, ergot, etc.

Dr. Halliday Croom, of Edinburgh, has arrived at the following conclusions:

1st. That electricity will arrest the hæmorrhage, but he has not seen a case in which the improvement was permanent, and he does not regard electricity in this respect as in any way superior to rest, ergot and styptics.

2nd. In regard to the pain, he says, that as far as fibroids are concerned, the pain is accentuated.

3rd.—With regard to the diminution in size of the tumor, he has not met with a single case which has shown any disposition to diminish through the influence of electricity, more than by any other means. While, on the contrary, he has found more significant cases of diminution from rest and ergot than from any electric treatment whatever. He is rather inclined to think that the electric current increased the development of muscular tissue, and his experience has been that

some tumors had grown more rapidly after the use of electricity.

Dr. Stevenson, of St. Barts., holds about the same opinion as Mr. Croom, and many others in this country fall into line with them.

I have seen a number of cases treated by this method with little or no improvement. The electrical treatment of fibroids, brought forward by Apostoli, has not met with as great success in the hands of any one else, and from present statistics we might justly arrive at the following conclusions :

1st.—It cannot be doubted but that the hæmorrhage is less, or may be even controlled altogether for a time.

2nd.—That the tumors in a number of recorded cases have diminished greatly in size. But to say that the tumor has ever entirely disappeared in a single case, where the diagnosis of a uterine fibroid was beyond doubt, is a disputed point.

3rd.—That the applications of electricity to the uterus are far from void of pain, and patients object greatly to frequent applications on this account.

4th.—That local erosions may be produced when a current not exceeding 120 milliamperes is used ; while Apostoli recommends a current as strong as 350 milliamperes.

5th.—That the employment of this measure is by no means unattended by danger to life, even when a current of much less strength than 250 to 350 milliamperes is used.

6th.—That puncture of the tumor and the employment of the galvanic current is far from being without danger, as a number of deaths from this procedure have been recorded.

7th.—That after all our labor, and pain to our patient, there is perhaps little more to be attained than we can get from the palliative treatment of rest, hot douching, ergot, etc.

Surgical Treatment.—This consists in the removal of the tumor through the vagina, or through the abdominal wall ; or the removal of the uterine appendages with a view of checking the hæmorrhage and growth of the fibroid.

1. *Removal through the vagina.*—The cervix must first be dilated, then an incision is made in the mucous membrane covering the tumor. This checks the hæmorrhage, as it divides the venous sinuses in the capsule, which retract and are closed by thrombi. It also favors the expulsion

of the tumor, which comes to protrude through the incised mucous membrane. After incision, the separation of tumor is generally left to the natural efforts, assisted by full doses of ergot. Should sloughing occur, the tumor must be rapidly removed, by a spoon-saw or other means. The mortality of this operation is from 15 to 20%.

2. *Removal through the abdominal wall by laparotomy.*—The operation here depends upon the nature of the growth. 1st. For subserous and pedunculated tumors, the pedicle can be treated intra-peritoneally as in ovarriotomy, *i. e.*, transfixed and ligatured in two portions, though it is desirable in addition to bring together with catgut the edges of the peritoneum over the end of the stump.

The statistics for this operation show a mortality of ten per cent.

In the second class of cases when the tumor grows from the serous aspect, but between the layers of the broad ligament, and into the cellular tissue, a more serious operation is demanded, *viz.*, that of enucleation from the peritoneum and cellular tissue. The cavity, after the operation is sewn up with catgut, and the abdominal incision closed ; or its margins may be stitched to the open abdominal wound, the hollow being packed with iodoform gauze. The mortality of this operation is very high.

The third class, when the fibroid is in the substance of the wall, gives occasion for two quite distinct methods of operation. (1) Enucleation from the wall ; or (2) Hysterectomy.

1. Enucleation from the uterine wall, and sewing up the hollow, is an operation introduced by Martin, of Berlin. He describes the operation as follows :—“After the uterus has been exposed and drawn forward into the incision, a longitudinal incision is made over the tumor, which is shelled out of its capsule ; the margins of the cavity are then trimmed with scissors, considerable portions of the muscular wall, and all the connective tissue portion of the capsule being sometimes excised, and the wound closed by continuous deep and superficial uniper catgut sutures.”

The uterine cavity sometimes is opened during the operation, but if it be disinfected and packed with iodoform gauze, which acts as a drain, it does not affect the prognosis. The mortality from this method is 18 per cent.

2. *Hysterectomy, or Supra-Vaginal Amputation for Fibroids.*—This operation may be divided into three stages—1st, the opening into the abdominal cavity; 2nd, the extraction of the tumor; 3rd, the treatment of the stump.

1. An opening in the abdominal wall is made from the ensiform cartilage to the pubes. The bladder is sometimes high up, and may have to be separated from off the tumor; as the bladder is more easily defined when distended, it should not be emptied before the operation.

2. The tumor is brought out through the abdominal incision. When the mass is large it may be difficult to draw the slippery tumor out. To get more purchase on it a nickle-plated corkscrew may be inserted into the tumor.

3. After removal of the tumor the ligatured stump is either dropped into the peritoneal cavity and treated intra-peritoneally, as in ovariectomy, or the stump is brought to the abdominal incision, and being fixed there, is treated extra-peritoneally.

The great point in the operation is to successfully secure the ovarian and uterine arteries, in order to prevent hæmorrhage. The question then arises, how can we best secure these arteries, and how should the stump be treated after removal of the tumor?

Schoeder and Martin advise that a double silk ligature be carried on a needle from behind, through the cervix, so as to come out at the bottom of the vesico-uterine pouch in front; this is divided, and the end of each half carried backwards through the broad ligaments of its respective side, just external to the cervix, and knotted to its corresponding end; the cervix is thus tied in two portions, and each uterine artery is controlled by a ligature. The tumor, with the body of the uterus, is now cut rapidly away, with a large knife, above the ligatures. The uterine stump is cut in a V shape, and first the muscular walls are adapted by coarser, then the peritoneal covering with finer sutures. Martin, at present, I believe, employs an elastic ligature to constrict the uterus before suturing the stump.

I had the pleasure of seeing Mr. Sutton, at Middlesex Hospital, perform this operation a couple of times. The method he adopted was to pass a ligature by means of a long curved needle as deeply as was possible, on either side of the cervix, which,

when tied, controlled most effectually, both the ovarian and uterine arteries. He then passed the wire of a *serre-nœud* around the neck of the tumor, which, when tightened, served as a safeguard against hæmorrhage. The uterus and tumor were then rapidly removed by a V-shaped incision, the wire of the *serre-nœud* loosened and removed with only a little oozing from the cut surface. The muscular walls were then carefully brought together with coarse, and the peritoneal covering with fine sutures.

While in London, I saw Dr. Bantock, at the Samaritan Hospital, remove a large fibroid with the uterus. He treats the pedicle extra-peritoneally and uses a *serre-nœud* to control the hæmorrhage. He does not apply any styptic or cautery to the pedicle when fixed in the abdominal wound, but dresses it with dry thymol gauze.

Dr. R. T. Smith did two hysterectomies while I was at the Hospital for Women, in Soho Square, both with success. He treated the pedicle in both of these cases extra-peritoneally.

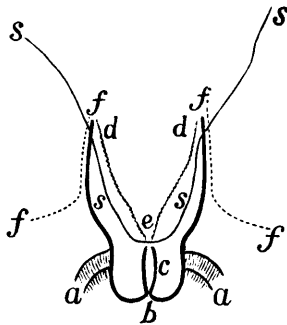
Sir Spencer Wells and Péan, both favor the extra-peritoneal treatment of the pedicle. Péan describes the operation as follows: The tumor is drawn out of the abdomen and held perpendicularly by an assistant. The operator transfixes the cervix with two strong wires at right angles to each other; below these wires he passes a curved needle through the cervix and drags back a double wire; this wire is divided and each half is fitted into a *serre-nœud* by means of which it is both tightened and twisted. The tumour and uterus are amputated above the wires; the pedicle is placed in the abdominal wound and is kept from retracting into the abdomen, by means of the wires and *serre-nœuds*; these are left in position, so that they may be tightened in case of hæmorrhage."

Keith prefers the application of a clamp to the *serre-nœud*.

Klieberg introduced the elastic ligature, which is passed double through the cervix, it is then cut and the two ends on each side firmly knotted.

Fritsch has had remarkable results without the employment of clamp, *serre-nœud* or elastic ligature. He uses stitches as in the intra-peritoneal method, the hæmorrhage being controlled by the employment of a temporary elastic ligature, until his stitches are placed in position. He proceeds as

follows: "After the tumor has been brought out through the incision, the upper portion of the incision is closed. The broad ligaments are secured in two places and divided between the ligatures and the elastic ligature applied. After the tumor is cut away the end of the stump is stitched as shown in the drawing (Fig. 1). The elastic ligature is then removed; and new stitches put in if there is bleeding, the uterine arteries being tied separately when visible. The broad ligament pedicles are drawn up and stitched to the side of the stump around which the parietal peritoneum is adapted. The sutures to close the abdominal wound are then passed, those next the uterine stump being passed through it." Fritsch has operated in this way on 19 cases, without a death.



(a) Vaginal wall. (b) External os. (c) Cervical canal. (d.e.d.) Funnel shaped raw surface left after excising mucous membrane. (r) Peritoneum. (s) Suture.

At a recent meeting of the American Association of Obstetricians and Gynecologists, Dr. Werder read an interesting paper on the elastic ligature in the extra-peritoneal treatment of the pedicle. In speaking of its advantages, he says that the elastic ligature gives absolute security against hæmorrhage, and with it there is less danger from sepsis, because the dressings do not require to be disturbed for the first few days; nothing, therefore, prevents the formation of firm adhesions between the approximated peritoneal surfaces within the shortest space of time, thus securely excluding all septic matter from the peritoneal cavity that may subsequently form about the pedicle.

In the discussion that followed, Dr. Krug, of New York, said that he had given up the employment of the elastic ligature and extra-peritoneal treatment of the pedicle. He believes in not leaving any stump, and takes out all the uterine

tissue and drains by the vagina. He has had remarkable success by this method, having operated in several cases without a death.

It is very difficult, or almost impossible, to get statistics of cases of abdominal hysterectomy, as writers give them along with their results of operations for the removal of fibroids tumors, not specifying the respective operations.

Thos. Keith reports 26 cases with four deaths. Tait, 88 cases, with a mortality of 11.3%, the last 31 being without a death. Joseph Price, 26 cases, without a death. In all, I have been able to collect 94 cases with 15 deaths. In 57 of these the stump was treated extra-peritoneally, with seven deaths; 22 intra-peritoneally, with four deaths, and in the remaining 13 it was not specified whether the treatment was intra, or extra-peritoneal.

There can be little doubt but that the safer way of treating the pedicle, from our present knowledge, is by the extra-peritoneal method, either by fixing it with *serre-neud*, clamp, elastic ligature, stitches, or Tait's pins. Tait and Bantock both remark that certain cases of pedunculated fibroids might be treated by ligature and dropping the pedicle; but some pedicles would be insecure and dangerous, no matter how carefully they were tied, and even the most tempting pedicles cannot be relied on, for after they have been tied ever so tight they may begin to bleed within 24 hours.

On the Continent better results have been obtained from the intra-peritoneal treatment of the pedicle.

Sir Spencer Wells, in speaking of hysterectomies and the best means of treating the stump, says:—"I cannot help thinking that, as in ovariectomy, the clamp at one time gave better results than the ligature, but gave way to intra-peritoneal methods, so it will be with hysterectomy. But this is a matter for further observation, and improvements in the mode of applying the ligatures will, no doubt, be suggested."

(To be continued.)

The *Therapeutic Gazette* says that one part of menthol, twenty parts of alcohol, and thirty parts of simple syrup relieve nausea and vomiting—sometimes even the obstinate vomiting of pregnancy—if given in teaspoonful doses every

INFLUENZA, ITS COMPLICATIONS AND SEQUELÆ.*

BY W. H. MOOREHOUSE, M.B. L.R.C.S., AND L.R.C.P.,
EDIN., LONDON, ONT.

My object in bringing this subject up for discussion, is, to get the views of the various members, (1) as to the mode of propagation; (2) its various forms; (3) its complications and after effects.

1. As to the mode of propagation, I think the history of the affection, its mode of onset, attacking different individuals in different ways, the rapidity of its dissemination, the wide area over which it extends, all induce me to believe that it must be due to some specific atmospheric influence, probably some form of living miasm.

Now, one of the main starting points of miasmatic epidemics is a good breeding ground, and such a breeding ground is said to be particularly well supplied by inundations, floods, etc., such as the overflowing of its banks by some great river; and it has been asserted, that the late epidemic was due to the great floods in China, about a year ago, when millions of animal lives were destroyed. These bodies, along with decaying vegetable matter, mixed with the slimy detritus and moisture, consequent upon such catastrophies, would make a capital breeding ground for such a nuisance.

The theory of the origin of the late epidemic in China, is well borne out, when we consider that it came from the east, working its way towards the west and south—through Russia, Germany, France, Great Britain, America and Australia, completely girdling the globe, in the space of a few months.

The first authentic account given of this disease was in the year 827, when we are told, "that even the dogs and birds suffered with it, as well as man." About the year 1658, this disease began to be known as influenza, which is derived from the Italian for "influence." Willis writes: "About the end of April, 1658, suddenly a distemper arose, as if sent by some blast of the stars, which laid hold on very many together, that, in some towns in the space of a week, above a thousand people fell sick together."

During the past three hundred years we have had a great many visitations of influenza; some writers say that we have had as high as one hundred and fifty such epidemics.

Etiology.—As I have stated, the disease is, no doubt, due to some form of living miasm, which is rapidly diffused from point to point through the atmosphere, effecting its entrance into the body through the respiratory passages, more particularly the air cells. At the same time authentic cases are on record, where the presence of the disease was due to personal intercourse and contact with those already suffering from it. Bodies of persons who died from influenza, when removed from one hemisphere to another, upon exposure, have been known to give rise to a local outbreak of this disease.

It may appear at all seasons of the year, and in all climates. It attacks both the weak and the robust alike, but the mortality is greater among the weak and delicate, as in also those having bad sanitary surroundings.

Clinical History.—This disease presents great variations in intensity, from being very mild and trifling to that of the gravest character, terminating in death. The milder forms come on with a feeling of malaise, lassitude, weariness, inability to concentrate the mind upon business matters; weakness, with shortness of breath upon exertion. To this may be added, some catarrhal trouble, such as laryngitis, bronchitis, coryza. Such cases may or may not be ill enough to keep their rooms.

Other more severe forms may be ushered in with a slight chill, or chilliness, alternating with flashes of heat; afterwards a fever of more or less severity comes on, ranging from 99.5° to 105°. One peculiarity in some of these cases is, the very rapid rise and decline of the fever, followed by very annoying sweats. At the same time there may be intense frontal headache, with pain in the orbits and root of the nose, so that movement of the eyeballs causes distress; sometimes the pain is limited to one side of the temple or brow, or it may be bilateral. There is usually a dry cough, with slight soreness of the throat. The cough is apt to be paroxysmal, very irritating and annoying to the patient. Loss of the sense of taste and smell is of quite common occurrence.

We will now consider some of the leading features of this affection.

* Read before the Ont. Medical Association, June, 1890.

1. *Fever*.—As before observed, is irregular in character, and may vary from 99° F. to 105° F. It frequently rises and falls very rapidly. One hour the patient may appear cool and comfortable, and at the next hour be in a raging fever. It does not in most cases follow the law of "morning remission and evening exacerbation," the fever frequently being higher in the morning than in the evening. There may be a number of these periods of exacerbations and remissions in the course of twenty-four hours, each period being followed by a more or less profuse perspiration.

2. *Pain*, is one of the characteristic symptoms of a large class of cases, and is sometimes very severe, especially in the head, and muscles of the neck and back, also in the sides, limbs and abdominal muscles; in fact, any part of the body is liable to be affected. The pain is apt to be spasmodic, and, like the fever, remittent in character; a paroxysm of pain usually precedes the attack of feverishness.

3. *Disturbances of the Digestive Tract*.—Loss of appetite is a very constant symptom, with thirst, foul and loaded tongue, tenderness in the epigastric region, with nausea and vomiting; constipation may prevail. In other cases the catarrhal symptoms appear to attack the gastro-intestinal tract instead of the pulmonary, producing diarrhoea, and even dysentery; as a result we have chronic gastro-hepatic catarrh.

4. *Urine* is sometimes very much decreased in volume, one case noted, after a prolonged attack of influenza, passing only two oz. in 24 hours; this continued for nearly three weeks. In three cases there was a marked hæmaturia; urates are usually abundant.

In from three to twelve days the fever begins to abate and the pains subside, there is then an increase in the flow of urine, expectoration becomes more free and the catarrhal symptoms abate, but may become very protracted.

5. *Nervous System*.—There is often very marked functional disturbances of the nervous system, with great depression and lowness of spirits and loss of strength; mind may become weak, and even delirious, which may last for some time; stupor, convulsions, cutaneous hyperæsthesia, with areas of burning pain, similar to the application of a sinapism, or some highly heated surface; neuralgia, myalgia, pleurodynia, muscular twitchings, etc.,

Often there is a great drowsiness, or the reverse may be the case.

The above, are some of the symptoms met with in ordinary practice, during an epidemic of influenza. Seldom are they all met in the same patient, but there are certain types which appear to prevail. For example, there is:

(1) *Catarrhal fever* which may be further subdivided into (a) respiratory, (b) gastro-intestinal.

It is generally supposed, that all cases of influenza partake more or less of the catarrhal form, and from an analysis of a number of cases I find that it prevailed in $\frac{3}{4}$ of all cases affected; yet, contrary to the general opinion, it is not an essential feature of the disease.

(a) In that form attacking the respiratory passages, there is more or less extensive hyperæmia of the mucous membranes of the head and throat, extending into the bronchial tubes; cough is more or less severe, and often spasmodic, out of all proportion to the amount of bronchitis and expectoration, which has led to the idea that it is often of nervous origin, or it may be due to some enlargement of the bronchial glands.

(b) In the gastro-enteric form, we have a hyperæmic condition of the mucous membrane of the stomach, liver, gall bladder and ducts, together with the intestinal tract. This gives rise, often, to great loss of appetite, nausea and vomiting, with diarrhoea, alternating with constipation. This inflamed and swollen condition of mucous membrane extends up the ductus communis choledochus into the gall-bladder and hepatic ducts. Jaundice, resulting from obstruction, is thus set up, with its attendant troubles.

(2) *Nervous Form*: One of the first and most prominent features of this form, is the extreme physical prostration. The slightest exertion, causing great exhaustion, with shortness of breath, and rapid action of the heart. This condition may remain for many weeks or months, long after convalescence.

Headache, which may come on remarkably sudden, is almost constant. The pains may extend from the root of the nose, through the orbits up into the brow, following the prolongations of the Schneiderian mucous membrane, into the frontal sinuses; often the pain is referred to the middle ear, which frequently suppurates. In other cases, the pain is seated at the point of attachment of

the cervical muscles into the occiput, at the base of the skull. Pain, of a severe character, may be felt in any muscle, or set of muscles, which may wander from part to part, in some cases attacking the heart, producing death, which I have seen in three instances.

Delirium, more or less mild, often attended with delusions, extending over weeks, may occur. A prominent feature of this form, is the great mental despondency which is often met; the patient is low-spirited and depressed, and takes no interest in his former hobbies. In fact, life appears a blank to him. The countenance denotes very great anxiety and is usually pale. Another feature, is that of muscular spasms or twitchings. I have a patient, who contracted influenza about six months ago, who is now, barely able to walk at times, on account of the twitchings, or "jerkings," as he calls it; sometimes, as in this case, a single muscle in a limb will twitch; again, a combination of muscles will take on spasmodic action, causing the limb to be rapidly drawn to one side. Tremulousness, with dizziness and faintness upon any sudden exertion, is frequently met.

Rheumatism, of a more or less acute character, of the joints is common, as also muscular rheumatism. Many cases, during the course, but especially towards the close, of an attack, appear to be complicated with a form of remittent, there being slight chills, followed by fever, which rises suddenly, and falls as suddenly, at irregular intervals, accompanied by night sweats, more or less profuse.

Cause of the various forms of this disease, is, no doubt, due to individual peculiarities, conditions of health, age, etc., and not to any variation in the character of the poison introduced into the system, as we find all the forms prevailing at the same time during the one epidemic.

Complications: (1) Capillary bronchitis; (2) Inflammatory conditions of the lung substance proper. We are told, upon good authority, that from 5 to 10% of all influenza patients suffer inflammatory lung complications.

Inflammation of the lungs was unusually fatal in my practice, during the past winter, when it occurred as a complication, or followed an attack of influenza. Catarrhal pneumonia was the form most usually encountered, and it appeared to be a gradual and insidious extension from the tubes to

the air-cells. But the most fatal and distressing form was pleuro-pneumonia, coming on with violent and distressing pain at the very onset, the patient appearing to be stricken with death from the beginning, as though from collapse.

Pharyngitis has, in numerous cases, during the late epidemic, been very troublesome, often extending up the Eustachian tube to the middle ear, resulting in inflammation with great distress.

Inflammation of the kidneys, of a well-marked character, was set up, during the second week of the attack, in a few cases.

Sequelæ: the most frequent is neuralgia; next, is myalgia, or muscular rheumatism. Eight years ago last March, a gentleman, forty years of age, had a severe attack of influenza, which left as a sequel, supraorbital neuralgia, and myalgia of the muscles, of the neck and scalp. He does not suffer constantly from these attacks, but they are apt to come on when very much fatigued. It makes its appearance by a painful sensation in the cervical muscles, gradually becoming more severe, and working its way up to the scalp, which becomes tender and painful, until the close of the second or third day, when all the pain appears concentrated over the left supra-orbital region, where it remains for 24 hours, when it takes its departure by a process of explosion. The entire process lasts from three to five days, during which there is extreme mental depression. He is then free for another week or two, until some exciting cause brings on another attack.

Old neuralgic affections, which have long lain dormant, have been revived with more than ordinary severity. The same may be said of rheumatism of the sub-acute type, which may be revived in old subjects, or started afresh, attacking the various joints, such as the wrists, ankles, etc., or the various muscles, in the form of lumbago, pleurodynia, etc., emphysema and organic heart-troubles have been much aggravated from the strain of coughing while in a weak, exhausted state.

Chronic Gastritis and Enteritis with congestion of the liver, which often takes months of dieting and careful treatment to overcome. These cases are liable to become aggravated by exposure to cold, or, when dormant, may again be aroused.

Great general debility, with nervous prostration and melancholia, is another very frequent

sequel, and is apt to make the patient a ready prey for any acute disease which may seize him. Several cases of great mental depression have come under my notice, approaching to a mild form of insanity. Such cases may last many months, and ultimately recover, provided some inter-current affection, as I have said, does not set in and carry them off.

Relapses are very common, many patients contracting the disease again and again, after apparent convalescence, thus keeping them in a low, weakened condition, which, in time, arouses into active existence any dormant diathesis, such as tuberculosis, etc.

THE TREATMENT OF DISEASES OF THE RESPIRATORY ORGANS BY INHALATION, WITH NOTES OF THREE CASES.

BY D. A. DOBIE, M.D., TORONTO.

Since the introduction of Koch's method for the treatment of tuberculosis, and the very promising results reported, in many cases, we may be inclined to let our attention wander from the consideration of older forms of treatment.

By strict attention to hygienic conditions, nourishing diet, etc., we all have observed the benefits that the patient receives.

Halter, Krull, Weigert, and later, Jacobi, experimented with a method of treatment by inhalation of hot air, which would seem at first sight to have claims to be called curative, since its intention was to remove the cause of the disease, by destroying the bacilli.

Latterly, the use of beechwood creosote has given promise of good results. The ardent disciples of this method of treatment, have urged the saturation of the system with the drug; but the irritating effects upon the stomach, its nauseous and pungent taste, and the difficulty of combining it with other drugs, are objections to its internal administration.

These objections and its unquestionably good effects, where it could be well borne, together with the knowledge of the benefits afforded to patients suffering from pulmonary disease, by a residence in places where the atmosphere is impregnated with resinous emanations from pine

forests, led me to try combinations of creosote, oil of Southern Pine needles, and other balsamic preparations, by inhalation, upon three patients suffering from pulmonary tuberculosis, the notes of which are given below.

The treatment by inhalation has long been practiced; but the instruments devised for that purpose, have heretofore been so imperfect, and inefficient, being merely spray producers or atomizers, that the results have been somewhat unsatisfactory.

The primary essential in an instrument for this purpose is its power to completely volatilize drugs intended for inhalation, thus ensuring their reaching the farthest recesses of the respiratory tract. I succeeded in securing a lately devised instrument, known as Dr. Coulter's Combined Vaporizer and Inhaler, which meets this requirement in the highest degree satisfactorily, and commenced using it with case No. I, on Oct. 24th, 1890.

CASE I. W. J. C., age 40, plainer; first seen Oct. 21, 1890. There was consolidation of the upper part of the left lung, extending in front to the lower border of the third rib and behind somewhat lower. There was considerable cough and expectoration, and from Sept. 1st, 1889, thirteen months previously he had had 28 attacks of hæmoptysis. He had been taking for one year previously cod liver oil and creosote, using ergot, turpentine and tannic acid for the hæmoptysis. The creosote had caused considerable gastric disturbance, and the turpentine renal congestion. Began using Coulter's vaporizer and inhaler on Oct. 24th, inhaling twice daily about 15 drops each of ol. pini. sylvestris, tr. iodi., and tr. benzoin co., and twice daily an inhalation of creosote and turpentine ãã gtt. xx.

The atmosphere of the room was kept impregnated with these preparations.

The hæmoptysis ceased entirely, the expectoration was lessened, the temperature lowered, perspiration suppressed, the appetite improved, and his weight increased.

He quit using the vaporizer, feeling he needed it no longer, about Jan. 15, 1891.

There is now very little cough or expectoration, although very little apparent change in the physical signs.

CASE II. Mrs. D., first seen in May, 1890. The physical signs did not definitely establish a

diagnosis; but the cough was severe, with copious expectoration. On examination of the sputum, bacilli were found.

First general tonic treatment with ol. morrhuae and creosote was given, with inhalations over hot water.

Afterwards a Coulter's vaporizer was procured, and the improvement has been gradual and marked. There has been no cough or expectoration since October last. The appetite has improved, night sweats have ceased, and she has gained in weight from 96 lbs. to 108 lbs.

CASE III. W. J., aged 21 years. First seen November 1st, suffering from a rapid form of pulmonary tuberculosis. The left side and upper part of right side were flat and perfectly motionless, the lower part of right lung only expanding.

Without any expectation of improvement in so hopeless a case, but merely to satisfy the whim of the patient, I loaned him a vaporizer. Although he was not aware of the condition of his lungs, he called my attention to the fact that he only felt the inhalation in that portion of the lung expanding. This last case serves to illustrate the fact that the volatilized oil was carried to the farthest part of the lung.

In cases I and II there was undoubtedly a marked influence upon the cough, and a general improvement.

Although my experience has been limited, I considered these cases worth reporting, in the hope of hearing further of this valuable form of medication.

Selected Articles.

THE TREATMENT OF BRONCHITIS.

We make no apology for bringing the subject of acute bronchitis under the notice of those of our readers who may be in general practice, beyond the fact that the present foggy weather with low temperature and north-east winds will swell the number of cases under treatment, and we venture to hope that when our remarks have been read our busy brethren will have derived some useful "tips" in treatment.

To do our work thoroughly we will dip a little into the pathology of the disease and see what an important bearing a knowledge of it must have

in directing our efforts. And first let us look at the anatomical structure of the parts concerned in an attack of ordinary catarrhal bronchitis in which we find the larger and medium sized bronchi, and by which we shall see the strong analogy that must exist between similar affections of the nasopharynx and trachea, and which we will define as an inflammation of the mucous lining of the tubes, a prolongation of that lining the above-named organs. But as we get deeper into the chest, and still following a tube to its final ending, we find (1) that the cartilaginous plates become more irregular, smaller, and finally disappear; (2) the bronchial glands also disappear in the finer tubes; and (3) the mucous membrane becomes more intimately blended with the elastic and muscular coats, and also that it gets thinner the nearer we get to the bronchial terminals, forming, in fact, part of the alveoli of the lung proper, and from these we learn two very important lessons—first, to direct our endeavors to confining the disease to the longer tubes, and, secondly, that when acute bronchitis reaches the finer structures it must become a most potent factor in setting up bronchopneumonia. We have also chosen the subject of acute bronchitis as the subject of our remarks because for some years we practised in a district not far from the river, and where we may say the disease was endemic, and thus we had opportunities of watching cases in all stages.

As we are strong believers in the teaching of pathology, let us see what changes take place in the course of an acute attack with regard to anatomical structures. (1) A bronchus consists of a mucous membrane, covered with cylindrical and ciliated epithelium, lying on (2) a basement membrane separated by connective tissue in which the network of capillaries ramify from (3) the mucosa proper, which is composed of elastic tissue surrounded by muscular fibres, and outside this is (4) the sub-mucosa or adventitia which is really the connective tissue proper of the lung, and in which the cartilaginous plates are embedded containing the pulmonary lymphatics. And now for the pathological changes which take place:—(1) Congestion and hyperæmia of the vessels of the mucosa; (2) œdema of the basement membrane; (3) shedding of the superficial epithelial layer with rapid reproduction; (4) infiltration of the adventitia with round cells of inflammation, which are thus transfused by the lymphatics to all parts of the bronchial tissues, and thus the inflammation is generally distributed over both organs. It is thus easy to see how quickly a case of capillary bronchitis may become one of double broncho pneumonia.

Now for treatment. Let us take a typical case. A young man, say from twenty to twenty-five years of age, comes under our notice with a feverish cold, his temperature reaches 101°F. to

103°F., with dry chest notes; we order him straight to bed in a temperature of 65° to 70°F., covered with blankets, and straightway inject $\frac{1}{4}$ grain of nitrate of pilocarpine subcutaneously, encouraging the subsequent sweating with diaphoretics and warm drinks, to be mentioned later on; the mixture we prescribe is liq. ammoniæ acet. ℥j., sp. eth. nit. ℥ss., sweetened camphor water ℥j., and with each dose two minims of Fleming's tincture of aconite, to be taken every hour for the first three or four doses, subsequently every two hours, finishing up next day with two grain doses of quiniæ sulph. By this means, in the majority of cases, we avoid having to pay many visits and save his club many weeks of sick pay. In this case we do not reach the second or moist stage of the disease, the first being what we describe as the hot, dry stage. But we do not always get at our cases in such an early stage, usually the first has passed off and the second stage is commencing. We still inject the pilocarpine and order the above mixture, but supplement the treatment now with steam from the bronchitis kettle, to which we add twenty minims of the ol. menthæ pip. for each pint of water in the kettle. This steaming should be continued for twenty or thirty minutes every two hours, or perhaps continuously for the first six hours, should the case be severe. With children in the same condition we use bicarbonate of soda in the proportion of ℥iv. to the kettle of water, poultices of linseed to the back and chest and a mixture proportionate to age, and for our little sufferers we manage to make a very nice bell tent with the mother's umbrella. When the acute symptoms have passed off we rub the chest and back with a liniment composed of ol. camp. (essential) ℥j., tinct. opii. ℥iss., lin saponis ℥iss., to be well rubbed in with the hand two or three times a day. Now the rationale of this treatment consists in causing the removal of carbon from the blood by the skin instead of the lungs, by inducing sweating, and it is wonderful how such minute doses of the tincture of aconite helps us to accomplish this. With children we also have the back and chest well swathed in wadding after the poulticing, but for adults this is not necessary. For these we are also convinced that no inhalant gives such a soothing affect as the oil of peppermint, but children do not bear it at all well. With adults also we find that if a stimulant is required we cannot find anything better than one-sixteenth of a grain of the hydrochlorate of cocaine in a pill freshly prepared, repeated in two hours if necessary. In no stage of the disease do we consider alcohol necessary, in fact we look upon it as harmful. After the temperature has come down to nearly normal we reduce the temperature of our patient's room to 60°F., gradually getting it to 55°F., and there we endeavour to keep it as long as necessary. The tonic we have found most

benefit from is quinine with, in some cases, three minim doses of Fowler's solution. In poulticing children we have found it of benefit to cover the poultices with a piece of "Christia," a substitute for oiled silk of which we cannot speak too highly.

For drinks to promote perspiration we have found they made after recipes published by Dr. J. J. Ridge, in a little book which he calls, "Diet for the Sick," and which can be procured from Messrs. Churchill, and for children "Cream Whey" will be found most useful. Saline aperients, should anything of the sort be needed, are indicated, and for children nothing is better than phosphate of soda, which may be given dissolved in beef tea. To sum up the points in treatment we lay most stress upon are the subcutaneous injection of pilocarpine when the patient is comfortably recumbent in a temperature of 65° to 70°F.; the exhibition hourly of tinct. aconite (Fleming's) until temperature is lowered; the keeping up of sweating until the breathing is easier, and the exhibition of hydrochlorate of cocaine if a stimulant is required.

Formerly the family doctor prescribed almost invariably tartrate of antimony in acute pulmonary inflammation, and other remedies which would horrify the modern medico, and yet we almost think that even though we had not heard of the bacterium termo or the other strange animals which Professor Koch and his merry men are annihilating in billions (by their own account), disease was as quickly and satisfactorily dealt with as in these times, when the march of intellect demands the placing of the "Gamp" on a level with the heads of the profession; and there are many good men and true, who have the best interests of the profession at heart, who would strongly advise a return to the days when materia medica was learned while pounding up two or three pounds of pil. rhei. co., or mixing up the stock of mist. alb. This, however, has nothing to do with curing bronchitis, so to return to the subject and by way of concluding we would call attention to an old-fashioned remedy which is useful in most chest cases, and that is *Lichen Islandicus*, otherwise Iceland Moss, prepared with milk as recommended by Dr. Ridge, or made into a jelly known in Ireland as "Carrageon Jelly." We hope that we have not wearied our readers and at the same time that we have given some useful hints on treating acute bronchitis. At some future time we may say something about the chronic form which so often remains as a sequel of the acute, and which is so difficult to treat satisfactorily.—*Hosp. Gaz.*

HEADACHE almost always yields to the simultaneous application of hot water to the feet and back of the neck.

THE TREATMENT OF FAILING CIRCULATION, WITH SPECIAL REFERENCE TO THE USE OF STRYCHNINE.

When a physician is confronted by a case in which there is either sudden, gradual, or threatened failure of the circulation, the pregnant question arises—What is he to do? Naturally, his first thought is of some drug which, either from his own experience or that of others, he knows has been successful in combating or postponing this formidable complication, and the remedy he most desires is one that will act promptly and, as nearly as possible, entirely upon the circulatory apparatus. His judgment in the selection will be guided, if he be not merely an empirical therapist, by the cause of the cardiac weakness, the disease and condition of the patient, and the physiological action of the drug. It may seem unnecessary to make this preliminary statement, or even to broach the subject at all, to those whose high positions as teachers of medicine give them unlimited opportunities for experience and observation, and may even seem truisitic in view of the fact that most of the matter here discussed can be found in so many text-books. But when it is considered that the average practitioner is prompted to request a consultation when this symptom begins to show itself, and that, as a matter of fact, comparatively few are able to cope with it, the writer may be pardoned if he omits an apology. He submits this paper with some diffidence, to invite a discussion upon this important subject, and in the hope that it will suggest to the minds of those who are familiar with the treatment of so-called heart-failure the usefulness of a publication of their knowledge of it.

There are numerous instances of the heart ceasing its function when it cannot be said that life would have flown under proper treatment, and it is in these cases that there is shown either the lack of proper remedies or the absence of a sufficient amount of medical skill, if not negligence. As previously stated, the remedy should act upon the circulatory system, and in a way that will increase the strength of the cardiac contraction and promote the rapidity of the circulation; and upon other parts of the organism it should not have any, or, at least, only a minimum, antagonistic concomitant action, which would tend to annul or counterbalance the prime effect upon the heart.

A glance at the physiological action of the cardiac tonics will show that some of them have a very disagreeable behavior in this respect, and in none is it so well marked as in the case of digitalis, which is generally adopted as an efficient agent. Quoting the words of an eminent writer, digitalis "prolongs the diastole and increases the vigor of the systole," an effect most desirable,

because it gives the ventricles time to fill and to expel a maximum amount of blood into the lungs and arteries, but, unfortunately, it at the same time contracts the arterioles and raises the blood-pressure, thus lessening the rapidity of the blood-flow and preventing a proper washing out of waste products from the tissues. In addition to this, if large doses be given, it impairs the irritability of the sensory and motor nerves and muscular fibres, and interferes with reflex action, effects that cannot fail to retard nutrition. Clinically it has been found unsatisfactory in those low states of the system brought about by high temperature and degeneration of the muscular tissues—notably of the heart itself—such as are found in typhoid fever. Recently a scientific teacher of therapeutics was quoted as recommending that digitalis be employed in typhoid fever, and that he had had most excellent results from its use. It is difficult to understand this opinion, as the same writer states in his book that he has seen digitalis produce, even in therapeutic doses, a dicrotic pulse, and numbers of authorities have, both by their writings and lectures, condemned it. The late Dr. James H. Hutchinson was very pronounced in his opinion against the employment of the drug in fever, and once told the writer that he knew of several cases of sudden death occurring in the course of fever that were unquestionably due to the digitalis administered. In the failure which accompanies simple organic disease of the heart itself, and in that which follows the shock due to hæmorrhage and similar conditions, digitalis is the proper remedy; but in the class of cases mentioned above it does not fulfil the requirements. The slowness of its action precludes its use in acute heart-failure, for, though given hypodermically, it is from two to four hours before its peculiar effect is manifested. Clearly, then, digitalis should be employed in only a limited class of cases, and is not the drug for the majority of emergencies.

Ammonia has been spoken of as the most powerful cardiac stimulant known, but its action is transient and of short duration. In some cases it does not act well. Wood speaks of it as being most serviceable in purely functional cardiac failure, and as not a reliable agent in that accompanying the adynamic fevers. To obtain from it a satisfactory effect it must be administered at short intervals, from every half-hour to one hour, and an insuperable objection to it is the fact that it cannot be used hypodermically without producing an inflammation at the site of the injection; and, in a disease like typhoid fever, fatal sloughing might result. It can be administered by the veins, but this is always a dangerous procedure, and it is doubtful if it be effective, as strong alkalies injected into the circulation of animals destroy the red corpuscles. It possesses the

advantage of not being followed by the depression of the nervous system which constitutes so objectionable a feature in the case of alcohol, but from its chemical properties it is difficult to use it in states of unconsciousness.

Atropine is justly regarded by many as a cardiac stimulant, and Harley has highly recommended it; but it is really more of a respiratory stimulant, and is only adapted to certain cases. Bartholow is inclined to doubt its usefulness in cardiac failure, since it exhausts the irritability of the heart ganglia; but, since the preliminary period of stimulation is well marked, he advises its use in temporary depression of the heart's action. When given in large doses it locks up the secretions and must necessarily interfere with nutrition and lessen the excretion of waste products, and, on this account, cannot be safely employed in uræmia.

Alcohol is a safe and effective heart-stimulant when intelligently used, and is probably the best general tonic in the list. It possesses the advantage of being comparatively non-toxic, and can be administered for a longer period than some of the other heart-tonics, without deleterious effects. Its influence upon the processes of nutrition renders it especially adapted to those long-continued cases of gradual circulatory failure that are encountered so frequently in the low fevers. But its effectiveness in cases of sudden or profound cardiac failure occurring in the course of acute maladies, such as pneumonia, in which large amounts must be given, either by the mouth or hypodermically, is open to doubt, since the profound depression that follows its exhibition in large doses must certainly conduce to an unfavorable result. It may be more correctly regarded as prophylactic rather than as an active combative agent.

Caffeine and cocaine have lately been much used as heart stimulants, and they are of undoubted value in simple weakness, when there is no reason to suspect that the weakness is a premonition of beginning failure. The action of the former is fugacious, owing to its chemical instability, and the writer has seen the delirium of typhoid fever markedly increased by cocaine. They, like alcohol, may be better classed as prophylactics.

Nitroglycerin is an active remedy in certain cases in which the heart is slow and weak. It paralyzes the inhibitory centres, dilates the arterioles, and with the increasing heart-action thus induced the circulation is rapidly promoted. A very interesting article on the comparison between the action of this remedy and digitalis lately appeared in the *British Medical Journal*, which serves most aptly as evidence that neither drug can be depended upon in all cases. The transitory impression made upon the heart by nitroglycerin compels the drug to be given in frequently

repeated doses, and its powerful toxicity renders it too dangerous for general employment. The writer administered it once with most happy results in a case of shock due to traumatism, the pulse increasing in three and one-half hours from 40 per minute to 78. In such instances there is, of course, doubt as to the part played by the medicine. A rapid heart would be a contra-indication to its use.

Ether acts quickly and is effective in some instances of cardiac failure following traumatism, but the effect is not sustained, and it is not advisable to give it for more than a short time.

Strophanthus, sparteine, convallaria, and adonis vernalis have not as yet been sufficiently studied to be considered.

In the array of remedies that are criticised above it is seen that none of them fulfils the indications for relief that are presented by most cases of heart-failure, without at the same time exhibiting deleterious counter-effects. An agent which will sustain the circulation must not interfere with the resulting good effects of such action by any secondary manifestations, and until one can be found that will behave in this manner the problem must be met by such a combination of remedies and methods as will most nearly resemble the desired drug.

The writer considers strychnine, if not the best, at least one of the best, cardiac stimulants available. A study of its physiological action undoubtedly shows that it, too, has objectionable features, but fortunately they can, to a certain extent, be mitigated by the conjoint use of other remedies. Strychnine is very diffusible; it acts quickly, and the effect is sustained. When a medicinal dose is administered hypodermically the heart at once responds by an increase in the strength of its movements, the arterioles contract, and the blood-pressure rises. At the same time the irritability of the sensory and motor nerves and the excitability of the muscular tissue are greatly increased, thus promoting nutrition-changes and mechanically favoring a rapid blood-current. A spasmodic contraction of the renal capillaries is likely to occur if large doses are given, but the interference with the kidney secretion can be obviated by diuretics having a selective action upon the urinary organs. Lately strychnine has been strongly recommended by some eminent observers as a reliable agent when other members of the group of cardiac tonics are contra-indicated, and to the writer, who used it a great deal while resident physician in the Pennsylvania Hospital, it has proved very satisfactory. The stimulation is not confined to the circulatory system, but is general, and in many respects very much resembles the effects of heat. Its characteristic effect upon the spinal cord no doubt tones up, so to speak, through the sympathetic nerves, the digestive

function, which with the diffused stimulation of the circulatory system must certainly result in a supply of better blood to the nerve-centres, and consequently to promotion of the vital functions.

A curious fact in connection with the action of strychnine is that the weaker the circulation the larger is the amount necessary. Its action seems to be in a way neutralized by the causes inducing the weakness, requiring in some instances rapidly-increasing doses to maintain the effect. Dr. C. B. Penrose informs the writer that he has given hypodermically as much as two grains of the sulphate of strychnine in twenty-four hours, with the result of successfully tiding the patient over a crisis.

This paper is intended as a preliminary to a more complete consideration of the usefulness of strychnine, and in a future article, now in course of preparation, the writer hopes to be able to indicate the extent and class of cases in which it can be effectively employed.—C. S. Bradfute, in *Med. Progress*.

NOTES ON CARDIAC DISTURBANCES.

Pye-Smith (Prog. and Treat. of Diseases of the Heart, Hunterian Society, Nov., 1890), gives an interesting summary of various forms of heart disease. He discusses *idiopathic tachycardia*. Here the number of beats is increased. The length of the first sound is diminished, and the period of rest is shortened. Many conditions may cause a temporary tachycardia in a perfectly healthy heart. Among these are exercise and mental emotion. If the causative condition be removed, the heart beats become normal. Any pulse constantly rapid—*over eighty beats per minute*—in an adult means the presence of disease, not necessarily of the heart. A physiological tachycardia is generally accompanied by palpitation. The condition is common where organic cardiac disease exists. The idiopathic form is rare and its prognosis is unfavorable. *The irritable heart* is closely related to excessive exercise or great bodily strain. Rest and careful diet are necessary in its treatment. The author's observations on the *intermittent pulse* are in keeping with those of other observers. Alone it is without significance and is most generally due to slight causes, such as gastric disturbance. Cases are mentioned where the condition existed for more than twenty years. Intermission with irregularity is of grave import, and indicates serious organic disease. *The pulse of high tension* is generally associated with interstitial nephritis. It indicates renal change, and when found should always require an urinary examination. The views expressed as to its importance are open to criticism. It is true, as the author says, that the increase shows that cardiac nutrition is going on well, but it certainly is not

an indication of healthy or desirable condition. *Hypertrophy from overstrain* is found most commonly in athletes or in young boys whose development is not complete. Remedies aiding cardiac nutrition are indicated, but many cases do not respond to treatment. *Rapid dilatation, per se*, is met with as a secondary condition to certain acute affections, such as rheumatic fever, scarlet fever, acute nephritis, and other febrile disorders. Although not stated by the author, it is probable that the dilatation is here so rapid that there is not time for the hypertrophy to develop. Fatal syncope is to be dreaded in this condition. Various forms of alcohol are the remedies to be used in combating this acute affection. It is interesting to note that the author does not believe that fatty degeneration is common in heart affections.

There is but little evidence on physical examination to throw light on the subject. An excessive growth of fat over the heart may, it is stated, interfere with perfect action and produce ill effects. *Fatty degeneration is always found in phosphorus poisoning*. The discussion of valvular lesions commences with the subject of ulcerative endocarditis in which the presence of auto-infection from the inflammatory condition is well brought out. The author terms it an "internal pyæmia." The situation of the inflammation is such that the products of suppuration are being constantly carried to distant parts of the body, causing secondary troubles. For the term pulmonary, in describing stenosis and regurgitation, the author substitutes "dextro-sigmoid." Valvular lesions with their accompanying muscular changes have always different prognoses than the hypertrophies and dilatations occurring without valvular disease. Aortic regurgitation is regarded by the author as the lesion of greatest seriousness, of most rapid course, of least responsiveness to treatment, of greatest tendency to sudden death. Aortic stenosis is put down as having the best prognosis. Cases of mitral regurgitation respond best to treatment, and even if grave secondary changes have occurred, if cardiac nutrition can be established, the same holds true. The author gives certain statistics of heart cases in Guy's Hospital. There were 95 fatal cases of aortic disease; 69 of these had mitral disease (secondary). The ages were as follows: 1 under 10; 14 between 10 and 20; 40 between 20 and 40; 33 between 40 and 60; and 3 above 60. There were 41 cases of death from mitral disease. There were 6 between 10 and 20; 14 between 20 and 40; 20 between 40 and 60; and 1 over 60. Of 34 cases in which death was due to cardiac syncope valvular disease was found in 21 cases. The duration of organic disease of the heart is larger in women than men. In prognosis the nature of the life led is most important. Secondary diseases, acute in their character, affect the diseased heart unfavor-

ably. The author records many cases where the disease had long existed. One case of aortic regurgitation had existed for ten years; another of double disease had existed for twenty years. One case of aortic stenosis had lasted many years, the patient dying at the age of seventy-five. The influence of rest and proper diet in the treatment of organic heart disease is well illustrated in a case of the author's. The patient was a London cabman, exposed to all the inclemencies of the weather, having mitral regurgitation, who was admitted into Guy's five times with a staggering heart. Four times he was dismissed improved, and returned to work. The last time the case resulted fatally. The author condemns Oertel's treatment, on the ground that forced gymnastics are always to be avoided. The most excellent and important part of the paper are the paragraphs describing ulcerative endocarditis.—*Brooklyn Med. Jour.*

EXAMINATION FOR TUBERCLE BACILLI.

Since it has been demonstrated beyond doubt that bacilli are the generators of tuberculosis in all the organs, it is evident that a thorough and careful examination of the sputum for them is of utmost importance in order to settle the question of whether we are confronted with a case of tuberculosis or not. As Koch says: "The bacilli are not the only cause of tuberculosis, but they are the only cause of it; and there is no tuberculosis without bacilli."

Koch's method of treatment of tuberculosis is not directed against the bacilli proper; it does not directly kill them, but it destroys the tissue containing them. It is this tissue which is reached by the specific action of his remedy. The resulting necrobiosis involves tissue destined to become eliminated. The system endeavors to rid itself of it by the proper means for each organ. It will be raised and expectorated by cough in phthisis; it will exude on the surface of the skin in lupus.

But the case has an entirely different aspect if we do not succeed in demonstrating the presence of bacilli in the sputum. I have met with cases where all the symptoms pointed with a fatal certainty to the existence of phthisis, and yet the bacilli of tuberculosis were absolutely wanting. In a case of this character the patience of the physician is put to a severe strain. In one case observed by me, no fewer than forty specimens had to be examined before the long-sought-for little red bacilli could be brought to view under the microscope.

The lack of tubercle bacilli is, therefore, not an evidence of the absence of tuberculosis. It is possible that in a given case the bacilli may be very

few, since their number is in some measure dependent on many causes. There may be present in the lungs an encysted collection of bacilli utterly without connection with the outside world. Such cases are those of so-called latent tuberculosis, where after a seeming cure, cheesy masses and chalky deposits form themselves into concretions, become encysted, and represent a condition hitherto known as innocuous cicatricial healing. Such a tissue may contain bacilli, but only to a very limited extent. Now, if they, for some cause or other, migrate into the adjacent tissue, they will naturally find a soil suitable for their development, will multiply, and, of course, appear abundantly in the sputum. Another possible cause for the temporary absence of tubercle bacilli, is presented in many cases of cavities in the lungs. Here again we may be confronted in the first place with a mechanical difficulty, such as an obstructed, twisted bronchus, bronchial glands, inflammatory contraction, or perfect occlusion of the same. Then, again, it is possible that by an acute or subacute inflammation, the surroundings of the cavities may become hyperæmic and the seat of pneumonic infiltration. In such a case the tubercle bacilli will again be found very scarce, or altogether absent until lysis sets in.

These are only some of the possibilities which should put the physician on his guard in making the final diagnosis in cases where the tubercle bacilli are temporarily absent from the sputum. Although the demonstration of the presence of tubercle bacilli is not altogether a complicated affair, yet a degree of experience and certain physical appliances are necessary in order to enable one to work with ease, cleanliness, and some skill.

To accomplish these, I may be permitted to describe the several phases of examination of the sputum from the moment when it is submitted to our investigation.

It is a very sensible method to collect the sputum, if possible, in a glass jar which has a graduated scale in cubic centimetres burned in its walls, in order to ascertain the quantity of expectoration. We now empty the contents into a soup-plate, the hollow of which should have been painted black. This has the advantage that the grayish-white masses appear more distinctly on a black ground and are more easily discernible. The sputum, which in the jar has appeared in strata, will now become one floating mass in which serum, mucus, cheesy masses, and pus conglomerations are lying side by side. We now get our microscope in readiness by focussing it. A good bacterial microscope ought to be provided with an oil-immersion lens, an Abbe's condenser, and an iris diaphragm. This latter is an effectual device in place of the old diaphragm plate.

Two cover-glasses and one glass slide are now

taken and carefully cleansed. This and one of the covers are meanwhile placed on a quadrangular black glass plate about four by six inches in size. This little contrivance will prove very serviceable, inasmuch as it makes slides and covers put on it recognizable. It is a veritable saving institution and will diminish the bill for glass accessories. The second cover is now placed between the thumb and the index finger of the left hand, while the right hand seizes a sterilized platinum loop, lifting out sputum from the plate of the size of about half a pea, and depositing it upon the cover-glass.

Care should be taken to avoid catching saliva or mucus with air bubbles.

After some experience one will soon be enabled to distinguish pus or cheesy masses. The latter are a veritable bonanza for the tubercle bacilli. We must, however, be prepared, in searching for cheesy masses, to find instead expectorated stomach contents closely resembling the former. Such errors occur very frequently. The true character of these masses, however, is only revealed under the microscope after laborious preparation of specimens. In cases of this kind we may find, instead of the tubercle bacilli, swollen starch granules or disintegrated meat fibres.

Having now placed the pus or cheesy mass upon the cover, we distribute it evenly with the loop and remove any superfluous remnants. The second cover is now placed on the top of the first, and both are moved in a sliding manner upon each other in different directions. By this we insure a still more even distribution of the sputum, and avoid an accumulation on the edges of the covers. In this way we have gained two specimens for further use.

We now place each cover, with the preparation side upward, between the thumb and the index finger of each hand, swinging them to and fro over the minute flame of a Bunsen burner, for from half a minute to a minute until they are dry. Care should be taken to avoid scorching of the specimens, which would inevitably destroy the tubercle bacilli. This done, each cover-glass is seized between the branches of a pincette—Dr. Cornet's self-closing pincette is the best in this case—and is drawn three times in rapid succession transversely through the developed flame of the Bunsen burner. A spirit lamp will answer the same purpose, although not so handy as the former.

Now follows the second part, the staining of the specimens. Let us now take a small tripod, place a wire net over the opening, and lay a hollow hour-glass upon it, in which the required staining fluid is contained. Place now a spirit lamp—a Bunsen burner is preferable—under it and heat it. Our staining fluid consists of an alcoholic solution of carbolized fuchsine. The formula is :

Fuchsine,	2 parts
Alcohol,	20 "
Carbolic acid,	10 "
Distilled water,	200 "

Now take one of the specimens between the thumb and the index finger of the right hand and place it carefully—always with the prepared side *downward*—upon the staining solution. As soon as the first bubbles appear and boiling sets in, turn the flame down and leave the specimen in the hot staining solution for not less than five minutes.

The specimen is now lifted out with a pincette and rinsed with distilled water. Hold the specimen with the preparation side downward until the water flows off colorless.

Any regular fountain syringe or irrigator, such as is found in every office, will answer the purpose where other more complicated appliances, such as a glass reservoir or a system of tubes and pipettes, are not at hand. Care should be taken not to direct too heavy a stream of water upon the specimen.

It is now necessary to dry the specimen by means of blotting paper, after which it is again placed—prepared side downward—for a minute and a half in a cold solution of methylene blue (a mixture of 3 parts of methylene blue, 50 of dilute sulphuric acid, and 200 of distilled water). It is now lifted out, rinsed, and dried as before. This completes the second, the staining, act; and everything is now ready for the microscopical examination.

A drop of the so-called "preparation" cedar oil (a mixture of cedar oil and glycerin) is now placed on the slide, and the cover-glass, with the preparation side downward of course, is pressed gently upon it. Another drop of "immersion" (clear) cedar oil is finally placed on the top of the cover, and the specimen is placed under the microscope.

A specimen thus prepared will bring into full view even solitary tubercle bacilli. The entire specimen prepared according to this process will be found stained bluish-purple, and the tubercle bacilli lie in it as red rods 1.6 to 3.5 μ in length, singly and in groups or in heaps together. A picture is formed which, once seen, cannot easily be forgotten.

In taking the liberty of describing this method of examination, I have given it simply as I was taught to use it in the richly endowed laboratory of the new City Hospital "on the Urban," in Berlin. I have studiously avoided describing more extensive and cumbersome apparatuses, in order to facilitate the method of observation to the practitioner. Much can be done with a small outfit.

It is doubtless true that there will be cases where a more intricate examination and counter-

tests will be needed. In such cases, of course, the facilities of a well-equipped laboratory are necessary.—Dr. Ludwig Weiss in *N. Y. Med. Jour.*

MEDICAL EDUCATION.

The address recently given by the Hon G. W. Ross, Minister of Education, in the theatre of the Normal School Building, of which an extended report was given in Saturday's *Globe*, contains an interesting survey of the development and growth of public school education in Europe and America. The address shows the results of a good deal of historical reading, though from the sociological or philosophical point of view it is, perhaps, a little disappointing. From the Head of the department of public instruction, in the largest and wealthiest Province of the Dominion, we should have been glad of some discussion of fundamental principles. It is obvious, for instance, that the more universally education and the enlarged intelligence and thoughtfulness it brings become diffused among the people, the more needful will it be that the relations of the State to the work of public education shall be clearly defined and broad-based upon some principle that can be defended as just and equal. So far as the public schools are concerned there is no room for doubt or cavil. They are for the children of all the people, and it is meet that they should be supported at the expense of all the people. It was when the Minister came to the universities that he failed to apply principles, and appealed to precedents only. After quoting numerous facts to show, what needed no proof, viz., that the "tendency across the water is to be generous with the universities, notwithstanding"—an objector might say because of—"the conservatism of those countries," Mr. Ross went on to say, "Surely we in Canada should fortify ourselves to deal liberally with the universities." If he means that this liberal dealing should be of the kind which he afterwards recommends, the outcome of the patriotism and generosity of the people, all will heartily approve his words. If the idea is that further aid should be bestowed upon the provincial institution from the public chest, some troublesome questions will at once arise. Does Mr. Ross maintain, for instance, that it is in the interests of the whole people that students should be trained for the medical profession at the public expense? A few moments of his lecture might at this point have been well devoted to showing how it can be for the good of the people that the University, the entire resources of which are imperatively required to maintain and increase the efficiency of its Arts work, which is, *par excellence*, the department of its work which interests the public, should have been permitted by the Government to sink so large an amount of its available funds in the new Science

Buildings, which are admittedly far more extensive than can be required for the science work of the Arts course proper. Will not the public justly hold the Minister responsible for the mistake, not to say misappropriation, which was made when one of the six independent medical colleges of the Province was chosen to be the ally and beneficiary of the Provincial University, to the great, and, so far as appears, just dissatisfaction of all the friends and patrons of the other five, thus unfairly discriminated against? The injustice of this diversion of the public funds appears all the more indefensible in view of the recent protest of the teachers in the Department of Modern Languages in the University, some of whom have been kept working as mere lecturers, with inferior *status* and smaller pay, for more than twenty years. It is said that the promotion of these to the position of "professors" is impossible for want of money. Certainly, if most of them are not qualified for professorships they ought to be, and it would be little to the credit of the University to have kept incompetent men so long in teaching positions of so much importance. But if an act of simple justice is denied or delayed for want of funds, while enough and much more than enough of capital has been sunk in buildings not needed for the proper educational work of the University, the fact is one of a kind not well adapted to encourage the public to deal more liberally with the Government institution under which such maladministration is possible.—*The Week.*

ANALGESIC EFFECTS OF EXALGINE.

Dr. Gorodichze having undertaken a series of investigations as to the therapeutic properties of this new drug, reports his observations on fifty-four patients. He prefaces his communication by remarking that in the treatment of disease our efforts must always always be directed to comfort our patients by suppressing the pain, and that his investigation was confined to patients in whom pain appeared to be most excessive.

The size of the dose which is employed in all known analgesics, such as antipyrine, acetamillide, phenacetine, and others, without speaking of the anæsthetics, often leaves behind circulatory and calorific disturbances (lowering of temperature, cyanosis, eruptions of the skin, etc.), whereas he found exalgine acted on a comparatively small dose. He had only in three cases out of fifty-four found that the application of this drug had been followed by vertigo with sensation of heat in the stomach, which trouble was, however, slight.

Profs. Dujardin-Baumetz, and Bardet were the first who brought to light the analgesic properties of exalgine in their communication to the *Accadémie de Médecine* in March, 1889. Since then the drug has been experimented with by

Prof. Desnos, of La Charite, Prof. Frazer, of Edinburgh, Dr. Rabow, and others, who appeared to agree that our armamentarium has been enriched by a remedy superior to antipyrine which has been so much employed lately.

The following are the results of the fifty-four cases referred to, all being adults. In every case exalgine was prescribed in the following formulæ :

Exalgine, 7.80 centgr. = 12 grains ;

Alcohol 1.0 grammes = 25 grains ;

Eaude melisse 100 grammes = about 4 oz.

To be taken in two doses with eight hours' interval, the dose being the same in every instance.

The fifty-four cases may be subdivided thus :—

	No. of Cases.	Suc-cessful	Unsuc-cessful
Migraine.....	12	10	2
Cephalalgia of influenza.....	6	6	0
Sciatica.....	4	4	0
Muscular rheumatism.....	2	1	1
Angina pectoris.....	3	2	1
Dysmenorrhœa.....	7	6	1
Tranchies uterines.....	2	1	1
Neuralgia.....	10	9	1
Blennorrhagia.....	1	0	1
Chronic pelvic peritonitis.....	2	1	1
Zona herpes.....	2	2	0
Viscualgia tabetic.....	3	2	1
Total.....	54	44	10

From the foregoing table it will be observed that the principal action of exalgine is on neuralgic pain such as migraine, facial neuralgia, herpes zona. Contrary to Prof. Dujardin-Beaumont's observation, that hyperthemia was a contra-indication for exalgine, Dr. Gorodichze employed it in six cases, in all of which the cephalalgia, so intense in influenza, disappeared in one or two hours without any depressing condition for the patient, and he concludes by remarking that the remedy has rendered good service in dysmenorrhœa in five out of the six cases in which he employed it (in two of which cases three grammes, forty-five grains, antipyrine had not the slightest effect), and this confirms in his opinion and in that of other investigators, the superiority of exalgine in similar cases over antipyrine.—*Paris Correspondent Med. Press and Cir.*

ELECTROLYSIS OF GOITRE.

In making supplementary remarks upon a subject which was discussed at length in the *Lancet-Clinic* of September 10, 1890, I do so in response to a number of inquiries from members of the profession in reference to a point which was at the time of the discussion in these columns necessarily undecided. It is not my intention to further illus-

trate the subject of electrolysis by the recital of additional cases, although I have had, since my report, quite a number of new cases under observation. The unusually large number of cases, presented in the first report, was a source of surprise to a great many, as could be gleaned from some of the inquiries received. It is accounted for by the fact that the two first patients, being members of a well-known family, and among the most successful of the whole number of cases, were the subject of an article which appeared in a daily paper of large circulation. More than a dozen patients presented themselves for treatment within one month after that publication.

The results of the electrolytic method certainly removed all doubt as to the efficacy of the galvanic current in many cases of goitre. Time alone, however, could decide *whether these results would be lasting or not*. It is this point which I wish to briefly consider in response to a number of interrogations. In my report of last September there were considered two distinct electrolytic methods, namely : *electrolysis* proper, (cutaneous galvanization), and *galvano-puncture* (introduction of the galvanic needle). This division will serve us well in discussing the point at issue.

In reference to the cases, treated by *cutaneous galvanization*, the ultimate outcome of the treatment fully vindicated the opinion as to its relative value, which we ventured in our report. Diminution of the size of the tumor was tolerably well marked in some of the cases after the electrolytic method had been given a few weeks' trial. In other cases the effect was slow and barely visible. The interval of time, which has elapsed since the treatment of these cases by cutaneous galvanization was suspended, seems to justify us in considering the action of the galvanic current in the light of a *temporary benefit only*. For, in every instance, there has taken place a gradual re-establishment of the original condition. The tumors have eventually returned to their former size. In two of the cases the tumors are indisputably larger than they were originally. A strange phenomenon was the fact that the speed with which the secondary enlargement took place, apparently was in direct proportion to the degree of rapidity which characterized the beneficial action of the current in each case. Without assuming to explain this interesting feature, we may, in harmony with our previously expressed opinion, dismiss the subject of cutaneous galvanization by pronouncing over it the *mens tekel phares* of practical experience.

A not inconsiderable number of my goitre cases were treated by *galvano-puncture*. Not one of these has demonstrated any tendency to recurrence. Galvano-puncture, then though not without peril to the patient, and requiring for its execution a certain amount of surgical dexterity,

or rather upon the grounds of my own limited observation seems to be *absolutely and permanently curative*. When the process of inflammatory absorption, set up by the needle, is at an end, the tumor will be found to be markedly diminished in size. Small cicatricial nuclei, freely movable below the skin, usually mark the point of introduction of the needle. The systemic disturbances, spoken of by some as the invariable result of the removal or destruction of goitre-tissue I have not had occasion to observe. Some constitutional re-action, however, is indicated by the fact that the characteristic neurotic element, invariably present in cases of enlarged thyroid, will be markedly modified, and not infrequently be caused to intirely disappear, *pari passu* with the shrinking goitre.—Dr Juettnet, in *Cincinnati Lancet-Clinic*.

NOTES ON THIOI.

Thiol, which we have, at various times, during the past year and more, mentioned and described fully in this journal, is receiving the attention now which its greater purity and other manifest advantages over ichthyol justify. Thiol in its chemical constituency and therapeutic action is identical with ichthyol, and in dermatological and general therapeutic practice, its use is indicated in all those cases where ichthyol has been advantageously employed. The reasons for giving thiol the preference over ichthyol are many and important, but the principal one is its superior chemical purity and consequent freedom of all toxic dangers. The chemical and physical actions of thiol and ichthyol are the same; both dissolve readily in any proportion of water; both yield clear, dark brown solutions, which are perfectly neutral; but chemically thiol is purer than ichthyol; ichthyol containing an excess of waste products of evil odor, and 4 per cent. of sulphate of ammonium—an undesirable by-product of the process of distilling and neutralizing the crude stock; thiol has only a faint, not unpleasant, bituminous odor, and retains only 1 per cent. of the sulphate of ammonium.

Another desirable property—not possible in ichthyol—is that thiol can be produced in dry form, either in scales or powder. This permits of dry application, a favorite method in antiseptic and surgical practice at the present time. Thiol, pure and non-toxic, has been successfully employed by internal administration also.

The following formulæ are compiled from the favorable clinical reports of such leading practitioners as Dr. Paul Geserich, Berlin, Dr. A. Zeeden, Dr. L. Reeps, Dr. F. Buzzi (Schweninger's Clinic in Beglin), Prof. Dr. Neisser, Breslau, Dr. A. Bidder, and Prof. Dr. E. Schwimmer, Budapest—surely a list of authorities whose favorable

verdicts on thiol bear the greatest weight and its best recommendation.

THIOI SOLUTION.

1. R.—Thiol liquid
Aq. dest. ʒss. 15 g.
S.: Apply with c. h. brush.

THIOI SOLUTION.

2. R.—Thiol. liquid. 20 g.
Glycerin. 10 g.
S.: Apply with c. h. brush.

THIOI DUSTING POWDER.

3. R.—Thiol. sicc. pulv. 25 g.

THIOI DUSTING POWDER.

4. R.—Thiol. sicc. pulv. 5 g.
Amyli tritici. 20 g.
Talc. ppt. 5 g.

THIOI SALVE, 10%.

5. R.—Thiol liquid. 5 g.
Adipis suilli. 45 g.

THIOI-LANOLIN SALVE.

6. R.—Thiol. liquid. 5 or 10 g.
Blancolini. 20 g.
Lanolin. 70 g.

THIOI-COLLODIUM, 5%.

7. R.—Thiol. sicc. pulv. 5 g.
Colloid. 95 g.
Solve.

THIOI WINE.

8. R.—Thiol. sicc. 1 g.
Vin. Med. Tokay. 99 g.

THIOI CHOCOLATE.

9. R.—Thiol. sicc. pulv. 2 g.
Chocol. opt. 98 g.

THIOI PILLS.

10. R.—Thiol. liquid. 5 g.
Pulv. Althææ. q. s.
ut fant pilul. No. 50 o duc.
Sacchar.
S.: Take 2 pills 3 or 4 times daily.

—Notes on New Remedies.

THE THERAPEUTICS OF EXOPHTHALMIC GOITRE.

At the meeting of the New York State Medical Association, held October 22, 23 and 24, 1890, Dr. E. D. Ferguson, of Rensselaer County, read a paper with this title. Exophthalmic goitre, he said, was not a common disease, and yet it was not so rare as to render it a curiosity. Though the disease was one with sufficiently well-defined characteristics to allow of its ready recognition, still errors of diagnosis might, and doubtless did, occur. The fact was that enlargement of the thyroid body was not peculiar to the disease, and that a frequent pulse was attendant on a multitude of morbid conditions, and occasional prominence of the eyes might be added from causes not the same as the condition determining the development of exophthalmic goitre. The conclusion that the condition was not at any rate a pathological unit had been strengthened, in the judgment of the writer, by the results of the use of digitalis, for in every instance in which he had felt confident of the diagnosis, that drug had not only failed to afford relief, but was apparently productive of injury. The writer then gave in detail the histories of several cases of exophthalmic goitre treated with strophanthus. The administration of this had afforded prompt relief, the patients being able to return to their ordinary occupation. In no instance had either the exophthalmia or the goitre been entirely removed, and, so far as the latter was concerned, the author would not expect its removal, for when the enlargement had existed for some time it became of so dense or fibrous a consistence as to preclude the idea of its complete removal. There was however, a notable degree of improvement both in the

exophthalmia and in the thyroid body, but it was impossible to express in mathematical terms the changes in these features of the disease so well as could be done in the rate of the pulse. Not only were the rate and rhythm of the contractions favorably influenced, but in these cases there undoubtedly existed a dilatation of the left ventricle, which improved so as to leave no physical or symptomatic evidence of cardiac lesion. Recent pathological considerations tended to place exophthalmic goitre in the category of the neuroses, and the locus of its origin in the floor of the fourth ventricle. Still, the evidence was not such as to give any clue concerning its etiology or treatment, aside from clinical observations, and consequently there was no explanation to offer as to the method by which strophanthus afforded relief, aside from the idea that first suggested its use, and that was to relieve an apparently overtaxed heart through the lessening of the resistance in the systemic circulation which was alleged to be its action. Aside from any theoretical consideration as to the way in which the agent acted, the fact remained that benefit was apparently the direct result of the use of strophanthus,—a benefit so notable as to almost justify the announcement of a cure in some of the cases. The only preparation used by the writer was the tincture, given by the mouth, three times daily at each meal, the initial dose being from 8 to 10 drops, which was increased, if necessary to reduce the frequency of the pulse, to 15 or 20, or even 25 drops. Whether its apparent utility would bear the test of time and larger experience was still problematical. At present it seemed to be our most valuable therapeutic resource in exophthalmic goitre.—*New York Med. Jour.*

ALBUMINURIA OF PREGNANCY.—The diagnosis of the Bright's disease of pregnancy is so easy as to require no notice here, but I may say that it is still too common to allow pregnant women to go to term without examination of the urine.

The prognosis is, however, of such importance as to demand closer attention, especially in connection with treatment, and to this I desire to call attention as the most important part of my paper. In the first place, the acute nephritis of pregnancy is much more serious than acute nephritis from any other cause, while uræmia is the dangerous symptom which is responsible for the fact, so much so that if this danger be escaped the prognosis becomes quite favorable, even more so than in acute nephritis from other causes. Rosenstein has shown that convulsions occur in about one-fourth of all the cases, and that about 30 per cent. of the eclamptic cases die. This mortality, which certainly is not overstated, it seems to me can be diminished. Scarcely a week passes in which some valuable life is not sacrificed to errors of practice under these circumstances, and this will continue

to be the case until the profession is thoroughly aroused to a closer study of the complication in question. I have called attention to certain conditions, or combinations of conditions, under which Bright's disease associated with pregnancy demanded that premature labor should be induced to save the life of the patient.

It remains to point out briefly the treatment which should be adopted in cases where it is concluded to attempt to prolong gestation to the viable period or the end of pregnancy. To keep up elimination and thus to prevent the over-accumulation of toxic substances in the blood, is of course, the first indication. And while the kidneys present themselves as the natural channel through which this is to be accomplished they are seldom sufficient; and the bowels become the next, and indeed often the first and most convenient medium. Especially should constipation be avoided, while a brisk purge has often averted an uræmic attack. Continued looseness of the bowels is a safety valve, which in these cases can scarcely be abused. The skin is also a serviceable medium for elimination, and is continuously availed of by warm woollen clothing next the skin, the effect of which is increased by the uniform temperature of the bed. Daily warm or hot baths, according as to which may be found more efficient, increase this effect, while the simple spirit of nitrous ether in full doses is a double agent acting upon the kidneys as well as most efficiently favoring the action of the skin. Jaborandi or its active principle pilocarpin in small doses, just enough to keep up a gentle but constant action of the skin, is also valuable. The hot-air bath or vapor bath may also be used with excellent effect. These are cases, too, in which a diet of pure milk or milk diluted with water or carbonic-acid water diminishes the dangers with which the patient is threatened.

When uræmia actually sets in, any or all these agencies, except possibly jaborandi, may be employed in increased doses if available, but whatever may be the hesitation of inducing premature labor previous to its appearance, there should be none after it.—*Tynan, Medical Record.*

HÆMOPTYSIS IN APPARENTLY HEALTHY PERSONS.—Hæmoptysis is a symptom which has always a serious aspect about it, causing both physician and patient to be apprehensive of impending pulmonary tuberculosis; but that too much significance should not be assigned to it *per se*, is shown by the report of some cases published by Dr. Newman. In the first case a man, aged forty-nine, complained of frequent attacks of hæmoptysis, the amount of blood lost varying from a few drops to an ounce and a half. Despite the attention of many practitioners from time to time, the attacks continued, and had lasted for sixteen months before he came under the care of the

author. No physical signs were discoverable in the chest, and the patient's health was good. Inspection of the larynx and trachea, the latter being visible as far as the bifurcation, failed to show at the first three examinations any morbid condition. At the fourth examination the larynx and trachea were observed to be tinged with blood; and after the patient had cleared the air-passages as well as possible by coughing, a small bleeding point was noticed immediately below the anterior commissure. The blood oozed from it slowly and trickled down the trachea. With local treatment the hæmorrhage ceased and complete recovery followed. In another case the hæmoptysis had continued for nine months, the patient being a man aged fifty-six; the amount of blood lost varied between an ounce and an ounce and a half, and the attacks usually occurred once a month. No physical signs of phthisis could be detected in the chest. After, however, a large hæmorrhage, the naso-pharynx, pharynx, larynx, and trachea were carefully examined. The two latter were deeply blood-stained as far as could be seen, but no bleeding point could be discovered; but two days afterwards a little erosion was observable on the anterior aspect of the trachea, just below the cricoid cartilage, and the surrounding mucous membrane was moderately injected. Two days subsequently to this the lesion just described had completely disappeared. Twenty-six days later the hæmorrhage recurred, and the lesion referred to was observed for a second time. Local treatment was persisted in for six weeks, and a complete cure was accomplished. In a third case the hæmorrhages were more serious. On one occasion a pint of blood was lost. After one severe hæmorrhage an examination was made by the author. The pharynx and soft palate were swollen and relaxed, and the vault of the pharynx was very shallow from before backward. On the upper and back part of the pharyngeal arch a number of distended viens were discovered. At the beginning of the examination these varicose veins were intact, but from the irritation produced by instruments, bleeding was induced which continued till the next day. The first treatment adopted was the employment of solid chromic acid to the distended veins. This failed, however, to effect any improvement, and a few days afterward electrolysis was employed, the positive pole being applied to the pharynx, and the negative to the neck. This treatment was adopted on three occasions, with the interval of a week intervening. Ultimately the veins were completely occluded, and three years later the patient had never had any return of the hæmorrhage.—*Medical Press.*

A CLINICAL NOTE ON THE SOPORIFIC ACTION OF MERCURY.—I am not aware that the above action of mercury in the class of case I am about to

describe has been recorded. No doubt the fact is known to many of you, yet it does not appear to me to be so generally, and that is my reason for bringing the subject forward at this meeting.

The cases in which I have found blue pill—for this is the form of mercury I am referring to—give such good soporific effects are rather difficult to describe, and must be given in a more or less general way. Many men would call them cases of biliousness, and for want of a better term I am content to use it. The patients are generally over forty, complaining of lassitude, loss of appetite, a general fulness of the abdomen, pains in the shoulder-joints, tongue generally of a whitish brown color, a nasty taste in the mouth, eyes are rather "thick," a want of clearness of thought, more or less dull pain in the head not confined to any one particular spot, irritability of the skin, and, above all, sleeplessness at night. There may be many more symptoms and signs than the above, or few of them may be present, but, when the symptom of sleeplessness is prominently complained of, it is here that we find the soporific action of blue pill followed by saline draughts peculiarly brought out. Now, the symptoms detailed are principally those found under the heading of bilious dyspepsia, but there is this important clinical difference: whereas sex, richness of food, want of exercise play important parts in producing the above form of dyspepsia, the cases that I have in mind are found as often, if not more so, in women, and where the plainest diet and moderate exercise have been taken.

There is a little doubt that the sea air has something to do with the above state of health; people who have come down to the seaside after a long residence inland frequently develop after a few days' sojourn all the afore-mentioned symptoms. I believe that we who practice in seaside resorts would less often be called upon to prescribe for this condition were a little mercurial taken immediately by the patient on his arrival, but perhaps, on the whole, this had better be left in our hands.

Again, I do not associate these cases with those which are commonly called "lithæmia," or the substitution of uric acid for urea as the final product of disintegration of albuminous substances within the body: under this last condition you obtain the more remote symptoms of gout.

What is the exact action of the mercury which brings about the above happy result I do not know, nor am I anxious to speculate or propose theories. Murchison supposed that it possessed a double action, for whether or not the secretion of bile was increased, there was certainly more bile passed when mercury was being taken; thus an eliminating action was brought about, so that less of the bile constituents were absorbed from the intestines than usually. Again, he supposes, in some way or other, the albumen is more thoroughly disintegrated. But what is important for us to know is

the use of a drug which will enable you to give your patient a good night, whilst at the same time you are treating the root of the disease, and apparently not giving ordinary soporific drugs.

It is needless for me to use any padding to this paper in the way of quotation of cases; they would be uninteresting and wearisome; and the title of my paper does not admit of it.—*Brit. Med. Jour.*

INOCULATION BY MOSQUITOES AGAINST YELLOW FEVER.—Drs. Finlay and Delgado, of Havana, have published in the *Revista de Ciencias Médicas* some statistics of their practice of inoculating persons newly arrived in Cuba against yellow fever by means of mosquitoes which have been caused to contaminate themselves by stinging a yellow fever patient. These observations have been carried on for the last ten years, and, in addition to a certain number which are still incomplete, may be said to consist of fifty-two cases of mosquito inoculation which have been fully followed up. Of these, twelve experienced between the fourth and the twenty-sixth day after inoculation a mild attack of yellow fever, with or without albuminuria; twelve experienced no symptoms of yellow fever either within twenty-five days after the inoculation or during three years subsequently; twenty-four experienced no symptoms within twenty-five days, but contracted a mild attack before the end of three years, either uncomplicated by albuminuria altogether or with only a very transient appearance of it; three who had had no symptoms within twenty-five days contracted well-marked yellow fever within three years; one patient who had a mild attack in consequence of inoculation contracted a severe attack later on, which proved fatal; that is to say, that of those who had been inoculated only about eight per cent. contracted the disease in a well-marked form, with a mortality of under two per cent. In order to enable us to appreciate the significance of these figures, the authors mention that they observed sixty-five monks, who from time to time arrived in Havana, where they all lived under similar conditions. Thirty-three of these were inoculated, and thirty-two were not. Only two of the inoculated contracted well-marked attacks, which, however, did not prove fatal; whereas eleven of those that had not been inoculated were severely attacked, no less than five dying. It is remarked that inoculations performed in the cold weather are not entirely trustworthy, and that they should be followed up by a repetition in the spring; also that experience shows that a person who has been three years in the city without contracting the disease has become "acclimatised," and is very unlikely to be attacked at a subsequent period.—*Lancet.*

SEXUAL LIFE OF WOMEN AFTER CASTRATION.—At the Berlin Medical Congress, Dr. F. Deppler,

of Venice, read a paper embodying the results of a study he had made in the cases of ovariectomy performed by himself. He had performed castration forty-six times, obtaining a cure in thirty-nine. These operations were performed for the relief of purulent or gonorrhœal salpingitis, oöphoritis, fibroid tumors of the uterus, etc. The following were his conclusions, derived from a study of the physiological consequence of these operations: 1. When the operation was performed on account of salpingitis or other inflammatory process, uterine hæmorrhage never occurred subsequently. 2. The conjugata became gradually shortened, and this was the more marked the younger the individual was when operated upon. 3. The uterus became atrophied, the vagina grew shorter and narrower, its mucous membrane became paler, and the labia majora were somewhat thinned. 4. The breasts grew smaller, acquiring a strong resemblance to the pale mamma. 5. The brown pigmentation of the nipple, areola, perineum, and anus disappeared wholly, as did also pathological pigmentation existing in some of the cases; the hair also turned white. 6. The tendency to embonpoint, which is generally believed to exist after these operations, was not observed by the author. 7. No changes were observed as regards the growth of the hair or the tone of the voice. 8. The sexual desire remained, and was the more pronounced the earlier in life the operation was performed. 9. The operation offers no impediment to marriage; three of the author's cases had married and had lived happily with their husbands for years. 10. A marriage with a castrated woman is the ideal Malthusian marriage, and the only way the Malthusian idea can be carried out without endangering the health and happiness of the woman. 11. In the cases operated upon in early life for inflammatory conditions, no neuroses were seen to develop, which was not the case when women were operated upon late in life for fibroid tumors of the uterus. 12. A favorable influence upon the hæmorrhage was observed after operation for myoma, yet in no case did the menopause at once set in. 13. In cases of operation for uterine fibroma, the patients, even those in full maturity, lost all sexual inclination after the operation.—*Medical Press and Circular.*

THIOL IN SKIN DISEASES.—Prof. E. Schwimmer, Buda-Pesth, is cited in the *British Journal of Dermatology*, September, 1890, as recommending thiol as useful in erythema, dermatitis herpetiformis, herpes zoster, acne rosacea, and acne vulgaris faciei, in papular and weeping eczema, as also in the treatment of burns, etc. It is generally applied in the strength of a one-in-three aqueous solution. Prof. Schwimmer was especially struck by the exceedingly satisfactory results he obtained with it in the treatment of herpes zoster and der-

amatitis herpetiformis. Of the latter disease a case had been ineffectually treated for three months with other remedies, but healed promptly in the course of a week when thiol was applied. The patient was painted regularly twice daily with the solution for two or three days, and the skin then carefully washed with pure water. It was found that the vesicles and bullæ had disappeared even in this short space of time, being replaced by scurfs of thiol, and the skin below showed nothing but a moderate pigmentation. A result like this appears really marvellous in such a refractory disease as dermatitis herpetiformis. In erythema exudativum multiforme also good results were obtained with the solution, but the thiolum siccum pulveratum seemed preferable, the eruption becoming much paler in three to six days, and soon healing completely. The liquid form again proved more adapted to papular eczema, being especially cleanly in application. On the whole thiol does not soil much, though the ointment form (made of 2 parts of thiol and 20 parts of lard) is not quite so agreeable as the solution. Its great advantage over ichthyol, is however, the absence of all unpleasant odor.—*Med. and Surg. Reporter*.

PUERPERAL CONVULSIONS.—Dr. Alexander Pilliet (*Nouvelles Arch. d'Obstét.*, November, 1890), lays great stress upon the hæmorrhagic foci which are found in the livers of women after death from puerperal eclampsia. He implies that the hepatic lesion is primary, and that this pathological discovery must modify our opinions and our treatment of one of the gravest complications of childbirth. Twelve necropsies have been made by this obstetrician, and in all the characteristic changes in the livers were detected. This series does not include any case of choleric eclampsia or hepatic anæmia of pregnancy and the puerperium; and in the twelve, icterus, where it occurred, was slight, and appeared after the other distinct symptoms. The hæmorrhagic focus in the tissue of the liver is no mere product of simple engorgement of a vessel followed by rupture. It is associated with complicated local pathological changes, minutely described by Dr. Pilliet. In certain respects these foci resemble similar appearances observed in the kidney in scarlatinal and erysipelalous nephritis. The most careful search, however, has failed to detect any bacteria in the foci in Dr. Pilliet's twelve cases. He maintains that since a distinct and severe lesion of the liver was found in every one of the twelve cases of death from puerperal convulsions, it is reasonable to suppose that the lesion is pathognomonic of the complication in question. Lastly, it must here be noted that in the cases in Dr. Pilliet's series where the condition of the kidney is recorded, that organ is described as though not in a perfectly normal condi-

tion. He also detected pulmonary and cerebral hæmorrhages in more than one of the twelve necropsies.—*Supp. Brit. Med. Jour.*

ANOTHER GOOD THING.—Instead of using the curette to scrape away vegetations from the cavity of the womb—endometrium—as is recommended by authorities in gynæcology, I advise injecting the uterine cavity with a mild escharotic, such as the following:

R.—Glycerine,
Ext. hamamelis āā f ̄ ij.
Pulv. salicylic acid gr. xx.
Chloride of zinc gr. x.

M. Sig.—Use a fluid drachm in a fluid ounce of warm water, with a long-nozzled syringe. Inject to the inmost recesses of the womb's cavity, fearing no evil. Repeat this operation every three or four days.

The oozing, bleeding and enfeebling discharges will soon cease, and all discomfort pass away. The curette does not reach all dentritic growths, and those left soon extend to the fresh field. I know by experience what I am talking about. I have cured cases in a few weeks that had been curetted every week for months together. The curette improves a case, but does not cure it. No danger of having the escharotic enema go through salpingian canals to peritoneum. That bugbear has been exploded by experience; but a cold douche of the endometrium will excite uterine colic in occasional instances.

Besides using the mild injection, give viburnum prunifolium internally. Under this treatment the patient will recuperate rapidly.—*Eclectic Med. Jour.*

NOVEL SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE.—Dr. Lencke, of Hamburg, reports two cases of exophthalmic goitre in which surgical treatment of goitre produced "great relief" of symptoms. The first patient was a lad of seventeen, who had the classical symptoms of the disease—rapid heart, palpitation, prominence of the eyes, and goitre. He came under treatment on account of a sudden access of the swelling, which by the pressure it exerted produced great distress with extreme cyanosis. The heart was rapid and irregular, no rest or sleep could be obtained, and the patient was in imminent danger of asphyxia. Tracheotomy was performed, and a week later one-half of the tumor was extirpated. The operation was accompanied by much hæmorrhage, which, however, stopped spontaneously, and recovery was uninterrupted. The symptoms rapidly vanished, the exophthalmos disappearing, and the heart becoming quiet and regular in action. The improvement was maintained until the time at which the paper was written.

The second case was that of an older patient, and was attended with similar results.—*Med. Rec*

THE TRUE POSITION OF ELECTRICITY AS A THERAPEUTIC AGENT IN MEDICINE.—The *Boston Medical and Surgical Journal* (October 2nd, 1890) contains Dr. Morton Prince's views upon this subject. Electricity is a most valuable aid to the diagnosis of certain forms of disease. To test electrical reactions requires great care and no little technical skill. Proper apparatus is indispensable. As a palliative for neuralgia, nothing can be more valuable than electricity, particularly galvanism. This is also true of acute and subacute neuritis. The atrophy and paralysis following anterior polio-myelitis, in joint lesions and disuse, in hemiplegia following cerebral hæmorrhage, in diphtheritic and pressure paralyses, in hysteria, muscular rheumatism, articular rheumatism, painful neuroses, it is palliative and sometimes curative.

In neurasthenia it acts as a tonic, relieves nervousness and dispels insomnia, but is in no sense a cure. Conditions following gripe yield to it in a remarkable manner; and in psychoses and neuroses, symptoms disappear like magic, the insomnia often disappearing at once. Electricity is not of the slightest use in curing such diseases as locomotor ataxia, disseminated sclerosis, progressive muscular atrophy of the spinal type, myelitis or general paralysis. Whoever hopes to cure epilepsy and migraine by electricity is doomed to disappointment. Faradism probably works, first, by reflex action through the sensory nerves, inhibiting the pathological process in the nerve centres, upon which the local process probably depends; and, secondly, by direct stimulation of nerves and muscles. It is by reflex action, probably, that pain is inhibited. Galvanism probably acts in the same way, and possibly produces local chemical and physical changes which aid in its therapeutic effects. It is claimed for galvanism that it is electrolytic. In many cases the relief obtained from the electric current is largely through *suggestion*, especially in psychoses and neuroses and in those affections where pain plays an important part.

—*Jour. Nervous and Mental Diseases.*

UNCONSCIOUS PARTURITION IN A PRIMIPARA.—A case of high obstetric and medicolegal interest is to be found in the *Archives de Tocologie* for November. Physiologically painless parturition is rare. Tarnier has related some cases, including one instance where a Canadian woman occasionally dropped a baby on the ground, at term without noticing it. In Howard's case labor took two hours; the patient was reading a book till a quarter of an hour before the child was delivered, which event occurred after some straining, not sufficient to make her cry out. In Dr. Brunon's case, newly reported, a married woman, aged twenty-two, had a troublesome cough one day shortly before term. The coughing was accompanied with lumbar pains, which increased. At

eleven o'clock in the evening the patient tried to pass a motion. She sat over one hour in the closet, believing that her pains signified painful defecation. Then she went to bed. At half-past one o'clock she work up feeling a desire to pass a motion, with lumbar pains such as she had felt before when constipated. As she rose to go to stool a smart lumbar pain occurred, and she felt something between her thighs. On handling it she found, much to her surprise, that it was the head of her first-born. She declared to Dr. Brunon that the pains were entirely lumbar, she had no colicky sensations, and none of the expulsive pains usually so severe, especially in primiparæ. The desire to defecate was strong, and she stated that the child might have been born into the pan of the closet without her recognizing the truth of her condition till the moment of its delivery. The patient was an intelligent well-educated woman, free from any neurosis. This case proves that in the case of an inexperienced person an infant might be expelled into the water in the pan of a closet without any intention of infanticide on the part of the mother.—*Brit. Med. Jour.*

HOW TO WASH OUT A BABY'S STOMACH.—Dr. Siebert (*Dix. Doctor*) gives the following directions for performing this little operation: A No. 10A soft catheter is attached to a glass tube six inches long, the operator is seated before the child, which is held upright (as in throat inspection), or on one side when collapsed; the left index finger of the operator is held between the right upper and lower maxille so as to prevent the mouth from closing. Then the tube is passed over the tongue into the pharynx, the head of the child inclining slightly forwards. By gentle pressure, we overcome the spasmodic contraction of the upper pharyngeal muscles, and then the catheter glides easily into the stomach. Now, the left hand holds the catheter, and the right attaches the lower end of the tubing of the fountain syringe or regular irrigator over the glass tube attached to the catheter. Water is now allowed to flow, and after the stomach is filled the supply is shut off, the tube detached, and the end of the glass tube lowered below the child's umbilicus, so the contents come away very nicely. Never use force. No trained assistant is necessary. The tube will never enter the larynx. The younger the babe, the easier it is to wash out its stomach.—*Med. Brief.*

BAD BREATH.—Dr. Frank H. Gardner gives the causes of bad breath as follows:—First, decaying particles in the mouth as far back as the pharynx vault taint the breath, if exhaled, very little if at all. Second, mouth-breathers have a bad breath when the tonsils are enlarged, or when cheesy masses exist in the tonsillary mucous folds. Third, certain gastric derangements taint the

breath only when gases are eructated through the mouth. Fourth, the principal cause of bad breath is decomposition in the intestinal canal, the retention of fecal matter in the transverse and descending colon, and the absorption of gases into the circulation, finally exhaled by the lungs. Fifth, catarrh—nasal, pharyngeal, or bronchial—causes bad breath. Sixth, medicines or ailments which undergo chemical changes below the œsophagus may, by rapid absorption through the stomach walls, or immediately below, give to the breath the characteristic odor. Bad breath is often a source of serious annoyance to the patient, and the fact that it has more than a local cause is too often ignored by the physician, who therefore fails to cure it.—*Dental Review*.

SPLINTS.—The following recipe is a capital one for manufacturing splints out of old cloth, which answers all the purposes of felt.

Dissolve one pound of the best gum shellac in one and one-half pints of 95 per cent. alcohol, adding one drachm of borax. This makes a syrup-like solution, which is painted over one side of woollen cloth, with a new brush, and the cloth is thoroughly dried before the fire. When dry, a second coat is added; dry again, making a thin piece, which can be strengthened by placing another piece over it, with the prepared surfaces together, when they can be united by pressing with a hot iron.

Pieces of old cloth are better than new cloth, as they absorb more. When ready to apply, hold before the fire or in hot water, till soft, then mould to the part, remove for a few moments until hardened; this can be expedited by immersing in cold water.—*North Amer. Practitioner*.

AN EARLY ATAXIC SIGN.—Weiss, of Vienna, says that an early symptom of locomotor ataxia is an inability on the part of the patient to walk backward, while as yet, and in other ways, he may be able to walk with firmness and rapidity. Perron, of Bordeaux, has also, as we stated several weeks ago, recently suggested an early diagnostic sign, which is simply a modification of the Romberg test—namely, causing the suspected ataxic patient to stand upon one leg, instead of two, with the eyes closed. If the patient shows a tendency to fall, it may be inferred that the spinal trouble has begun which will lead on to locomotor ataxia, even if the Romberg test fails, as it not infrequently does in cases that are not well advanced.—*N. Y. Med. Jour.*

MILK DIET IN TYPHOID FEVER.—Prof. Da Costa thinks that the exclusive use of a "milk diet" in typhoid fever is overdone. The stools should be carefully watched to see that the milk does not disagree. His plan is to use three pints

of milk and one pint of broth in the twenty-four hours, given alternately, with a mid-day meal of arrow-root, or other thickened food. It should be given every two hours during the day, and every three hours at night. In very light cases it may be given every four hours at night, but under no circumstances should nourishment be used less frequently.—*College and Clinical Record*.

A PLEA FOR CIRCUMCISION.—It is surely not needful to seek any recondit motive for the origin of the practice of circumcision. No one who has seen the superior cleanliness of a Hebrew penis can have avoided a very strong impression in favor of the removal of the fore-skin. It constitutes a harbor for filth, and is a constant source of irritation. It conduces to masturbation, and adds to the difficulties of sexual continence. It increases the risk of syphilis in early life, and of cancer in the aged. I have never seen cancer of the penis in a Jew, and chancres are rare.—Jonathan Hutchinson, in *Archives of Surgery*.

Up to two years ago, the buildings of the Johns Hopkins Hospital cost about two million dollars.

MODERN MEDICINE.

First they pumped him full of virus from some mediocre cow,
Lest the small-pox might assail him, and leave pit-marks on his brow;
Then one day a bull-dog bit him—he was gunning down at Quogue—
And they filled his veins in Paris with an extract of mad-dog;
Then he caught tuberculosis, so they took him to Berlin,
And injected half a gallon of bacilli into him;
Well, his friends were all delighted at the quickness of the cure,
Till he caught the typhoid fever, and speedy death was sure;
Then the doctors with some sewage did inoculate a hen,
And injected half its gastric juice into his abdomen;
But as soon as he recovered, as of course he had to do,
There came along a rattlesnake and bit his thumb in two;
Once again his veins were opened to receive about a gill
Of some serpentine solution with the venom in it still;
To prepare him for a voyage in an Asiatic sea.
New blood was pumped into him from a lep'rous old
Chinee;
Soon his appetite had vanished, and he could not eat at all,
So the virus of dyspepsia was injected in the fall;
But his blood was so diluted by the remedies he'd taken,
One day he laid him down and died, and never did awaken;
With the Brown-Séguard elixir though they tried resuscitation,
He never showed a symptom of reviving animation;
Yet his doctor still could save him (he persistently maintains),
If he only could inject a little life into his veins.

—Puck.

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TORONTO, MARCH, 1891.

The LANCET has the Largest Circulation of any
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EHRlich's TYPHOID FEVER TEST.

In our last number we gave in brief, in an editorial note, this test. By the kindness of Dr. L. F. Barker, one of the House Surgeons at the Toronto General Hospital, we have a more extended notice of the test, with remarks upon the difficulties and errors likely to arise in its application. The importance of thoroughness, and a complete understanding of the reactions occurring, will be obvious to all who wish to use the test, and, judging from our own experience of the difficulty of making an early diagnosis of typhoid, the number should be large. The sulphanilic acid is not, at the time of writing, in stock in Toronto, but by the time of publication of this issue, will be obtainable from Lyman Bros. & Co. here, who have kindly ordered the reagent from New York. The solutions used are: (1) R. Acid hydrochlor. pur. 1; aquæ destillatæ, 20; acid sulphanilic, q. s., to saturate. (2) A $\frac{1}{2}\%$ solution of sodium nitrite, NaNo.². (3) Ordinary liquor ammonia.

The reagent which Ehrlich wished to use was diazo-benzene sulphonic acid. This body is not stable, so he prepares it by mixing solutions No. 1 and No. 2. The hydrochloric acid acts on the nitrite of sodium, setting free nitrous acid HNO_2 and sodium chloride. $\text{HCl} + \text{NaNO}_2 = \text{HNO}_2 + \text{NaCl}$. Now, sulphanilic acid (which is para-amido-benzene sulphonic acid) is converted by nitrous acid into diazo-benzene sulphonic acid.

Thus:— $\text{C}_6\text{H}_7\text{NH}_2\text{SO}_2\text{OH} + \text{HNO}_2$

Sulphanilic acid, Nitrous acid.

$= \text{C}_6\text{H}_4\text{SO}_2\text{N}=\text{N} + 2\text{H}_2\text{O}$

Diazo-benzene sulphonic acid.

This diazo-benzene sulphonic acid unites with some unknown substance in typhoid urine and the compound thus formed on the addition of liquor ammonia becomes a beautiful garnet-red or carmine color, the nature of which is also unknown. If allowed to stand, this red body becomes precipitated and slowly changes to a dark green substance.

In making the test, ten parts of solution No. 2, are mixed with 400 parts of solution No. 1, and well shaken. Take equal parts of this mixture and the suspected urine, shake well, add excess of liquor ammonia and if the "typhoid diazo-reaction" be present, a deep carmine or garnet color results, which, on shaking, yields a reddish foam. This latter is important, as very many specimens of urine, even from healthy individuals will give a red-color which, on shaking does not, however, yield a red foam. Again, febrile urines will give the red-color and on shaking will give an orange-colored foam, but this after a little experience is readily distinguishable from the "reddish foam" of the typhoid test.

In order to obviate the difficulty of distinguishing the red-color which appears in febrile urines from the genuine reaction, Ehrlich advises dilution of the urine with 5 or 6 vols. of absolute alcohol and subsequent filtration. Then mixture with test-solution and addition of ammonia. Where any doubt exists this is a valuable alteration in the test, but absolute alcohol is expensive, the process is a lengthy one, and with attention to the details mentioned above, in regard to the original test, one will scarcely ever be misled. Dr. C. E. Simon, of Johns Hopkins Hospital, recommends what he calls the "ring-method." He mixes equal parts of test-solution and urine, and allows about one drachm of liq. ammonia to trickle down from a pipette on to the surface of the mixed liquids. A dark garnet at point of juncture is supposed to indicate the reaction. This method is in our experience altogether unreliable, as it would seem impossible to distinguish the color produced by typhoid urine from that of other urines.

The advantages of the test are that typhoid can be diagnosed before the appearance of the spots. The results are most brilliant from the 3rd to the 12th day of the disease.

Again, in doubtful cases and cases with complications, the application of the test will sometimes clear up the diagnosis at once.

Unfortunately as a drawback, Ehrlich has found the reaction *rarely* present in certain other diseases, especially those accompanied by rigors, as pyæmia, ulcerative endocarditis, and severe malaria. Simon also claims to have found the reaction once or twice in cases of pulmonary tuberculosis. In the Toronto General Hospital the urine in 17 tubercular cases has been tested without obtaining the *genuine* diazo-reaction in any case. A research on this is now being carried out and will be reported later.

ONTARIO MEDICAL ASSOCIATION.

The eleventh meeting of our Provincial Medical Association will soon be held in this city, and we hope that the members will not only turn out in large numbers, but that the character of the papers presented by them will reach an excellency never before attained. It is encouraging to note that the attendance has almost doubled since the Association held its inaugural meeting in 1881; but when we consider that there are over 2,500 practitioners in the Province, and over 300 in Toronto, an attendance of 245 seems small indeed. Is it possible that only one in ten of the profession is sufficiently anxious to keep abreast of the times, to make it worth his while to attend this annual gathering for scientific purposes? The interest manifested in the Medical Society must be held to be the index of the interest taken by the physician in the science of his profession, apart from its dollar and cents aspect. It is the Medical Society, or Association, or Congress, that stimulates the zeal of the general or special practitioner to keep records and histories, to group his cases and draw conclusions for after use. The time and money spent in attending the Association meetings is repaid a thousandfold by the good derived.

The Association this year will be favored with papers of unusual interest from some of its members. As will be seen in another column, the discussions in medicine, surgery, gynæcology, and

otology, have already been arranged, and not only do the subjects chosen appear practical and useful to the general practitioner, but the leaders in these discussions are all men to whose opinions the Association will be glad to listen. In addition to these, Dr. N. Senn, the widely-known Milwaukee surgeon, has promised to contribute a paper upon the Surgical Treatment of Intussusception. This will afford an opportunity to meet and listen to a gentleman known to many already by his able writings.

Dr. Howard Kelly, of Johns Hopkins University, will read a paper entitled "Gynæcology for the general practitioner," which can hardly fail to be of great practical interest to many of our members. We are informed, moreover, that it is expected one of the leading authorities in medicine from the other side of the line, will lend further interest to the meeting. A considerable list of good papers is already in the hands of the Committee on Papers, and altogether we feel sure that under the presidency of Dr. Moorehouse, the Association is about to see one of its most successful gatherings.

THE ARREST OF HÆMORRHAGE BY TORSION.

While among the rank and file of the profession, torsion is not looked upon as so safe a method for the arrest of hæmorrhage as is ligature, yet the former method seems to be increasing in favor among many of the abler surgeons of the day. It has many enthusiastic advocates in Philadelphia and elsewhere. Mr. Bryant, of London, has also employed torsion on the larger arteries a great many times, and claims for it better success than with a ligature. The advantages claimed for torsion by Dr. J. B. Murdock, as compared with ligation, are as follows:

1. The greater facility with which it can be applied. I am fully aware that this proposition is disputed, but to those who are familiar with both methods, there can be no doubt that torsion is the easier of the two. For the ligation of an artery, an assistant is required to seize the vessel and draw it out while the ligature is applied. For torsion, the surgeon requires no assistant. The vessel must be seized by the forceps in either case. In torsion it only requires three or four turns of the forceps

to complete the process, which can be accomplished in as many seconds. When a ligature is applied, let the operator be ever so skilful, the thread may break or slip off the vessel, but if neither of these accidents occur, the process cannot be accomplished in anything like the same time.

2. Torsion is a safer method, being less liable to be followed by secondary hæmorrhage.—This proposition has been absolutely proven by the experience in the use of torsion at Guy's Hospital, London, and my own experience is additional proof.

3. Healing is facilitated because the wound is free from any irritating or foreign body. This proposition is so plain that it should not require argument. It was true before the antiseptic treatment of wounds had come into such general use, but it is doubly so now. The catgut ligature is no doubt a safer ligature than the silk, for it does not require an ulcerative process for its discharge, and when this ligature has been made thoroughly aseptic it is no doubt the best. But a ligature rendered thoroughly aseptic is not always at hand, and those surgeons who have had most experience with the antiseptic treatment of wounds will, I think, be the first to admit that, in spite of their most careful attention, septic germs are often introduced into the wounds by means of the ligature. Even after every precaution in preparation and preservation, the handling of a ligature in its application is a frequent source of infection."

MEDICAL AND SURGICAL BRIEFS.

FROM NEW YORK HOSPITALS.

THIERSIE'S METHOD OF SKIN GRAFTING.—As a general rule antiseptics are not used in the operation of skin grafting. The patient having been etherized and the skin rendered aseptic, that portion of the body to be dermatized may be freshened by means of a scalpel. Two retractors (made for the purpose) placed at a suitable distance and held by an assistant, make the skin tense so that the operator with a sharp razor may remove the cuticle from the healthy skin. A few drops of a $\frac{1}{2}$ % solution of common salt is now to be placed on the denuded skin which lies on the razor in a corrugated mass. The razor is reversed and drawn backward over the wound, while the graft is gently teased into its place. A rubber protective

gauze soaked in the salt solution, cotton wool and bandage form the after dressing. The graft requires repeated moistening in the salt solution, necessitating frequent disturbance of the dressing, generally about every three hours. To avoid this it has been proposed to substitute a weak antiseptic fluid for the salt solution. Several successful operations have been performed where bichloride, 1 in 10,000, was used, the dressing not being disturbed for forty-eight hours. In this way, strips of cuticle are applied sometimes as long as three inches by one and one-half wide. So far as I can learn, the above represents fairly the methods adopted in the various New York hospitals.

APPROXIMATION PLATES.—For various lesions of the bowel, such as stricture, gangrenous strangulation, rupture, traumatism, etc., it is important to consider the best means of suturing the intestine. The operation is rendered tolerably safe by means of Dr. Senn's plates, or by a modification of them, the gut rings devised by Dr. Abbe. It is difficult to obtain the bone plates, and as it requires several days for their preparation much inconvenience might arise if one had to depend on them alone. They are made of bone, perforated because the fæces will have to pass through them, and decalcified by maceration in a 10 % solution of hydrochloric acid. They require two or three days for maceration and several days for drying. To remove the difficulty of obtaining the plates, it has been proposed that catgut rings be substituted. They are made of heaviest catgut softened in hot water till they cease to twist. Then a single strand is wound closely on four strands to form a ring. Four or more threads are fastened to the plates or rings at regular intervals, having the needles attached. The ring is placed in the intestine, while the threads are brought out through the gut wall. Two of these rings are required, one in each aperture, so that when drawn together by the threads the approximation of the peritoneal coat will be complete. The union may be rendered more secure if need be by a few Lambert sutures. These may be used in the operations of circular enterorrhaphy, intestinal anastomosis and in the construction of artificial ani. The success of the operation depends entirely on the approximation of the peritoneal surfaces. A great number of experiments of this kind have been tried on animals with almost complete

success. Several successful operations on the human subject are also reported.

RADICAL CURE FOR HERNIA, AT ROOSEVELT HOSPITAL.—This is quite an ordinary operation here. Two principal results are aimed at, first, to secure the sac and ligate it at the internal abdominal rings; and, second, to prevent primary union in the wound, in order to get cicatricial tissue to strengthen the abdominal wall, for it is claimed that with primary union the hernia is very apt to recur. The incision is made just above the inguinal canal, from the internal abdominal ring as far as necessary, which is sometimes to the middle of the scrotum. All structures are divided down to the sac, which is exposed, and completely separated up to the internal ring. The next step is to ligate it. The ligature should go as far into the abdominal cavity as possible. For this purpose the operator puts his finger into the sac and prevents the gut from coming down, and at the same time aids by allowing the ligature to roll off his finger, in getting it up well up on the sac. Before the wound is closed the skin and deeper tissues are united by a row of sutures passing completely round it. The scrotal part of the incision is sewed up closely; the remainder is only partially closed, a space about one-eighth inch wide being left between the lips of the wound. Silver sutures, three or four in number, with leaden buttons and perforated shot are now passed deeply to approximate the remaining part of the opening. The space between the edges of the wound is packed with iodoform gauze down to its bottom. The object of this is to prevent primary union, and so promote the formation of granulation tissue. Iodoform gauze, bichloride gauze, cotton wool and bandages complete the dressing, which is undisturbed for a week.

STOMACH WASHING IN INFANTS.—For some time past this method of treatment of gastro-intestinal diseases in infants has been largely experimented upon, and adopted by some of the leading practitioners of France and Germany. Not a few of the most successful physicians here are warm in its support, and some of those who at its inception opposed it, are now its exponents. It is applicable to all gastro-intestinal disorders—save typhoid—including infantile dyspepsia, cholera infantum and chronic diarrhœa. It is a simple and harmless

measure. A funnel or fountain (graduated) attached to a soft catheter by means of rubber tubing, constitutes the complete apparatus. It is generally believed that antiseptics are useless, and so only warm water is used. It will be readily seen that if the funnel, filled with water, be raised higher than the stomach, the water will flow into it. So by lowering it the tubing is converted into a syphon, capable of withdrawing the fluid. The catheter can only pass into the œsophagus, and should be passed rapidly at first until gripped by the upper œsophageal muscles, which soon relax, after which slight pressure at once places the instrument. Irrigation of the colon is also employed, and would undoubtedly be useful where the morbid condition is in the lower bowel.

INFANTILE DIARRHŒA (Polyclinic).—Diarrhœa occurring in infancy is believed to be due to germs of decomposition in the intestinal tract. Antiseptics may not be used of sufficient strength to arrest the process, and are therefore discarded. All kinds of food, and especially those which have been most used by the child are prohibited for one or two days. During this time barley gruel is given, simply to occupy the attention of the digestive organs. The child may drink black tea sweetened with sugar or glycerine. Washing out of the colon is considered imperative. If vomiting be associated, the stomach is washed out with tepid water, and calomel given to clear out the upper bowel. Chronic diarrhœa also yields to this treatment.—J. F. B. R.

ONTARIO MEDICAL ASSOCIATION.

The discussions by special committees have been arranged as follows:

Medicine—Chairman, Dr. A. McPhedran, Toronto; Dr. Mullin, Hamilton; Dr. Henderson, Kingston; Dr. Gillies, Teeswater. Subject: "The Cardiac Complications of Rheumatism."

Gynæcology—Chairman, Dr. Eccles, London; Dr. A. A. Macdonald, Toronto; Dr. K. N. Fenwick, Kingston; Dr. Mathieson, St. Marys. Subject: "Treatment of Fibroid Tumors of the Uterus."

Surgery—Chairman, Dr. Teskey, Toronto; Dr. Wishart, London, Dr. Groves, Fergus. Subject: "The Cause and Treatment of Carcinoma."

Otology—Chairman, Dr. R. A. Reeves, Toronto ; Dr. Osborne, Hamilton ; Dr. Hodges, London.

Therapeutics—Dr. Saunders, Kingston.

The Chairmen of the standing committees are :

Credentials—Dr. Anglin, Kingston ; *Public Health*

—Dr. Kitchen, St. George ; *Legislation*—Dr. W. B.

Geikie, Toronto ; *Publication*—Dr. W. P. Caven,

Toronto ; *By-laws*—Dr. P. Brown, Toronto ; *Ethics*

—Dr. Tucker, Orono.

The remaining temporary committees have been appointed by the President as follows :

Papers and Business—Chairman, Dr. A. A. Macdonald, Toronto ; Drs. N. A. Powell, R. A. Reeve, Toronto ; Arnot, London ; Moore, Brockville.

Arrangements—Chairman, Dr. Machell, Toronto ; Drs. J. A. Temple, Jas. Ross, J. G. Graham, Atherton, W. Britton, R. A. Pyne, Strathy, Sweetman, Cane, Macallum, Riordan, Toronto.

Audit—Chairman, Dr. Gullen, Toronto ; Dr. Caldwell, Peterboro' ; Dr. Harris, Brantford ; Dr. Meldrum, Ayr ; Dr. Irving, Kirkton.

Necrology—Chairman, Dr. Lett, Guelph ; Dr. Bascom, Uxbridge ; Dr. Raines, St. Thomas ; Dr. Powell, Ottawa ; Dr. Taylor, Goderich.

Advisory—Chairman, Dr. Henderson, Kingston ; Dr. Gibson, Belleville ; Dr. W. T. Aikins, Toronto ; Dr. Lesslie, Hamilton ; Dr. Lundy, Preston ; Dr. Burt, Paris.

INOCULATIVE TREATMENT OF TUBERCULOSIS.

The Koch treatment still continues to be a matter of interest and speculation among the members of the medical profession throughout the world. The enthusiastic assurances of success, made rather upon a knowledge of the discoverer of the remedy than upon the results of its use, have, in a measure, abated, and all are waiting for tabulated results to pronounce the success or failure of the remedy. It would at present be unwise to hazard an opinion upon the matter, but the reports of relapses in some of the cases of lupus are somewhat discouraging, and in the cases of pulmonary tuberculosis, the time elapsed has not yet been sufficient to state anything definite. It may reasonably be inferred that inasmuch as the remedy is an extract of the tubercle bacillus, its injection in large and repeated doses would, in cer-

tain cases, induce acute miliary tuberculosis. It has been asserted that in the event of failure of the treatment the idea of treating disease by inoculation of the products of bacteria is a valuable suggestion to the practical therapist. But this is in no sense a new idea, for in the *London Medical Times and Gazette*, of March 14th, 1863, Sir James A. Grant, of Ottawa, showed the possibility of *vaccination* proving curative in many forms of contagious affections, and his communication of that date forms a very interesting item in the light of the discoveries of Dr. Koch.

TREATMENT OF GASTRIC ULCER BY RECTAL FEEDING.—In an article by Dr. Donkin (*Lancet*) his method of healing gastric ulcer is commended after large experience. The stomach should be kept free from all labor of digestion, which should be transferred to the colon. When the diagnosis is certain and hæmatemesis not of long standing, begin with small injections of milk and beef tea at short intervals ; while in uncertain cases pain after eating should lead to this treatment. A comparison of the enema treatment with that per os demonstrates the inferiority of the latter.

Many cases of so-called chronic dyspepsia were successfully treated in this manner. Ten cases are related, some treated, by milk and beef tea, others by peptonized fluid enemata, or suppositories, with like success in all. All cases became emaciated, but soon regained the loss. It is possible that water alone is the efficacious agent, although he has never used water injections alone. At any rate, it is still doubtful if albuminous substances are assimilated in the colon, and it is an established fact that life may be preserved for many days by the exclusive use of water. Absolute rest is demanded, and for this reason it would be injurious to ascertain, by weighing, the value of various enemata. Injection will not disturb if not too large ; 2 to 3 grammes should suffice at intervals suited to the case. Irritation of the intestine is treated by thorough irrigation. As soon as solid food can be retained, arsenic and iron improves nutrition.

CHLOROSIS AND ITS TREATMENT.—Dr. Frederick Scholz of Bremen, says *The Lancet*, has published a remarkable work on chlorosis, the outcome of observations made during the last twenty years. Instead of regarding the deficiency of iron or

hæmoglobin, or even that of the red corpuscles, as the primary affection, he states that contraction of the vessels is always present in these cases, as indeed was observed by Bamberger, Rokitansky, and Virchow; and this, he contends, is not to be regarded as a complication due to an altered condition of the blood, but as the primary condition which is followed by the morbid change in the blood. As a matter of fact, the vessels are, he says, too full, or in the condition termed by the older physicians "plethora ad vasa," the blood being—or becoming—abnormally serous. Long ago his attention was struck by the cold and livid condition of the skin in anæmic subjects, and he was led by this to employ hot baths, together with gentle friction, in the treatment, with the view of acting directly upon the skin, so as to improve the vitality and nutrition generally. The success of his first attempts was so marked that he was encouraged to persevere in this line of treatment, and he has since had many opportunities of extending his experience with it. Hot baths diminish the plethora by relaxing the tension of the vascular system, which is high, quickening the circulation, and thus relieving the palpitation, dyspnœa, and other symptoms. In thirty cases where the distress of the patient was very great, Dr. Scholz has gone a step further and supplemented the hot bath by venesection. Paradoxical as this treatment may appear, it was followed by marked benefit, and if the theory of the pathology of chlorosis above mentioned be correct, there can be little doubt that the novel line of treatment practised by Dr. Scholz is justifiable.

INDUCTION OF PREMATURE LABOR.—This procedure being often necessary, the following by Dr. Balandin (*Annales de Gynécologie*) will be of interest to our readers. He gave the results of forty-three induced labors, the only assistance in each case being that rendered by an experienced midwife. Strict antiseptic precautions were enforced, and the two methods habitually employed for inducing labor where the introduction of the bougie and puncture of the membranes. As auxiliary measures, electricity and douching were practiced. Injections were thrown up between the uterus and the ovum, either 2 per cent. boric acid solutions being used, or sterilized water at a temperature of about 100° F. The bougie often acted but

slowly after several days or weeks, and sometimes not at all. Its efficacy appeared to diminish with the increase of the antiseptic precautions. But it never set up febrile reaction, or caused any other complications. After puncture of the membranes, uterine contractions did not invariably set in. This was mostly the case when the uterus was but slightly excitable, and had relaxed parietes. In one case, intermittent flow of the waters continued for eight days after puncture, without contractions setting in. In an instance of this kind, more radical courses were needed. Dr. Balandin usually dilated the cervix with his finger, turned by the combined external and internal method, drew down a foot, and slowly extracted the fœtus. Not a single mother was lost. No reaction even followed the turning cases. In the last series of twenty cases, nineteen children were saved.

ANOTHER TREATMENT OF ASTHMA.—Says Pearse in *The Practitioner*: There is one other method of treating asthma that is not, I think, regularly practiced, but to which I wish more particularly to draw attention. A person liable to attacks of asthma should be classed with those persons who have fits of epilepsy, and with those who suffer occasionally from "sick-headaches." By this I mean that all these patients have unstable nerve-centers, liable to explode their energies at any moment and exhibit the pathological phenomena peculiar to nerve-storms. Our treatment here should, I think, be an endeavor to break the habit morbidly acquired by the nerve-centers, and by regular prolonged medication to maintain the centers in a state of more stable equilibrium. This is done very successfully in the majority of cases of epilepsy, and I have applied the same principle with success in cases of severe migraine and asthma. In these cases I give chloral and belladonna night and morning, or every night at bed-time, and I have found the attacks not only lessened in frequency, but also considerably diminished in severity.

SAYS Morell Mackenzie: I believe that Koch's fluid is an agent of the highest possible value for the detection of tubercle, a remedy of great potency for certain of the slighter manifestations of tuberculosis, a palliative for some of the distressing symptoms of the severer forms of the disease, and

a deadly poison in advanced or unsuitable cases. Probably when more is known as to its mode of action, it will be possible to do more good by its means, with less risk of harm, than is the case at present. A wider sphere of usefulness will, no doubt, be opened up to it when practitioners have learnt how to combine other methods of treatment with it to the best advantage.

DR. TEMPLE'S PRIVATE HOSPITAL, BELLEVUE HOUSE.—We are pleased to notice the opening of Dr. Temple's new hospital at No. 87 Bellevue Avenue, Toronto. In February, 1889, Dr. T. made a new departure in the City of Toronto, in opening a private hospital for the treatment of diseases of women, and so great has been his success, that it has been found necessary for him to build the present new and commodious hospital at the above address. We are able, from a personal inspection, to say it is one of the best equipped, and most comfortable institutions of the kind to be found on this continent. The sanitary arrangements are of the most modern and approved character, whilst the wards have been arranged with the view of affording as much as possible, the comforts of a home. The head nurse, Mrs. Barton, so favorably known whilst chief nurse of the obstetrical department of Toronto General Hospital, and also of Dr. Thomas' Hospital, New York, is a sufficient guarantee of everything being done for the patients which careful and skilful nursing can do. The operating rooms are well lighted and fitted with beds, so that in serious cases patients need not be moved immediately after operation. The entire establishment is under the personal management and control of Dr. Temple, who, with his staff of trained assistants, attends in every case. Dr. Temple's reputation is so well known, that comment is unnecessary. We regard this institution as particularly well equipped, and it cannot but serve as a boon to the many suffering women of the Dominion of Canada.

SHALL THERE BE COMMERCIAL UNION WITH CANADA OR NOT?—*Public Opinion*, the eclectic weekly of Washington and New York, has just announced the offer of three cash prizes of \$150, \$100, and \$50 respectively for the best three essays upon the question: "Is any extension and development of trade between the United States and

Canada desirable; if so, what are the best means of promoting it?" The topic is particularly timely and the contest will doubtless attract considerable attention.

Full particulars may be had by addressing the publishers of *Public Opinion* at either New York or Washington.

MIXTURE FOR NEURALGIC HEADACHE.—The late Dr. George M. Beard, says the *St. Louis Med. and Surg. Jour.*, devised a mixture which he employed successfully in headaches of all kinds, and which has lately received the endorsement of Dr. E. P. Hurd, in his monograph on neuralgia. The prescription is as follows:—

R.—Caffeini citrate
 Ammonii carb. aa ʒj.
 Elixir guaranæ ʒj.—M.
 Sig.—A tablespoonful every hour till the pain is relieved.

The continuous use of the drug does not seem to produce any harm.

NASO-PHARYNGEAL CATARRH is thus treated by Willis: First cleanse parts with peroxide of hydrogen, diluted sufficiently, and then apply the following with spray:

R.—Sodii boro-benzöat,
 fld. Ext. hydrastis. āā ʒj.
 Glycerini. ʒj.
 Acid. carbolicæ. ℥xx.
 Aquæ camph. ʒvj.
 Aquæ. ʒvj.
 M.—Sig. Use three times per day.

TREATMENT OF JAUNDICE.—Dr. L. E. Samuel says: I have tried many things for the relief of functional jaundice; many drugs highly lauded by "authorities" have in my hands proved of no value; others have seemed to arrest the progress of the trouble and to aid in slow return to health. The most efficient combination I ever found is as follows:

R.—Sodii phosphatis. ʒij.
 Aquæ pur. fl ʒj.
 M. et ft. solut. et adde:
 Tinct. nucis vomicæ. fl ʒij.
 Tinct. gentian, ad. fl ʒiv.

M. Sig.—Teaspoonful three times a day. This will often give relief where every other

thing has failed to do so. If it prove too laxative a smaller dose may be administered, but under ordinary circumstances the dose here given will be all right. The same formula may be given with advantage in "billiousness," trouble with the duodenum, or even in certain forms of dyspepsia.

THE Paris correspondent of the *Medical Press and Circular* mentions the following application for vegetations of the genital organs :—

R.—Acid. salicylic., ʒj.
Acid. acetic., ʒj.—M

Touch the excrescences with this liquid morning and evening with a fine brush. In two or three days they will disappear.

TO PRACTITIONERS.—What will successfully remove the discolorations caused by irritable bladders?—A. B.

DR. J. A. SPRAGUE, Stirling, Ont., has received the M.D., C.M., Trinity University, Toronto.

ALEX. M. BLIGH, M.R.C.S., Eng., etc., Liverpool, England, says : S. H. Kennedy's Extract of *Pinus Canadensis* is an invaluable remedy for most diseases of the mucous surfaces, especially of the throat, and indeed the whole intestinal mucous membrane. In throat affections, relaxed uvula, chronic laryngitis, assuming the form of aphonia clericorum, to which teachers, singers, and clergymen are subject, I have found its administration, both internally and as a gargle, most useful. I have considerable experience of its efficacy in clergymen, and find it invaluable in neurosis of larynx.

Books and Pamphlets.

THE GENERAL PRACTITIONER by Theodore Strehz, M. D., Chicago, Ill.

This manual for the practice of medicine, is neatly gotten up, and published in three small volumes. The first volume contains a valuable collection of selected prescriptions with carefully arranged rules as to the manner of their exhibition. The other two volumes deal with the various diseases, taking them up in an alphabetical manner, giving definitions, causes, symptoms and treatment. The busy practitioner should find this a work of easy and rapid reference as well as a reliable comprehensive, and condensed view of medicine.

We apologize for these advertisements appearing in this column. As the copy did not come in till we had gone to press with the advertising pages, to save disappointment to our patrons, we encroach on the last column of reading matter.

CHICAGO POLICLINIC.

The Third Semi-Annual Special Course for Practitioners, will begin March 30, 1891, and continue two weeks. This course will include :

- 1.—Surgery of the Brain and Spine, . . Prof. C. Fenger.
- Surgery of the Thorax and Stomach, Prof. N. Senn.
- Surgery of the Abdomen, Including Abdominal Tumors, Prof. Chas. T. Parkes.
- Surgery of the Genito-Urinary Organs, Profs. F. Henrotin and J. H. Etheridge.

All operations demonstrated on dogs and cadavers.

- 2.—General Clinics in all the Departments of Medicine and Surgery by Members of the Faculty.
- 3.—Operative Surgery on the Cadaver.

The use of Koch's Lymph in Medical and Surgical Cases will be demonstrated.

Regular Courses continued throughout the year.

For further information address the Corresponding Secretary,
M. R. BROWN, M. D.,
174 and 176 Chicago Ave.



ONTARIO

Medical Association

Eleventh Annual Meeting,

JUNE 3rd AND 4th, 1891.

The 11th Annual Meeting of the above Association will be held in the City of Toronto, on Wednesday and Thursday, June 3rd and 4th.

All duly qualified practitioners attending this meeting will obtain return tickets at one and one-third fare.

Gentlemen desirous of reading papers, or of presenting cases before the Association, are to notify the Secretary by the 1st of May at the latest, of the title of such paper or case, for submission to the Committee on Papers and Business.

D. H. MOOREHOUSE, President,
Toronto.

D. H. GIBB WISHART, General Secretary,

47 Grosvenor St., Toronto.