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Original Communications.

A REPORT OF TWENTY CASES OF SHORTENING
THE ROUND LIGAMENTS AT THE EXTERNAL
INGUINAL OPENING IN THE TREATMENT OF
RETRODISPLACEMENT OF THE UTERUS.

BY T. JOHNSON-ALLOWAY, M.D.,
Instructor in Gynæcology. McGill University.

The subject of treatment of retroposition of the uterus has always been an unsatisfactory one to gynæcologists. It is needless to say that supports of every conceivable form have been devised, and have occupied the attention of the profession for years past, without any substantial benefit to patients. So that, under this unsatisfactory state of things concerning the subject, it was thought justifiable to remedy the condition in question by some direct surgical means. Dr. Alexander of Liverpool was amongst the first, some seven or eight years ago, to carry into practice the shortening of the round ligaments by cutting down upon the external inguinal ring, taking up the ligaments, suturing them to the wound, and cutting off the slack. As the wound healed the ligaments united with the tissues in their shortened condition and retained the uterus in its normal forward inclination.

It is not my intention to enter into the question of priority of the various claimants to originality in suggesting this operation, nor to the methods of performing it, as much has of late years been written upon these points by myself and others; but I wish, in this short report, to bring to your notice some of the main

features in the cases in which the operation has been undertaken and the results which have been achieved.

CASE I.—The first case I operated on was in February 1886. The case has been already reported. The lady in question had been for some time a confirmed invalid. Her ill-health was due to chronic metritis and extreme relaxation of the uterine supports, culminating in descent of the uterus and retroflexion. The operation was performed on the 19th February, 1886. She is now, and has ever since been, in perfect health, and leads a very active life.

CASE II.—This case was that of a young lady who had suffered from constant pain in her back and headache, with other allied symptoms. After a prolonged preparatory treatment, I made an attempt to find the ligaments, but failed. I operated on one side only. I may say, in passing, that I again operated upon this young lady last Monday week, and found both ligaments without any trouble whatever. Result perfect.

CASE III.—This case was a widow, aged 49, still menstruating. Profuse leucorrhœa, old standing laceration of cervix, with extensive hyperplasia. Retroversion to third degree (3°). There had been a progressive state of exhaustion for a year past. Constant headache and backache. I operated upon this lady on the 15th June. First removed the diseased cervix by Schröder's method and then shortened the round ligaments. This patient recently called upon me in perfect health, free from pain, and is doing considerable work.

CASE IV.—Aged 37; married sixteen years; twins twelve years ago; menstruation regular, but profuse and very painful; leucorrhœal discharge; pain in back and left iliac region; vertigo and very bad headaches; extreme nervous exhaustion and insomnia.

Examination.—Descent of vaginal walls; uterus retroverted, enlarged through chronic metritis, and very low down in pelvis.

I performed Schröder's amputation of diseased cervix and shortened the round ligaments. This lady called several months after the operation to thank me for the benefit she had received. She was then able to do all the work her requirements call upon her to engage in.

CASE V.—Age 50. Had borne one child twenty-five years ago. Had worked very hard all her life. I found her a confirmed invalid, unable to leave her bed. Complained of severe backache, headache, nervous exhaustion and insomnia. Uterus low down in retroversion, cervix appearing at introitus, great descent of vaginal walls, and incomplete rupture of perineum, with atrophy from pressure. She was removed to a private hospital, where, after a few days preparatory treatment, I repaired the perineum by the flap-splitting method and shortened both round ligaments. This patient is now conducting a retail store and is doing heavy work. Uterus high in pelvis and in anteversion.

CASE VI.—This was the case of a young lady who had suffered from severe backache for some years past. Menstruation very profuse and over-frequent, accompanied with pain. Great prostration, but little or no headache. She can scarcely walk, movement causing her so much pain. Uterus very low down, retroverted, and fundus exceedingly tender. Cervix elongated and congested. Endometritis present.

After a few weeks of preparatory treatment, I shortened the round ligaments September 27th. November, returned to her work as saleswoman. Uterus anteverted, lying close to the pubic symphysis. Absolutely free from tenderness and all symptoms formerly complained of.

CASE VII.—This was a young lady who had suffered from severe backache for some years past, but especially severe during the latter four months; also severe intermenstrual, hypogastric pain and irritability of bladder. Feels an inability to walk much, as, if she should have a sudden jar, it causes her very severe pain. Uterus retroverted and fixed in cavity of sacrum. Exudation mass in Douglas's pouch. Utero-sacral ligaments very tense and tender by rectal examination. This patient was confined to bed for one month on preparatory treatment.

Sept. 26th—I shortened the round ligaments. They were extremely thin on both sides.

Nov. 6th—Called to say she was going home the following

day. All symptoms disappeared, and feels much pleased to be free from pain. The uterus in this case was well forward, but not so much so as in other cases.

CASE VIII.—An unmarried lady of 32 years of age. She has not menstruated for about one year. While lifting a heavy case, about one year ago, was suddenly seized with severe pain in her right side. Three months ago she began to eject all food taken, and this condition has existed to the date of consultation. She says she cannot retain even a teaspoonful of water. She has almost constant headache and insomnia. Removed a soft rubber ring pessary which had set up a distressing vaginitis. The uterus lay in 2° of retroversion.

After some days of preparatory treatment, I shortened the round ligaments. Since the operation, now sixteen days, she has been taking fairly large quantities of food, and has not once vomited. She sleeps well and is very little troubled with headache. Uterus, on examination, is well anteverted, and parts free from tenderness.

CASE IX.—This was a case of a married lady, aged 28; married three years, one child. Menstruation over-frequent and profuse. Complains of a dull, dragging pain in back and hips. Profuse leucorrhœal discharge. The principal subjective symptom (intense headache), however, was continued, which had become almost intolerable during the past two years. There was also a constant feeling of nausea, with disinclination for food. I found, on examination, cervix bilaterally lacerated and segments everted; uterus in retroversion, with contraction of utero-sacral ligaments; endometritis, with glairy discharge. I had this patient in bed on preparatory treatment for four or five weeks.

Dec. 20th.—I performed trachelorrhaphy and shortened the round ligaments. Found them very large and strong. This patient made a good recovery, and has not had a headache or feeling of nausea since, neither has she had a return of her former back and other aches.

I have now given a short history of a few of my private cases, and it was my intention to place before you the history of at

least twenty of those I have operated on ; but, on second thought, it occurred to me that it would be hardly fair to inflict upon you so many cases of so similar a nature. I will therefore be content with publishing the remainder when sufficient time has elapsed since operating to determine definite results. I would, however, here say that I have already, in my hospital reports, published the minute histories of six cases operated upon last summer at the Montreal General Hospital. In two of these cases I completed a cervix, a perineum, and the round ligament operation at the same sitting. One of these patients had complete prolapse of the displaceable portion of the pelvic contents (uterus outside vulva). The other case was one of incomplete prolapse. In the other four hospital cases the operation was also more or less combined with either perineorrhaphy or trachelorrhaphy. I may say that these cases have turned out satisfactorily in so far as relief given and the deformity being rectified. I have ensured the attendance of these patients during the period between the operation and the present time at the gynecological clinic, and they have expressed their gratitude for the relief afforded them by the operation. In one of these cases the wounds suppurated, but still the uterus was found sharply anteverted, although the sutures had to be removed on the seventh day. Of all my cases, hospital and private, I have had two cases in which the wounds suppurated, but the accident did not prolong convalescence or interfere with the good result of the operation. One of my patients thought she felt a "weakness" in one of the wounds, and as a prophylactic measure I fitted a truss. She is now sometime without it, and no protrusion has taken place.

The other case, the one of complete prolapse, did not return to the clinic as desired. She could not be found. But a few days ago (six months after the operation) she was sent to me through the kindness of Dr. England, whom she had consulted about a lump in her groin. I found, on causing her to force down strongly when in the erect posture, that some protrusion did take place on the right side, and undoubtedly would have in time become a full-sized hernia if it had not been attended to.

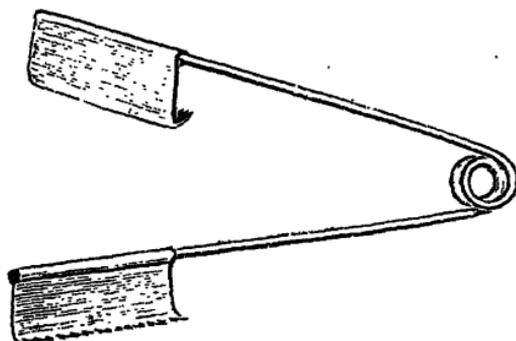
I cannot account for this condition in her case, as the wound was very small and the disturbance of the parts little. She left hospital rather soon, fully two weeks before I generally give them permission, and I think privation, hard work, and a pendulous condition of the abdomen tended largely to cause a slight separation of the pillars of the external opening. We must not forget here also the great beneficial change which had been brought about as a result of the operation. The woman now is carrying her pelvic floor high up in the pelvis and her uterus as high up as the finger can reach, instead of it being totally outside the vulva—between her thighs. From this it can be easily seen how the intra-abdominal weight became directed against the pillars of the inguinal canal, instead of being carried down past them through the pelvic outlet as a true pelvic hernia—the condition in which I originally found the case. So that it solves itself into the question, Where would this poor woman prefer to have her hernia? I may say here in passing that the hospital case-book states this patient had been operated on three times in London, Eng., and twice in a special hospital in Canada, for the relief of her complete prolapse (perineorrhaphy) without any benefit whatever. These facts speak sufficiently in themselves for the great advantage of Alexander's operation over all other methods of treatment for this distressing deformity. I have fitted a simple hernia truss, which has relieved her of the tenderness in the wound caused by the constant spreading of the pillars of the ring, and the patient is now free from suffering and able to undertake her regular work.

In regard to suppuration in these cases, I think causes tending in this direction should be avoided, although Polk of New York states that he regards it as of advantage. Dr. Polk uses the open wound method of dressing—*i. e.*, packing the wound with iodoform gauze. I do not think, however, that suppuration involves any danger to the patient so long as we ensure good drainage. I do not think there is any doubt about the direct cause being the introduction of septic matter. In both of my own cases I traced it to this cause, although not directly connected with myself or instruments. In future I shall do the

operation under irrigation of plain boiled water, and not allow nurses through the medium of sponges (however clean) to cause me to run any chance of infection from without. It is now well acknowledged that spongy connective tissue is extremely liable to break down under the influence of septic infection. It has not the same degree of vitality as muscle or the peritoneum. The latter, in fact, is a veritable digester of filth, and is difficult to influence in this way. On this account I now never make a vaginal examination on the day of the operation, and am more scrupulously careful in every way than in the case of any other operation. I think that the prolonged use of pressure forceps to keep the wound open while the ligament is being searched for has a tendency to cause severe injury to the connective tissue. I have therefore devised a very convenient wound speculum which answers as a reflector as well. This instrument is inserted directly the inguinal opening is reached; it is self-retaining, and acts also as a good reflector.



DRAINAGE TUBE.
(Full size.)



WOUND SPECULUM.

In regard to protection of the wounds, I think it will be well to cause the patient to wear a double truss for a few months, especially if a hospital patient with a pendulous condition of the abdomen. I am having such an one made with a large soft pad, which will be worn with more comfort than the ordinary double hernia truss.

In considering the operative methods for retroversion, Dr. H. T. Byford says :—

“ Alexander’s operation for shortening the round ligaments has now been performed several hundred times, and is established as a safe and effective procedure. The position of the uterus obtained is one of moderate or normal anteversion. Relief of symptoms is not always immediate, since the traction of the shortened round ligaments upon the tender or contracted tissues about the broad ligaments, or contrariwise, the dragging of the rigid resisting tissues and uterus upon the newly healed round ligaments, may give rise to discomforts for some weeks or months. Adjustment of the parts takes place after a time, however, and all symptoms due to uterine displacement, together with many others, eventually subside. Much unmeaning argument has been trumpeted throughout the scientific world about the inadequacy of the round ligaments to support the uterus against abdominal pressure, and about the part other structures beside the round ligaments play in causing retroversion. It is not pretended that the round ligaments support the womb in its natural position—they merely draw the fundus in position so that its weight and abdominal pressure will act to antevert the uterus. The effect of their action upon the uterus may be likened to the effect of the action of the rudder upon the boat—directing merely, not antagonizing the displacing or propelling powers. This brings us to the methods by which the fundus has been fixed in front of the axis of the superior strait. Kœberle was the first to stitch the uterus to the abdominal wall by suturing the stump, after abdominal oöphorectomy, in the wound. Olshausen recommended suturing the broad ligaments to the abdominal walls by a laparotomy performed expressly for this purpose. Since then Kelly and Sænger have prominently associated their names with this operation. By it the uterus dislocated toward the front of the pelvis and swings on a somewhat rigid fundal attachment near the reflection of the peritoneum over the bladder. The position of the uterus is not at all comparable to that after Alexander’s operation, since there is a dislocation forward and a fixation of the fundus. The Germans call it ventro-fixatio-

uteri, or ventral fixation of the uterus, while Kelly has named it hysterrorrhaphy. Laparo-hysterrorrhaphy, or anterior fixation of the uterus, as it might more properly be called, must be reserved for those in which Alexander's operation may not be available or practicable, or for those in which it may become necessary to perform laparotomy for breaking up of adhesions or other purposes."

In conclusion, I would say that, carefully judging from experience, I think there is a good future for this operation in affording relief to that most distressing of conditions—retroversion with descent. In recent discussions at American societies it is fast gaining in favor. Its difficulty of successful performance is its greatest drawback, and it requires a great deal of experience and careful manipulation to overcome this difficulty. When, however, the pelvic floor is in the slightest degree functionally impaired and the uterus enlarged, the three operations I have spoken of should be done at the same sitting—and should be properly done. To simply suspend a heavy, bulky uterus by the aid of the round ligaments over a prolapsed pelvic floor is unreasonable, and the bad result obtainable will only tend to bring the round ligament operation into discredit, and very unjustly so.

The following are a few letters I have received from some of the above patients or their husbands, which I thought might be interesting to read :

"*Dear Sir*,—Words cannot express my thanks and gratitude to you for the successful result of this case.

"Yours faithfully, A. G."

"*Dear Sir*,—I am happy to tell you that since the operation performed by you I am feeling very much stronger and improved in health in every way. It is now seven months since the operation, and I may say that I have felt well and am able to do my work. Thanking you very much for your kindness during my illness,

"Believe me, dear sir, yours truly, M. M."

"*Dear Sir*,—Allow me to tell you how well I am now feeling, the result of an operation performed by you. Previous to the

operation I suffered for years with backache, excruciating headaches, loss of appetite, insomnia, a depressed feeling and lowness of spirits, besides other troubles which you are well aware of. Now I am happy to tell you that I feel like a new woman. No more aches or pain, have fair appetite, rest and sleep well.

“ I remain, yours most thankfully, R. L. McL.”

“ *Dear Dr. Alloway*,—Allow me to express my gratitude for the happy results of the operation performed by you some time ago. I may say that the result was far beyond my anticipations.

Yours truly,

M. H.”

CASE OF MUMMIFIED FŒTUS.

CONTRIBUTED BY M. W. LANG, M.D., LAKE PORT, MICHIGAN.

Early on the morning of 30th January, 1890, I was called to attend a primipara, *æt.* 24, presenting symptoms of threatened abortion. She had last menstruated about the beginning of August, and reckoned herself in the sixth month of pregnancy. About 1 A.M. on 30th January she was awakened with a sharp hemorrhage, followed in an hour by expulsive pains. About 4 A.M. I saw her and found the abdomen of normal size and appearance—foetal movements distinct—foetal heart-sounds 160 per minute, head midway between the umbilicus and the middle of Poupart's ligament. On vaginal examination a slight flow was found still persisting, the parts were moist and soft, the os slightly dilated. Rest and full doses of opium were prescribed; in consequence the pains soon subsided and the flow ceased for a few hours. At noon she had a severe rigor, followed shortly by strong expulsive pains. When I saw her again at 4 P.M. it was quite evident that abortion could not be prevented, so I stopped the opium, dilated the os with the finger, and ruptured the membranes; in an hour a living child was born, but died in a few minutes. The placenta and membranes were delivered *entire* by expression. The uterus, however, remaining abnormally large, I made a vaginal examination and found another foetal head protruding through the os; I hooked my finger over the neck and brought

away the foetus, cord, placenta and membranes all together. The foetus was $4\frac{1}{2}$ inches long, flattened antero-posteriorly, well preserved, and of a leathery consistence. The cord was 12 inches long, almost straight (only two twists in its entire length), tough, leathery, and requiring considerable force to break or tear it. The placenta was brownish, tough, leathery, and odorless; the membranes were shrunken to mere threads, no liquor amnii being present. On the maternal surface of the placenta there was no appearance of recent detachment from the uterine wall, nor was there any sign of lateral attachment to the other placenta. It seemed as though the foetus and placenta had remained unattached in the uterine cavity for some time.

There was no specific history; the patient was somewhat anæmic, but otherwise in good health. Most likely this was a case of the survival of the fittest, the stronger and more favorably situated twin crowded out the weaker and pushed it to the wall. The interesting point in the case is the spontaneous separation of the placenta from the uterine wall, and the retention of foetus and placenta *free* in the uterine cavity while another foetus was developing there. When was the placenta separated? How long afterward did labor set in? Was abortion brought on by the irritation of the dead foetus and placenta *in utero*? Unfortunately I was not permitted to take away the specimen for examination, and these interesting questions cannot be definitely answered.

CASE OF SUPERNUMERARY BREASTS.

By J. HERBERT DAREY, M.A., M.D.,
OF GRANGER, MINNESOTA.

I was summoned on December 2nd, 1889, to attend Mrs. D., who was at the time in labor with her sixth child. She had had four living children and one born dead at full term. Nothing of any importance occurred with regard to any of her previous labors. I found, on examination, the os moderately dilated and the membranes unruptured. After waiting some time till the os was fully dilated, I ruptured the membranes and she was shortly delivered of a healthy male child. She informed me of a peculiarity in her organization which had caused her a great deal of trouble during each pregnancy and for some time after delivery, viz., the existence of an extra breast in each axilla, which secreted milk very freely and were very hard to dry up. For the latter portion of each period of pregnancy these extra breasts would increase in size, the same as the normal ones, and cause her great distress and discomfort by pressing on the brachial plexus and the axillary vein, causing the arms to swell up. The only way she could get any rest at all at nights was to lie flat on her back, with the arms stretched away out from the sides. If she attempted to lie on either side the gland crowded on the plexus of nerves would cause her such excruciating pain that she could not stand it. During lactation the extra breasts would secrete very freely and wet her night-clothing completely in the course of the night, thus rendering her very uncomfortable.

On examination, I found two normal mammæ in the natural situation; and in addition, in each axilla, a mamma as large as a medium-sized lemon, with a distinct areola, but no nipple at all. The ducts opened in the areola, of course, or no milk could flow out. The hair of the axilla grew over these extra glands. The glands were freely movable under the skin, and had the ordinary consistence of the normal breast. There was no connection whatever between the normal breasts and the supernumerary ones. I advised her to get a breast pump for the two extra breasts, as she said she had never used one: but she in-

formed me of a method she had tried in her last three pregnancies to dry the milk up and so be done with it. As it is very simple, and I had never heard of it before, I will mention it, as it might prove useful in cases where it is advisable to diminish or dry up the secretion of milk. It is simply to make a hot saturated solution of common table salt and apply it constantly on cloths as a fomentation. I saw her again a week after her delivery, and she said that the extra breasts had secreted freely for two or three days, but that under the influence of the salt solution they had almost ceased to flow. She had plenty of milk for the child in the normal mammæ. I thought the anomaly an interesting one, and worth putting on record, as I have never seen any account of a precisely similar case.

EXALGINE AS AN ANALGESIC.*

BY JAMES STEWART, M.D.,

Professor of Pharmacology and Therapeutics, McGill University.

The following paper is based on observations made with exalgine for the relief of pain from various causes. In all it was given in 95 cases, with the result of a marked relief in fully 74 cases, or upwards of 77 per cent. In the remaining 21 cases, the effect was slight or negative. The group of cases where relief was most marked were those of facial neuralgia. In all there were 23 cases of facial neuralgia, and in only three was there a negative effect or slight relief. In other forms of neuralgia it was given four times, with a good result in three of the four cases. It was administered in 31 cases of simple headache. In 20 cases relief was obtained, while in 11 the effect was practically negative. In one case of the lightning pains of tabes, marked relief followed its use. In four cases of acute pleurisy relief was marked. A similar result followed in four cases of acute rheumatism. In two cases of severe gastric pain the relief obtained was marked. In 10 cases of abdominal pain from various causes, only six received a beneficial effect. The remaining 16 cases comprised pains of a general and anomalous

* Read before the Medico-Chirurgical Society of Montreal.

The writer is indebted for the majority of the reports on which these observations are founded to Drs. Campbell, England and Brown, Medical Residents at the Montreal General Hospital.

character, due to traumatism, etc. Relief followed in 14 of these cases, while in only two was the result negative.

It will be noticed, from these observations, that the action of exalgine was most marked in cases of *pure* facial neuralgia, while it was least successful in headache. The cases of the latter where the drug was employed comprised headache from various causes. It is generally a difficult and frequently an almost impossible problem to ascertain with any degree of exactitude the cause of headache. This is the only excuse I have to offer for the vagueness of the term headache as here employed.

Now what conclusions are fairly derivable from the experience here related? Exalgine has marked analgesic powers. To estimate the real worth of a drug, it is necessary, however, to take into account not only the good it does but also the evil; and, unfortunately, nearly all of our agents of this class possess some very undesirable qualities.

The untoward effects, up to the present, observed in the agents derived from the aromatic series are nausea and vomiting, cardiac depression, dyspnoea and lividity from destruction of the red blood corpuscles, and rashes on the skin. In the 95 cases where exalgine was given, slight nausea was complained of in one case and nausea and vomiting in four. In only two cases, however, was the vomiting apparently directly traceable to the drug. A complaint of numbness in the left arm was made by one patient, but it is doubtful whether the exalgine had anything to do with it. Another patient complained of bad dreams. A feeling of coldness in the feet and legs was another complaint, but the patient was, as a rule, unreliable in her statements, and little weight has been placed on this complaint. The only untoward effect of any moment in the entire 95 cases, or, if we count several doses at intervals in some cases, we have upwards of 150 administrations, were two cases of vomiting, and in both it was but transitory.

No depressing action on the heart was observed in any case, and this is an important point. Neither was there noticed any dyspnoea or other sign of a destructive influence on the red blood cells. Sweating appeared in some cases, but was never profuse enough to exhaust the patient.

It follows, as far as these observations lead us, that exalgine is freer from any deleterious effect than any other analgesic of its class or power.

Exalgine is a compound anilide, being the methyl acetanilide, and is prepared by acting upon sodium acetanilide with iodide of methyl. It appears in needle crystals, hardly soluble in water, but readily soluble in water containing a little alcohol. The dose varies from one grain up to six grains. Fraser of Edinburgh says that he has found marked analgesic effects from quantities as small as half a grain. In a few cases I have tried these small doses, but not with any satisfactory result. Not infrequently it has been found necessary to have to administer a second dose of five grains in the cases reported. The greatest quantity given in twelve hours was 30 grains.

Two doses of five grains at intervals of two or three hours I should consider to be a maximum quantity.

Its action begins usually in about half an hour and reaches its maximum in about an hour or an hour and a half.

As compared with antipyrine, antifebrine and phenacetine, exalgine is, I think, fully as reliable. It is not more so than any one of these agents, but it is comparatively free from the untoward effects not uncommonly following the action of these agents, the special advantage of exalgine being its good effects in small doses. It is especially interesting, as opening the way to the discovery of other agents belonging to this class which will exceed it in activity for good and harmlessness.

A very important point which is still unsettled is the mode of action of the aromatic group as analgesics. How do they relieve pain? We know that opium and agents belonging to its class act by numbing the susceptibility of the sensory centres. The aromatic group, however, do not act in this way.

All the agents of this series, it is found, have a peculiar action on the spinal cord, and from this action there is more than a probability that through it we can explain the analgesic effects of these agents. This effect on the cord was ascertained first in regard to antipyrine. It has been found that this agent, in medium doses, depresses the reflex functions of the cord; larger

doses, on the other hand, cause convulsions, followed by paralysis. The primary diminution of spinal excitability is followed, when large doses are given, by an increased excitability, and this in turn by absolute loss of reflex function. Now there is a very intimate connection between agents which tetanize and those which relieve pain. Both of these properties are commonly found together in the one agent. This point has been prominently brought forward by Lauder Brunton.

The primary depression is supposed to be due to a stimulation of the inhibitory muscular nerves or tracts, the muscles responding but slightly owing to the greatly increased inhibitory influence. As a result of excessive stimulation, we have exhaustion of the inhibitory mechanism and, in consequence, convulsions and rigidity; the final paralysis being explained by the exhaustion of the motor nerves.

Physiology has not, as yet, unravelled the mysteries of the nature of pain. It is surprising how little is said on the essential nature of pain in physiological works. No doubt the seat of pain is in the brain, and we know that there are influences capable of inhibiting pain—that there are higher centres which inhibit the sensory centres. Intense concentration of the mind destroys pain, or as the poet says, "The labor we delight in physics pain."

A constant feature, and one common to all forms of hypnotism, is insensibility to pain from pricking, pinching, burning, etc., while the sensibility to touch may be present or actually increased. Now, although we are unable to explain the phenomenon of hypnotism, it is clear that it is essentially owing to an inhibitory influence, and the most plausible explanation that I know of to account for the analgesic action of the group of aromatics is that given by McAllister. He thinks "that this class of drugs acts, not by numbing the sensory nerves, but by stimulating the inhibitory centres."

This hypothesis may appear to many as too highly imaginative. For true progress it is very necessary to have hypotheses. It requires no effort of the imagination to conceive the time when we can explain the true nature of pain, and then the day will not be far distant when the modern chemist can put into our

hands agents more powerful for its relief than any we at present possess. It is even not unphilosophical to assume that we may yet be put into possession of agents which will relieve not only bodily but *mental* pain.

Retrospect Department.

QUARTERLY RETROSPECT OF OBSTETRICS.

PREPARED BY J. CHALMERS CAMERON, M.D.,

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Mummified Fœtus Retained in Utero.—Slow death of the fœtus, with mummification and retention in utero for weeks or months, occurs in multiple more frequently than in single pregnancies. Usually the placentæ are attached by their borders and anastomose freely, or else one placenta serves for both children. When one fœtus is much stronger than the other, or is more favorably situated, it is apt to take the lion's share of the nutriment and push the weaker to the wall. This latter slowly perishes and is compressed more or less by the other's growth, and sometimes even flattened out like a sheet of parchment, when it is known as *fœtus papyraceus*. Dr. Lang reports a case in the current number of this JOURNAL, which it is interesting to compare with one reported by Dr. E. W. Mulligan in the *Buffalo Med. Soc. Journal* (quoted in the *Brit. Med. Journal*). On 21st Nov., 1888, Dr. Mulligan was called to a patient six months pregnant, with symptoms of threatened labor, the pains recurring every half hour. The abdomen was so large that he thought the patient's calculations must be astray, and that she was at or near full term. He left directions with the nurse to send for him when labor pains became more active. Soon after he left the house the waters broke and nearly a pailful came away. The pains ceased and the patient continued in good health and attended to her domestic duties till the end of February, 1889, when labor set in. The abdomen was then much smaller than in November. A ten-pound child was delivered, followed immediately by a dead mummified fœtus, whose cord had a velamentous attachment to the border of the placenta. Here there were

two amniotic sacs with but one placenta; the rupture of the one sac and death of the first foetus did not bring on labor prematurely or affect the growth of the other foetus. In Dr. Lang's case there were two sacs and two placentæ, apparently unattached and not communicating with each other; the one foetus perished and mummified, its placenta separated from the uterine wall, both foetus and placenta apparently lying free in the uterine cavity for some time. It is very unfortunate that Dr. Lang was unable to secure the specimen for examination.

A Remarkable Case of Foetal Retention from Fibroid Disease.
—Prof. Alphonse Hergott of Nancy presented the report of a remarkable case to the Academy of Medicine in December last. (*Annales de Gynécologie.*) The patient, æt. 24, II-para, was admitted to the hospital 26th March, 1889. She menstruated regularly from her fifteenth year, was married at seventeen, and bore a child two years later. She enjoyed excellent health till the middle of August, 1888, when her menses ceased; then for three months she suffered from difficult and painful micturition, at times necessitating the use of a catheter. The abdomen enlarged irregularly, foetal movements were first felt on the right side at the sixth month, symptoms of peritonitis appeared in the seventh month, whereupon the foetal movements became gradually feebler, and finally ceased about the middle of the eighth month. The abdominal distention then declined somewhat, but her general condition became so bad that she sought admission to hospital. On examination, the abdomen was found to be irregularly enlarged. Palpation was painful. The right corner of the uterus in which the foetus had developed occupied the right flank and extended almost to the border of the false ribs, while a large, firm, fibroid tumor extended from the superior strait in the middle line up to the umbilicus. It was impossible to induce labor on account of the situation of the cervix, so there was nothing to do but to wait for the onset of labor and build up the patient's strength meanwhile. On April 6th the liquor amnii began to drain away, a few days later there was a reddish discharge with shreds of membrane, which continued till April 24th; meanwhile the abdomen was getting smaller and the breasts

larger and more turgid. The diagnosis was foetal retention from fibroid disease of the uterus. The patient's condition grew rapidly worse, signs of foetal decomposition and septic absorption appeared, and it became imperative to remove the putrid contents of the uterus by abdominal section. On May 22nd an incision was made to the right of the linea alba obliquely downwards over the site where ballottement had been made out, the uterus was freely incised, a quantity of dark foetid, purulent fluid came away, and a macerated foetus extracted. It was about seventeen inches long and weighed a little over five pounds. The placenta was attached to the left side and was firmly adherent throughout. As uterine contraction was feeble, and the patient very weak, it was deemed unsafe to peel off the placenta or attempt the amputation of the uterus; so the edges of the uterine wound were sewn to those of the abdominal wound and the placenta left to separate spontaneously. To guard against septic absorption, the uterine cavity was thoroughly irrigated with the naphthol β solution so highly recommended by Pinard and Bouchard, and tamponed with iodoform gauze. A large thread was attached to the cord and three soft rubber drainage tubes carried down beside the placenta. The sutures were then placed and the dressings applied. Every day gentle traction was made upon the cord and the uterine cavity irrigated with the naphthol solution. On the thirteenth day after the operation the placenta began to come away in fragments, and by the twenty-fourth day it had all been fished out. From that time improvement went on rapidly; on July 18th cicatrization was complete, and on August 1st she left the hospital. The rapid growth of the fibroid in this case is remarkable; so small as to give rise to no symptoms before gestation began, it grew so rapidly that it filled the pelvis, displaced the uterus, and formed the bulk of the uterine tumor. Prof. Hergott wishes to draw the attention of obstetricians to the fact that in certain exceptional cases when the surgeon is obliged to do a Cæsarian section, he may, after suturing the uterus to the abdominal wall, leave the placenta adherent to the uterine wall, thereby avoiding the hemorrhage which is so formidable after its immediate artificial

separation and extraction. Naphthol β , a non-poisonous antiseptic, diminishes considerably the danger of septic absorption, and enables him to await the spontaneous separation of the placenta without fear of hemorrhage.

The Influence of La Grippe upon Diseases of the Female Genitals.—Biermer states that the grippe is apt to cause uterine hemorrhage, and in cases of amenorrhoea sometimes re-establishes menstruation. Jacquemier and Kiwisch say that in their experience the disease does not exert an injurious effect upon the course of pregnancy. Dr. Sigmund Gottschalk of Berlin (*Centralblatt f. Gyn.*, 1890, No. 3) gives his experience and confirms the views of Biermer. He found the uterine hemorrhage to be a true metrorrhagia, not merely a menorrhagia. Blood appeared either on the first or second day of the attack, was profuse and accompanied by sacral pain and dysuria. This latter symptom was referable to inflammation of the urethra and vulva. The bleeding lasted from five to eight days; partial relief was obtained by the use of Hydrastis Canadensis and hot vaginal irrigation. In all his cases the uterus was markedly enlarged, its cavity lengthened 1—1½ cm., its walls softened as in pregnancy, its mucous membrane thickened and softened. The uterus was tender to touch and the passage of a sound painful. There seemed to be no special engorgement or sensitiveness of the appendages; he considers the hemorrhage attributable rather to inflammation of the uterine mucous membrane than to any reflex effect from the appendages. It has been asserted that pregnant women are less liable to be attacked with influenza; this was not Gottschalk's experience. Abortion occurred in two cases, pains setting in about the second day of the attack. In both the uterus was very sensitive to touch. In neither was the rise of temperature high enough to account for abortion. He thinks that the influenza sets up inflammation of the uterine mucous membrane in the pregnant as well as the non-pregnant, a condition which may readily lead to abortion in the first half of gestation especially. Gottschalk's observations coincide very closely with my own, made during the recent epidemic in Montreal. In three cases abortion occurred within five days from the onset of

influenza, and the loss of blood was unusually great. In another, ten days confined and not yet allowed up, the influenza was ushered in with severe hemorrhage and marked uterine tenderness. In another who was confined while sickening with influenza, there was marked uterine inertia during labor and atony afterwards. Considerable blood was lost during the third stage, the lochia continued profuse and bloody for a long time, and the convalescence was slow and tedious. Symptoms of cardiac weakness were marked in most of my cases, in two severe enough to cause great anxiety. Ergot seemed to be of little use; quinine, digitalis and stimulants were of most service.

Case of Air Embolism after the Iodoform Gauze Tamponade in Placenta Prævia.—(*Centralblatt f. Gyn.*, No. 1, 1890.)—*Vávra* of Prague reports the case. Patient, æt. 38, II-para, was delivered spontaneously. The placenta, attached low down and to the side, came away in half an hour. Atonic hemorrhage followed, which was not controlled by massage, ergotin, hot and cold douching. After several strips of iodoform gauze had been introduced the patient became suddenly cyanosed, and died. At the post-mortem, air was found in the veins of the broad ligaments, both internal spermatic veins, the inferior vena cava, the right heart and pulmonary artery. Moderate anæmia and œdema of the lungs were also found. *Vávra* calls attention to the necessity of care in tamponing, because in this case the air was pressed into the uterine veins while the strips of gauze were being placed *in situ*.

The Antiseptic Value of Acetic Acid in Obstetrics.—(*Centralblatt f. Gyn.*, No. 6, 1890.)—Dr. Schæffer read a paper before the Berlin Obstetrical and Gynæcological Society criticising the views of Battlehner and Engelmann upon this subject. In Veit's laboratory he carried out a series of experiments upon the relative germicidal power of acetic acid and carbolic acid upon anthrax spores and the staphylococcus aureus. A 5 per cent. solution is as strong as can safely be used; the following are the results:

{ A 5 p.c. sol. of carbolic acid destroyed anthrax spores	in 36 hours.
{ A 5 p.c. sol. of acetic acid	“ “ “ in 15 days.
{ A 5 p.c. sol. of carbolic acid destroyed staph. aureus	in 1 minute.
{ A 5 p.c. sol. of acetic acid	“ “ “ in 7 hours.

In the treatment of puerperal septicæmia, the carbolic acid solution is consequently 420 times as powerful a germicide as the acetic acid solution. Battlehner advocated acetic acid, because it is always readily obtainable in the form of vinegar; Schæffer considers the intrauterine injection of vinegar objectionable on account of fermentative and other germs it is liable to contain.

A Case of Ectopic Gestation without characteristic symptoms.
—(*Medical News.*)—Dr. J. M. Baldy records a very interesting case where he diagnosed pyosalpinx and operated, but found an unruptured tubal pregnancy. The patient, æt. 24, had two children, no miscarriage. The last pregnancy was six or seven years ago. After this labor she was confined to bed for eight weeks, and has never since been free from pelvic and abdominal pain, and has been once confined to bed for a week with abdominal pain. Her menstruation has been regular but profuse. On November 15 she applied to Dr. Baldy, stating that her regular period had come on five weeks previously, and that she had been losing more or less ever since. She had chilly feelings, a high temperature, and rapid pulse. On examination, the uterus was found of normal size and in good position. On each side were irregular cystic masses, the largest being on the right. Manipulation was painful. The diagnosis was double chronic pyosalpinx with acute pelvic peritonitis. Six days later abdominal section was performed and a tubal pregnancy six or seven weeks old was removed from the right side, and an ovarian cyst the size of a hen's egg from the left side. Subsequent questioning elicited no other signs of gestation, ectopic or otherwise. During the past year no menstrual period had been delayed, scanty or missed. None of the ordinary signs of pregnancy were present, such as she had previously noticed. There were no mammary changes, no decidual discharge, no stomach symptoms, no enlargement of the uterus, no discoloration of the genitals. Sterility for six or seven years, bleeding for five weeks and pain were the only symptoms usually present in ectopic gestation, symptoms altogether too indefinite to make diagnosis possible. This case is of interest in view of the dogmatic statements that are made from time to time as to the early diagnosis of ectopic gestation. Dr. Baldy calls particular attention to the following points:—

1. That this was an unruptured or primary tubal pregnancy.
2. That there was no missed or scanty menstrual period.
3. That there was no decidual discharge.
4. That there were no breast or stomach symptoms or other signs of pregnancy.
5. That the woman did not think she was pregnant.
6. That the uterus was of normal size.
7. That the character of the pain was not markedly distinctive.
8. That there was a tubal pregnancy on one side and an ovarian cyst on the other.

The Influence of Menstruation upon Lactation.—(*Medical News.*)—It is and always has been a popular belief that in nursing women menstruation impairs the quantity and quality of the milk. Some trace rickets to the continuance of lactation after menstruation has been re-established, while one observer claims that bacteria appear in the milk during menstruation. Schlichter has recently published some important observations on this subject in the *Wiener Klinische Wochenschrift*. In the foundling hospital for five months and a half, careful note was taken of the general health, evacuations and weight of fifty-two children nursed by women whose menses had returned, thirty-three milk analyses being made. It was found that children nursed by menstruating women sometimes increase wonderfully in weight, the average increase being greater during and just after the appearance of the menses than before, and the condition of the child during the menstruation period being excellent. Only one child became dyspeptic at this time, and even then did not cease gaining in weight. The milk analyses showed less difference between the milk of the menstruating and non-menstruating than between specimens of the same woman's milk collected at morning, noon and night. The conclusions drawn are as follows :—

1. Menstruation returning during lactation (that is, after the sixth week from delivery) is not necessarily injurious to mother or child.
2. Metrorrhagia before the sixth week may retard the development of the child.

3. Diseases in the nursing child, as dyspepsia, colic, enteric catarrh, occurring during menstruation in the nurse, should be regarded as coincidences, and, therefore,

4. Should not, *à priori*, be treated by a change of nurses or artificial feeding, but should be managed in the usual way by medication and regulating the length of the nursings and the intervals between them.

The writer of the *Medical News* editorial concludes that these views of Schlichter's are in accord with his clinical experience, and that menstruation not excessive in amount or duration, nor accompanied by other pathological conditions, does not of itself interfere with lactation.

Changes in the Tubes and Ovaries in Pregnancy and the Puerperal state.—(*Zeitschrift f. Geb. und Gyn.*, Bd. XVIII., Hft. 1.)—*Dr. Thomson* of Dorpat, from a series of investigations upon rabbits, comes to the following conclusions:—

1. The tubes in pregnancy and the puerperium undergo very appreciable changes. In pregnancy the connective tissue is richer in blood and more succulent, and seems somewhat thickened. The tubal musculature hypertrophies, but in a less degree than the uterine. In the puerperium the muscle cells involute in the same way as the uterine.

2. The ovaries manifest no appreciable change in their structure during pregnancy or the puerperium.

Abdominal Section for Congenital Umbilical Hernia.—In the January number of the *American Journal of Obstetrics*, *Dr. McDonald* reports a case which resisted reduction by taxis, but was cured by section. At birth it was noticed that the cord was the seat of an umbilical hernia; a temporary ligature was applied about eight inches from the abdomen and repeated attempts made to return the bowel. The child was normal except the hernial protrusion at the umbilicus the size of an orange. The sac-wall was thin and translucent, permitting a view of the already congested bowel beneath. Taxis having failed, immediate operation was decided upon. The child, wrapped in warm flannel, was placed in a good light and put under chloroform. The abdomen and cord having been made aseptic, the sac was

divided between two artery forceps to the left of the umbilical vessels. The external layer (amnion) was freely incised, and Wharton's jelly having been carefully cleared away, the inner coat (peritoneum) was freely incised between artery forceps, care being taken to avoid adherent intestine. The sac contained portions of the ileum, ascending colon and cæcum. All non-adherent portions were at once returned and a hot sponge applied to close the ring; adherent intestine was relieved by resecting the inner wall of the sac and adherent omentum ligated and removed. The intestines were then returned, hemorrhage controlled, the entire sac down to the integument excised, and the wound closed by through-and-through silk sutures, introduced well back from the edges of the wound. The patient made a good recovery. The author gives a table of all the cases of abdominal section for umbilical hernia he has been able to find, nineteen in all—with seventeen recoveries and two deaths. He has also collected from various sources twelve cases treated by the expectant method (compress and bandage)—with three recoveries and nine deaths.

The operation should be done as soon as possible after birth, as the delay of a few hours may be followed by commencing gangrene of the cord and peritonitis. The indications for operation are—

1. The character of the sac must be such that delay will lead to its sloughing.
2. The hernia must be irreducible.
3. If reducible, it must be incapable of retention by suitable mechanical appliances.

Pregnancy in the rudimentary horn of a bicornate uterus mistaken for Tubal Gestation; Laparotomy; Recovery.—Dr. Mundé (*Amer. Jour. Obstet.*, Jan. 1890) reports the case of a woman who had a tumor to the right of the uterus which he supposed to be an ectopic gestation. He opened the abdomen, and discovering his mistake, aspirated the liquor amnii, whereupon the uterus regained its normal outline. The uterus was returned to the abdominal cavity and the abdominal wound closed. The patient aborted that night, as expected, and made an uninterrupted recovery.

The subsequent behavior of cases of Ectopic Gestation treated by Electricity.—In May, 1888, Dr. Brothers of New York reported a case of ectopic gestation successfully treated with electricity, and gave a resumé of forty-three cases collected from various medical journals (*American Journal of Obstetrics*) In the February (1890) number of the same journal he reports ten more cases, and gives the results of his enquiries respecting the subsequent behaviour of cases so treated. It is well-known that in the majority of reported cases the use of electricity has been followed immediately by an abatement in symptoms due to growth, and a marked diminution in the size of the tumor. In order to determine more accurately the subsequent course of such cases, he opened a correspondence with those operators who had used this method or knew of cases where it had been used. An answer was requested to the following two questions: 1. What secondary dangers has your patient undergone as a result of the treatment? 2. What is the present degree of health of your patient, or when last seen? From replies to these questions he is able to state positively that 25 patients (reported cured) have been heard from, after the lapse of one to eight years, and that at last accounts all were well. Many still carried traces of the old trouble, but not such as to cause any inconvenience. From a careful study of the facts he has collected, Dr. Brothers draws the following conclusions:—

1. The risk of rupturing the sac of an ectopic pregnancy and causing death by internal hemorrhage is slight. In but one case has this possibly occurred, but the reporter himself thought that the damage existed prior to the employment of electricity.

2. Suppuration of the dead foetal mass has not occurred in any case in which electricity was employed before the third month.

3. Beyond the third or possibly the fourth month, electricity should not be resorted to.

4. Electro-puncture is to be condemned in all cases.

5. In cases of mistaken diagnosis, no harm is done by the electrical treatment.

6. Under galvanism or faradism early ectopic gestation can

be checked in its growth and caused to disappear entirely or become shrivelled up. The remaining masses have thus far caused no subsequent trouble.

Embryotomy vs. Cæsarian Section.—Dr. Barnes replies to Dr. Wathen's criticisms of his views on this subject in the *American Journal of Obstetrics*, March 1890. Dr. Barnes discriminates between cases of labor at term with conjugate diameter under 2 inches, and those with a conjugate of 3 inches and more. In the first class of cases he advocates C. section. If the conjugate is under 2.5 inches and the child is not viable, he thinks abortion should be induced. If the conjugate is 3 inches or more (too narrow to allow a mature foetus to pass alive) he advises to temporize till the foetus is viable and then induce labor. He says it is the mother's right to turn the scale in her favor when there is a doubt. He maintains that neither craniotomy nor Cæsarian section can be absolutely accepted or absolutely condemned; each has its own proper field, and in particular cases we are bound to consider which is to be preferred. "It has become the fashion of late to accept without reserve the dogma that foeticide, done for the purpose and with the high probability of saving the mother, is murder. May it not be said with more justice that to encounter the serious risk of matricide with the doubtful hope of saving the foetus is near akin to murder? There are two sides to the question; they are not incompatible."

RETROSPECT OF PATHOLOGY.

BY WYATT JOHNSTON, M.D.,

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Peritonitis.—Dr. H. J. Waterhouse of Edinburgh has published some interesting experiments upon purulent peritonitis. Grawitz had shown, in 1886, that the injection of even large quantities of pyogenic bacteria into the peritoneal cavities of rabbits and dogs was not sufficient to produce suppuration unless they were mixed with some substance difficult of absorption (blood, etc.), or unless the peritoneum was at the same time inflamed by some substance such as turpentine or croton oil. Dr.

Waterhouse was able to confirm these results on rabbits and cats, and further performed experiments to bring out certain points of practical importance in explaining the conditions under which peritonitis follows laparotomies, intestinal strangulation, etc. It was found that very small quantities of decomposing fluids—urine, pus—injected into the peritoneum were capable of always producing fatal peritonitis, but when largely diluted with water were inert. Injection of a few drops of any fluid containing staphylococci with simultaneous irritation of the peritoneum by turpentine produced fatal peritonitis. A laparotomy wound was not in itself a predisposing cause for peritonitis, because laparotomy and injection of staphylococci gave negative results; further, inoculation of the angles of the wound itself directly with staphylococci failed to produce peritonitis. Inoculation of an incision down to, but not opening, the peritoneum produced a large abscess in the abdominal wall, but no peritonitis. In resection of the intestine, the peritoneum showed itself more susceptible, peritonitis resulting in one case where resection was accompanied by injection of staphylococci. Artificial strangulation of the intestine was always spontaneously recovered from in rabbits and cats when the constriction had only lasted six hours. When the peritoneal cavity was infected with staphylococci the result was fatal peritonitis, even when the constriction had only lasted two hours. A similar fatal result was obtained by strangulation and injection of cocci into the veins of the ear, or by producing a septic abscess or osteomyelitis. On the other hand, strangulation with injection of staphylococci into the stomach or the incarcerated intestine was not followed by peritonitis. In animals with ascites, the injection of a very few drops of the staphylococcus emulsion produced in every case purulent peritonitis.

Experimental Extirpation of the Liver.—Prof. E. Ponfick of Breslau has reported in *Virchow's Archiv* the results of a remarkable series of experiments upon this subject, to ascertain to what extent the function of the liver could be dispensed with. Previous attempts in this direction by others were chiefly confined to ligature of the portal vein, with the uniform result of

death within a few hours. Ponfick found to his astonishment that by ligaturing the long tongue-like processes of the rabbit's liver near their roots, close to the vena cava, he was able to excise, either at a single sitting or by repeated operations, from one-fourth to three-fourths or even more of the organ without seriously affecting the general health of the animal. The rabbit's liver consisting of five lobes bearing a uniform ratio to the entire organ, the removal of one or more of these signified respectively the removal of one-fourth, one-half, three-fourths, four-fifths, etc. The immediate effects of the removal of one-fourth were a temporary venous congestion of the spleen, stomach and small intestine. When one-half or three-fourths were removed, this condition was more marked, a few ecchymosed and infarcted spots being observed. The spleen in these cases was increased to double its normal size. The large intestine and cæcum were, however, quite free from congestion. This portal congestion was only transitory, disappearing completely in the course of a few days or even hours. These immediate effects were observed in these animals dying from various causes soon after the operation. The majority of the animals survived.

The ultimate effects of the operation.—Since the individual weight of each of the five lobules bore a constant ratio to the total weight of the liver, and the total weight of the liver to the body weight, it was interesting to estimate the degree of compensatory hypertrophy in those portions of the liver left intact. It was found that the animals, after removal of one-fourth, at first lost weight but soon regained or even exceeded the weight previous to the operation. In attempting subsequent further removal of another lobe the operation in several cases was attended with fatal hemorrhage. The autopsy showed that the intact portions of the liver had compensated for the portion lost, the actual liver weight being greater than that estimated at the time of operation. When one-half or three-fourths of the liver had been removed, this compensation was even more marked, and took place within even the incredibly short space of eight to fifteen days. An attempt to remove subsequently the remaining fourth of the liver in thirteen cases resulted uniformly in the death of the animals from hemorrhage.

Of the performance of the liver function under these altered conditions no exact details are given, but it is stated that none of the remaining organ showed any tendency to assume the function of producing bile. The histological changes will be dealt with in a subsequent paper.

Tetanus.—Since the discovery of the tetanus bacillus in garden earth by Nicolaier in 1885, and its successful culture and inoculation from a case of tetanus by Rosenbach in 1886, a great number of observations have been made upon the subject. At first, it will be remembered, it was impossible to obtain pure cultures of the bacillus, but Kitasato (and independently of him, Buchner) have succeeded in doing so by excluding oxygen from their tubes. The bacillus is anaerobic, growing well in the ordinary media in an atmosphere of hydrogen, but not growing in carbonic acid gas. It forms spores within the body which possesses great powers of resistance to heat and disinfectants, retaining their vitality after ten hours sterilization by 5 per cent. carbolic lotion. The way in which the symptoms are produced is still obscure. Brieger, in 1887, was able to isolate, not one, but four toxic alkaloids (or ptomaines) capable of producing in various degrees tetanic symptoms.—(*Zeitschrift f. Hygien*, Vol. VII.)

In this connection it is interesting to note that other observations go to show that animal alkaloids produced by the body itself (leucomaines) can produce tetanic symptoms. An irritability of the nervous system stands in some unknown connection to the tetanus, to the toxin as the determining cause. It is possible that tetany, hitherto regarded as a purely nervous disease, may depend upon the production of leucomaines.

Kitt has succeeded (*Centralblatt f. Bact.*, No. 10, 1890) in producing tetanus in horses and other animals by inoculating with dried pus obtained from a case of tetanus in the horse sixteen months previously. He was also able to obtain the tetanus bacilli in pure culture from the same material.

Kakke.—(*Virchow's Archiv*, Vol. CXIX.)—The peculiar disease existing in Japan and called kakke has recently been investigated by Dr. Minra of Tokio. The symptoms are dyspnoea, lividity, a tendency to dropsy, and passive dilatation of the right

ventricle. The disease is frequently fatal in from six weeks to as many months. The symptoms appear to depend upon a progressive paresis of the diaphragm, and much benefit is derived from faradization of the course of the phrenic nerve. Dr. Minra considers that this obscure neurosis is produced by eating certain species of tunny fish. (*Fam. Scombridae.*) It was formerly very prevalent in the Japanese navy, but disappeared entirely about a year ago when fish was abolished from the sailor's diet. It was common amongst the jailors in the prisons, but the prisoners who lived on a vegetable diet were free from it. It was present only during the summer months, when this fish was obtainable, and existed chiefly among those persons who were in the habit of eating it (probably in a condition not perfectly fresh).

Acute cases of poisoning from these fish had been long well known, and went by the name of fish-drunkenness, the symptoms being headache, vertigo, palpitation and dyspnoea.

Malignancy in Tumors.—There seems to be a growing tendency to accept the theory so long upheld by Sir James Paget, that tumors are due to some specific virus whose nature we have yet to learn. The announcement by Scheuerlen some three years ago that a specific bacillus had been discovered in cancer, led to the careful investigation of this point by numerous competent men with negative result. It seems well proved that the virus, if it exist, is not bacterial in nature. At present it seems probable that some tumors, at all events, are due to parasitic protozoa (psorospermia) belonging to the family of Gregorinidæ. The conditions known as epithelioma contagiosum and Paget's disease of the nipple appear due to the coccidium (or spore case) form of these parasites. These are forms of cutaneous epithelioma due to psorospermia. The parasitic nature of the disease was first pointed out in 1889 by Darier, of the Hospital St. Louis in Paris, who calls it follicular psorospermiosis. The small oval parasites were found in large numbers in the sebaceous follicles and in the deeper layers of the rete Malphigii, which showed a marked tendency to proliferation and infiltration of the deeper tissues. In the later stages ulceration occurred.

L. Wickham of the Hospital St. Louis has since investi-

gated six cases, finding parasites present in every instance. Inoculation experiments were unsuccessful. Cultivations in moist sterilized sand were attended with some degree of success, certain changes in the protoplasm being observed to take place. These changes remained absent when the cultures were mixed with powdered iodoform.—(*Archives de Médecine Experimentelle*, Jan. 1890.)

Bland Sutton (*British Medical Journal*, 1889) has described similar bodies in cases of mucous papillomata of the cervix uteri in monkeys. In these cases, however, the conditions did not appear to be malignant. The parasites were not detected in some cases of uterine cancer in the human subject.

Thoma (*Fortschritte de Médecine*, No. 11, 1889) reports having met with cell-like bodies apparently parasitic in nature lying within the nuclei of cancer cells.

It is possible that these may have escaped detection through the close resemblance they bear to the histological elements; unless some method of cultivation and inoculation is discovered the microscopic appearances alone cannot be considered conclusive.

A contagious form of epithelioma also occurs in fowls, and in this L. Pfeiffer has recognized similar parasitic protozoa.—(*Zeitschrift f. Hygiene*, Bd. IV.)

Hanau of Zurich (*Fortschritte de Médecin*, 1889) reports the successful inoculation of a form of carcinoma affecting the testicles of white mice. He transplanted portions of the tumor into several other mice both subcutaneously and into the peritoneum.

Wehr (*Arch. f. Klin. Chirurg.*, Bd. XXXIX.) was able to successfully transplant minute portions of a medullary cancer from the prepuce of a dog into the subcutaneous cellular tissue of healthy dogs. The grafts attained the size of hazel nuts and then disappeared. In one case, however, secondary carcinoma was found six months later in the lymph, glands and spleen.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

CONDENSED REPORTS OF CASES IN DR. MACDONNELL'S WARDS.

The Influenza Epidemic in its Relation to the Mortality from Pneumonia.—According to the various records of previous epidemics of influenza there has been, during the period of the visitation, an unusual mortality from lung diseases, and more especially from pneumonia. It was my lot to have had charge of half of the medical patients in the Montreal General Hospital during the period in which Montreal was visited by the influenza, and inasmuch as many lung cases found their way to my beds, it has appeared to me that some account of the cases may not be uninteresting.

Most writers on epidemics give some six to eight weeks as the period during which influenza visits a place. So I shall take the months of January and February as the *grippe* period here, as it was during Christmas week that the first cases made their appearance. The field of observation, I confess, is very small, some thirty beds all told, many of them occupied during all that period by those suffering from chronic diseases, but, perhaps, had our records extended over more patients we might, as has happened during typhoid fever visitations, become so overworked as to render the accurate recording of all the symptoms and physical signs an impossibility.

There were admitted 15 cases of lobar pneumonia; of these 9 died. Of the whole number but two had a previous history of *la grippe*. In all the other cases in which a connected history could be obtained there was the story of the pain in the side, the chill and sudden illness. These two cases were both fatal. One was a consolidation of the whole of the right lung, occurring in our nurse who, having had the influenza, struggled to attend to the patients under her charge. The second case was in one of our chronic patients who had been under treatment for aortic regurgitation. After having had febrile symptoms for some days, pneumonia developed, and death was speedy.

When such a small number of cases is dealt with, comparing the statistics of one year with those of another is apt to mislead, otherwise I should be tempted to compare the admissions from pneumonia for these two months with those of the corresponding months of previous years and to attempt to establish a comparison of the mortality, but it is better merely to relate the experiences of the wards during the period of the visitation.

Of the 9 fatal cases, 5 were double pneumonias, and the majority of these were brought to hospital in a moribund condition. No case of double pneumonia recovered. Of the single pneumonias which ended fatally, one was a complication of a rapidly progressing diabetes mellitus, one was a complication of valvular disease of the heart, and one was connected with an alcoholic history. The nurse's case was the only fatal uncomplicated case, and she was 52 years old. Alcoholism was present in the history of nearly every case. This cause could, to my satisfaction, be excluded in but two of the fatal cases. Of the 6 patients who recovered 2 were of dissipated habits.

The most interesting of the pneumonia cases is that of C. C., æt. 30, a stout, muscular man, formerly a cabman, and of temperate habits. On the 14th January he came to hospital with severe pain in the right side, which was felt for the first time the day before. Great prostration. There was flatness on percussion in the right chest from a point about one inch above the nipple to the extreme base, extending horizontally around the chest. At the upper part of this area the crepitant râle was very distinct and vocal resonance was increased, but it was lost below; slight cough, no expectoration. On the third day of the disease there was some expectoration, which was streaked with blood. The temperature was elevated (102°), pulse 130, and respirations 30. The dulness spread until it became evident that the whole lung was involved. On the fifth day blowing breathing could be heard over the upper half of the affected lung above the nipple line. On the seventh day there was a decided crisis, a fall of temperature to normal, and profuse sweating. On the 16th day it was noticed by Dr. Campbell, the house physician, that the physical signs were undergoing

change. After the crisis, in addition to the sweating, there had been sharp diarrhoea and very copious mucous expectoration, but there had been no perceptible change in the physical signs. To-day, however, it is evident that fluid is rapidly forming. The apex of the heart is displaced to a point half an inch outside the nipple line. In the right lung, below the nipple line, all round there is silence; above this level the breathing is bronchial. Two days later the signs of fluid became more manifest; the right chest was perceptibly larger than the left, and did not undergo any perceptible movement during the act of inspiration. The temperature, which had fallen to normal after the crisis, now began gradually to rise at night. Aspiration with a hypodermic needle withdrew fluid suspiciously sero-purulent. The physical signs are now indicating very copious effusion; 20 ozs. of fluid were withdrawn with an aspirator on the 4th February. This fluid, on microscopical examination, was reported to contain pus. On 9th February another aspiration was practised and 46 ounces of decidedly purulent fluid were taken away. The general condition having somewhat improved, the chest was opened by Dr. Bell on the 11th February and a considerable quantity of very thick pus was removed.

March 19th.—Progress of the case satisfactory.*

Small as was our experience of the relation of epidemic influences to the frequency of pneumonia, it enables us to say (1) that during the period of the visitation there were an unusually large number of admissions for pneumonia, (2) that of these persons so attacked a large proportion were either drunkards or aged persons, (3) that the prognosis in pneumonia during this period was no worse than any other time. All the single lung

* The following references to Metapneumonic Empyema have recently come under my notice:—

In the *Revue des Sciences Médicales*, Jan. 1890, there is an abstract of a case reported by Sevestre, of a boy aged seven, son of a consumptive mother, who in the course of a left apex pneumonia presented the physical signs of effusion into the pleura with displacement of the heart. Three hundred grammes were withdrawn from the 7th interspace. Ten days afterwards another tapping had to be made in the 2nd interspace to empty a second collection of fluid. Finally the operation for empyema was performed, and recovery ensued in the space of two months.

The *American Journal of the Medical Sciences* for June, 1888, contains (p. 621) an abstract of an article by Penzoldt (*Munch. med. Wochenschr.*, 1888, 227) on this subject, in which he relates his experiences of seven cases.

pneumonias not complicated with alcoholism or age recovered. The proportion of deaths to recoveries corresponds very closely to what has been observed elsewhere. Thus, in Vienna Prof. Rettenbacher reports eight deaths in ten cases. Nothnagel reports a high mortality from pneumonia, and states that the peculiarity of the disease is the tendency to spread to both lungs. In the "General History of the Epidemic of Influenza" by Dr. Jacobi, in the *New York Medical Record* for February 22nd, 1890, it is stated that in St. Luke's Hospital there were fifteen cases of lobar pneumonia, seven deaths; both lungs involved in four cases.

Reviews and Notices of Books.

The Principles and Practice of Surgery. By JOHN ASHURST, JR., M.D., Barton Professor of Surgery and Professor of Clinical Surgery in the University of Pennsylvania, Surgeon to the Pennsylvania Hospital, Senior Surgeon to the Children's Hospital, &c. Fifth edition, enlarged and thoroughly revised. With 640 illustrations. Philadelphia: Lea Brothers & Co. 1889.

We had the pleasure and privilege of reviewing the last edition of this excellent work on surgery, and the only regret regarding it we had then to express was the continued antipathy of its able author to the great principle of modern antiseptic surgery. Now, however, we are happy to be in a position to state that Dr. Ashurst has at last become a convert, and is now almost as strong in his advocacy of Lister's methods as before he was opposed to them. This is a great gain, because there are few teachers on this continent who wield a more widespread influence than the author of the work under review.

We have pleasure in making the following quotation from the article on the treatment of wounds: "In previous editions of this work I have expressed a doubt as to the superiority of the *antiseptic method* over other plans of wound-treatment. Having now employed it for over two years in large clinical services at the University, Pennsylvania, and Children's Hospitals, as well

as in private practice, I feel compelled to say that I have modified my opinion, and that while I cannot subscribe to the extravagant laudations which this plan of treatment receives at the hands of its most enthusiastic advocates, I believe that, when used with judgment, and, if I may be pardoned the expression, when *diluted with common sense*, it is capable of affording very valuable aid to the surgeon. I have not, indeed, found any diminution in the mortality after operations by its employment, but I find that the average period of convalescence is shortened; that the violence of the traumatic fever and the frequency of secondary fever are both lessened; that upon the whole the comfort of the patient is promoted; and that the labor and anxiety of the surgeon are very materially diminished. For all which I am duly thankful."

While the general arrangement of this edition is very much the same as that of previous volumes, all parts have been carefully revised and much new matter incorporated. The chapters on Diseases of the Eye and of the Ear have been thoroughly revised by Drs. De Schweinitz and Randall, both former pupils of the author. The number of illustrations has, moreover, been considerably increased by original cuts, especially of new and improved forms of instruments and apparatus.

We can, in conclusion, strongly recommend the work, and we predict for it a large sale both among students and practitioners.

Chronic Bronchitis and its Treatment. A Clinical Study. By WM. MURRELL, M.D., F.R.C.P. London: H. K. Lewis. 1889.

This little book consists largely of abstracts of various papers published by the author during the past ten years, but strengthened by much additional experience. Various forms of treatment are discussed by the writer, many of which are either original or have been largely worked out through his industry. The routine treatment with counter irritants, stimulating expectorants, etc., is dismissed in a few words as proving unsatisfactory in many cases. A strong case is presented for the wider introduction of the ipecacuanha spray, and cases are cited in which

great relief to the cough and more especially to the dyspnoea were obtained. This remedy may now be looked upon as an established method of treatment, and its value has been corroborated by many continental and American observers. Tar, terebene, cubeb and other remedies are spoken of favorably. Although it seems probable that the views expressed are too sanguine, yet any attempt to alleviate the distressing symptoms of this complaint will be welcomed. The author has evidently made a careful and systematic study of a large number of cases, and his work can be confidently recommended as a valuable contribution to the therapeutics of the disease.

A Manual of Obstetrics. By A. F. A. KING, A.M., M.D.
Fourth edition. Philadelphia: Lea Brothers & Co. 1889.

In each successive edition, Dr. King's manual exhibits evidence of growth; it now numbers 431 pages. No doubt in a few years it will have expanded into a full-fledged systematic treatise on the science and art of obstetrics. The sooner the metamorphosis takes place the better will it be for both author and student. In many respects the book is excellent; it is well written, contains much valuable information, and is particularly good in its illustrations. In its present form it may serve a good purpose as a synopsis for review, but it can not be safely permitted to take the place of a good standard text-book. Such manuals, useful perhaps to the diligent, are liable to great abuse by the idle and indifferent, and cannot be recommended for general use.

Lehrbuch der Hebammenkunst. Von DR. BERHARD SIGMUND SCHULTZE (Jena). Neunte Auflage. Mit 96 Holzschnitten. Leipzig: Wilhelm Engelmann. 1889.
(Text-book of Midwifery. By Dr. B. S. Schultze of Jena. Ninth edition, with 96 woodcuts.)

Among the poorer classes in Germany, the practice of midwifery is almost exclusively in the hands of women, a physician being summoned only in cases of difficulty or danger. It is necessary, therefore, to prescribe a more extended course of

study for midwives in Germany than is usually considered necessary in this country where common usage is so different. Dr. Schultze's manual is prepared especially for the use of midwives and contains a good deal of matter not usually found in English text-books; it is clear, plain and practical, and the illustrations are excellent. It is divided into seven parts and an appendix. The first part is devoted to the anatomy of the female pelvis and foetus; the second describes the course and symptoms of normal pregnancy, the development of the ovum, the position of the foetus in utero, the methods of making external and internal examinations, the diagnosis of pregnancy, and gives directions for the diet, dress and care of the pregnant woman; the third and fourth parts treat of normal labor, the puerperal period and lactation; while the fifth, sixth and seventh are devoted to a consideration of the abnormalities which may occur during those periods. The appendix treats briefly of ethical and medico-legal duties, conduct in emergencies, the use of the douche, catheter, etc. The chapter on the resuscitation of still-born infants is particularly good.

Handbook of the Diagnosis and Treatment of the Diseases of the Throat, Nose, and Naso-Pharynx. By CARL SEILER, M.D. Third edition. Philadelphia: Lea Brothers & Co. 1889.

The popularity of this book is evidenced by the fact that it has, in a short space of time, reached its third edition. The subjects discussed have been thoroughly revised in the former edition, and brought to the views most generally accepted, omitting many points upon which so much has been said without anything definite being arrived at, thus saving the student of laryngology invaluable time. The chapter on the physiology of the voice and articulate speech deserve particular commendation, for this matter, a thorough knowledge of which is absolutely essential to the correct understanding of certain pathological conditions and of their successful treatment, is, unfortunately, almost neglected even by so-called standard works on laryngology. There is one point which does not commend itself, and

that is a classification of subjective symptoms of the larynx and naso-pharynx, for symptoms in this class of diseases are so varied and so ambiguous even in the same disease, that the student is apt to lay too much stress upon subjective symptoms and neglect the more important ones, viz., *objective*.

As a guide to the study of diseases of the throat and naso-pharynx, we cordially recommend it to students and practitioners.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, February 21st. 1890.

G. E. ARMSTRONG, M.D., PRESIDENT, IN THE CHAIR.

Orbital Tumor.—DR. BULLER brought before the Society a young girl, aged 18 years, whom he had operated on for tumor of the right orbit. The eyeball, previous to operation, was displaced outwards, downwards, and half an inch forwards. The growth had been slow and painless, blindness being the first symptom; the movements of the eye were not restricted: ophthalmoscopically choked disc was seen. The tumor was reached after tenotomy of the right internal rectus, and found, by digital examination, to have extended as far back as the apex of the orbit and to have involved the optic nerve. The tumor was carefully separated from the orbit and that portion of the optic nerve which was imbedded in its centre removed along with it. The internal rectus was then re-attached. Now, three weeks after the operation, the action of the right external rectus was defective; with this exception, it was extremely satisfactory to have retained the eyeball *in situ*, this being the third case on record where such a result had been obtained.

Sarcoma of the Sole of the Foot.—DR. JAMES BELL exhibited this specimen, and said that it had been removed from a young girl 18 years of age. The first appearance was a small nodule on the sole of the foot, about the size of a bean, which was noticed three months ago; this had been incised, with the result that it rapidly increased in size. Symes' amputation was performed, with a happy result.

DR. JOHNSTON, who examined the specimen, said it was a round-celled sarcoma, originating in the structures beneath the cutis, and it had not infiltrated the surrounding tissues.

DR. FOLEY then read a paper entitled "*The Influence of Clothing upon the Skin.*"

DR. F. W. CAMPBELL, in discussing this subject, advocated the disposing of woollen clothes for night use as being decidedly healthier. In acne, he had noticed tight collars acting as an exciting cause.

DR. SHEPHERD thought that no rules could be laid down as a guidance to proper clothes to be worn, and that common sense was the best guide. In children, the speaker had observed urticaria as a result of suddenly changing the clothes.

Pathological Specimens.—DR. ALLOWAY exhibited a uterus he had removed by vaginal hysterectomy from a patient three months ago. The patient was aged 42; had had one child twenty years ago. She was a heavily-built, florid woman, in apparent good health. She had suffered some pain of late, and on passing her finger into the vagina found a large tumor obstructing the way. This was the first intimation she had of there being anything abnormal. On examination he found a large fungating epithelioma, about the size of a Florida orange, springing from the cervix uteri. The surrounding parts were uninvolved. During the operation he employed both ligature and clamp. The clamps on the broad ligaments were removed on or about the fiftieth hour. The patient made an uneventful recovery, and the cicatrix at present looks very healthy and smooth.

Dr. Alloway also exhibited an interesting specimen of a blood cyst of the ovary, about the size of a large walnut. The patient, a young lady aged 24, had been a great sufferer all her menstrual life. The hemorrhage into the ovary probably took place within a few weeks. A drainage-tube was used for twenty-four hours, as considerable adhesions had to be separated. The patient made a rapid and uninterrupted recovery, and is now, four months after the operation, free from pain and has gained much in flesh. Menstruation has not returned.

Dr. Alloway also exhibited a specimen of double pyo-salpinx. The patient was a married woman, 32 years of age; had had one child ten years ago; had been a constant sufferer ever since. There was a constant purulent discharge from the cervix. The tubes and ovaries were removed without rupture. The patient made an uninterrupted recovery, and is now, four months since, in perfect health. A metrostaxis occurred at the third month and lasted for a day or two.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, March 4th, 1890.

J. W. ROSEBRUGH, M.D., PRESIDENT, IN THE CHAIR.

Partial Excision of Superior Maxilla for Epithelial Epulis.

—DR. A. E. MALLOCH read the notes of this case, as follows: Mrs. F., aged 58 years, consulted on 20th Sept., 1889, by Dr. Mullin's request, regarding a growth of the hard palate. The mucous membrane over the greater portion of the hard palate of the right side and over the central portion of the left side is raised, forming a flattish tumor of some consistency with ill-defined borders, presenting about its middle a scar; with the exception of the central incisors and molars of the left side, the alveolar processes were destitute of teeth. The swelling was first noticed in July 1889, when it burst, giving exit to some stinking pus; two teeth were then removed by a dentist, who subsequently—in August—removed all the teeth from the right side, with the exception noted above. Later on he lanced the swelling without getting matter; the wound bled very freely. There is no history of specific disease. The glands under the jaw are unaffected. Dr. Mullin and I agreed that the disease was an epithelial epulis, and advised operation. On 25th September, after chloroform anæsthesia, the tongue was controlled by a strong ligature passed through it a little distance from its tip; the upper lip divided in the middle line up to, but not into the nostrils. The cheek and lips were freed from the bones, from the posterior extremity of the right alveolar ridge to the canine tooth on the left side, and the nostrils separated from the bones

from within. A deep groove was made in the right maxilla parallel to the alveolar process on the right side, at a level slightly above the floor of the nasal fossæ, the bony nasal septum was then divided with bone forceps and the left maxilla was sawn through from the left nasal fossa to the side of the canine tooth, and backwards and inwards through the hard palate. The soft palate was then separated from the hard by the knife, and the piece of bone severed by bone forceps, cutting in the groove first mentioned and connecting its posterior extremity with the opening between the hard and soft palates. The bone was then depressed by bone forceps and completely separated by cutting a few shreds of soft tissue. The parts were well douched with warm water frequently. She was sitting up on the third day, when two of the stitches in the lip were removed and plaster strip substituted. The three other stitches were removed on the 30th, two days later. By the 20th October the mouth was solidly healed and has remained so ever since.

Microscopic slides from the tumor showing epithelial nests were exhibited by Dr. Olmstead.

The patient was shown to the members of the Society. There appeared little or no disfigurement, and everything nicely healed as above described.

Case of Lead Poisoning.—DR. ALGERNON WOOLVERTON then read the notes of a case of lead poisoning :

J. S., aged 26, of strong and muscular development, with good family and personal history, was first seen by me on the evening of 20th December last. He was moaning and tossing himself about, and complained in distressing tones of an agonizing pain in the abdomen, but which was chiefly referred to the upper half. He said the pain was continuous, but had frequent exacerbations, when it was almost unendurable. His face had a drawn, anxious expression; the skin was cool; respiration thoracic, and a little increased in frequency; the pulse I found to be quite slow and soft, about 46 per minute. On inquiry I learned that he worked in a factory where lead was manufactured from the refuse material derived from the distillation of coal oil. He had been working but a few days prior to the

attack, the furnace having been shut down on account of a fire having taken place in the factory. Prior to the fire he had been working at the business for some months, and had never felt any ill effects from the work. Preceding the attack he seemed as well as usual, and showed none of the symptoms of lead poisoning. He worked during the whole night, but had to give up in the morning on account of severe pain. It is somewhat peculiar that the symptoms usually preceding lead poisoning were not present in his case. There was no constipation, loss of appetite, colicky pains or emaciation; but the attack seems to have developed almost suddenly. Upon examining the mouth, the characteristic blue trail was pencilled along the gums. I found the bowels had not been opened that day. Upon inspecting the abdomen, there was no retraction of the walls, which is said to be characteristic of lead poisoning, but rather a slight distension accompanied with very marked rigidity of the abdominal muscles, which I may say continued most persistently until after all other symptoms had abated. This symptom I think worthy of your particular attention, being one that impressed me more forcibly than all others, on account of its persistent and unyielding rigidity. It was as tense as that characteristic of peritonitis, but was not accompanied with pain and tenderness on pressure. Relief of the pain demanded first consideration. I injected half a grain of morphia hypodermically and left several half grain powders to be given at intervals of two hours if the pain persisted. I also ordered two ounces of castor oil to be given at once, to be followed by two ounces of mag. sulph. if the bowels would not act. I also directed hot fomentations to be applied, and which were to be frequently changed.

On visiting the patient next morning, I expected that there would have been some abatement of the pain, but found that such was not the case, nor had the bowels been opened. He had taken $2\frac{1}{2}$ grs. of morphia during the night. I then directed that injections of hot water and soap-suds should be given and the morphia to be continued. Two or three of these injections were never returned per anum, having become absorbed, being retained on account of spasm of the sphincter.

The temperature still remained normal and the pulse slow until the evening of the third day, when the pulse rose to 110 and the temperature to $100\frac{1}{2}^{\circ}\text{F}$. There was also at this time some vomiting; the bowels remained obstinately constipated, despite frequent doses of mag. sulph. and copious injections thrown up through a long tube. The pain still persisted, although the pupils were contracted to pins points, showing the patient was thoroughly narcotized. He was in a stupid, dazed state, but would answer on being questioned. When the temperature and pulse began to rise I became anxious as to the result and requested a consultation. Dr. Miller being called in, we decided to give chloroform to relieve the intense sufferings and to (if possible) overcome the great rigidity of the abdominal walls. We also passed a long tube along the rectum and injected as much water as we could, but nothing came away with the injection. Chloroform was given until the conjunctivæ were insensible to the touch and the muscles of the extremities became flaccid and unresisting, and yet the abdominal muscular spasm did not yield; chloroform narcosis being kept up until a two ounce vial was exhausted. When the effect of the chloroform wore off the pain was as bad as ever. The prognosis at this time began to look unfavorable. We decided to substitute hydrate of chloral for the morphia, and obtained much better results. I do not think it would have been possible to have relieved the pain with morphia unless you had killed the patient, it almost seemed to aggravate the pain and caused a feeling of great oppression in the head. Thirty-grain doses of chloral repeated every two hours gave some relief and some sleep, and that drug was continued more or less frequently as long as the pain persisted. The next day, after the substitution of the chloral, the pulse again became slow and the temperature normal, but the bowels still refused to act, though no purgatives were given at this time on account of the vomiting, for I considered them useless, if not injurious, as long as the great rigidity and spasm of the bowels continued. It was not until the sixth day that the spasm of the bowels was overcome to such an extent that a passage from them was secured, from which time improvement

set in. On the tenth day he was able to be up and about, considerably reduced in flesh, but not otherwise much the worse for the attack. At no time was there albumen in the urine.

This is the severest case of lead colic that has ever come under my notice, and was especially interesting to me on account of the persistency of the spasm. Although the mortality is stated to be only from two to three per cent., I at one time feared a fatal termination to this case. The conditions for lead poisoning must have been very favorable in the factory, as all the employees, four or five in number, were attacked, with more or less severity, at the same time. One man had been employed at the business for over twenty years, and had heretofore had no trouble from the lead. The method of procuring the lead is briefly as follows:—

In distilling coal oil, 3 lbs. of litharge (a prob. oxide of lead) is used for each barrel of oil. This is deposited in the black tar-like refuse which is collected after the distillation of the oil. This refuse is burnt in some open place, and a brown, flaky, dry substance remains. This residue is put in a crucible furnace and a very strong heat applied, which causes a large portion of the lead to flow in a molten state from the furnace, while a considerable part is also driven off in a state of fumes, carried into pipes under ground, and in which the lead is deposited as a white oxide. The workmen are constantly inhaling these fumes, and as no great precautions are taken to prevent lead absorption, it is surprising that poisoning does not take place more frequently. The amount of lead taken in these cases must have been excessive, but harmful results are not always proportionate to the quantity of lead taken in. Small amounts, even 0.0015 per cent., if long continued, has been known to cause lead poisoning, and, on the other hand, large doses have been given for weeks with seeming impunity. Lead may be introduced into the system in a variety of ways, and it is often a difficult matter to discover the origin of the poison. Sometimes it is due to the water in lead pipes or cisterns, especially when the water is soft; sometimes from drinking cider and beer or soda-water kept in lead utensils; also from eating food kept in badly glazed vessels;

and sometimes from canned fruit, the acid of the fruit acting upon the solder. It is well known that various trades and occupations are favorable to lead poisoning, such as plumbers, potters, type-workers, enamellers and painters. The colica pictonum must not be confounded, as is often the case, with the colica pictorum (the colic of painters). The former is a name given to a form of colic common among the people of Poitou, which is probably due to impure wine. Lead-poisoning was known to the Greeks and Arabians, who recognized the arthralgia and paralysis which sometimes follow this disease. In modern times Tanquerel des Plauche's (1830) work remains an authority upon this subject. It would seem that lead poisoning was more common sixty years ago than at present, as no less than 1,217 cases came under Tanquerel's observation. In every one of these cases colic was present; arthralgia in 755 cases, paralysis in 107, and encephalopathy in 72—17 of these latter cases were fatal. One attack predisposes to another, and may occur years after the first attack. Tanquerel relates the case of one painter who for nine consecutive years had attacks of lead colic and other symptoms of lead poisoning, although he had ceased to follow his trade. Cats, dogs and horses have been known to have symptoms of lead poisoning produced both experimentally and from living in a lead-infected atmosphere or from drinking lead-contaminated water. Horses working in lead factories have had tracheotomy performed on account of paralysis of the larynx. Tanquerel was the first to point out that the blue line seen along the edge of the gums was due to a deposit of sulphide of lead in the substance of the gums, the decomposition of food affording a supply of sulphuretted hydrogen which combined with the lead, and caused the dark discoloration which extends in some cases to the whole mucous membrane of the mouth. The three most common sequelæ of lead poisoning are the arthralgia, paralysis and encephalopathy. The last is the severest form of lead-poisoning, and is found only among workers in lead. It may come suddenly with violent headache and sometimes amaurosis or severe convulsive attacks. Post-mortem appearances in these cases only give negative results. Lead paralysis may occur as

early as the third day after exposure or not till after years have elapsed. It affects chiefly the upper extremities and the extensor muscles, especially the extensor communis, then the triceps and then the deltoid. This is in singular contrast to the myalgia which chiefly affects the lower extremities and the flexor muscles. The paralysis may be confined to a single muscle, as the extensor of a finger, or involve the whole limb, or by gradual extension even the whole body. Sensibility is not usually affected, though there may be some circumscribed areas of anaesthesia. But the most characteristic changes take place in the nutrition of the paralyzed muscles. In a few weeks the muscles become very much wasted and atrophied in marked contrast to the surrounding muscles, which retain their normal development. The prognosis is, as a rule, proportionate to the extent of the paralysis and of the atrophy. Post-mortem examinations show but few pathological changes except in the affected muscles and peripheral nerves, and negative results in the central nervous system, thus rendering it very difficult to afford a satisfactory explanation of the various symptoms of the disease. Different investigators have described different pathological changes in the cord and medulla and brain, which is presumptive evidence that no definite pathological lesion has yet been discovered which may be stated to be characteristic of the disease. It was at one time thought that the lead acted upon the muscular fibres, especially the unstriped variety, but Heubel shows that this not the case. He states that lead exists in the blood and all the organs in chemical combination with albumen. He says that lead cannot be detected by chemical tests prior to the destruction of the organic substances containing it. The amount of lead found in the system is comparatively small, not amounting in the average to .02 per cent., too small a quantity, one would think, to produce such grave results, and it probably can only be accounted for in some such manner as chronic alcoholic poisoning, that the circulation of a foreign poisonous material in the blood causes an abnormal nutrition of the whole system, but why it should cause colic (which is supposed to be a neurosis of the intestinal plexus) in one case, arthralgia in another, and encephalopathy in another,

is not yet understood. I will not dwell upon the general treatment of this disease, for I believe time is the chief element in it, but the general indications are the relief of the pain and the overcoming of the obstinate constipation. And my experience points to chloral as being the drug best adapted to accomplish this purpose.

Selections.

The Isolation of Consumptives. (By DR. P. H. KRETZSCHMAR, of Brooklyn, N.Y.)—At the Congress of American Physicians and Surgeons, held in Washington during the month of September, 1888, one of the most prominent members of the profession, from the city of New York, made the statement that the time had come when pulmonary consumption should be classified among the contagious and infectious diseases, and consumptives should be cared for in like manner as small-pox patients are. At that the writer entered his protest against any such proposition; but so much has been said since regarding the probabilities of transmitting the disease from the patient to the healthy, that a discussion of this very important subject seems to be advantageous.

The fact that the "International Congress for Tuberculosis," which will meet in Paris this year, has among other subjects the question of "Isolation" on its programme, is evidence that a portion of the medical profession *does* seriously consider the advisability of such a proposition. Since Dr. Koch first demonstrated the specific cause of tuberculosis, it has been asserted that consumptives are a source of danger to their surroundings, and it has been claimed that many cases of pulmonary tuberculosis are directly traceable to infection by contact only. As long as one hundred years ago the theory, now preached by many, that consumptives are liable to infect healthy persons by contact *only*, was accepted as a fact, and appropriate laws were issued. In Naples a law existed during the latter part of last century for over fifty years, compelling the attending physicians to report every case of pulmonary consumption—*l'ulcera pulmonale*—and the fine for the first failure to comply with this

law was three hundred ducats, to be followed, in case of repeated neglect to report this class of cases, by expulsion from the country for a period of ten years. All poor consumptives were at once removed to a hospital; the clothes and bedding belonging to consumptive patients had to be destroyed after death; the dwellings of all patients who were fortunate enough to die outside of the hospital had to be entirely renovated and nobody was allowed to occupy them until one year afterward. Similar laws and restrictions were in force in Portugal, without, however, influencing the prevalence of pulmonary consumption in any marked degree. Rigorous laws, strictly enforced for fifty-six years, would certainly have shown *some* favorable results if isolation and *public supervision* of consumptives were of any practical value whatsoever.

In a paper read before the American Public Health Association during its meeting in October last, the writer used the following language: "If the advocates of isolation would reflect for a moment and consider the hardship and injury which would follow its introduction, affecting, as it would, a large proportion of the human race and seriously interfering with our entire social life, without giving the slightest assurance of better results than those obtained after many years of trial in Naples and Portugal, one would think that they would hesitate to advocate so inhuman a proposition. It will not be denied by them that a very large proportion of consumptives are phthisical subjects long before they themselves are aware of it, and even physicians frequently treat alveolar catarrh as bronchitis until the microscope demonstrates the fact that the patient's expectorations are full of tubercular bacilli. What benefit would be derived by isolating advanced cases of pulmonary consumption, if cases during the early stages are permitted to deposit millions of microbes with their expectorations upon our streets, in our churches, public halls, railroads, and all over their own residences? And, finally, what advantage would it be to have isolation enforced in the State of New York and not in New Jersey, Pennsylvania, or other neighboring States; or, if adopted by the United States and not in Canada?"

Careful consideration of the subject has strengthened the

writer's former opinion about the infeasibility, cruelty, and absurdity of any attempt to carry into practical effect the teachings of those advocating isolation of consumptives for the purpose of diminishing or destroying the danger of infection, although it is admitted that, *theoretically*, the isolation of *all consumptives* would do much to lessen the quantity of tubercular bacilli floating in the air, and thereby the danger of infection. *Practically*, the same favorable results would be obtained if the lessons taught by Dr. George Cornet's experiments would be made the basis for proper teachings regarding the expectorations not only of people known to be consumptive, but of all persons suffering from prolonged coughing, depending, apparently, upon other deranged conditions of the human system. We know that the source of contagion is contained in the sputa; we also know that as long as these expectorations remain in a moist state they are not apt to infect anybody, but that the dry sputa, becoming pulverized, allowing the poisonous germs to be carried away into the surrounding atmosphere, are alone responsible for the dissemination of the disease. The short pamphlet issued by the Board of Health of the City of New York regarding this matter gives most excellent instructions, and it seems to the writer to be an act of vital importance for this Society to do *its share* that these instructions, or others of a similar character, be published by every health officer or every county society of this State.

To obtain the views of the most advanced pthiso-therapeutists the writer entered into correspondence with some of them. Dr. Hermann Weber, of London, England, writes under date of January 2nd, 1890: "In answer to your note I beg to say that it would not only be a great cruelty to isolate consumptive patients, but it would also be an impossibility. . . ." Dr. P. Dettweiler's answer is dated Naples, December 24th, 1889, and reads, . . . "regarding the effect of isolating consumptives, I can only say, most minute cleanliness, the rigorous use of the spittoon, and the general introduction of the 'blue flask' are the best means to prevent the spreading of the disease; isolation is unnecessary." Dr. Ernst Meissen, of Falkenstein, Germany, writes December 19th, 1889, about as follows: "The isolation

of consumptives is cruel, not practical, and unnecessary." Dr. Cornet's investigations have proven the latter. Every possible effort should be made, of course, to destroy the dangerous tubercle bacilli, and, thanks to Cornet, we are now in a position to do that much more effectually than formerly. The term "intelligent spitting" does not sound pleasant, but these two words express best what will do *most* to diminish the number of the germs producing pulmonary consumption floating in the air which we breathe. If in hospitals and in private practice sufficient attention would be given to this most important matter great progress would be made toward lowering the death-rate from pulmonary consumption. It is our most solemn duty as physicians to see to it, that the public is not only duly instructed about the value of "intelligent spitting," but also that it is carried into practice.

The "blue flask," referred to by my friend, Dr. Dettweiler, is intended for use among consumptives; it has been devised by him and was exhibited at the last Medical Congress of German Physicians, held at Wiesbaden in April, 1889. The writer fully appreciates the importance of Dr. Dettweiler's invention, and takes pleasure in presenting the "blue flask" to you for your inspection and consideration. There may be room for improvement in the make-up of the flask, but the principle involved in its use is of the greatest magnitude, and it is to be hoped that the lesson which its use teaches will be carried by you into every household where consumption exists, and that the patients will be so thoroughly impressed with its importance that spittoons partly filled with appropriate fluid and frequently cleaned will soon be found in every room, and that patients will know what to do to relieve their friends of the danger of becoming infected by their carelessness.

Permit me at this time to digress for one moment from the subject under consideration, to pay a well-earned tribute of gratitude and admiration to the memory of the late Dr. Hermann Brehmer, of Goerbersdorf. He died on December 22nd, 1889, from pneumonia, just before my letter, asking for his opinion regarding the isolation, reached Goerbersdorf. The medical

profession loses by his death one of its brightest stars, and those especially interested in the subject of phthiso-therapy their foremost teacher, writer, and active practical worker. For over thirty-five years Dr. Brehmer conducted his now world-renowned institute for the cure of consumption in Goerbersdorf; beginning with almost no capital and upon the smallest scale, his institution has grown to a most marvellous extent, and more than 14,000 patients have visited it during the last three decades. Of Dr. Brehmer's writings the most important are: "Chronic Pulmonary Consumption and Tuberculosis of the Lungs: Its Cause and Cure," published in 1857; "Etiology of Chronic Pulmonary Consumption," 1885; "The Treatment of Chronic Pulmonary Consumption," 1886, second enlarged edition, 1889; and his latest work, "Communications from Dr. Brehmer's Institution for the Cure of Consumptives, in Goerbersdorf," 1889.

Strongly opposed to *isolation* of consumptives for the purpose of diminishing the spread of the disease, the writer is one of the most enthusiastic advocates of the *separation* of consumptives from the healthy, and their removal to institutions properly conducted and located, and conducted solely for the cure of this class of patients. It is a great pleasure to the writer to see that the profession in France—as shown by the writings of Professor Nicaize and Drs. Daremberg, Pouzet, and Frémy—is adopting the view that consumptives find the greatest probabilities for a cure within sanatoria and not in so-called open "health resorts." The excellent results obtained in the Adirondack Cottage Sanitarium by Dr. E. L. Trudeau, of Saranac Lake, are so encouraging, that it is surprising that other institutions of similar character have not been established, and it is to be hoped that the profession in the United States will soon recognize the importance and the value of special institutions for the cure of consumptives.

I repeat what I stated in a paper read before the American Climatological Association in Boston, during the month of June, 1889, that "if anything is to be done tending to restoration to health for those who are consumptive, whether rich or poor, it

can be accomplished with the greatest promise of success in a properly located and rationally conducted sanitarium."—*The Sanitarian*, March, 1890.

A Sanitary Wash-house.—Albert Shaw has a most suggestive paper in the *March Century* entitled "Glasgow, a Municipal Study," from which we quote:—

"Not the least important feature of the health department's work in Glasgow is the Sanitary Wash-house. A similar establishment should be a part of the municipal economy of every large town. In 1864 the authorities found it necessary to superintend the disinfection of dwellings, and a small temporary wash-house was opened, with a few tubs for the cleansing of apparel, etc., removed from infected houses. For a time after the acquisition of Belvidere a part of the laundry of the hospital was used for the purpose of a general sanitary wash-house. But larger quarters being needed, a separate establishment was built and opened in 1883, its cost being about \$50,000. This place is so admirable in its system and its mechanical appointments that I am again tempted to digress with a technical description. The place is in constant communication with sanitary headquarters, and its collecting waggons are on the road early every morning. The larger part of the articles removed for disinfection and cleansing must be returned on the same day, to meet the necessities of poor families. I visited the house on a day when 1,800 pieces, from twenty-five different families, had come in. In 1887, 6,700 washings, aggregating 380,000 pieces, were done. The quantity, of course, varies from year to year with the amount of infectious disease in the city. The establishment has a crematory, to which all household articles whatsoever that are to be burned after a case of infectious disease must be brought by the vans of the sanitary department. The carpet-cleaning machinery and the arrangements for disinfection by steam, by chemicals, and by boiling I cannot here describe.

"The department's disinfecting and whitewashing staff is operated from the wash-house as headquarters. A patient being removed to the hospital, the authorities at once take possession

of the house for cleansing and disinfection. It is a point of interest also that the city has provided a comfortable 'house of reception' of some ten rooms, with two or three permanent servants, where families may be entertained for a day or more as the city's guests if it is desirable to remove them from their homes during the progress of the disinfecting and clothes-washing operations. The house is kept in constant use, and it is found a very convenient thing for the department to have at its disposal.

"As net results of the sanitary work of the Glasgow authorities may be mentioned the most entire extinction of some of the worst forms of contagious disease and a mastery of the situation, which leaves comparatively little fear of widespread epidemics in the future, in spite of the fact that Glasgow is a great seaport, has an unfavorable climate, and has an extraordinarily dense and badly housed working population. The steady decline of the total death-rate, and its remarkably rapid decline as regards those diseases at which sanitary science more especially aims its weapons, are achievements which are a proper source of gratification to the town council and the officers of the health department."—(*Medical and Surgical Reporter.*)

A Test for Albumin in Urine.—In the *Johns Hopkins Bulletin*, Feb. 1890, D. Meredith Reese calls attention to an editorial note in the *British Medical Journal*, Nov. 16, 1889, in which a new test for albumin in urine was given. Trichloroacetic acid CCl_3COOH , a substitution product of acetic acid, formed from acetic acid by the replacement of three of its hydrogen atoms by three chlorine atoms occurs as a crystalline salt, and is colorless and readily soluble in water. Boymond claims to have been the first to make mention of the reagent, and since this it has been adopted by Raabe. Boymond begins his article by saying that Marsalt and Languipin have described albuminous urine in which a precipitate by heat was gotten, but in which urine the precipitate was re-dissolved by acetic acid. Patein, in a note quite recently made, attributes this fact to the presence of a special albumin differing from serum albumin and globulin. Boymond has observed this phenomena repeatedly,

and considers that the condition is much less rare than supposed, and that the peculiarity has much import; for in a rapid examination of urine where heat and acetic acid are used alone, we might perhaps conclude that albumin was absent, when the urine might contain considerable proportion of this special variety of albumin. He has been accustomed for some time to employ trichloroacetic acid instead of acetic acid. Other agents which precipitate albumin also precipitate this variety, but trichloroacetic acid presents some advantages, and particularly that of not changing the albumin. The reagent precipitates albumin in cold solution, and is considered to rank among the most delicate tests. Raabe, in the article referred to above, considers it sensitive, superior to HNO_3 and to metaphosphoric acid, advocated by Hindenlang. Raabe gives the relative amounts of albumin recognized by metaphosphoric acid, nitric acid, and trichloroacetic acid as in the proportion 1 : 3.7 : 6.2. He also states that .0295 grm. of albumin can be recognized in 250 cc. of urine.

It may be employed as a solid or a liquid. When used as a solid a crystal of the salt is dropped into the urine in a test-tube, and touching the bottom is dissolved, producing a diffuse turbidity or turbid zone definitely marked out. When used in liquid form, the solution may be saturated or of medium strength. The saturated solution is used after the method employed with HNO_3 in Heller's test, by floating the urine on the acid. A characteristic ring will be formed, as one finds with the HNO_3 test, but without the production of the colored zone between the urine and acid caused by the oxidation of the pigments. When urine is rich in urates of soda error will be avoided, an error common to all reagents, by diluting the urine with the addition of distilled water. Boymond closes his paper by saying that he confirms the observations of Marsalt and Languipin, and that he wishes to draw attention again to trichloroacetic acid as a useful test in not only this particular variety of albumin, but in the ordinary forms.

In the last few months this reagent has been tried in the clinical laboratory of the Johns Hopkins Hospital. The article

was obtained from Merck and found to be, as Boymond describes, a crystalline salt, colorless and deliquescent. In all the tests a saturated solution was used, making a liquid of the consistency of HNO_3 . This was kept well stoppered to keep it of uniform strength in the experiments. It was employed as above described by pouring the acid beneath the urine by means of a pipette.

In all, eighty-seven different urines have been tested, the urine filtered, and that from women drawn by catheter. At first only those urines showing albumin by control tests, such as heat, HNO_3 , and picric acid, were used, and in all cases trichloroacetic acid gave a distinct, clearly defined zone, produced immediately, with no discoloration whatever between the urine and acid. Generally the zone was produced more quickly than with nitric acid, and was of a greater thickness and intensity. On standing for some time a slight pinkish discoloration may in some cases be obtained below the urine in the acid when trichloroacetic acid is used.

In forty-three cases where the control tests gave albumin a precipitate was obtained by trichloroacetic acid, not dissolved, but made more distinct by heat. In twenty-five cases no reaction whatever was obtained by any test. In fourteen cases where there was no reaction by control tests, the trichloroacetic acid gave a precipitate. In eleven of these cases granular, epithelial and hyaline casts were found, and in three of these eleven cases the post-mortem showed distinct changes in the kidneys. In three cases where heat and acetic acid and nitric acid gave no precipitate of albumin, a precipitate was obtained by picric and trichloroacetic acids. In all three of these cases casts were found. In two cases where the precipitate on heat was dissolved again by acetic acid, trichloroacetic acid gave a good precipitate. In conclusion it may be said that trichloroacetic acid has proven a most delicate test for albumin in urine; that it is prompt in its reaction; that it gives no discoloration or colored zone; that it is a test easily applied and one worthy of more extended use.—
(*Medical and Surgical Reporter.*)

The Cold Bath Treatment of Typhoid Fever. A REVIEW OF RECENT DISCUSSIONS.—(By DR. SIMON BARUCH, New York.)—The experienced hydrotherapeutist never uses ice-water for a prolonged application. Water below 50° is sometimes used in the douche for ten to twenty seconds. But the aim of all hydrotherapeutic measures is to refresh, to stimulate the nerve-centres, never to induce a sedative effect. This must be clearly understood as the first principle of scientific hydrotherapy, and it is even well understood by the empirical hydropath to-day.

It has been objected to Brand's rule for bathing, that the intelligent physician should not be hampered by strict rules, that he should be allowed to use his judgment in each individual case. Brand's rule, however, is not inflexible, as the following extract from a letter received on Saturday, February 15th, from Dr. Brand, illustrates. Referring to a case where bath treatment was detailed in one of our journals, he says: "By following my rule is not to be understood such treatment as was given by Dr. — to the child, which was so far reduced in strength and nerve-power that it should not have been put into a cold bath, but into a warm one, until it gradually became accustomed to the cold bath, for twenty-four hours. To me it is surprising that Dr. — did not obtain greater disadvantage from the low temperature used in this case; it was a special piece of good luck. I always use warmer baths for twenty-four hours, usually temperature of the room, if the patient has been ill over four days; often, also, from the beginning." From this extract it will be gathered that Brand does not advise the plunging of every case into a bath of 60°F. without regard to individual condition. The truth is, that in no method of treatment is good judgment more necessary than in the management of typhoid fever by the cold bath.

But how is this method to be tested, if, as is evident in the recent discussions, there is no uniform method of treatment; when gentlemen class cold sponging, the wet pack, the ice-sprinkled sheet, the graduated bath of all temperatures, from 70° to 90°F., as the cold bath treatment? It is remarkable

that American physicians, who are usually so practical and ready to utilize the most successful methods, have so long stood aloof from this well-proven treatment.

The statistics furnished by Juergensen and Vogl are the best possible guide for this or any country, because they are obtained from hospital practice, civil and military, and they represent the comparative merits of various methods. Vogl is the chef of the Garrison Hospital at Munich. He offers us the records of 8,325 cases of typhoid fever treated there during forty-seven years. (Military records in Germany are proverbially accurate.) Vogl mentions each year the type of the disease, derived from symptoms and autopsies, the treatment pursued, and the results. The mortality ranges from 40.3 per cent. (1843) to 23 per cent. (1877 and 1878). Since 1875, when the cold bath treatment was systematically begun, the mortality per cent. has never exceeded 4.7 per cent., and the average was 2.7 per cent.; neither one of which figures had ever been reached before (the lowest was 9.9 per cent. in 1865, under quinine and camphor treatment; the next, in 1869, 11.5 per cent.).

In the Poliklinik at Tübingen Juergensen had observed even better results. During nine years 217 cases were treated by strict bathing, according to Brand. Only one of these died.

I desire to emphasize the fact that it is not at all difficult to place typhoid cases under the cold bath treatment before the diagnosis is clearly made. Every suspicious case of fever should be placed in the bath, if the temperature reaches 103°F. This is the course pursued at Munich and Stralsund. That no harm can result from it may be easily demonstrated. I pursue it constantly in private and hospital practice. If this rule is adhered to in all suspicious cases, many would come under treatment before the fifth day, and almost surely be saved. If the case be one of simple fever of an ephemeral type, no harm will ensue, especially if the graduated bath be used, until the diagnosis is clear.

Bahrdt says that the mortality of typhoid fever in the Jacobs Hospital at Leipzig was reduced by the bath treatment from 18.2 per cent. to 9 per cent. Riegel reports a reduction in

Bamberger's clinic from 20 per cent. to 4.4 per cent. by baths. Schulz, in Bremen, reduced the mortality to 2.7 per cent. by strict bathing.

Guttstadt, who is the censor of the Statistical Bureau in Berlin, said, in a lecture before the Verein für innere Medizin in Berlin, in 1887, that "an important factor in the diminution of mortality is the more successful treatment now used, especially Brand's method."

The most important question in this review of the recent discussions is: What constitutes the *cold bath treatment*?

The statistics referred to, showing a reduction of mortality to less than three per cent., and in 1200 cases treated before the fifth day to less than one per cent., were not obtained from cold sponging, wet packs, cold coils, cold affusions, graduated baths, or any other agreeable substitute. They were the result of methodical bathing according to Brand's original method. As there seems to be much vagueness of conception on this point, I deem it important to furnish an outline of the method, as I have learned it from the study of Brand, Vogl, Tripier, and Bouveret, and correspondence with Brand himself.

1. The first principle is to bathe early; even before diagnosis is clear. No harm is done at least by a graduated bath, viz., reduced from 90° to 68°F. for a quarter or half an hour. This is the only modification of the method which is advisable. It accustoms the patient to the treatment and gains time. It should be resorted to as soon as the temperature in the rectum reaches 103°F. I am in the habit of bathing the patient's face and chest with ice-water before placing him into any bath.

2. As soon as the case becomes defined or even suspicious, the strict bath (65°F.) should be used. The tub must stand at the patient's bedside, filled two-thirds with water at 65°. The patient receives a stimulant, and has his face and chest washed with ice-water. He is undressed and gently lifted into the water. A gasp or shudder follows, perhaps an ejaculation of distress; but gentle reassurance by word and deed, a calm demeanour devoid of haste, and avoidance of force, will do much to quiet the patient. With one hand under his head, if necessary, the

other is used to gently practice friction over the submerged parts. Another nurse pursues the same course, if possible. This important feature of the Brand method is, I have observed, frequently neglected, and to its neglect may be charged the occurrence of collapse, cyanosis, and chill. Gentle friction with the outstretched hand produces a rosy hue of the skin; the superficial vessels are dilated. By thus exposing a large supply of blood, the cooling is more rapid. The bath should be continued in this manner for fifteen minutes, no matter how urgently the patient desires to be removed. A pinched countenance, chattering of teeth, unless excessive, or a small pulse, must not be taken as indications for removal. If the face becomes cyanotic, or respirations embarrassed, the bath must cease. Every five minutes during the bath, water at about 60°F. should be gently poured from a pitcher over the head of the patient, after a folded handkerchief has been tied like a bandage with the knot over the nucha. This prevents the water from running over the face, and spreads it over the head.

Before the patient is removed from the bath, a linen sheet should be spread over a blanket to receive him. If his temperature has been high, this sheet alone is wrapped around him, while his lower extremities are also covered with the blanket. If his temperature has not been over 103.5°, the whole body may be wrapped in the blanket over the sheet and hot bottles placed to the feet. He is then left to dry for ten or fifteen minutes; something hot is now given him; his night-gown is replaced and his temperature is taken. A piece of old linen sheeting (cotton should never be used for any purpose in this treatment) is now folded into a compress of four folds, gently wrung out of water at 60°F., and placed upon the entire anterior portion of the body, from the neck to the pubis. It is renewed every half-hour if patient is not sleeping. This process is repeated every three hours, so long as the temperature reaches 103°, night and day, unless the patient is asleep naturally.

Stupor, coma or delirium are always indications for the bath, even if the temperature is below 103°. In these cases, placing the patient semi-recumbent into a half-bath at 95° and pouring

several basinfuls of water at 60° over his head and shoulders, is a more valuable procedure than the cold bath. Let it be distinctly understood that the Brand bath is not "a nervous sedative" (as has been claimed for the cold bath in a recent paper before our State Society), but a refreshing measure, a stimulant, if you will, by which the depressing effects of typhoid poison are to be counteracted. The nervous system is tottering under the toxic influence arising from the infective process; all the functions are so enfeebled thereby, that the processes of life are barely maintained. The impact of cold water upon the large peripheral surfaces deepens the inspiration; more oxygen is inhaled, more CO₂ given off; the cooled blood rushes to the nervous centres, vivifies and refreshes them; the heart and the stomach respond, the secretions become more active. All this is evident to the most superficial observer. The *rationale* of the restorative action of the bath is so simple, that, if once appreciated, no attempt will be essayed to substitute it. The gentle friction stimulates the coats of the superficial vessels, whose muscular coats, as Marey and others have shown, are paralyzed by the infective process (giving rise later to heart failure from absence of propulsive aid). These vessels are thus dilated, as is evident from the ruddy hue of the skin; the obstacle to heat dissipation is removed also (Weyrich has demonstrated that gentle friction increases heat dissipation 60 per cent.); the occasional cold douche over the head and shoulders again contracts the vessels briefly. Thus their activity is maintained. How different the effect must be of laying the patient into the cold water and leaving him in it undisturbed for fifteen minutes, or wrapping him in a sheet and sprinkling ice-water over him, very little reflection will indicate. Winternitz has demonstrated by sphygmographic tracing this restoration of tone to the vessels by the bath and friction; and the most superficial observer will note the increase in the force and decrease of the frequency of the pulse after it. It is therefore a true "restorative."

The cold bath is not intended as a specific curative measure; its action is analogous to that of peripheral stimuli applied to other toxic conditions. If we can diminish the force of the toxic

effect arising from the infective process in typhoid fever, before it accumulates and overwhelms the system, we accomplish the same result that we reach in opium poisoning by early faradization and other measures, viz., we endow the system with nerve-stimulus or force to tide over the danger of toxæmia, until the offending elements are eliminated. Our antitoxic measures will prove efficient in proportion to the earliness, persistency, and good judgment with which we apply them, in the one case, just as they will in the other. For the object is almost analogous in both cases, although the conditions are not.

Regarded in this light, and not in the light of a heat-reducing measure, this mode of bathing (not sponging, wet-packing, or ice-coil) must save many lives that are now daily sacrificed.

The main object of the treatment by cold baths is not to reduce temperature, but to furnish a restorative and stimulant to the nervous system. Brand, indeed, now claims that his method is antipyretic. It was Liebermeister who was the leading spirit in proclaiming that the benefit derived from cold baths was due to their antipyretic effect, and, after giving a bath, he often administered forty or fifty grains of quinine, for the purpose of keeping the temperature down after it had been reduced by the bath. But the result of this treatment was a mortality of 18 per cent.

My object, then, is to show that the cold bath is not meant for the purpose of antipyresis. Antipyrine, as I have found to my cost, will bring down the temperature much more efficiently than the cold bath. As to my analogy between typhoid toxæmia and opium poison, I grant that the comparison might be defective in some particulars; but, at the same time, the main points will hold good. In both cases we have a profound poisoning of the system, though in one case the poison acts rapidly and in the other slowly. In both, the poison will become eliminated in the course of time, if we can but support the patient and prolong life until nature can accomplish this; and in both, therefore, the indication is simply to fortify the flagging powers until this can be accomplished. I do not claim that we can cure typhoid; but it is a self-limited disease, and what we have to do is to maintain

life until it has run its course. In regard to statistics, it is true that twenty or thirty, or even a hundred cases, are of no practical value; but if we have vast numbers of cases, the correctness of whose data is vouched for by men of the highest scientific attainments and reputation, I believe that such statistics are to be trusted.

The omission of medicine in the strict bath treatment is perhaps, as Dr. Delafield has suggested, of great value. It seems probable that often the medicinal treatment employed has actually damaged our patients, and in what is known as the combined treatment, in which drugs of various kinds are employed in addition to cold baths, the mortality, as has been shown in the paper, is very large.—*College and Clinical Record*, April, 1890.

Chronic Morphinism.—A valuable communication on the subject of morphinism was recently made by Dr. Arthur Wynne Foot to the Royal Academy of Medicine in Ireland. To us the most important parts of the paper are those relating to prognosis and treatment. As regards prognosis in morphinism, Dr. Foot does not consider it so favorable as was at one time believed. In the opinion of some authorities the morphine habit belongs to the category of diseases which are almost incurable. The weaning from it is a laborious task for the patient as well as the physician, and yet thereon rests the only hope of recovery. It is considered by those who have had the longest experience of such cases to be easier to cure a morphine eater of his craving than a morphine injector. The probability of a cure may be estimated by attending to the following points: (1) The duration of the habit. Cases of short existence are more successfully treated than those in which the habit of long standing has exercised a deleterious influence on mind and body. (2) The persistence or not of the condition which gave rise to the exhibition of the drug. If this condition be irremovable, a cure is scarcely to be expected. (3) The physical and nervous constitution of the patient. Bad effects follow the withdrawal of morphine in cases of weakly individuals, or in those of specially nervous temperament. The magnitude of the dose does not much affect the

prognosis, except in so far as the larger doses indicate chronicity of the habit. It is a hopeful consideration that in most cases to break the habit means to get well, because, unlike alcoholism, the morphine habit does not entail structural lesions of any vital organ. Relapses, however, are very frequent, being more common in men than in women. So great is the tendency to relapse that Jaeckel does not consider a cure to be accomplished by the mere suppression of the morphine hunger, but considers the continuance of control over the patient in a proper institution of the greatest importance. Dr. Wynne Foot's practical remarks on the treatment of morphinism may be summarized as follows: The process of cure or of "demorphinization" requires a degree of moral and physical courage seldom at the disposal of a morphine *habitué*. His abject mental state calls for firmness, gentleness and tact on the part of the physician and the attendants. Neither the intensity of his craving nor the reality of his sufferings should be underrated or disputed. Four methods of treatment have been tried—(1) the deceptive plan; (2) the substitution plan; (3) the tapering-off plan; (4) the abrupt withdrawal plan. The deceptive and the substitution plans are not worthy of serious consideration in the management of confirmed morphinism, the latter simply handing the sufferer over from one enemy to another. Not only is the substitution of cocaine for morphine dangerous, but there is a risk of developing a cocaine habit which is worse than morphinism. As to the tapering-off plan and the abrupt withdrawal plan, there seems to be no unanimity of opinion as to which mode of treatment should be employed. The first-named plan consists in the gradual reduction of the dose until none of the drug is required. Dr. B. W. Richardson considers it better to reduce the dose at each administration than merely to lessen the number of injections in the twenty-four hours. The abrupt discontinuance of the drug is attended in all cases by indescribable sufferings, and in many by serious dangers. When morphine is suddenly cut off in those accustomed to its use, a remarkable group of severe and alarming symptoms ensue, called the *Abstinenz-syndrome* or reactionary effects. These comprise acute diarrhoea, insomnia, great excitement, amounting

at times to mania dangerous to those around, and particularly to the physician, hallucinations, and collapse. In cases where the habit is denied or concealed, Charcot relies for the diagnosis on the occurrence of the characteristic *Abstinenz-symptome* which supervene during the process of demorphinization. Great care is needed in the case of pregnant women addicted to opium, because incautious attempts to withdraw the habitual drug are, according to some authorities, almost certain to be followed by the loss of the foetus.—*Dublin Jour. of Med. Scien.*

To Show the Need of Medical Examining Boards for Graduates.—We copy a few of the answers given before the Minnesota State Board of Medical Examiners during their recent examination. We join expression with the *Northwestern Lancet* (February 15) in the statement that “it is a pity that the general public cannot carefully appreciate the important task performed by the State Medical Examining Board in shading them from such dense and dangerous ignorance as is revealed in the following quotations, copied *literatim et verbatim* from the written answers of candidates,” who, without the law as it now stands, would have been let loose as practicing doctors. There are many just as ignorant now in the profession that cannot be reached who must be endured until they die out. But we can prevent many ignoramuses now applying from entering the profession.

“Symptoms of edema of the glottis are that the patient feels husky and has sore throat. I would amputate it if necessary. I would do the operation within three or four months if it was a bad case.”

“The dose of morph. sulph. for a child of five years, hypodermically, would be one-fourth grain, and if that doesn't give relief, I would give one-half grain.”

“The dose of antipyrin for a child five years old is fifteen grains every three hours.”

Q. “What is an element?” A. “Earth, water, wind, fire.”

Q. “Definition of Inorganic Chemistry?” A. “Chemical examining of metals or in geology for lime phosphates or any minerals.”

Q. "Definition of Organic Chemistry?" A. "Of flesh, stomach, bowels, liver, or any organic matter."

"The Sterno-Cleido-Mastoid muscle takes its origin from the mastoid portion of the temporal bone, runs down the neck, and is inserted into the upper and back portion of the scapula."

"The coverings of the femoral artery is the same as of hernia, it lies between the femoral vein and sciatic nerve."

"The pulmonary artery is a branch from the great arto, fully supplying the lungs with arterial blood."

"The coverings of the femoral artery are three in number, and in Scarpia's triangle, include the vein and nerve."

"The kidney is a muscular formation, in shape oblong, color quite dark, weight about one pound to one and a half, but may vary considerable."

"Parts severed in amputation at upper third of thigh—just avoiding the insertion of the glutei musels, passing through the Taylor's musel, periostum and femer."

"Coverings of oblique inguinal hernia—skin superficial facia, transversalis mussle peritoneum and omentum."

"The sympthetic system is composed of all the filament of nerves that start from the spinal cord, and are distributed to all parts of the system, especially the brain. The cervical portion ramifies the encephalon in general. The dorsal portion ramifies the anus."

"Extra uterine pregnancy may be a fungoid groth or tumor fibroid in its character or any extra groth in the uttrous would be called extra-uterine pregnancy."

"A brecch presentation may be known by the sense of touch, the buttox being different in formation from the cranium. The anus is different from the mouth, absence of tongue and nose, get your finger in the inguinal reagion soon as possible and assist your patient by ferm but gentle tention."

"Trismus neynatorum—a peculiar trouble of the eye, generally congenital, falling of the lids giving a unnatural look to the ordinary face of a child."

Q. "Tests for Arsenic." A. "Separate the juices or secre-

tions in the stomach and evaporate the aqueous portion and the test precipitate with acids."

Another writes, "Don't know any thing about it. Such a stomach would be sent to a chemist at the present day."

Q. "Give the distinctive histological features of carcinoma."

A. "Carcinoma will show a general dropsical condition. Transparent condition of all the fluids except the urine which may show considerable deposit, scanty, and hot. The patient's puls, heavy, large, does not care to move."

"Tubercle of the lung is supposed cause of consumption and the one generally advocated and preventive treatment is any that will burn up them or destroy them I am a believer in alcohol but the way and its action I am unable to give."

Q. "Test for arsenic in wall paper." A. "Don't know; if I should happen to have a case where it was necessary I should look it up. I know it is to burn something in a room and the fumes will turn the paper green."

Q. "How would you tell Sulph. Morphia from Sulph Quinia?"

A. "Sulph. Quinia is white, flaky, glistening. Has a metallic look. Tastes bitter. Never saw any pure Sulph. Morphia in my life. Have no use for either."—*Virginia Medical Monthly.*

THE

Montreal Medical Journal.

VOL. XVIII.

APRIL, 1890.

No. 10.

DESTRUCTION OF BACTERIA WITHIN THE BODY.

A number of researches have been made upon this subject during the past few years. When Metschnikoff published his observations upon the immunity of the frog towards anthrax, and founded the doctrine of "phagocytosis," he certainly introduced a very plausible explanation of a previously unexplained fact. From a theoretical side, the doctrine that the leucocytes eat up the bacteria leaves nothing to be desired, but, unfortunately, it does not seem to be in accordance with the facts. Careful observers have failed to recognize these alleged powers of devouring bacteria not only in the white-blood corpuscles, but in the other cells of the body. Baumgarten* has published a larger number of observations upon the destruction of bacteria within the body, and finds that in animals which possess immunity from anthrax, the bacilli are not taken up by the leucocytes. Osler (lecture before Alumni Association of New York Academy of Medicine) failed to observe anything like phagocytosis in malarial blood. On the other hand, the fluids of the body appear to possess a marked power of destroying bacteria. Nuttall (*Zeitschrift f. Hygiene*, 1888) and Buchner (*Central. f. Bacteriologie*, 1889) have shown that, while blood serum which has been sterilized by heat forms an excellent culture medium for bacteria, serum which has been received into sterilized vessels, but not heated, is capable of destroying anthrax and typhoid bacilli. T. M. Prudden of New York has recently confirmed these results, and has tested ascitic and pleuritic exudations to

* Beiträge, Path. Anat., Vol. VII.

see if they possess this power. He found them capable of destroying anthrax and typhoid bacilli, but not the pyogenic bacteria—a point of interest with reference to the tendency of these exudations to become purulent.

THE MEDICAL COURSE.

The Commission appointed to enquire into the methods of teaching in the Scotch Universities will soon assemble to hear the views of all interested in this important subject. As yet nothing has been made public as to proposed changes in the methods of conducting the medical course, with the exception of a pamphlet by Dr. James Finlayson, Physician and Lecturer to the Western Infirmary of Glasgow. Dr. Finlayson's chief recommendation is for the supersession of courses of systematic lectures by courses of practical instruction. He would make attendance at systematic lectures voluntary, and attendance on practical courses compulsory. He says that "the day is probably not far distant when systematic lecturing, in many subjects, will be almost abandoned, except in so far as is required for practical instruction."

MUNIFICENT DONATIONS.

Through the princely liberality of Mr. W. C. McDonald, of Montreal, McGill University is to receive donations of upwards of \$400,000. Of this sum, \$150,000 is to be devoted to the Faculty of Law and the remainder to the Science Faculty. This is the largest single gift ever received by McGill.

FIRST SURGEONS OF MONTREAL.

The following interesting notes were given to us by Mr. W. McLennan:—

Etienne Bouchard, born at Paris, parish of St. Paul, master surgeon, signed his engagement with the Company of Montreal, 10th May, 1653, received 147 livres on account of his wages; born 1622, married Marguerite Boissel at Quebec, 6th Oct. 1657, died at Montreal 20th July, 1676. Lived in Notre Dame street, near the site of the present City Hall. Had 9 children. (Tanguay

Dic. Gen.) By a contract dated 30th March, 1655, he agreed with 26 heads of families to treat the husband, wife and children "born and to be born" for 100 sous each, with the right to either party to withdraw at will. (Faillon II., 198.) Before this he was paid by the Company. By deed before Basset, notary, No. 277, Bouchard engages Nicolas Colson for one year as "serviteur chirurgien," for which he agrees to pay "sept vingt dix livres tournois"—i.e., seven times twenty + ten, 150 livres, equal, with the difference of purchasing power in money, to about as many dollars to-day, and board and lodge him.

Louis Chartier came out in 1653, the same year as Bouchard, as surgeon. When he came out he received 120 livres on account of wages. Born 1633. Drowned while bathing 20th July, 1660. Unmarried. He seems to have lived with LeBer and LeMoyné, as it was in their common house that Basset, notary, made his inventory on the 22nd July, 1660. Among the articles enumerated are :

6 shirts of white linen, valued at.....	26	livres.
4 " de traites neuves (for trading).....	12	"
5 pair drawers, bleached linen.....	10	"
2 old shirts.....	3	"
3 " pair drawers.....	4	"
10 pair ruffles for sleeves.....	10	"
8 pair socks, white.....	8	"
8 " stockings.....		
3 cravats, cotton.....	6	"
4 others.....	3	" 10
27 handkerchiefs.....	100	"
12 falls of cambrick (i.e., bands).....	12	"
3 " of lace.....	10	"
1 " (must have been very fine).....	100	"

SURTS.

A pourpoint with breeches of grey serge, façon de Raz (I find in Cotgrave Ras de Milain—the finest kind of bare serge or a silk serge), garni de rubans couleur de feu et vin, very much used, &c., &c., &c.		
1 pair of double or lined chamois gloves.....	30	"
A cloak of Bergame grey, lined with Ras de Chalons.....	30	"
A sword with silver hilt and baldrick.....	18	"
Another without sheath.....	6	"
A gun, the barrel 4 ft. in length (probably for ducks).....	80	"
A musketoon, mounted.....	16	"
A pistol and belt.....	18	"
2 powder horns.....		50
A beaver muff.....	19	"
A case with silver spoon and fork.....	18	"

TENTH INTERNATIONAL MEDICAL CONGRESS.

TO BE HELD IN BERLIN, AUGUST 4TH TO 9TH.

The Committee of Organization of the Tenth International Medical Congress—R. Virchow, President; E. von Bergmann, E. Leyden, W. Waldeyer, Vice-Presidents; O. Lassar, Secretary-General—have appointed the undersigned members of an American Committee for the purpose of enlisting the sympathy and co-operation of the American profession.

We are assured that the medical men of our country will receive a hearty welcome in Berlin. The Congress promises to prove of inestimable value in its educational results, and in securing the ties of international professional brotherhood. It is most important that the American profession should participate both in its labors and its fruits.

Delegates of American Medical Societies and Institutions, and individual members of the profession, will be admitted on equal terms. The undersigned therefore beg to express their hope that a large number of the distinguished men of our country will appreciate both the honor conferred by this cordial invitation and the opportunity afforded us to fitly represent American medicine.

The Congress will be held at Berlin, from the 4th to the 9th of August.

The arrangements in regard to a few general meetings and the main scientific work, which is delegated to the sections, are the same as in former sessions. A medico-scientific exhibition, the programme of which has been published a few weeks ago, is to form an ingredient part. It is to the latter that the Berlin Committee is very anxious that both the scientific and the secular press should be requested to give the greatest possible publicity.

The office of the Secretary-General is Karlstrasse 19, N.W., Berlin, Germany.

S. C. BUSEY, Washington, D.C.	WM. T. LUSK, New York.
WM. H. DRAPER, New York.	WM. OSLER, Baltimore, Md.
R. H. FITZ, Boston, Mass.	WM. PEPPER, Philadelphia, Pa.
H. HUN, Albany, N.Y.	J. P. PORCHER, Charleston, S.C.
A. JACOBI, New York.	J. STEWART, Montreal, Can.

110 WEST 34TH STREET,

NEW YORK, April 7th, 1890.

Mr. Editor,—In a letter dated Berlin, Karlstrasse, 19, March 22nd, Dr. Lassar, the Secretary-General of the Tenth International Congress, directs me to inform the medical profession of America that a programme of the Congress and other communications will be distributed two months before the meeting amongst those who will have registered previously and received their tickets of membership.

The latter can be obtained by sending application and five dollars to Dr. Bartels, Leipzigerstrasse, 75, Berlin, S.W. By so doing the members will save much crowding and time during the first days of the Congress.

For the American Committee of the Tenth International Medical Congress,
A. JACOBI, M.D.

The following additional programmes of the work of Sections have been published :—

SECTION OF DERMATOLOGY AND SYPHILOGRAPHY.

(1) Pathogenesis of Pigmentations and Discolorations of the Skin; (2) Diagnosis, Prognosis, and Treatment of Chronic Gonorrhœa in the Male and in the Female; (3) Treatment of Syphilis—(A) Results (*a*) of excision, (*b*) of general preventive treatment; (B) Beginning, Duration (chronic, intermittent, or temporary?) and best method of Treating Constitutional Syphilis; (4) Treatment of Inflammatory Diseases of the Skin; (5) The Special Indications of the Different Modes of Applying Mercury in the Treatment of Syphilis; (6) On What Etiological Factors does the Outbreak of Tertiary Forms of Syphilis Depend? (7) The *Rôle* of Diathesis, Nervous Causes of Disease, and Pathogenic Parasites in the group of diseases designated as Eczema; (8) The Nature of Medicinal Eruptions; (9) Lupus Erythematodes, its Nature and Treatment. Communications should be addressed to Dr. Lassar, 19, Karlstrasse, Berlin, N.W.

SECTION OF OTOLOGY.

A discussion on the relations of Micro-organisms to Diseases

of the Middle Ear and their Complications, will be introduced by Drs. Moos and Zaufal; one on Cholesteatoma of the Ear, by Drs. Duhn and Bezold; one on the following question: Can opening the mastoid process from the external meatus be considered as equal to the more usual method? by Dr. Hessler. 4. One on the After-treatment of the Trephined Mastoid, by Dr. Kretschmann; one on the Indications of Excision of the Malleus and Incus, by Dr. Stacke; one on the Pathological Anatomy of the Labyrinth, by Dr. Steinbrügge; one on the Condition of the Organ of Hearing in Diseases of the Central Nervous System, especially in Tabes Dorsalis, by Dr. Morpurgo; one on Otitis Interna as a Sequel of Hereditary Syphilis, by Dr. Wagenhauser; one on Statistics of the most important Ear Diseases, by Drs. Bürkner and Jacobson; one on Testing the Hearing and Notation of the Auditory Capacity, by Drs. Magnus and Schwabach; one on the Diagnosis, Prognosis and Treatment of Progressive Deafness in Chronic Non-suppurative Otitis Media, by Drs. McBride and Gradenigo. Communications should be addressed to Prof. Lucæ, 9, Lötzwoplatz, Berlin, W.

SECTION OF FORENSIC MEDICINE.

1. Are gonococci so thoroughly established that the finding of them in the vaginal secretion of a child can with certainty be referred to gonorrhœa in a supposed ravisher? 2. On impotence in the male, and the criteria in which it can be established in court. 3. Can Air drawn into the Lungs by Respiration disappear from them in Dead Bodies, so that the Lungs of Newborn Children may present the Signs found in those who have never breathed? 4. Can the Changes produced in the Anus by Passive Pederasty disappear after discontinuance of the Pederastic Acts, and in how long a time after? The discussion on this subject will be introduced by Professor Liman. 5. Can the Lungs of a Newborn Child that has never breathed present, owing to Schultze's Vibrations, the signs of having done so? 6. When Sepsis is found in a person who has secretly miscarried, can a strong suspicion or certainty be expressed that the Abortion was deliberately induced, or does Sepsis also occur after

Spontaneous Abortion? 7. Is there an independent "Moral Insanity," or is that Complex of Symptoms one of the Manifestations of other forms of Mental Disease? 8. Is Mummification of a Corpse confirmatory evidence of Arsenic Poisoning, or is it quite without significance in that respect? 9. The significance of Proofs of Life. 10. On the Influence of the Recent Development of the Doctrine of Infection on Medico-legal Examinations in cases of Death occurring after Bodily Injuries? 11. The Significance of Ptomaines in Forensic Medicine. 12. What position must the Medical Jurist take up as regards the question of Auto-infection in Puerperæ? 13. Observations of Medical Jurists on the recognition of the Simulation of Neuroses, especially of Traumatic Origin. 14. Medico-legal Observations on the Occurrence and Significance of Rigor Mortis. Communications should be addressed to Professor Liman, 46A, Königgrätzerstrasse, Berlin, S.W.

SECTION OF MEDICAL GEOGRAPHY AND CLIMATOLOGY (HISTORY AND STATISTICS).

1. Influence of Tropical Climates on Immigrants from Higher Latitudes, the resistance of Immigrants to Diseases prevalent in the Tropics, and the Possibility of the Acclimatisation of Europeans and North Americans in the Tropics. 2. Influence of Climatic, Telluric, and Social Conditions on the Occurrence and Course of Pulmonary Tuberculosis, with special reference to the Disease in the Torrid Zone. 3. Endemic and Epidemic Spread of Yellow Fever, and the Influence of Climate, Soil, and Trade thereon. 4. Beri-beri from the standpoint of Etiology and Treatment. 5. Leprosy, with special reference to its Transmission by Heredity and Contagion. 6. Malarial Diseases, with special reference to the Geographical Distribution of the Various Forms thereof: Are all forms due to one and the same or to different poisons? Communications should be addressed to Professor A. Hirsch, 113, Potsdamerstrasse, Berlin, W.

SECTION OF DISEASES OF THE TEETH.

1. Bromide of Ethyl as an Anæsthetic in Dental Practice.

2. Causation, Course, and Treatment of Pyorrhœa Alveolaris.
 3. The Part Played by Micro-organisms in Caries of the Teeth.
 4. Crown and Bridge Work.
 5. The Bonwill Method of Articulation in Artificial Dentures.
- Communications should be addressed to Professor Busch, 8, Alexanderufer, Berlin, N.W.

Medical Items.

—We regret to announce the death of Dr. Trélat, the famous French surgeon.

—The Influenza has about completed its circuit of the globe. It is reported that it is now very prevalent in Persia.

—The Jefferson Medical College, Philadelphia, had 220 graduates at its recent convocation.

—The *Transactions* of the recent Intercolonial Medical Congress of Australasia, held in Melbourne, has been issued.

—Sir Andrew Clark has been re-elected for the third time President of the Royal College of Physicians of London.

—Prof. Bramann, late assistant to Prof. Bergmann, has been appointed to the chair of Surgery in the University of Halle.

—Professor Grashey of Munich has been appointed to fill the chair rendered vacant by the death of Prof. Westphal of Berlin.

—The next annual meeting of the American Medical Association will be held in Nashville, Tenn., on the 30th of May next.

—An effort is being made to establish a medical school at Cardiff in connection with the University of South Wales and Monmouthshire.

—The University of Basle has thrown open its doors to women. Zurich and Berne for some time have admitted the fair ones to its different faculties.

—An excellent portrait of the late R. Palmer Howard, M.D., has been placed in the library of the Medical Faculty of McGill University.

—Prof. Henoch, the Director of the University Clinic for Diseases of Children in the University of Berlin, will celebrate his seventieth birthday on the 16th of July next.

—The death of Dr. Aquilla Smith, of Dublin, at the advanced age of 84 years, is announced. Dr. Smith was for many years the representative of the College of Physicians on the General Medical Council.

—A proposal recently brought forward to establish regular chairs for the teaching of Medical Jurisprudence in the German Universities has been negatived on the ground that the subject is not of sufficient importance.

—The Pennsylvania State Board of Health is anxious to obtain information from practitioners throughout the entire country as to any evidence they may have as to the alleged value of smoking in the prevention of tuberculosis.

—We have received the first number of a new centralblatt, called the *Osterr.-Ungar. Centralblatt für die Med. Wissenschaften*. It is published by Moritz Perles of Vienna. The editors are Paschkis and Zerner of the same city.

—Dr. Caroline White, in a recent issue of the *Forum*, has an article denouncing the practice of vivisection. The article is hardly worthy of serious consideration, the author being deeply ignorant of what has been done in scientific medicine during the past two decades.

—The following additions have been made to the Faculty of the New York Post-Graduate Medical School and Hospital:—Charles B. Kelsey, M.D., Professor of Rectal Diseases; Charles H. Knight, M.D., Professor of Laryngology and Rhinology; Reynold W. Wilcox, M.D., Professor of Clinical Medicine; Dr. S. Lustgarten, formerly Privat Docent in Vienna University, Instructor in Syphilis and Dermatology.

—The first election of the Council of the newly-formed College of Physicians and Surgeons for the North-West Territories took place at Regina on February 11th. The five practitioners required by the Act who received the highest number of votes

were the following in order : Dr. O. C. Edwards, Qu'Appelle Station ; Dr. Jas. Lafferty, Calgary ; Dr. R. B. Cotton, Regina ; Dr. R. G. Brett, Banff ; Dr. H. C. Wilson, Edmonton. The first meeting of the Council was held at Regina on March the 10th, when officers for the ensuing year were elected as follows : Dr. O. C. Edward, President ; Dr. J. Lafferty, Vice-President ; Dr. Cotton, Registrar and Treasurer.

VIRCHOW AND THE SHOEMAKER.—So the great Professor Virchow, as a politician, has had to bow to an obscure Polish shoemaker. This seems to strike a certain section of the press with awe, but in reality there is no cause either for surprise or mortification. Admirably as the illustrious scientist might represent a university town, we can perfectly understand that his lofty ideals (if he has any) do not correspond to the objects which Berlin electors have just now in view. Fancy Sir Joseph Lister or Sir Andrew Clark putting up for Mile End ! Whatever their views as stated at the hustings might be, it is morally certain that their opinions upon matters in general would clash with those of their constituents, and since the object of an election is to obtain a representative—that is, a mouthpiece—the electors of the particular district, if afflicted with advanced views, would do wisely to choose some one whose life and education were more calculated to bring him into touch with them and their aspirations.—*Hospital Gazette*.

SIMPLICITY THE SEAL OF TRUTH.—Dr. Robert Koch, in the minds of many the foremost scientist and physician of living Germans, is in manner of life the personification of simplicity. His demeanour is said to be so plain and free from self-assertion that, by comparison with him, certain others of his *confrères* of the Berlin profession appear haughty and unapproachable. As an illustration of Dr. Koch's habits, it is said that when he travels he is quite as apt to be found taking a third-class railway ticket as any other, while the majority of his students would consider their dignity compromised by anything less than a second-class passage. In other matters as well are indicated attributes of mind and character which place him in the right line of descent

from the great Boerhaave, whose favorite motto was "*Simplex sigillum veri.*" And this is the legend that is graven on his monument in the St. Peter's church at Leyden by her grateful citizens—a fact which has put in the mouths of thousands the admirable sentiment, "simplicity is the seal of truth," hundreds of whom have probably dwelt but lightly on their debt to the great professional talents of him whose life was squared to that rule. Simplicity is the trait of the master, while the lack of it seems entirely natural to the novice. As it is the single flower that produces the seed, while the double one beside it perishes with its beauty, so there is that singleness of purpose and simplicity of method that bear the fruit of life-saving discoveries, such as the genius of Boerhaave gave to his generation, and such as Koch's labors promise to yield in surpassing measure.—*Jour. Amer. Med. Association.*

HOMŒOPATHY.—The New York *Graphic* having recently gone out of its artistic way to inform its readers that "quite one-half of the medical practice of the world is governed by the philosophic discoveries of Hahnemann," the *N. Y. Medical Record* sets forth the facts as follows:—"In the United States there were, in 1885, twelve homœopathic and eighty-eight regular medical colleges, with 1,088 and 9,441 students respectively. At the most liberal estimate the homœopathic practitioners of this country form one-eighth of the total number. There is no homœopathic medical college in the country which can be said to be even fairly well equipped and endowed, as compared, for example, with the leading regular medical colleges of New York, Boston and Philadelphia. The only school which really flourishes is in Chicago. The statement that 'homœopathy is a recognized branch in most of the great medical schools of Europe' is absolutely untrue. Homœopathy has no place whatever in any of the universities of Germany or France, nor has it a school of its own anywhere in Germany. There is a small homœopathic hospital of one hundred beds in London, with a small medical school attached. There are said to be only about 275 homœopathic physicians in Great Britain and Ireland. The number on the Continent is proportionably even less." Accord-

ing to the most recent official statistics in Austria, there are only 118 homœopathists out of the whole number of medical men (7,183), and only 44 of these profess to practise homœopathy exclusively. There are none at all in the Italian districts, and only 19 in Vienna. The number also is said to be steadily decreasing.—(*Dublin Jr. of Med. Sc.*)

—Dr. Willard's Rest Cure establishment at Burlington, Vt., offers all the comforts of a first-class hotel, at rates no higher than are charged at many boarding-houses, including the professional services of the doctor himself, who is a regular graduate and an expert in mental diseases, as well as a lecturer at the medical college. The Rest Cure is a handsome building, delightfully situated in the fashionable part of the city, away from the noise and turmoil of business, and just the place for a man who needs the restful seclusion which this retreat affords. The advertisement will be found on another page.

—Dr. F. F. Henwood, of Thompson, Pa., writes: "In a case of acute neuralgic headache I used Peacock's bromides with complete success, and find it to be the best nerve sedative prepared."

LILLY'S IMPROVED GLYCERIN SUPPOSITORIES.—These invaluable peristaltic persuaders are prepared in a most excellent and improved manner by Messrs. Eli Lilly & Co., of Indianapolis. Their suppositories contain 95 per cent. of glycerin, and a beauty of their construction is the peculiar water-proof covering of each suppository, which is readily and easily removed. By simply pressing upon or slightly squeezing the suppository between the fingers it slips out with astonishing ease, leaving the covering between the fingers. A great improvement, as any one will readily recognize who has ever made the effort to divest one of the ordinary suppositories from its lead foil and tissue paper envelope.—*Southern Practitioner*, Oct. 1889.