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Original Communications.

MEDICAL EVIDENCE.

A Paper read by ROBERT MARK, M.D., F.R.C.P.S.K., Coroner, Ottawa, before the Rideau and Bath-hurst Medical Association.

Mr. President and Members of the Rideau and Bath-hurst Medical Association :

In response to an invitation from our esteemed Secretary, I beg to submit a short paper on Medical Evidence.

The giving of *evidence* dates from a very early period in the world's history, when by legal enactment individuals were disallowed to take the law into their own hands, but were required to bring their case before a judge; where the accuser, the accused and the witnesses met face to face, and the judge passed sentence according to the evidence.

Since June 15, 1215, when King John gave to his people the great Magna Charta, trial by jury has been the privilege of all

under British rule, under which arrangement the *judge* is obligated by oath to pass sentence according to the verdict of the jury; and the jury are sworn to bring in a verdict, without fear or favor, according to the evidence; and the *witness* in the solemn presence of Almighty God, pressing the book of Holy Writ to his lips, swears he will tell the truth, the whole truth, and nothing but the truth.

Ordinary witnesses are only required to state facts of which they have a personal knowledge, but upon *skilled and scientific witnesses waightier responsibilities rest*; their opinions are often *demande*d to elucidate matters that are obscure to the ordinary mind.

The medical witness enters upon his work of investigation, realizing the solemn responsibilities that rest upon him not only to present naked facts, that would impress the mind of the most casual observer, but to unearth hidden facts essential to a right understanding of the case, and place them in an understandable form before the public mind.

He is obligated to tell the truth, the *whole* truth, which demands the exercise of all the power he possesses to ascertain *all* the facts bearing on the case that it is possible for *him* to reveal; a lack of fidelity on his part may lead to the escape of the guilty or the infliction of punishment upon the innocent.

On the 10th of October, 1890, I received a telegram from the Crown Attorney of Prescott and Russell, dated Cumberland,—the scene of the noted murder of Mary and Eliza McGonigle—saying: "Wanted—come at once, to make post mortem examination." On reaching Cumberland, I was met by the Crown Attorney and Provincial Detective Grier, and in the name of the Crown was specially requested to put forth every exertion, so that by my medical evidence I should aid the Crown in a righteous conviction of the guilty party.

Associated with Dr. Fergusson and Dr. Janson I made a post mortem examination on the bodies of both girls:

Mary apparently about 14 years of age, and Eliza 12 years.

Mary—From a superficial examination I found on the left side of the crown of the head a cut about 1 inch in length; it penetrated the periosteum of the skull. The skull was not fractured. Under the right eye there were two cuts; the upper was transverse, about $\frac{3}{4}$ inch long. I found it, deepest nearest the eye; the lower cut was oblique, and about $1\frac{1}{8}$ inch long, in form the same as the one above. The cuts on the scalp and face were made by some blunt cutting instrument, similar to wounds I have found in my surgical practice made by a man breaking a heavy water jug on the head of a woman, and another case where the head and face were cut with a lathing hammer. Stones with very sharp edges were found near the bodies.

On the neck of Mary there were deep red discolorations, intensified immediately over the windpipe, on both sides; the small-

est discoloration was on the right side, as if made by a human thumb. Discolorations on the left side were more extensive, as if made by human fingers. Eliza had precisely the same mark on her throat, only they were apparently made by the left hand.

The trachea yielded easily to the touch; the hyoid bone was broken.

The internal examinations of the bodies of Mary and Eliza revealed *similar conditions*: the eyes were infused with blood; the tongues very much swollen, and dark red; the veins in the temporal regions, also the sinuses and vessels of the brain, were very much congested; the lungs were also congested; the right cavity of the heart was full of blood; the stomach, bowels, kidneys, bladders, ovaries, uterus were normal.

The external genitals were terribly lacerated, the vaginal canal opened to view. Posteriorly, there were extensive abrasions in sight, the mucous membrane being torn, the capillaries ruptured and blood deposited on the injured surface.

By digital examination of the vagina of Mary I found the canal elongated on the left side and two of the three coats ruptured, a pocket formed by violent pressure.

By a similar examination of the vagina of Eliza, I found similar abrasions in the canal, but discovered an opening about an inch in diameter through its walls into the abdominal cavity between the bladder and the rectum.

We carefully removed the external and internal genitals. I placed them in sealed jars, and upon reaching Ottawa, removed secretions from both vaginas, and made careful microscopic examinations for spermatozoa, and with two associate M.Ds, found them in Eliza, but did not find them in Mary. I saw them on two future occasions in company with other M.Ds., who recognized the spermatozoa at the same time as I did.

I infer Eliza was the first ravished, and male seed left within the vagina; any sur-

plusseed upon the penis would, I conclude, be deposited upon the external genitals at the time of the violent entrance into Mary.

I am satisfied that one mind guided two hands, which grasped two throats, exactly in the same way, and guided one penis in entering two vaginas—in both cases entering somewhat to the right and passing over somewhat to the left of the neck of the uterus; in the one case making a severe rupture through the walls into the abdominal cavity, in the other case rupturing two of the three coats, and abnormally stretching the third, forming a pocket. I here presented the jar containing the genitals.

The hands of Eliza were severely wounded, the skin gouged out of the knuckle of the index finger of the right hand; there were slighter wounds on the same finger between the second and third joints; the left hand was more severely injured. The wounds could have been inflicted by strong nails on human fingers.

At the L'Original Assizes I said, when under oath at the inquest I was closely questioned as to the wounds on Eliza's hands and the nails on the fingers of the suspect Laroque, I was sure that similar enquiry would be made at the Assize trial here to-day, so I placed a tissue paper under the hands of Eliza, and made a careful tracing of both hands, then placed the transparency upon the hands, and with pencil tracing showed the form of the nails, and by pencil shadings showed the size and situation of the wounds.

But I was convinced that such a crude representation would not be acceptable to the learned counsel for the defence, so I conferred with the Crown Attorney, submitting to him my purpose to amputate the hands, take them to Ottawa, and obtain a life-size photograph of the same.

CARDS.—At this moment I presented a copy to the Judge, another to the jury, and the third to the counsel for the defence,

remarking at the time I obtained the photos, I apprehended the learned counsel for the defence would, upon their production here, ask me: "Do you swear that you were present when these photos were taken?" I could answer yes; but he would likely ask me: "Can you swear that you understand the art of photography?" I should have to answer, "No, not in all its details."

I apprehended I should be asked: "Can you swear that the artists did not, by malice, or mistake, make some of the shadings deeper than necessary, to present a true representation of the wounds?"

I knew I could not so swear, so I relinquished my intention of THEN burying the hands in the grave of the murdered girls, and resolved to preserve them in spirits until the close of this trial. I then handed the sealed jar containing the wounded hands to the clerk of the Court, who placed them in clear view of the judge, the jury, and the accused, and they remained there till the trial was ended and sentence pronounced.

I remarked further:—While under oath at the inquest I was asked to examine the finger-nails of the suspect Laroque, which I did, and declared under oath that, in my opinion, Eliza's hands could have been wounded as found by human nails such as were on the fingers of Laroque. I then foresaw that six months' rest from work and six months' trimming with a penknife, the suspect's nails would be very much more changed in form at this assize than at the time of the inquest; so I took casts or impressions of the finger-nails on both hands of the accused Laroque in soft putty, afterwards taking plaster of Paris impression of said finger-nails, which were concave in the putty and convex in the plaster. I placed both before the judge and jury, showing the chisel-like nails on the hands of Laroque at the time of the inquest, being six months before the assizes.

I questioned if on the hand of one man in a hundred thousand you could find such strong, sharp, chisel-like nails as on the accused Laroque.

I was asked, could not two men have seized the girls by the throat? I replied: "No; it would be impossible for two men to leave the marks I found upon their throats, unless one was left-handed."

The learned Counsel for the defence asked me, as I had found evidence of an emission of male seed in the vagina of Eliza, had there been a second emission, would not the seed have been weaker than the first? I answered: "No, no more than rifle ball No. 15 would be weaker than rifle ball No. 1 fired from a repeating rifle."

The learned Counsel for the defence asked me could one man hold the girls' throats, and also ravish the two girls. I said: "Yes; with such injuries to the hyoid bone and trachea, breathing would be suspended, a flash cross the eye, a rumbling sound in the ear, consciousness almost instantaneously lost, and the victims be as helpless as if chloroformed."

The learned Counsel for the defence asked me was it likely the accused would ravish the girls when so nearly dead; I said yes; remarking it is only this week we learned through the press that in a recent battle women were slain as well as men, and the victorious soldiers returned and ravished the bodies of the dead women, and I inferred that it was more probable that the prisoner would ravish the body of a female, nearly dead, than for a soldier to ravish the corpse of a woman.

The learned counsel asked me: "Do you swear these girls died from asphyxia?" I replied: "No, my learned friend. I presume you vie with me in an admiration of the work by Tidy on Medical Jurisprudence, in which he wisely and truly remarks:

"We begin to die at the head, or

"We begin to die at the heart, or

"We begin to die at the lungs.'

"The McGonigle girls, from the injuries inflicted on their throats, began to die at the lungs, and in about twenty or thirty minutes died at the heart; the primary cause of their death was asphyxia, but mental and physical shock tended to produce death in the brain and heart."

I admit the removal of the parts of the bodies, the preservation of the same and their presentation at the assizes may be pronounced by some as a very unusual proceeding, if not an unheard-of act previously performed by a medical expert.

But in my defence I submit the words relating thereto which fell from the lips of the learned judge.

His Lordship Judge McMahan, in his address to the jury, said: 'Photographs have been produced, and Dr. Mark, with that care which I am very glad to see was exercised in this case, took the precaution to amputate the hands of one of the girls so that the jury might see exactly the struggle she was making in order to prevent the accomplishment of the diabolical deed which was then being perpetrated.'

By His Lordship's special request in these words: "Could you make it convenient to-day to bring the vessel containing the genitals, etc.," His Lordship remarking he desired to clearly understand the injuries in their minutest details, "so as to write up the case fully and clearly in his report," he kindly remarked after the trial he had seldom heard medical expert testimony given with such great care and with so much satisfaction as by Dr. Robert Mark at the Laroque trial.

SOME UNUSUAL SYMPTOMS IN SPINAL CARIES.

A Lecture delivered at The City Orthopaedic Hospital, Hatton Garden, London, by NOBLE SMITH, F.R.C.S. Ed., Surgeon to the City Orthopaedic Hospital, and Surgeon to the All Saints Children's Hospital, London.

In discussing this subject I have upon many occasions referred to the uncertainty

of the symptoms of this disease, and pointed out that there are a large number of instances in which typical symptoms of caries do not exist.

PAIN, for instance, is a very uncertain symptom. I need not refer to the peculiarities of pain in an ordinary case, as they will be well known to all surgeons having experience of this subject; but I would again call attention to cases in which pain is either very slight or entirely absent. I have known caries to progress to a very considerable amount of deformity, and even abscesses to form without any pain occurring.

I have recorded several such cases, and therefore I will not dwell longer upon this point.

HIGH TEMPERATURE is a very important symptom, and is of especial value in cases where the diagnosis is, as far as other signs are concerned, doubtful. In acute tubercular caries there is very often, but not always, a rise in temperature. The following case well illustrates this subject:

Miss E. H., a very delicate-looking girl aged 16, began to suffer severe pain in the lumbar region, in April, 1893, and had gradually got worse.

When I first saw her, August 9th, she had recently recovered from influenza, but the temperature had risen again to 102° in the morning and 103° in the evening. It had been so for the previous fourteen days.

There was at first a question as to some specific fever. I found projection of the twelfth dorsal and the first lumbar vertebræ, and great pain in that region and below it. The spine was very rigid.

The case was obviously one of caries, and I thought that the high temperature was the effect of tubercular disease. Dr. Seton, who had charge of the case, coincided with my opinion. I anticipated a lowering of the temperature as soon as the spine was thoroughly fixed. The chart of this case is very interesting. The day following the

application of the "adjustable metal splint," the appliance which you have seen used with such good effect at this Hospital, the temperature dropped from 102° and 103°, which it had been for eighteen days, to 2° lower in the morning, and to 1° lower in the evening, gradually decreasing during the succeeding days. After each fresh adjustment there was a small temporary improvement in the temperature, but after the drop of the first four days it remained practically the same for nearly six weeks, when a further improvement took place, after which the temperature remained very steady, a fraction above the normal, and a week later it became perfectly normal, and has remained so. At the date when this practically normal temperature was attained, I had just succeeded in so arranging the apparatus that it proved a perfect support in all postures of the body. The spine had been gradually subsiding to a position in which it now remained fixed; the patient had been also improving in every other way—in healthy appearance, in gradual lessening of pain, and having a better appetite. The patient's listlessness and disinclination to do anything for herself, and some other symptoms, had led the relations to consider that some at least of her symptoms were hysterical. This view I could not agree with, and the hysterical symptoms all disappeared with the disappearance of the high temperature and with the other improvements.

This seems a very characteristic case of active tuberculosis of the spine; but from treatment by local fixation, and with general medicinal and dietetic remedies the patient continues to improve, and there seems every probability of a cure being effected.

The temperature should be regularly taken in all cases of caries. I have found it a valuable diagnostic symptom; a slight rise perhaps of about one degree of temperature only—often being present in caries

when the diagnosis has been otherwise doubtful. Certainly one meets with many cases of caries in which no rise of temperature can be detected, but upon more extended observation in this matter I have no doubt very valuable statistics may eventually be obtained.

Then, again, as regards RIGIDITY, there is usually more or less rigidity of the spine in the neighborhood of the disease, and this is an important symptom in the early stages of caries. It is the result chiefly of muscular spasm from reflex action, or voluntary muscular action to prevent pain, but may also occur from the exudation of the products of inflammation. Rigidity in caries of the spine is not, however, so clearly defined as it is in cases of inflammation of the more movable joints, as the hip and knee, and in many cases it cannot be very clearly detected. If the disease be situated in the lower dorsal or in the lumbar vertebræ, causing slight posterior projection in these regions, it may be a question whether the projection is the result of posterior curvature from weakness of the ligaments of the spine or from caries. Under such circumstances the presence or absence of rigidity should be determined. The patient should be placed in the prone position, when, if the case is one of weakness only, the projection disappears, whereas, if inflammation exists, the projection remains more or less.

Careful elevation of the legs, while the patient lies in the prone position, will intensify this result. Movements in other directions will also generally be found limited as a consequence of the rigidity when caries is present.

In cervical disease the rigidity shows itself in stiffness of the neck muscles, and this often affects the head, laterally producing wry-neck. There is usually a great difference between wry-neck from caries and that from permanent muscular contraction. In the latter it will probably

have existed for a long time, and there will be little or no pain, or at least of a less distressing nature; there will be firm and unalterable contraction of the sterno-mastoid alone, and the face may be atrophied on the depressed side and the features distorted. In caries, other muscles as well as the sterno-mastoid will probably be affected, and the head will be held in a manner more expressive of pain, and support of the head will relieve the contraction and the pain to some extent.

In simple torticollis the movements of the head are only restricted in one direction; in caries the head is kept in one position, but not commonly restricted in any if carefully handled, because, in torticollis from caries, movements in any direction are painful, whereas in true torticollis, pain, if any, only occurs from movement in one direction. Rest in bed for a few days will often relieve the torticollis of caries.

In the latter affection there may be a condition of spasm in the contracted muscles, and in adults it may be difficult to distinguish between this disease and "spasmodic torticollis." I have known torticollis having all the characteristics of the simple affection to exist in a child for many months before it was recognized as a symptom of disease of the bones. Inflammation of lymphatic glands of the neck alone may produce torticollis, and this may be very difficult to distinguish in its early stages. In caries of the cervical vertebræ there may, however, be very free movement.

In caries occurring in the dorsal or lumbar regions, rigidity may be observed in the psoas muscles (or in one psoas only), being perhaps associated with psoas abscess, and this may produce lordosis instead of posterior projection. Such cases must be distinguished from simple local inflammation of psoas muscles, which is not always very easy; however, the latter condition is rare.

These cases also may be mistaken for hip disease.

In both instances other characteristic symptoms of the individual affection must be depended upon. In hip disease it may be remarked that the stiffness of the joint exists in every direction, as well as in extension; yet in some cases of lumbar disease the hip is found very stiff, and the diagnosis may be extremely difficult.

Then, again, the lumbar region may be very stiff in hip disease.

There may be a certain amount of rigidity in lateral curvature, especially in rachitic cases. In rachitic kyphosis, rigidity may be very considerable, and quite like that in caries.

NERVE SYMPTOMS, the difficulties in walking occurring at a comparatively early stage of this disease, the subsequent loss of power over the muscles, the pain and some other symptoms, denote lesions more or less severe of the nerves; the motor nerves are chiefly affected, commencing with weakness in the legs and increasing until complete paralysis of motor power takes place.

The range of these nerve symptoms depends upon the position of the disease, almost always being limited to the nerves proceeding from the diseased bones and below that position.

In paralysis from cervical disease the arms may be affected, and all power of motion below may be lost. Herpes-zoster may occur.

Spasmodic movements of the limbs may become a troublesome symptom, the legs jerking suddenly without giving the patient any warning. The thighs may be jerked into a severely flexed position, or spastic paralysis may take place. Exaggeration of the reflexes is an early symptom of the commencing paraplegia, the knee jerk being especially increased, and ankle clonus may be found to exist.

Although both legs are usually attacked simultaneously, one leg may be affected before the other, or in a greater degree, or even one leg alone may suffer. Paralysis of the diaphragm may occur. When pain in the course of the nerves precedes paralysis, this shows that irritation of the nerve roots occurred prior to complication of the cord, and precludes any supposed disease originating in the cord itself. (Gowers)

ABSCESS—There is a great deal to be said about the peculiarities of abscess, and in considering this subject it is as well to remember that in any case a piece of bone detached from the diseased vertebræ may cause special symptoms, and give rise to considerable pain and irritation.

There is hardly any direction in which an abscess may not extend, simulating a great variety of other disorders, and especially should its similarity to hip disease be remembered.

Moreover, the abscess may even penetrate to the hip joint itself, ulcerating through the capsule, and may thus set up disease in that joint.

Then, again, abscess in hip disease may simulate that of caries. We may have psoas abscess from disease of the kidney, and a lumbar abscess has been produced by a foreign body which has been swallowed, as recorded by Mr. Nicholls, Brighton and Sussex Medico-Chirurgical Society, February 3rd, 1887. In pointing out these few instances of a variation from the typical symptoms of spinal caries, it is impossible in a short paper to do justice to the subject, but I trust I have written sufficient to call attention to the matter, and to show that great caution should be exercised by the surgeon before forming a definite opinion as to the nature of any particular case of spinal disorder.

Society Proceedings.

THE MONTREAL MEDICO-CHIRURGICAL SOCIETY

Stated Meeting, January 26th, 1894.

DR. JAMES BELL, PRESIDENT, IN THE CHAIR.

No doubt the benefit derived from simple incision, without any other procedure, is due in many cases to the moral effect of the operation itself, or expectation, as in metallic therapy, and this accounts for the marvellous cures reported as following the application of the new and extraordinary methods of treatment, such as faith cure, visits to shrines, laying on of hands, etc. Many of the diseases thus healed being those of the imagination are cured by imagination. Again, certain operations on the eye have relieved nervous symptoms, and trephining the skull without further procedure has temporarily cured epilepsy. This would explain the disappearance of pain and tenderness after exploratory incision, but not the disappearance of tumors or alterations in temperature, so other causes must be looked for, such as those suggested by Dr. White, viz., relief of tension, reflex action, etc., or perhaps some causes working in ways mysterious, and of which we know nothing, but to which we give such names as *altered nutrition, trophic disturbance, nervous influence, etc.*, etc. No doubt these cases in time receive suitable explanation, but at present we are in the dark as regards them. In many cases such symptoms as pain and tenderness with general discomfort may be due to adhesions which at the time of the operation are released; for instance, in the case I reported above, the omentum was adherent to the liver, and its release may have banished the pain and tenderness. In many cases of nephralgia, exploratory incision has caused relief. I myself have had several such cases, but in every case the kidney was more than usually movable, and now I think the explanation is generally accepted, that in cases of nephralgia, where no calculus is found, the cause of the pain is due to twisting of the ureter of a more than usually movable kidney, and that operation tends to fix the kidney in place.

No doubt many of you here will be able to add to the cases I have narrated, and perhaps some of you may be able to explain them more satisfactorily than the reader of the paper.

Discussion.—Dr. SMITH thought the curative effects were due to the improved nutrition resulting from stimulation of the peritoneum at the time of the operation.

Dr. WM. GARDNER had seen excellent results follow exploratory laparotomy in two cases of tuberculous peritonitis. These were already reported to the Society. In a case of grape tuberculosis of the peritoneum, he recently

reported, the patient was in no wise benefited, but this case had advanced pulmonary tuberculosis as well, which would alter the prognosis. He doubted whether malignant disease of the abdomen was benefited by this operation, and had never himself seen any improvement in such cases.

Dr. JOHNSTON asked if the patient had been informed of the negative result of the operation.

Dr. SPRINGLE suggested that the improvement in Dr. Shepherd's case might be due to the application of the cautery to the liver. He wished to know what time had elapsed in Dr. Shepherd's cases as in a recent case of reported cure of malignant disease by laparotomy there was a subsequent relapse.

Dr. WESLEY MILLS said that he had a theory explaining the beneficial results in these cases which he hoped to bring before the notice of the Society at some future time.

Dr. JAS. BELL stated that he was sceptical with regard to the curative effects of laparotomy. In cases reported as having got well, the diagnosis was usually obscure, and this was true of Dr. Shepherd's case. He wished to ask Dr. Shepherd if he had ever known of a case, in his own experience or that of others, where a tumor of undoubted malignancy had disappeared as a result of exploratory laparotomy. In malignant disease the symptoms were sometimes temporarily arrested after a laparotomy. Tuberculous peritonitis was a self-limiting disease.

Dr. SHEPHERD, in reply, said that the patient was informed of the fact that nothing radical had been done at the operation. The cauterization had been so slight that it was impossible to believe it had any influence at all. He had not intended, in his paper, to introduce the question of the curative effects of laparotomy in tuberculosis. He had seen cases which improved after laparotomy, but thought they would have got well in any case. The operations had been done because the disease was believed to be something else. He thought Dr. Bell had misunderstood his statement as to the relation between exploratory incisions and malignant disease of the peritoneum. He did not assert at all that malignant disease had been cured in this way. On the contrary, he had said that Mr. Tait's case would be much stronger if a microscopic examination had been made. Still, those deficiencies in the evidence do not explain away the fact that something does take place. Tumors have disappeared—not malignant ones, perhaps,—and processes which had previously invalidated a patient have been arrested. In his own case a piece of the tumor was not taken for examination simply because its great vascularity rendered severe bleeding likely. Of the other cases referred to, in a good many the improvement had persisted for several years; in others a few months only had now elapsed. It was hard to say if the arrest

of malignant disease after operation was due to the operation. He would like to hear the new theory which Dr. Mills had referred to, even if only a partial statement could be given.

Dr. WESLEY MILLS considered it unsatisfactory to bring forward new views without having at hand sufficient evidence to support them. He might say, however, that he would explain the matter by *reflex*. He thought we explained too little, rather than too much, by this agency. For his part, he believed life itself to be a reflex phenomenon. In the question under discussion the reflex acted on the blood vessels, the cells, and in fact on the whole metabolism. He disagreed with the agnostic standpoint taken by Dr. Bell.

Hæmorrhagic Typhoid.—Dr. Adami brought forward the results of an autopsy, presenting a peculiarly rare condition, performed upon a patient æt. 19, who had been admitted to the General Hospital in November with empyema, under Dr. Molson, had been transferred to the surgical wards under Dr. Bell, and there had been operated upon, a silver drainage tube being inserted. The empyematous condition under daily drainage improved greatly, but the patient continued weak, with indications of pneumonic disturbance of the left lower lobe. A week before death symptoms of peritonitis supervened, with eventual diarrhœa, incontinence of fæces and great distension of abdomen. The patient died eight weeks after admission. The continued emaciation aroused suspicions of tuberculosis, while the septic nature of the temperature chart seemed to render it not impossible that the empyema of the lower half of the right pleural cavity had led to a sub-diaphragmatic abscess with subsequent extension and peritonitis.

At the autopsy, neither of these conditions was found present; the empyema had healed with firm fibrous adhesion of the lowest lobe to the chest wall. But there were typical evidences of typhoid. The last twelve inches of the ileum contained five ulcers, three of which had undergone perforation, although two of the three perforations were covered externally by thick, inflammatory lymph. The typhoid was complicated with hæmorrhages. Petechial and ecchymotic hæmorrhages were found most widely distributed:—Subcutaneous (mostly on chest, neck, and upper extremities); along the course of the alimentary canal; gums, tongue, tonsils; œsophagus, stomach, small intestines and large intestines, being particularly numerous in the jejunum and ileum; and these both submucous and subserous; in the heart (both subendocardial and subpericardial); in the substance and on the surface of the liver and kidneys; in the right suprarenal (sub-capsular); in the retro-peritoneal lymph glands; in the bladder (both submucous and subserous), and again in the consolidated lowest lobe of the

right lung. There had been a more profuse hæmorrhage into the pelvis of the right kidney. Cultures from the organs gave a preponderance of the coli bacillus.

Dr. BELL said that on Jan. 10th there was great pain and distension of the abdomen, followed by collapse and subnormal temperature. Perforative peritonitis was diagnosed, but it was thought to be possibly due to the burrowing of pus from the empyema into the abdomen.

Ruptured Tubal Pregnancy—Report on the ovum.—Dr. ADAMI reported the result of the examination of the specimen, 5.5 mm. long, attached to the wall of the ruptured Fallopian tube exhibited by Dr. Armstrong at the last meeting. It showed very great evidences of degeneration, and all that could be said was that it more closely resembled an embryonic structure than any other object. There were no signs of fetal membranes surrounding it. Serial sections had been made, and showed that the object was bilaterally symmetrical and nourished by a vascular pedicle attached to the wall of the sac. There were no structures which could be distinctly recognized as fetal organs, although the cell structure as a whole was of distinctly embryonic type. In a normal embryo of this size, numerous organs would be recognizable. It was possible that degenerative changes and invasion by leucocytes accounted for the discrepancy. The object was certainly not a tumor or parasite. The inner surface of the sac in the neighborhood showed papillæ, though no typical chorionic villi were met with.

Dr. MILLS referred to some experiments in artificially changing the environment of ova. These had led to astonishing anomalies in the ova. He thought the object in the present case to be an ovum.

Dr. SMITH considered that the specimen was an ovum.

Dr. ARMSTRONG remarked that the history of the case was that of a ruptured tubal pregnancy.

Leucæmia.—Drs. FINLEY and ADAMI reported this case as follows:—

We venture to bring forward the present case, not because we feel absolutely convinced as to the correctness of the diagnosis (though at the same time it is difficult to see what other diagnosis satisfies all the details of the case), but because it seems to us that the uncommon clinical history and the appearances discovered at the autopsy are worthy of being placed upon record. For the very full report of the case we are indebted to Dr. Mackenzie, house physician of the Montreal General Hospital.

S. D., a deaf mute, but nevertheless a bright and intelligent-looking girl of eleven years of age, was born and lived till she was seven years old in California. The mother, who is a robust woman, has had four

children and no miscarriages, the father is alive and has some pulmonary affection.

The third day after birth a large swelling formed under the left ear and advanced forward to the cheek. This was poulticed, and discharged a large quantity of pus. She was a sickly infant, and suffered much from colic. At eleven months old she had an attack of whooping cough; when she was two years of age it was noticed that she could not hear. At four she suffered from measles, and at the outset of this attack occurred the first hæmorrhage, three cupfuls of blood being vomited. Next morning there was a slight hæmatemesis, and after this her condition was very weakly. When she was seven years old she vomited up a teacupful of blood without any premonitory symptoms, and without serious disturbance to her health. At eight she suffered a double rupture, for which she afterwards wore a truss. For the past five years her general health, if not robust, has been fair; she has been able to drive the cattle on the farm, has had a good appetite, and has not suffered either from diarrhoea or from hæmorrhoids.

Recently she was admitted to the Mackay Institute, and there learned to articulate a few words.

Upon December 30th last, she gave evidence of feeling unwell, and spat up some mucus stained with blood; later in the day, while in the housekeeper's arms, she brought up a large quantity of blood, estimated at about two quarts; she became very faint. Saline enemata were given with good effect, and she was confined to bed until January 1st, when she was admitted to the General Hospital under Dr. Finley.

Here her condition was found to be one of marked anaemia; the temperature was normal, the pulse 120, small and regular, the tongue large and fissured along the median line, with small fissures branching off.

Upon examination of the abdomen, some fullness was noticed in the left hypochondrium, and an oval tumor was made out, extending from the costal margin to just below and to the right of the umbilicus, while to the left it extended back to the line upwards from the middle of the crest of the ilium. It could be palpated bi-manually and was movable. The dullness extended upwards, merging apparently into an area of thoracic dullness, whose upper margin was 2 inches above the nipple.

The liver dullness was diminished, being $3\frac{1}{2}$ inches across in the right mammary line.

The heart lay in normal position; both apex and pulmonary systolic murmurs were present, soft in character.

The blood was pale and scanty, the amount of hæmoglobin was reduced to 38 per cent., the red corpuscles reduced to 2,240,000, the white increased to 1,200, and in some specimens of blood examined by Dr. Finley, the proportion of white to red had risen to 1 to 80. No change in the character of the corpuscles was noticed.

The urine was normal, though small in quantity (16 ozs. in 24 hours). The stools were normal, one mass was of dark, blood-stained color, and with it came a little blood-stained fluid. The larynx was normal, the drum of the left ear concave.

The patient's condition improved in hospital; upon the 5th she was bright and cheerful, and seemed to have gained in strength. At half past five she had her supper of bread and milk. This seemed to bring on nausea, and after a few minutes she vomited with scarcely an effort 20 ozs. of bright blood, which rapidly clotted. She was immediately given ice to suck, an ice-bag was placed upon the epigastrium, and ergotin was injected subcutaneously. Ten minutes later a smaller quantity of blood was vomited. A stool passed at the time of the first hæmorrhage was normal and bloodless. Saline enemata were now given. At 6.20 a third hæmorrhage occurred, followed by three more; altogether, 48 ozs. of

blood was brought up from the stomach. The patient suffered from great epigastric pain, and gradually sank, dying at 1.35 a.m. on the 6th.

We have entered into all these details in order to throw as much light as possible upon the condition found at the autopsy. This was performed eleven hours after death.

Autopsy.—The body was found fairly well developed and of large proportions for the age of the girl (eleven years). There was no excessive fat: the abdomen was sunken. The organs in the thoracic cavity were very pale, there was a little clear fluid in both peritoneal and pleural cavities. The blood present in all the cavities was fluid, and presented a peculiarly pale, diluted appearance. The heart was normal, the lungs rather sodden and œdematous.

Upon opening the abdominal cavity, the small intestines and other organs showed extreme pallor. The large intestines were distended and filled with almost clear fluid (the result of saline enemata given shortly before death). The liver was wholly retracted behind the ribs, save that below the ensiform cartilage the left lobe showed for the extent of three-quarters of an inch. The spleen, which was of a dull pale bluish color with well rounded edges, extended forward and downward to within an inch of the umbilicus.

The result of the examination of the various organs was as follows:

The spleen measured $20 \times 8 \times 3.5$ cm. and weighed 410 grms. The surface showed a reticulated fibrous condition. The splenic vessels at the hilus were large, but not abnormally thick; there was no local evidence of interference with the circulation of the organs. Upon section the trabeculae were distinct and prominent; the pulp was relatively scanty and pale, while the Malpighian bodies were not prominent. The microscopic examination bore out these naked eye characters, the most noticeable feature being the general interstitial fibrosis more marked in some regions than in others, although everywhere the trabeculae were enlarged.

The liver was small, with sharp, irregular edges, and weighed only 610 grm.—one-half as much again as the enlarged spleen. The organ was very pale and had a distinctly cirrhotic appearance. On section, however, much of the fibroid change appeared to be superficial, and while the organ was firm and cut firmly, but few bands of fibrous tissue could be made out passing from the surface deep into the substance. Here and there were small, isolated fibroid patches in the liver tissue. The gall bladder was small and covered by an unusual layer of fat, more than 0.5 c.m. in thickness. The ducts were pervious. Microscopically the main characteristic of sections of the organ was its leucæmic appearance; the capillaries throughout were large and easily recognizable, though there was not the slightest indication of central atrophy of the cells, of nutmeg liver; contrariwise, it was difficult to recognize the individual lobules. The capillaries contained an undue number of leucocytes—in fact, certain of them were completely injected with these corpuscles. In addition, the organ was markedly cirrhotic, but the cirrhosis was not of the common type. There was not anything approaching to a framework of increased fibrous tissue, but here and there were isolated patches of fibrous overgrowth, many perilobular, while some were within the lobules. The growth was of various periods; some of the patches were of well formed fibrous tissue, but there were occasional areas of recent cirrhosis with small cell infiltration.

Certain capillaries in the heart muscle showed also this injection with leucocytes; otherwise the heart muscle was normal, save that it showed, where the fibres were cut transversely, peculiarly well marked vacuolation. This vacuolation is frequently to be no-

ticed in the cardiac muscle fibres of children, and it is questionable whether it should be regarded as a pathological condition.

Beyond their pallor, the kidneys, which weighed each 90 grms., presented nothing calling for remark, either macro- or microscopically, nor was there anything noticeable in the other abdominal and pelvic organs with the exception of the intestines.

The stomach contained 8 ozs. of clotted blood. There was no ulceration or evidence of localized or general inflammation. Careful examination, both by the naked eye and by the microscope, failed to reveal any ruptured vessel or cause for the hæmorrhage, which would seem, therefore, to have been of capillary origin.

The jejunum showed blood-stained hæmorrhagic patches in its mucous membrane, which varied in length from two feet to seven or eight inches, and were separated from one another by areas of apparently normal intestine. The ileum was similarly affected, but to a less degree. In neither could any special hæmorrhagic point or ruptured vessel be discovered. The cæcum was normal, the appendix thickened, its mucous membrane reddened and apparently inflamed; the follicles were slightly enlarged. The large intestine and rectum were normal.

There was no noticeable enlargement of the mesenteric or other lymph glands. The marrow of the sternum was red, but not increased in extent. It had not the dirty reddish grey color characteristic of leuchæmia. It may be added that the brain was not examined.

Two conditions might possibly explain the clinical and other conditions of this case: cirrhosis of the liver and leuchæmia. But there is much that can be brought against the former possibility. While enlargement of the spleen is frequently associated with cirrhosis, that enlargement is only moderate, and does not approach to the extent discovered in this case. Again, cirrhosis fits in ill with the history of hæmatemesis, manifesting itself at irregular intervals over a period of seven years; and while the liver was undoubtedly cirrhotic, the fibroid change was not of either the ordinary or congenital syphilitic type.

On the other hand, much may be said in favor of leuchæmia. The spleen was distinctly of the leuchæmic type; its large size and fibroid condition are both characteristic of splenic leuchæmia. The injection of the capillaries in liver and heart are in favor of this diagnosis; the hæmorrhages from the stomach and intestines also support it. The absence of any marked swelling of the lymphatic glands or of greyish red softening of the sternal marrow is not against it. Still, there are difficulties in connection with this view of the case. Leuchæmia in children generally runs a rapid course, and if this be a case of the disease, we are almost bound to assume that it has had a duration of four, if not of seven years, the first hæmorrhage, of a type similar to the last, having occurred when the child was four years old. Again, while the proportions of white to red corpuscles, as determined by Dr. Finley, had become increased from the normal of 1 in 300 to 1 in 80, it cannot be said that this is a very great increase, especially when the facts are taken into

account that correspondingly there was, through the antecedent great hæmorrhage, a diminution of the red corpuscles to less than half the normal number, and that one expects to find a post hæmorrhagic increase of the white corpuscles.

Nevertheless, in certain cases of leuchæmia, the number of leucocytes present in the blood is capable of great variation from time to time; and taking into account the very typical spleen and the condition of the liver, I am inclined to consider that this must be regarded as a case of chronic, or it may be termed intermittent, leuchæmia, in which it has happened that the observations upon the blood have been made at a time when there has been a relatively small increase in the number of white corpuscles. The state of the liver appears to me to sustain this view. Apart from the capillaries with their injection of leucocytes, the curious cirrhotic condition of this organ, with its isolated areas of fibroid change, some old and well developed, some comparatively recent, some external to the lobules, some within the lobules—all this is what might be expected to result from capillary emboli produced from time to time in the organ by masses of leucocytes.

Dr. LOCKHART had seen the case three days prior to admission; she was lying near a pool of blood which looked normal in appearance. Ice to the epigastrium and perfect quiet were ordered. Later on, repeated saline enemata were given with a wonderful improvement each time in the pulse, lasting for half to three-quarters of an hour. During the afternoon she had three more hæmorrhages aggregating nearly a quart.

Dr. LAFLEUR said the number of leucocytes varied greatly at different periods in the history of leuchæmic cases. He asked what were the conditions of the lymphatic glands throughout the body, and of the bone marrow.

Dr. ADAMI said that the spleen measured 20 x 8 x 3½ cm. There was nothing noticeably wrong with the lymphatic glands. The bone marrow showed nothing abnormal. The difficulty in adopting the theory of leuchæmia was that she must in that case have had the disease since infancy.

Atresia of Vagina, Hæmatometra, Hysterectomy.—Dr. WM. GARDNER exhibited the specimen, taken from a girl of sixteen, with a history of violent pain and vomiting occurring periodically at intervals of about three weeks. A firm tumor could be felt in the hypogastrium. No vaginal canal was present, though the labia were normal. As no evidences of a vagina could be obtained by rectal examination, abdominal hysterectomy was done by the method of tying off the broad ligaments. The uterus was found to be greatly hypertrophied and was full of blood, the right tube was

normal, and the left distended with blood. The depth of the uterus was from 8 to 10 inches. The blood measured over $1\frac{1}{2}$ pints and had the ordinary characters of retained menstrual fluid. Such extreme conditions were, he believed, extremely rare. The operation was a success.

Aortic Aneurism.—Dr. E. P. WILLIAMS showed this specimen, which had been sent by Dr. H. P. Shaw, of Perth, Ont.

G. B., *æt.* 56, was for many years foreman on some dredging operations, and occasionally acted as diver. Previously, at the age of twenty-one, he had malarial fever, and at twenty-five an attack of acute rheumatism. Since then he has had several acute attacks and constant chronic rheumatism. He comes of a healthy, long-lived family, and has healthy children of his own.

During the summer of 1892 he suffered from anorexia and insomnia, and on the 1st of November he suddenly felt a sharp pain in the right mammary region, "like shoving in a red hot iron and drawing it out again."

The pain was paroxysmal and severe for five days, then the attacks occurred about every third or second day.

On Jan. 1, 1893, he noticed for the first time a small tumor in the right mammary region, which, from time to time, would swell up and "lift"; the skin over it would become red and tender, and then the paroxysms of pain began at the tumor, back, right shoulder and arm. After three or four hours the ribs seemed to "lift" and the pain would cease.

Upon examination at the Montreal General Hospital under Dr. Wilkins, a prominent pulsating tumor was found projecting forwards about 5 cm., and covered by reddened, œdematous skin. The most prominent part was firm, but the tumor was soft and compressible.

The ribs were not felt under the tumor. Dullness extended slightly beyond its outline.

Pulsation was synchronous with the heart beat, a sharp systolic rise followed by a quick fall; a slight systolic blow after the first sound was heard over the swelling, while the second sound is heard distinctly.

Tracheal tugging could be obtained.

The apex beat was at the fifth left interspace, and almost imperceptible. The sounds were normal, the aortic slightly accentuated. Pulse 72, of low tension; the radials were slightly thickened and pulsated equally. Respirations 20. Eyes normal.

After leaving the hospital the patient returned to his home. Dr. H. P. Shaw, who attended him, states that the pain became almost intolerable, only relieved by chloroform. Dyspnoea was severe and almost constant. The tumor was tense and heavy, requiring support by bandaging.

The temperature ranged from 101° to 104° .

On November 10, after several attacks of syncope, he became unconscious, and died comatose two days later.

At the autopsy, three hours after death, a firm clot was found in the aorta extending from the aortic ring as far as and into the great vessels of the neck, and projecting through the orifice of the aneurism. The sac was filled with soft clot. Both lungs were gangrenous.

The heart appears to be of average size with normal cavities and valves. The aorta is dilated, measuring at the ring 3 in. in circumference; one inch further, $6\frac{1}{2}$ in., and an inch beyond the left subclavian, $4\frac{1}{4}$ in. It is rough, and shows irregular nodules of atheroma, some breaking down, some undergoing calcification.

The great vessels of the neck are also atheromatous, measuring:—Innominate, 2 in.; L. carotid, $1\frac{1}{4}$ in.; L. subclavian, $1\frac{3}{4}$ in. in circumference.

Three inches from the aortic ring in the anterior wall of the aorta is a circular, thick-edged orifice, $4\frac{1}{2}$ in. in circumference, communicating with an aneurismal sac of large size.

In the course of its growth the sac probably became firmly attached to the wall of the thorax, and then gradually eroded through the ribs and intercostal structures to form a false aneurism covered by the skin.

The posterior wall consists of the remains of the dilated arterial coat, which is firmly united to the inner thoracic wall in a circular manner, the diameter being $5\frac{3}{4}$ in. from the midsternum to the right axilla, and from the second to the fifth ribs.

Outside the thorax, the dilatation extends further in all directions, being about $8\frac{1}{2}$ in. in diameter, as far to the left as the left costal cartilages, and from the upper border of the first rib to the lower border of the sixth.

The anterior wall is formed by the skin which is thin and vascular, especially over the central portion.

Into the sac project the rough ends of the eroded and broken 3rd, 4th and 5th ribs, and the edge of the sternum, which is rough and eroded between the 3rd and 4th costal cartilages. There are also bits of semi-detached bone and adherent portions of more or less organized clot.

Stated Meeting, February 9th, 1894.

JAMES BELL, M. D., PRESIDENT, IN THE CHAIR.

Dr. Robert Wilson was elected a member of the Society.

Purulent Pericarditis with Necrosis of the Sternum.—Dr. C. F. MARTIN showed the specimens obtained at an autopsy upon a male infant 17 days old who had died of purulent pericarditis. The labor was premature at 8 months, and the child sickly at birth. There was a sinus in the præcordial region, close to the sternum, leading directly to the pericardial sac, which contained some purulent fluid and flakes of lymph. There was necrosis of the

sternum, which appeared to be the origin of the trouble, as the process there appeared of earlier date than that in the pericardium. There was no evidence of syphilis or tubercle and no sign of infection through the umbilical cord. The external portion of the cord had not been detached, but was represented by a small shrivelled body 2.5 cm. long.

Dr. EVANS related the history of the case. The parents were both healthy and the labor had been easy. The child was small and sickly at birth, weighing only 3 lbs. 15 oz. On the 5th day it was noticed to be nursing badly; on the 8th a small pimple, from which pus could be squeezed, was noticed over the sternum. On the 13th day an abscess was opened in this region. Subsequently a probe passed into the deeper part of this abscess, entered a sinus leading into the pericardium, and the heart beats could be registered by the movements of the probe.

Dr. BELL asked if the incision made in opening the abscess had been continued down to the pericardium.

Dr. EVANS replied that such was not the case, the communication with the pericardium had been discovered a day or two later.

Epilepsy—Abscess and Cyst of Brain—Taphening and Exploratory Puncture.—Drs. BELL and ADAMI exhibited the specimens obtained at the autopsy in this case, and gave the clinical history.

Discussion.—Dr. JAS. STEWART had seen the case once in consultation. He thought the results of the post-mortem did not lessen the probability that the symptoms were due to irritation of the motor area, and thought that the cyst was the cause. After the operation he had thought the diagnosis was wrong, but the autopsy showed that it was right after all. It was not necessary for the lesion to be actually situated within the motor area in order to irritate it. He thought that there must still be some lesion not yet discovered (possibly of the internal capsule), as the cyst would not account for the paralysis. He thought the case could not be fully discussed at present, as the report was not complete. The electrical reactions were normal.

Dr. MILLS thought we were too rigid in our interpretation of what we mean by the motor area, and that it really is a sensori-motor area. The time has come to look for a wider definition which will include such anomalous cases as the present.

Dr. WILKINS said that the ganglion cells of the cord were probably involved, as shown by the wasting of the muscles.

Dr. ADAMI said that it had not been possible to examine the cord. The examination of the brain was not finished, as the specimen was not fully hardened.

(The discussion was postponed.)

Calcified Plates from the Pleura in Empyema.—Dr. ADAMI exhibited some calcareous plates removed from the pleura after resection of the 5th and 6th ribs. These looked like exfoliations of bone, but proved on examination to be merely deposits of calcareous salts in the thickened pleura following empyema.

Dr. BELL.—The patient was a man aged 48, who gave a history of a pimple having burst 8 months ago on the 5th intercostal space anteriorly. Since then pus had flowed from the wound. On resecting the ribs there was no appearance of exfoliation, but the empyemal sac, which had a capacity of about one pint, was lined with these bony-looking plates. Though the history only dated 8 months back it was possible that the disease had existed unperceived for some months or years. The patient was a tuberculous subject.

Cancer of the Body of the Uterus.—Dr. WM. GARDNER showed the specimen from an unmarried woman aged 55. There was a history of pain and bleeding coming on some time after the menopause, and which had lasted 6½ years. He had seen the patient 2½ years ago, and found the uterus enlarged. The cervix was normal. Upon curetting, some friable material was obtained, which proved to be cancer on microscopic examination. Operation was advised, but refused. The patient afterwards went to Europe and acted as courier to a party of tourists. Ten months ago she was examined, and some material, which was shown to be cancer microscopically, again removed from the uterus. Consent to operation was again refused, but, owing to the severity of the pain and hæmorrhage, was afterwards consented to. The operation was through the abdomen, as the vagina was narrow and atrophic. There were no adhesions. Near the fundus were two small pedunculated sub-mucous myomata, one of which was partly calcified. Recovery was uneventful.

Dr. SMITH thought that in any woman in whom uterine hæmorrhages recommenced a year or more after cessation of the menses, the case should be considered as cancer until the contrary was proved.

Albuminuria of Pregnancy.—Dr. SMITH showed some specimens of urine showing the rapid disappearance of a large amount of albumen in the urine after delivery. The patient had nearly lost her life a year ago from puerperal eclampsia. Subsequently, on becoming pregnant, her urine was examined weekly, and as it suddenly began to be highly albuminous in the fifth month, in consequence of a slight chill followed by convulsions, labor was at once induced, and the urine became nearly free from albumen in a few days. These cases should never be allowed to go on to full term.

Dr. SPIER read a paper upon scarlatina, based upon his observations of 100 cases of this disease as follows:

The first one hundred cases treated in the Montreal General Hospital during the present epidemic may be divided into the following classes:

(a) Of mild cases, showing all the symptoms of scarlet fever with a moderate fever and a little failure of the general health, there were forty.

(b) Of moderately severe cases, with a high temperature, a severe angina and intense rash, with considerable depression, there were twenty-nine.

(c) Of severe cases with a continued high temperature, ulceration and destruction of the tissues of the throat and involvement of the glands of the neck, there were thirty-one.

In over 50 per cent. of the mild and moderate cases, convalescence set in on the fourth or fifth day by crisis, the temperature falling in a few hours two or three degrees, then by lysis reaching normal by the end of a week or ten days. In a few cases the temperature fell to normal in twenty-four hours. The remainder of the cases reached the normal by a gradual lysis in from five to ten days.

The rash in many cases presented peculiar appearances. In many of the mild cases it was apparently absent or very transient, or appeared only in certain parts of the body, chiefly on the neck and chest, in the form of erythema. In three cases minute red spots without a general redness appeared.

In the moderately severe cases the rash as a rule presented the appearances generally described, but two or three presented a distinctly papular rash, these papules being specially distinct on the back of the hands and forearms.

Among the severe cases, anomalous rashes were common. One case presented a papular hæmorrhagic rash over the whole body without any distinct coloration of the skin between. Two or three cases had very numerous small vesicles over the whole body. The case of a young child presented the appearance of an acute exfoliative dermatitis.

The throat in mild cases showed as a rule redness and some slight swelling of the soft palate and tonsils. In the severe cases the whole palate, pharynx and tonsils were intensely red and covered with sticky mucus. In the most severe cases ulceration and destruction of the tissues occurred, accompanied by a foetid odor. In these cases also the glands of the neck became swollen and inflamed, frequently running on to suppuration. A general pyæmia has been frequently set up.

In one case sloughing of the tonsils and cellular tissues of the pharynx occurred, leaving the muscles of the pharynx clearly dissected out. In another case an abscess developed behind the soft palate, which was evacuated by an opening through it with immediate relief.

A large number of cases presented a diphtheritic appearance. This was most common among the moderately severe cases but was also common in the very severe cases. They were always accompanied by enlargement of the glands of the neck which very occasionally went on to suppuration. This diphtheritic condition occurred in 8 per cent. of the cases.

The digestive system was not, as a rule, much disturbed except the appetite was lost. Vomiting was persistent for four or five days in four cases. Diarrhœa was troublesome in three cases early in the disease. In fatal cases it frequently set in during the last three or four days.

The complications and sequælae have been numerous and varied.

The most frequent and most dangerous was inflammation of the glands of the neck. This occurred in 19 per cent. of the cases. The most dangerous was that form with an ulcerated condition of the throat. It generally ran on to suppuration, and was by far the most frequent cause of death, five deaths occurring from this cause, while only three recovered.

A less important form was that accompanying the pseudo-diphtheritic angina. This only went on to suppuration in one case, and caused no deaths. These two forms have occurred in the first two weeks of the disease. Three per cent. of the cases suddenly developed an acute inflammation of these glands during the third week of convalescence. It set in with chill and high fever, and a rapid enlargement of the glands took place. In two cases complete recovery took place by the third day, but one ran on to suppuration.

Acute nephritis occurred in 8 per cent. of the cases, coming on insidiously in the third or fourth week. Death occurred in two cases with complete suppression of urine and convulsions. In five cases apparent complete recovery took place after two or three weeks. One case, the only one in which dropsy was markedly present, became chronic.

Otitis media occurred in six per cent. of cases most frequently with the pseudo-diphtheritic angina, but occasionally with the mildest cases. It may occur at any time during the first four weeks of the disease.

True diphtheria has been present in four cases, but cases have been frequently coming into the hospital suffering from diphtheria, and evidently only shortly convalescent from scarlet fever.

Arthritis was common following this disease. A large number complained of slight pain in one or more joints. Three per cent. have suffered from severe attacks resembling acute rheumatism with fever and swelling of the joints. In one case, double hip joint disease rapidly developed with dislocation of the heads of both femurs upwards and backwards. There was no evident formation of pus.

In another case a so-called white swelling

became purulent; rapid and extensive destruction of the joint followed.

Mitral disease developed in two per cent. of the cases.

A purulent discharge from the vagina occurred in two young children during the fifth week, which disappeared in a few days.

A distinct relapse occurred in one case at the end of the first week of convalescence.

The whole course of the second attack was very severe, while the primary attack was very mild.

Ten per cent. of the cases treated died, the causes being as follows :

Nephritis, two deaths; ulcerated condition of the throat with involvement of the glands and pyæmia, five deaths; diphtheria, one death; pneumonia, one death; and one death due apparently to the intensity of the poison.

All but one death have occurred among young children, though fully 25 per cent. of the patients have been adults.

The adult who died was a chronic drunkard.

Tabulation of Cases.

Mild	40
Moderately severe	29
Severe	31

100

Complications.

Well marked inflammatory enlargement of the glands of the neck	19
Acute nephritis	8
Otitis media	6
Diphtheria	4
Severe arthritis simulating acute rheumatism	3
Mitral disease	2
Pneumonia	1
Relapse	1

Deaths.

Malignant scarlatina	1
Acute nephritis	2
General pyæmia	5
Diphtheria	1
Pneumonia	1

10

Discussion.—Dr. E. P. LACHAPELLE referred to the severe epidemic of scarlatina now going on in Montreal since October last. The reported weekly mortality was at present 20 to 30, but the real mortality was much larger, as a large number of cases were improperly certified. An inspection made by the Provincial Board of Health showed that the medical profession was mainly responsible for this unfortunate state of affairs, as it was impossible for the health authorities to do anything unless they knew of the cases. In Montreal, two-thirds of the physicians never report cases of infectious disease at all. Whether this was because they do not think of it, or do not care, or object to do it, the result is very bad. No one has any doubt to-day as to the contagiousness of scarlatina or

the duty of medical men to report cases, if the heads of families, who are also responsible, neglect to do it. If only a few men report, they suffer in consequence. If the profession are lax in regard to one contagious disease, they will be so in regard to others. The public is at the mercy of the physician. He hoped the Society would pass resolutions insisting upon the necessity of all cases being reported.

Dr. LAFLEUR said that he always reported such cases as soon as a diagnosis was made, but that many days often elapsed before the house was placarded.

Dr. ALLEN mentioned a case where he had attended a patient in a boarding house. Upon the statement of a member of the household, the board of health disinfected the house and removed the placard, although the patient went on desquamating for two weeks subsequently.

Dr. JOHNSTON thought there were too few physicians in the staff of the City Health office. Most of the disinfection and visiting appeared to be left wholly to sanitary policemen without any supervision, hence mistakes were often made. Work of this kind should be carried out under medical direction.

Dr. KENNETH CAMERON stated that his experience in this epidemic had changed his previous opinion that scarlatina is a mild disease. His first case was one of the hæmorrhagic form, and was fatal in 6 hours. He thought the infection was largely spread by mild cases which were not diagnosed. He had seen several instances in school children in whom the occurrence of dropsy had first drawn attention to the real nature of the case.

Dr. BULLER estimated from the statement made by Dr. Lachapelle, that there must be 500 cases occurring weekly. This probably would give one or more cases in every street in the city. He would advocate stopping the whole public school system, and so calling public attention to the necessity of providing some proper means of quarantining cases. The supineness of the local health board could only be overcome by taking strong measures such as would arouse public indignation.

Dr. McCONNELL stated that the local health board was not blameless; as for scarlatina patients, there was no other provision for conveying them to hospital than the public cabs. Children were allowed to return to school within two or three weeks from the commencement of an attack. The health officer should see to it that such does not occur within at least six weeks. He had little faith in the utility of sulphur fumigation when clothing and bedding were not disinfected by heat. Much can be done to prevent the spread of the disease through a building by the floating particles of cuticle, if antiseptic ointments were used during the period of desquamation. Creolin, carbolic acid, salicylic acid and rosorcin may be used; the latter has

the additional action of promoting a more rapid peeling, so that this process may be completed one or two weeks earlier than the ordinary period.

Dr. SMITH agreed with Dr. McConnell's statements. He made a practice of using carbolized vaseline and giving a hot bath every 24 hours, and tried to promote sweating. He gave copious drinks of water to flush out the kidneys.

Dr. MILLS said that whatever were the shortcomings of the local health board, we should not take shelter behind them. There had been a serious delinquency on the part of the profession, and we might as well admit it. He would recommend that a deputation of the Society wait upon the City Council and urge the adoption of suitable measures for restraining the epidemic. Most of the cases in school children could be watched through the co-operation of the family physician. To close the schools would produce a panicky condition prejudicial to the community.

Dr. ARMSTRONG.—The reason why cases are not reported is that two families out of three object to having it done, and point out that their neighbors' cases are not reported. Placarding is of no use, as intelligent people will warn others of the danger, and ignorant people will pay no heed to it. Nothing was accomplished by the antiquated methods of disinfection which constitute the only resource of the local health board; they make a little stink and do nothing more. Disinfecting was properly done only when the family physician went to the trouble, personally, of explaining how it should be carried out, and superintended it himself.

Dr. LACHAPPELLE could not agree with Dr. Armstrong. Two wrongs do not make a right. Whatever might be the faults of the local board, the profession was much to blame. If we, as a profession, had done our duty, we would have more right to complain. He approved of placarding, as it was likely that servants would not do their duty in warning people, whereas a placard warned everyone of the danger. He did not think the situation was severe enough to warrant such a step as closing the schools, and the well children would run just as much risk at home. The Society might depend upon the Provincial Board of Health doing their duty, however unpleasant it might be.

Dr. GORDON CAMPBELL said that some weeks ago, in a house fumigated by the city health officials, the clothing had not even been stripped off the infected bed. Some weeks later another case developed in this house. In St. Cunegonde absolutely nothing was done when cases were reported.

Dr. BELL, in summing up the discussion, said that if we first took the mote from our own eye we would be better prepared to remove the beam from that of the local health board. While sympathizing with what Dr. Armstrong

had said, still even when put in a false position, the members of the profession should be guided by their strong sense of duty, and do all in their power to check the spread of the disease. The present was a good time for the Society to express itself strongly to the incoming municipal council. It was simply disgraceful that Montreal had no place for quarantining scarlet fever, and through the absence of such a place we were now losing 50 lives weekly, not to speak of those who were afflicted with life-long consequences in the shape of affections of the ears or kidneys. He would suggest that the matter be referred to the Council, with power to add to their number and instructions to act.

Upon motion of Dr. MILLS, it was unanimously resolved that the Council should associate themselves with Dr. Lachapelle, and should take whatever action appeared necessary.

Progress of Science.

LIGATION OF THE BASE OF THE BROAD LIGAMENTS PER VAGINAM, INCLUDING THE UTERINE ARTERIES FOR FIBROIDS OF THE UTERUS.

Dr. Augustin H. Goelet, of New York, in a contribution to the *American Medico Surgical Bulletin*, June 1st, reports favorably upon this operation in his hands for the control of uterine hæmorrhage and reduction of fibroid growths. He believes it should be done in lieu of hysterectomy when that operation would involve too great a risk, and as a preliminary step with a view of avoiding the necessity of the more hazardous operation. When extensive attachments have not been formed which afford additional nutrition, considerable reduction has resulted even in growths of large size. When the operation has been done for smaller growths the result has been more satisfactory. In some instances complete atrophy has been reported. This result, as well as arrest of the uterine hæmorrhage, is accounted for by the diminished nutrition furnished the uterus and these growths by interference with the blood supply and nerve supply which are included by ligation of the base of the broad ligaments. It is estimated that the uterine arteries furnish the uterus with two-thirds of its blood supply, and it is reasonable to expect that a profound effect will be produced upon that organ and growths arising from the walls if this is suddenly cut off.

The sole danger in the operation is the risk of including the ureters in the ligatures, as they pass down behind the uterine arteries only half an inch from the cervix, and are consequently in the field of operation. Dr. Goelet suggests,

as a preliminary step, to eliminate this risk, that bougies be passed into the ureters through the bladder. He admits, however, that a careful operator accustomed to working in this region may easily avoid the ureters.

The technique of the operation as described by Dr. Goelet shows an important departure from the usual method followed. Instead of ligating each artery in only one place on a level with the internal os, he applies a second and often a third ligature to the artery on each side as it ascends along the side of the uterus, the result of which is to cut off the compensating blood supply from ovarian artery to the lower part of the uterus.

Dr. Goelet gives all the credit of priority to Dr. Martin of Chicago, who has recently suggested and popularized the operation and perfected its technique, but states that he first ligated the uterine artery *per vaginam* on one side in January, 1889, in the case of a large fibroid the size of a seven months' pregnancy, with a view of diminishing the size of the growth by reducing the blood supply. The artery on the other side was not ligated because the position of the tumor made it inaccessible. Six months later the tumor was one-third smaller, and was giving no inconvenience.

He quoted his last case operated upon, to show how promptly uterine hæmorrhage may be controlled by this operation.

THE PARASITE OF CANCER.

On several occasions we have called attention to the investigations of Professor Adamkiewicz, of Vienna, since they promised to throw more light on the obscure etiology of carcinoma. In his latest article, which is published in the *Wiener Medizinische Presse*, the author formulates the results of these investigations as follows: "The true and characteristic element of cancer is a coccidium. From it originate spores (larvæ), which in turn develop into coccidia and amoebæ. Metastases are produced by migration of the larvæ, coccidia and amoebæ to different parts of the body. The development of larvæ takes place within the epithelial and endothelial cells of the diseased area. The parasite, when developed, lives outside the cell and forms an integral portion of the cancerous tumor. It destroys the epithelia, but never causes them to proliferate, and it seems probable, therefore, that what appear to be epithelial proliferations are frequently colonies of coccidia and amoebæ." Adamkiewicz calls this parasite the coccidium sarcolytus, and considers it identical with the epithelial cell of cancer. Korotneff, who has followed a similar line of investigation, reaches essentially the same results. He goes even further and gives a minute description of the cancer parasite and its mode of develop-

ment. Viewed with his eyes, this formidable animal when fully formed is a gregarine, having a bulbous anterior end and terminating posteriorly in a sort of tail. It is rarely, however, that the larvæ develop into gregarines; usually they grow into a coccidium or amoeba.

Whatever practical value be attached to these observations, they are, at any rate, strikingly original and deserving of careful consideration. Looked at from another point of view, they illustrate exceedingly well the contradictory character of the evidence afforded by microscopical research in some diseases. As seen by one observer, the tissues of a cancerous neoplasm consist of proliferating epithelial cells, while to another, equally careful, these same cells assume the appearances of a destructive parasite. The nuclei of the cell in the one case become the larvæ of the coccidium in the other. How can these differences be explained? There certainly seems an element of optical delusion involved in the question.

TRAUMATIC PERIOSTITIS.

By B. M. RICKETTS, M.D., Cincinnati, O.

Having had a number of such cases under my observation, two or three of which have gone from bad to worse, I am led, on this occasion, to speak of the good results following prompt surgical interference. That the periosteum may be diseased independently goes without saying. That it is susceptible to injuries of any kind there seems to be no doubt. That the serous effusion as the result of inflammatory changes becomes purulent under certain conditions has been well established, even where there is no apparent connection externally. There is no class of injuries that present so great a number of opportunities for the study of this disease as railway injuries. The prompt interference in cases where there is a serous effusion not only shortens the course of the disease, but greatly lessens the liability of the bony structures becoming involved.

This interference consists in making one or more incisions through the entire thickness of the periosteum, depending upon the amount of tissue involved. The evacuation of fluid of any character, under these circumstances, is always attended with most gratifying results, and I feel sure that the premises and investigations of Mr. Ollier have been the greatest means of arriving at these conclusions. While the periosteum in its normal condition is tough and inelastic, it is not so in as great a degree when thickened by inflammatory processes. The effects of inflammation upon this membrane is to cause it to become several times its normal thickness, the changes being the same

as in any inflammatory process. The pain is sometimes excruciating and persistent, and if the pressure upon the bone is not relieved soon after the effusion takes place, there is great danger of bony necrosis, which, when once established, may have no limit. Especially is this so about the epiphyses and the apophyseal lines. The further the injury is upon the epiphysis from the apophyseal line, the greater the danger to bony destruction; in other words, the softer the bony tissue involved, the less resistance it has to abnormal changes. Unfortunately, the softest bony tissue is found near the articular surfaces; hence the great danger to joints when these tissues are the least involved.

It has been customary to postpone surgical interference where the periosteum is involved near articular surfaces. I am thoroughly convinced that this procrastination has been the occasion of many joints being needlessly involved. The nearer the articular surfaces the more prompt the surgeon should be in removing fluid of any character, either supra or sub-periosteal. As stated before, the periosteum is tough and inelastic, and in nature's great effort to absorb any kind of fluid, especially about the epiphyses, there is great danger of their destruction. It is better, in these days of antiseptic surgery, to take our chances for a good result in the evacuation of these fluids under these circumstances, than to leave them in the hands of mother Nature. True, she does her work at times rather perfectly, but there are times when she must be assisted, and I look upon this condition as demanding prompt attention.

It has been my fortune to have several of these cases under observation, a few of which I have been enabled to treat from this standpoint, and I feel assured that the good result following in each of these cases has been due to the early evacuation of the effusions. Who would hesitate to freely incise a felon, which is nothing more or less than an acute periostitis due to trauma? If it is good in one, it must surely be good in the other. This rule holds good, not only in trauma, but in periostitis from any cause, unless it be syphilitic. There are certainly conditions of this form of periostitis in which much good would be obtained from free incisions, viz.: In cases of persistent pain which have defied the anti-syphilitic remedies. In this connection I will say that I am led to believe that tuberculosis is the cause of 80 per cent. of all the cases of periostitis.

Case 1. Female, aged 40, weighing about 240 pounds, fell in her yard, striking the inner and middle portion of the left lower leg on a box. She complained of acute pain in this locality for two days before I was consulted. There was considerable tenderness and swelling; temperature 99°. It was necessary to give her

morphia to relieve the pain; elevation and hot applications were of no benefit. This state of affairs continued for seven days, when I prevailed upon the patient to allow me to make a free incision. This would have been done on the fourth day had it not been for her husband's interference. Under the influence of chloroform I made an incision two inches in length directly down upon the tibia, not, however, until after I had explored with the needle showing that fluid was present. The moment the periosteum was incised, about two ounces of serous fluid escaped. I introduced my finger, and found that the bone was denuded for an area of about one inch. This was to me a most remarkable condition. The periosteum was very much thickened, and gave evidence of degeneration. I believe that had I delayed the operation for a week or so, there would have been suppuration resulting in the destruction of both the periosteum and bony structure. Her recovery was uninterrupted, and she was upon her feet with a cane at the end of the third week.

Case 2. A man, aged 44, weighing about 160 pounds, in stepping from a street car struck the shin bone upon the platform. He did not pay much attention to it for a few hours, but as the pain became gradually worse I was consulted for its relief. It was also necessary in this case to administer morphia to accomplish this purpose.

On the following day he found it necessary to take to his bed, where he remained for two days, at the end of which time he felt that necessity compelled him to proceed on his journey. The swelling and tenderness increased until the entire tibia seemed to be involved. He went from under my care, but consulted me one year after, when I found that the tibia was very much enlarged, that the entire leg had been gradually involved, that he had done no work whatever, and that the suffering at times had been very severe. I report this case as one where free incisions were not made, and to show the result of not making them. This bone will be 20 per cent. larger than its associate, and will always be more or less troublesome for years to come. Had the patient remained under my care, and submitted to the operation that I advised, I firmly believe that the present state of affairs would not exist.

Case 3. Male, aged 33, of rather good habits, occupation clerical, struck the right arm upon his desk, causing but little inconvenience until after the first twenty-four hours. The pain was rather severe and dull in its character. There was considerable tenderness and but little swelling, showing, to my mind, that the swelling was not in proportion to the amount of pain, indicating that the fluid was beneath the inelastic periosteum. It was necessary to put his arm in a sling, as he

would not consent to have an incision made down upon the bone. However, as the pain became more severe, he gladly consented on the fourth day to allow me this privilege.

Under the influence of chloroform I made an incision, about a quarter of an inch in length, down through the periosteum, which allowed about half an ounce of bloody serous fluid to escape. The acute pain did not again occur, although it was necessary to place the arm in plaster-of-Paris with an opening in it over the incision. A small probe was occasionally introduced through the incision down upon the bone, that the fluid might have easy exit. This was not done after the first forty-eight hours. The swelling of the arm, which had by this time somewhat increased, gradually diminished. I feel certain that had this incision not been made, the epiphysis of the ulna would have become involved, thus seriously affecting the elbow joint. The arm was kept in plaster for two weeks, when it was removed, and motion in the joint was found perfect.

Case 4. Young man, 22 years old, a brakeman, allowed his knee to be caught between bumpers. It is a question as to the amount of space between the bumpers. The draw-bar of the tender of a locomotive is always stronger than that of any other car, so that it does not have any spring, otherwise I believe the knee would have been crushed and amputation been necessary: However, the epiphyses of the tibia and femur being injured made it necessary to give the parts complete rest. Here is a case where the pressure was so uniform that there was no particular part of the periosteum or bone involved. The force was not sufficient to seriously affect either, so that at the end of three days he was able to get about on crutches, which were used for two or three weeks. The tenderness about the external condyle of the tibia and femur was rather acute, and there seemed to be some question as to the extent of involvement, that is, whether or not there was the presence of periosteal effusion. This, I am certain, did not exist sub-periosteal. The fact that the course was short and the pain slight led me to believe that the effusion was so limited that operative interference was not necessary. This is a case where it was not necessary to resort to any surgical interference other than complete rest and the constant application of heat. *The International Journal of Surgery.*

OPERATIVE TREATMENT FOR STONE IN THE BLADDER.

Briggs (*International Medical Magazine*, February, 1894) contributes a most interesting article on this subject, giving his personal experience with two hundred and eighty-four

cases of stone, and discussing the various methods of operation.

He performed litholtrity on five patients, all of whom recovered, but were very impatient over the amount of time required for treatment. He then tried litholapaxy on ten adult cases; in two, death resulted from renal complications. He selects this method of operation under four conditions: 1. Adult patients; 2. Capacious and tolerant urethra; 3. Small or medium-sized stone, or, if large, of soft consistence; 4. Bladder capacious and free from severe and persistent inflammation.

He prefers lithotomy in children, and has performed the operation on seventy-six children under sixteen years of age, and all recovered but one.

The supra-pubic operation he performed on seven cases for the removal of very large, hard calculi; resulting in recovery in five.

Forty-four operations by the bilateral method resulted in ten deaths. He then chose a modification of the median operation suggested by Civiale in 1829, and called by him the medio-bilateral method. He has performed that operation one hundred and seventy-one times, with a result of one hundred and sixty-seven recoveries and four deaths, three of the number not being attributable to the operation.

The advantages of the operation given are briefly: 1. It opens up the shortest and most direct route to the bladder; 2. It divides parts of the least importance; 3. It is almost a bloodless operation; 4. It affords a sufficiently capacious passage for the removal of any calculus; 5. It reduces the death rate to the minimum.

In conclusion, Briggs makes the following statements: "1. No method of operation is adapted to all cases; 2. Thorough preparatory treatment is essential to success; 3. Litholapaxy is the operation when the patient is an adult with a capacious and tolerant urethra, and with a bladder free from severe chronic cystitis, and with a small or medium-sized stone, or, if large, of soft consistence; 4. The supra-pubic is the best operation for large and hard calculi; 5. The medio-bilateral should be chosen in all other conditions, because it is the easiest, safest and best."

PERSONAL.

Dr. Emory Lanphear, for many years editor of *Kansas City Medical Index*, has resigned the chair of Operative Surgery and Clinical Surgery in the Kansas City Medical College, and has removed to St. Louis. He makes the change in order to become Professor of Surgery in the St. Louis College of Physicians and Surgeons, one of the oldest and strongest medical schools of the West.

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MONTREAL, JUNE, 1894.

ANTIPYRIN AND ANTIFEBRIN.

According to the report of the United States Consul, the above drug is manufactured exclusively under the Knorr patents by the color works at Hoecheb in Germany. It is estimated that seventy-five tons of this preparation are sold annually, representing, according to an authority, a value of \$1,452,000, the greater part of which is clear profit. Apart from the ready solubility of antipyrin, it does not appear to have any advantages over antifebrin or acetanilide, which latter drug, not being patented, is sold for almost one-sixteenth the price of the patented antipyrin. The price of antipyrin is of course kept up by the law of supply and demand, and if there was less demand for it, the price would soon come down. For those who attend the poor the price of antipyrin at \$16.00 a pound is almost prohibitive when compared with antifebrin at \$1.00. Many regard antifebrin as safer than antipyrin; at any rate, the addition of a small quantity of alcohol to each dose not only renders antifebrin soluble in hot water, but also counteracts its depressing action on the heart. It is perhaps the best analgesic in dysmenorrhoea due to spasm of the tubes or uterus, while for relieving the pangs of the first stage of labor we have found nothing to surpass it. In no case, however, is it safe to exceed three or four ten-grain powders a day. Its solubility and activity are greatly increased by its thorough trituration

with equal parts of sugar of milk; but its compression into tablets seems to diminish the rapidity of its action. When taken in a fine powder, dry or with cold water, the action of antifebrin varies with the condition of the stomach; we have found it to act most quickly when taken after a meal, or when the stomach contains a certain amount of acid.

THE STAMPING OUT OF CHOLERA.

It has been known for the last ten years at least that Mecca was the great manufacturing centre of cholera germs for the whole world, and yet so fanatical were the Mahomedans in their faith in the miraculous powers of the holy well at that place, that the Turkish government did not venture to enforce the most ordinary precautions suggested by sanitary science. The holy well was found to be nothing better than a cess-pool, and that to drink its polluted waters was almost certain death, and yet the thousands of pilgrims continued to drink it and die. The British government has been blamed in some quarters for not using her great influence in order to have the holy well closed up, but it must be remembered that her rule in the East has only been possible through her proverbial justice and toleration of the various religious beliefs of her subjects, and on this particular subject of the holy well there were millions of people who were fanatical believers. At last, however, the Turkish government has agreed to purify the holy well at Mecca, and the British government has adopted quarantine regulations on the Red Sea port, so that very soon we may expect to hear that cholera has disappeared from the face of the earth. Now that the fact is becoming more generally known that the only way to contract cholera is to drink it, more care will be taken to secure a pure water supply. It was a pitiful example of official ignorance a year or two ago to see half a dozen steamers in New York harbor, each with a thousand or more people on board, and compelled to remain there drinking the water which had been taken on board at Hamburg from a river which was known to be polluted with cholera. And yet the authorities wondered that new cases made their appearance on board. The simple emptying and disinfection of the tanks and the refilling of them with clear water would have saved

many lives and millions of dollars. If the axiom were burned into the brain of all sanitary officials, that "one cannot get cholera unless he drinks it," a pure water supply would be the quickest means of stamping out the disease.

THE CAUSE OF JAUNDICE.

In Quain's Dictionary of Medicine there is an article by Dr. Murchison on "Jaundice independent of Mechanical Obstruction of the Bile Ducts," which, according to the editor of the *American Association Journal* is already obsolete. Recent experiments have shown conclusively that apart from mechanical obstruction of the bile ducts, bile never appears in the blood; and that when the bile cannot flow through its normal channels into the intestine, it enters the lymphatics of the liver, and is conveyed by the lymph channels into the thoracic duct and thence into the blood. Experiments have been made, which show that when the bile ducts are ligatured, bile promptly appears in the urine; but when the bile-making liver is completely removed, no bile is made and none is to be found in the blood or excretions. The question is an important one because of the great advances which have been made in the surgery of the gall bladder and bile duct, and cases of jaundice, which would, not long ago have rapidly proved fatal, are being cured every day now by prompt resort to surgical measures for the removal of the obstruction.

SHALL THE CLERGY PAY?

This is a question which is being pretty generally discussed in the Medical journals, and has therefore excited a good deal of interest. At one time when clergymen took a vow of poverty, and charged nothing for their ministrations but gave their sacred message freely, without money and without price, it was becoming that in return they should have all their wants supplied in the same generous way. But now all this has changed; the minister of the gospel makes his business contract with a congregation for such remuneration as the law of supply and demand dictates; and the doctor who attends his church, or who is married by him, or is buried by him, or has his children christened by him, receives his bill for it, or if

he does not receive a bill is expected to send the money all the same. In fact, no one does anything for the doctor for nothing, and indeed he is generally charged the outside figure for every service rendered to him, and no one does anything for nothing for him except another doctor, and even then the quality of the service is not always first class. Many clergymen receive very large nett salaries, and are quite able, and it must be said quite willing, to pay for services rendered them and their family. The doctor has perhaps enough to tax his benevolence to the utmost in attending the widow and the orphan and the hundreds of others who have been left destitute, without attending for nothing those who are comparatively well off.

NOTES FROM OUR EXCHANGES.

We see by the *Medical Press and Circular*, 31st Jan., 1894, that a well-known general practitioner in Dublin is furnishing the financial backing to an establishment of lady barbers which has been recently opened in that city. At one time, of course, all physicians were barbers, and we suppose that this is a case of "reversion."

The family doctor sometimes feels it his duty to advise his patients to leave a house on account of its unsanitary condition. For doing this, an action for libel and damages was recently taken against a Dr. Feunlhet, of Herne Bay, England, by the owner of the house. A verdict was given with costs in the Doctor's favor.

OPHTHALMIA.

In a recent article on an epidemic of granular lids in some of the English schools, Mr. Jonathan Hutchison concludes by saying: "I do not wish to be considered as an alarmist, but as a cause of blindness on the continent the ophthalmia of granular lids stands second only to the ophthalmia of infants. Our duty is, first, to be well informed ourselves and then to inform the public. The profession generally, and not only ophthalmologists, must learn to appreciate the importance of the problem before us." We are happy to say, that owing to the greater purity of the air of our cities, and also to the better feeding and less crowding of our school children, this disease is almost unknown in Canada. Ophthalmia neonatorum is occasionally seen, but this will soon be stamped out when the custom of giving a bichloride vaginal douche before delivery, as practised at the Preston Retreat, shall have become more general.

It appears that physicians in England receive a fee from the Health Department for every notification they send of cases of contagious disease. If physicians here who are asked to perform this very disagreeable task without any remuneration were also paid, no doubt the number of cases reported would be very much greater. As long as there is no contagious diseases hospital to take the patients to, we do not think that notification is of much benefit to the community.

It is the fashion at present to abuse the Hospitals and Dispensaries for allowing themselves to be abused by those who are able to pay. At a recent discussion on this subject before the Practitioners Society of New York (*N. Y. Medical Record*, 3rd Feb., 1894), the general opinion was expressed that it was quite exceptional for these charities to be abused. The Medical schools required clinical material, and in return for being thus made use of, those who went to the clinic received advice and medicine. This was very little for either part to thank the other for: In our opinion, they generally have to put up with a great deal of discomfort and loss of time in order to obtain attendance which was not always of very much value. Then again it depends very much upon the fees asked by the young practitioner, whether people in very moderate circumstances were poor enough to have to go to the dispensaries or not. A great many could afford a half a dollar twice a week who certainly cannot afford two dollars a visit, and for two visits a day. Those who grumble most at the dispensaries are the young doctors, and yet they need have nothing to fear from the former, provided they would place their fees within the reach of the mass of the people.

We have more than once pointed out some of the advantages of the practitioner's returning to the good old custom of dispensing his own medicine, the principal ones being that by so doing he would see his patient at least every week, instead of never seeing him again; second, if he cured the patient, the latter would recommend his friends to consult the doctor instead of obtaining a counter-prescription from the druggist; third, he would avoid the danger of having his patient fall into the hands of the patent medicine man, whose wares fill up every available corner in the druggist's shop; and fourth, he would be much surer that his patient would get the medicine he wished him to have, instead of something else which the young drug clerk might consider equally as good or even better. But there appears from the reports of a recent trial in the courts to be still another reason why the doctor should beware of sending his patient to a druggist shop. A few months ago a

physician with a large practice in the west end of Montreal sent a man to a druggist for some medicine for his wife, whom the doctor was engaged to confine and whom he was then attending. The druggist, while filling the doctor's prescription, told the man that the doctor was not competent to confine his wife, as he had once tapped a lady who was pregnant, having mistaken pregnancy for dropsy. The husband went home and told this to his wife, and so alarmed her that she at once discharged the doctor and engaged another one. The husband was also a member of a large lodge of several hundred members, of which lodge the doctor was the medical adviser, and at the next meeting of the lodge communicated the story of the tapping to other members in open lodge, with the result that the doctor was dismissed from the lodge. The druggist also told another patient of the same doctor's that his prescription was no good and that the doctor was no better. The doctor then sued the druggist for five thousand dollars damages, with the unexpected result that he lost the suit, and had to pay the costs, although it was proved that the tapping story was a falsehood manufactured out of whole cloth. The moral of this episode is that it is a very dangerous thing to send patients who have perfect confidence in their doctor to a drug store, where their confidence may be shaken and where their patronage may be alienated away to another doctor in whom the druggist has an interest. It would have been better for the retail druggists in general if this particular one had confessed his fault and thrown himself on the clemency of the court and the physician whom he had wronged, rather than that they should glory, through their pursuit, in the victory of a great wrong which, it was not denied, there had been committed.

SUBCUTANEOUS LIGATURE FOR VARICOCELE.

Dr. E. F. TUCKER has employed the following with success: An ordinary stout needle, about two inches long, and the necessary ligatures are all the instruments required. The needle, threaded, is made to pierce the scrotum from before backward, between the vas deferens and the veins, one end of the ligature being drawn clear through. The eye-end of the needle, which is still on the thread, is re-introduced through the hole of exit, and carrying the thread with it is made to pass outside of the veins and under the dartos, and out again through the hole of entrance, this end of the ligature drawn through, the needle unthreaded, and the ligature tied. By thus using the blunt end of an ordinary needle to carry the ligature back about the veins, there is no danger of piercing a vein or of puckering the skin of the

scrotum included accidentally in the ligature. It does away with the necessity of Reverdin's needle or any of its modifications, thereby diminishing the chances of sepsis, which are necessarily attached to the use of any mechanical needle, and adding to the general simplicity of the operation. In all other particulars the operation should be performed as described by Dr. Keyes.—*Med. Record.*

INGROWING TOE-NAIL.

Dr. M. A. VEEDER has made use of a method for the past ten years which answers well in the ordinary run of cases and also in certain cases of onychia :

It consists simply in cutting a piece of ordinary felt plaster, sold for use in cases of corns or bunions, so as to be the exact size and shape of the nail about which the ulceration is located. The bit of plaster thus shaped and fitted to the nail is to be firmly attached thereto, so as to press aside the overlapping granulations from off the nail. By holding it in this position a minute or two, until it dries and adheres firmly to the nail, it becomes strongly fastened and will stand considerable rough usage, but as an additional security, a strip of isinglass plaster is wrapped three or four times around the toe, including the felt. If properly applied, the relief is immediate, and the cure is complete as soon as the thinned and jagged edge of the nail underlying the granulation has grown out to its normal size.—*Med News*, Jan. 27, 1894.

BOOK NOTICES.

THE YEAR-BOOK OF TREATMENT FOR 1894. A Comprehensive and Critical Review for Practitioners of Medicine and Surgery. In a series of twenty-four chapters, by eminent specialists. In one 12mo. volume of 497 pages. Cloth, \$1.50. Philadelphia : LEA BROTHERS & CO., 1894.

In the ten years of its publication, The Year-Book of Treatment has firmly established itself as an invaluable aid for all those who desire to keep posted on the current additions to the world's knowledge of the management of disease. The word "treatment" is construed in its broadest sense, including medicine, surgery, gynecology, obstetrics, pædiatrics, and all the specialties, in a series of twenty-four chapters, each contributed by a gentleman eminent in his assigned subject. Bacteriology and hygiene are compendiously dealt with, and the Summary of Therapeutics for the year presents this most important subject in the most available form for use. The various articles are sufficiently detailed for all practical purposes, but references to original papers are

given for the convenience of those desiring to make extended research.

The volume contains a "Selected List of New Books, New Editions and Translations," which will give the reader a knowledge of the latest and best literature under each head. The Index of Authors Quoted and Index of Subjects complete and close a volume which is authoritative, well arranged, serviceable for every medical man and universally available owing to its very moderate price.

The address of Dr. S. Weir Mitchell, to the American Medico-Psychological Association, with appended letters from prominent neurologists, will appear in the July issue of the Journal of Mental and Nervous Diseases, which should be read by all Physicians.

NEW AID SERIES OF MANUALS FOR STUDENTS AND PRACTITIONERS.

As publisher of the "*Standard Series of Question Compendis*," together with an intimate relation with leading members of the medical profession, Mr. Saunders has been enabled to study, progressively, the essential *desideratum* in practical "self-helps" for students and physicians.

This study has manifested that, while the published "Question Compendis" earn the highest appreciation of students, whom they serve in reviewing their studies preparatory to examination, there is special need of thoroughly reliable hand-books on the leading branches of Medicine and Surgery, each subject being compactly and authoritatively written, and exhaustive in detail, without the introduction of cases and foreign subject-matter which so largely expand ordinary text books.

The *Saunders Aid Series* will not merely be condensations from present literature, but will be ably written by well-known authors and practitioners, most of them being teachers in representative American colleges. This *new Series*, therefore, will form an admirable collection of advanced lectures, which will be invaluable aids to students in reading and in comprehending the contents of "recommended" works.

Each Manual, comprising about 250 pages (5 1-2 x 8 inches), will further be distinguished by the beauty of the *new* type; by the quality of the paper and printing; by the copious use of illustrations; by the attractive binding in cloth and by the extremely low price, which will uniformly be \$1.25 per volume.

PAMPHLETS RECEIVED.

LE GROS MAL DU MOYEN-AGE ET LA SYPHILIS ACTUELLE, PAR DR. F. BURET. Avec une préface du Dr. Lancereaux, Médecin de l'Hô-

tel-Dieu, Membre de l'Académie de Médecine, Professeur agrégé à la Faculté, Chevalier de la Légion d'Honneur. La syphilis à Ninive et à Babylone. Manuscrits relatifs à la pathologie sexuelle du Moyen-Age, ce qu'il fallait entendre alors par le mot lèpre. Recrudescence de la débauche dans toutes les classes de la société ; anecdotes curieuses et poésies relatives au culte de Vénus et à ses conséquences. Le "quatre-vingt-treize de la Vérole" ou épidémie de Naples (1493-96). La médication actuelle comparée aux formules empiriques de l'époque féodale. Discussion scientifique de tous les procédés mis en usage depuis 400 ans. Le traitement le plus nouveau. Moyen préservatif. Paris : SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, 4 rue Antoine-Dubois, 1894. Tous droits réservés.

For those of our readers interested in syphilis and who are familiar with the French language, this small work will prove a treat.

OPIUM AND CATHARSIS AFTER ABDOMINAL SECTION. By Eugene Boise, M.D., Grand Rapids, Mich. Reprint from the New York Journal of Gynecology and Obstetrics.

A SERIES OF WOOLS FOR THE READY DETECTION OF "COLOR BLINDNESS." By Charles A. Oliver, M.D., Philadelphia, Pa. Reprinted from American Ophthalmological Society Transactions, 1893.

OPINIONS OF THE PRESS ON A BILL to establish a Bureau of Public Health within the Department of the Interior of the United States. Prepared by the National Quarantine Committee of the New York Academy of Medicine. John J. O'Brien & Son, Steam Book and Job Printing Establishment, 397 Fourth Avenue, New York. 1894.

HYSTERECTOMY BY MORCELLEMENT AND THE VAGINAL ROUTE IN PELVIC OPERATIONS, IN PLACE OF LAPAROTOMY OR THE ABDOMINAL METHOD. By Geo. J. Engelmann, M.D., St. Louis, Professor of Diseases of Women, Missouri Medical College and Post-Graduate School of Medicine ; Fellow American Gynecological Society, Southern Surgical & Gynecological Association, British Gynecological Society, etc. Reprinted from Transactions. 1893.

THE INTERRUPTED HIGH-VOLTAGE PRIMARY, OR MIXED CURRENT. By George J. Engelmann, M.D., of St. Louis. From the Medical News, February 3, 1894.

RETINITIS ALBUMINURIA. By L. Webster Fox, M.D., Professor of Diseases of the Eye in the Medico-Chirurgical College, Philadelphia. Reprinted from *The Times and Register*.

THE RELATION OF THE PATELLAR TENDON REFLEX TO SOME OF THE OCULAR REFLEXES FOUND IN GENERAL PARALYSIS OF THE INSANE. By Charles A. Oliver, M.D., Philadelphia, Pa. Reprinted from American Ophthalmological Society Transactions, 1893.

CLINICAL HISTORY OF A CASE OF SPINDLE-CELLED SARCOMA OF THE CHOROID, WITH A STUDY OF THE MICROSCOPIC CONDITION OF THE GROWTH. By Charles A. Oliver, M.D., of Philadelphia, Pa. Reprinted from Proceedings American Ophthalmological Society, 1893.

THE ALIENIST AND NEUROLOGIST for April contains : "Insanity in Relation to Law," by C. H. Hughes, M.D., St. Louis; "On the Means of Preventing and Evading Insanity," by William W. Ireland, M.D., Edinburgh ; "Neuratrophia, Neurasthenia and Neuriatra," by C. H. Hughes, M.D., St. Louis ; "Bilateral Paralysis of the Facial Nerve," by Dr. Monjoushko, Russia ; "The Criterion of Responsibility in Insanity," by H. C. Brainerd, Los Angeles, Cal. ; "The Education of the Feeble-Minded," by H. M. Greene, Lawrence, Kansas ; "Curability of Inebriety," by John G. Reed, M.D., Cincinnati, Ohio ; Editorials, Selections, Hospital Notes, Reviews, etc. C. H. Hughes, M.D., editor, rooms 421-2-3 Commercial Building, St. Louis. Subscription : \$5.00 per annum ; single copies, \$1.50.

That an unwarranted substitution of one remedy for another is occasionally practised by some druggists, there seems to be no question. That this is morally wrong, is equally true ; but that it is frequently a crime in the eyes of the law, and as such is punishable, seems to have been lost sight of by some of those who may practise it.

But the fact that such have enjoyed immunity from prosecution is no guarantee that they can continue their speculation, even on a small scale, without detection and its consequences.

Frank A. Ruf, of the Antikamnia Chemical Company, has recently been in New York and Chicago, and states that he has made arrangements for a thorough system of investigation throughout the country, and that counsel has been employed to prosecute, both civilly and criminally, all who persist in furnishing a substitute as and for antikamnia.

The Antikamnia Company proposes doing this without vindictiveness, and, indeed, with none but the most friendly feeling to the druggist. Even where a druggist has allowed himself to be persuaded into the practice, their first step will be to confer with him in the interest of mutual protection. Following that, they propose, if necessary, notifying every physician in the city of the name and address of the offender, with the recommendation to avoid him if honest goods are desired. The substitute obtained by the investigators, together with the name of the dispenser, will be shown to the physician, thus protecting the honest druggist. The more flagrant cases will be given to their attorney for proceedings in law.

Mr. Ruf said in regard to the matter : "We are simply determined that the honest druggist shall be protected ; that the physician and patient shall be protected ; and lastly, that our own interests shall not be trampled upon."—*Druggists' Circular*.