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CANADA

MEDICAL AND SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Cases of Scarlatinal Empyema occurring in the Practice of FRANCIS W. SHERRIFF, M.D., *with a Note from* Dr. R. P. HOWARD.

On the 9th April, 1842, I was called a distance of ten miles to visit two sons of Mr. James Lunan; the eldest, John, was 5 years old; the other, William, was three years. They were seized *ten weeks* before with scarlatina, both at the same time, and they recovered easily. At the end of a fortnight they were both seized with pyrexial symptoms and general anasarca. An irregular practitioner living in the neighborhood attended them constantly until I was called in.

On examination I found them both laying on the left side, having been unable, for the past eight weeks, to lay on the right; the respiration was, in both, very laborious, and they constantly made a moaning noise; their shoulders were elevated, and they kept their right arms extended, generally grasping firmly their right knee; the left side emitted no sound on percussion; John's chest was 23¾ inches in circumference, and the left side 1¾ inches larger than the right, and the left side of William was 1 inch larger than his right; their abdomens were much protruded, giving the appearance of ascites; their hearts beat on the right side; their tongues were much furred; urine was scanty, and bowels confined; the appetite good; had frequent desire to go to stool, but had little evacuations; pulse, 118—feeble.

I applied blisters to both, and gave the following prescription: Inf. Digital, ℥xvj.; Spts. Ether Nit. Potas. Acet. *aa.* ℥j. A tablespoonful every eight hours. In addition, Calomel, Pulv. Scillæ, Pulv. Rhei., *aa.* gr. j., in pill every eight hours.

At the end of one week William could lay on his right side, and the circumference of chest diminished; abdomen not so distended; general appearance of countenance improved. As will shortly be

seen that improvement was fallacious; no amendment had taken place in John, and I had resolved to perform the operation of thoracentesis immediately. I accordingly introduced a trochar between the ninth and tenth ribs, midway betwixt the ensiform cartilage and the vertebræ. A gush of pus instantly took place, and after having removed twenty two ounces I withdrew the canula, as the boy appeared very faint. I again introduced the canula in two hours, and did not remove it until it ceased running, another twenty-two ounces having been discharged—altogether forty-four ounces. The child was much relieved, and did not make use of his arm in respiration, and ceased to make the moaning sound; his pulse fell to 95—strong and regular.

On the morning of the 20th I again visited the boys, and introduced the canula, as John's breathing seemed to be more laborious. Only half an ounce came away; his appetite was very voracious, and had to be restrained; heart still beats on the right side. William seemed much the same, and I intended tapping him soon. I reached the house that morning before breakfast, and the two boys insisted on breakfasting with me. William ate some custard greedily, and drank some of the liquid part which remained. He also partook of tea. Before I had finished breakfast he asked to be put into his cradle, and then into his bed, and to be raised up. In about five minutes after finishing his breakfast I observed him suddenly become pale and his head droppod on his breast. I ran to him, lifted him in my arms and laid him on the bed. A dark flush shot rapidly over his face, and he expired.

Next day I examined the chest and removed a little over fifty ounces of matter. The lung was entirely absorbed, scarcely a vestige remaining; pleura slightly thickened; the heart laying on the right side, and the pericardium full of serous fluid; stomach was much distended, the pressure of which was probably the cause of his death, he having eaten so heartily a few minutes before.

May 6th.—I again tapped John, and this time removed fifty-two ounces. I left the canula in the chest with a plug in it; pulse, 130; countenance flushed; strength improving—can now walk; circumference of chest the same; heart still beating on the right side.

On the 8th I drew off sixteen ounces; on the 10th eight and a half; for the next four days four ounces each day—making, altogether, from the 20th April, one hundred and thirty-six ounces in twenty-four days.

13th.—Visited him; general health much improved; pulse, 100—of good strength; heart beating in mediastinum; slight respiratory

murmur in upper part of left side; tongue cleaning; bowels regular. The canula was now removed.

22nd.—Wound has apparently healed up; ribs have came together, there being scarcely any space between them.

26th.—Matter had again collected and forced itself through the old opening, and continued escaping for a month or two. The wound at last healed and he regained tolerable health. He died in 1854 from enlarged heart, with general dropsy. The left side never expanded, so that he actually lived for twelve years with one lung. He was never able to work, but assisted his mother in doing house-work.

I attended another case of scarlatinal pleurisy, with effusion of pus, in the Township of Burke, State of New York. He was a lad of about 13 years, and was under my charge for this disease two years and nine months. I tapped him once, removing a quart. Afterwards he spat it up through the lungs, a perforation having been made into a bonchial tube. He recovered entirely, and became a strong man, and afterwards removed to Illinois.

I have performed paracentesis thoracis frequently for empyema, following pleurisy, with general success; but invariably some time after tapping the matter was discharged through the lungs. A notable case of this was Mr. T. M., at present residing in Montreal. I removed from him eighty-eight ounces of pus at one run.

I have forgotten to mention that quinine was administered liberally, and some of them took cod liver oil, but no alcoholic stimulants were given.

HUNTINGDON, 7th December, 1872.

Mr. EDITOR,—The above interesting paper was sent me by my friend the writer, and with his consent I have forwarded it to you for publication. It affords evidence of the correctness of the opinion contained in my former paper upon the same subject, to the effect that the products of scarlatinal pleuritis are usually purulent. It is worthy of remark, also, that in two of the three cases general dropsy co existed—(whether it was so in the third is not stated)—a circumstance favouring another suggestion in the same communication as to the influence operating in scarlet fever in the production of empyema rather than of simple pleuritic effusion.

The sudden death by syncope, of the younger child, is a striking proof of the danger of copious effusion into the pleura, and supplies a strong argument, if any is yet needed, for the practice of tapping the chest when copious pleuritic effusion does not

become absorbed after the employment of appropriate remedies for a reasonable period. May I not add that Dr. Sherriff's cases, together with my own, justify the advice I have given elsewhere, "That in *scarlatinal* pleurisy, where the signs of effusion are marked and do not promptly disappear, it is well to make an exploratory puncture of the chest at a *much earlier* period than is even now customary in *ordinary* pleurisy following *exposure*." *

You will, no doubt, join me in the hope that Dr. Sherriff will embody, in another communication, his further experience of thoracentesis in empyema. Yours,

R. P. HOWARD.

BEAVER HALL HILL, December, 20th, 1872.

Removal of a Large Calculus Partly Impacted in the Urethra of a Paraplegic Woman, by the Combined Operation of Cutting and Dilating the Passage. By JOHN MCCURDY, M.D., C.M., of Chatham, N. B.

On the 6th May, 1872, I was called to see a married woman, aged 35, whom, I found, had been the subject of paraplegia for the past six years; or, since the birth of her last child. She was suffering from all the symptoms of this form of paralysis; such as loss of power and sensation in the lower extremities, incontinence of urine and fœces, &c. The most interesting physiological feature in the case, however, in connection with the nervous legion, was the fact that she was again pregnant and within six weeks of her confinement. The reason of my visit, however, was to explain, if possible, certain anomalous symptoms referable to the bladder which had recently been noticed and had given her considerable uneasiness. There had been of late some difficulty in getting the bladder emptied, and the flow of urine would at times suddenly cease. I immediately proceeded to make a careful examination of the parts: first externally, and then internally, with an ordinary female catheter. With the latter instrument I readily discovered what appeared to be a calculus lodged in the urethral canal, near the point of entrance of the latter into the bladder. Having satisfied myself respecting the character of the foreign body, I thought it advisable to proceed to its removal without further delay. I gradually and with care dilated the urethra by means of flexible bougies, having nothing more scientific conveniently at hand. The canal being

* CANADA MEDICAL AND SURGICAL JOURNAL, December, 1872, p. 246.

at length dilated to its fullest extent I attempted, by means of the ordinary lithotomy forceps of a small size, to withdraw the stone but found I could not move it in the least degree. Nothing was left but to divide the urethra in front of the calculus, which I did with an ordinary scalpel, and then the resistance being removed I readily grasped the stone and extracted.

I found the calculus to be of the lithic acid variety, alternating with phosphatic, and of the following weight and dimensions: Its weight was 742 grains Troy (1½ ozs. 20 grs.) and measure 2 7-16th inches in lengh, and 1 5-16th by 1¼ inches in breadth.

In the operation I employed no anæsthetic, the parts themselves being already insensible. She bore the operation admirably, and never afterwards suffered from any outward symptom. The urethra rapidly regained its former dimensions, but the incontinence of urine was not, of course, much, if any, relieved, the paralysis of the bladder remaining. In due time, however, I delivered her, after a natural labour (as far as the uterus was concerned), of a fine, healthy child, and her own condition, in general, seems to be much improved by this second act and process of child-bearing.

I submit this case, not on account of the operation, for that, under the circumstances was simple enough; but I look upon it as one of very great interest to the scientific accoucher and physiologist. In the first place, her sudden paralysis, occurring immediately after parturition, and for which no satisfactory cause could be assigned, was remarkable. Then, the fact that after six years, and while paraplegic, she should carry a child to the full term and pass through a natural labour, is none the less interesting and remarkable. When I performed extraction of the calculus *per urethram* I did so fully alive to the fact that little or no harm to the urethra or its contents was likely to accrue while the parts were in their then anæsthetic condition. It is easy to understand why concretions of the urinary salts should form in the bladder where its natural functions are impaired, and where sedimentary deposits may be retained for a considerable length of time.

A Visit to the London Hospitals. By WILLIAM H. MONDELET, M.D., C.M., Fellow of the Obstetrical Society of London, late House Surgeon Children's Hospital, London, England, &c.

London offers innumerable advantages to medical men who make it a point of devoting their attention to matters concerning their profession. On arriving in that great city, a world of itself, the stranger is completely lost, finding himself among people who, as a rule, are only interested in what concerns themselves, and to whom strangers present little or no novelty: he wanders about

the city until, perhaps, he happens to encounter a friend who, probably, has been initiated into the mysteries of London. He is fortunate if such be his luck, as thereby he is likely to become acquainted with the different objects of interest concerning his profession or otherwise.

The hospitals in London, which are very numerous, are conducted with such discipline and good management as to draw forth the praise and admiration of all strangers. Each hospital has its staff of consulting physicians and surgeons, besides those attached who attend daily at different hours. There are also house physicians and surgeons, and a resident "accoucheur," the latter having the entire charge of the midwifery department. This branch of the profession is represented at many hospitals in London. Women who cannot pay a medical man apply, during their pregnant state, to a hospital; a ticket is issued to them, and when their labor comes on this ticket is sent to the hospital; the resident accoucheur, who has under him two obstetric clerks, immediately sends one to the owner of the ticket, as he generally reserves himself for labors of an intricate nature, or those requiring the use of instruments, having himself served a clerkship under some former Resident Accoucheur. This appointment, as well as that of House Physician and Surgeon, are valid for three or six months, according to the regulations of the hospital. Each hospital has a department for Skin diseases, as well as for Vaccination, and Dental operations. Being divided into a Medical and Surgical Department, the officers never come in contact with one another except when required in consultation. Besides the larger hospitals there are others where only special diseases are dealt with. Each hospital has a day or days set apart for operations, a list of which is to be seen in the *Lancet* or *Medical Times*.

Guy's Hospital, which is situated near London Bridge, is one of the best in London, is renowned for its surgery; in fact, all the branches of the profession are well represented here. Mr. Edward Cock, Mr. Durham, Mr. Bryant, Dr. Phillips, its secretary, and other men of note, are the medical officers of this hospital. I had the pleasure of witnessing several surgical operations here, and one in particular, viz., Excision of the Kidney, performed by Mr. Durham, which struck me as being one of rather rare occurrence. Chloroform was the anæsthetic agent made use of in this hospital. The dissecting apartments are exceedingly well laid out, and very comfortable for the students. There is seldom, if ever, scarcity of material. The museum of Guy's Hospital, with that of the Royal College of Surgeons, are supposed to be the best in London.

London Hospital, situated in the east end of London, in close proximity with the docks, is considered to be the centre of heavy Surgery. Such men as Jonathan Hutchinson, of syphilitic celebrity, Cooper and Maunder, form the attending surgical staff.

St. Thomas' Hospital, situated in Stangate, opposite the Houses of Parliament, consists of seven distinct buildings, all connected, one with the other; although distinct so far that in case of fire communication can be immediately cut off, one from the other. The operating room, dissecting room, and eye departments, are very fine, the latter under the direction of Dr. Liebreich, the celebrated oculist, are especially so. Among the officers connected with this hospital we find Dr. Barnes, Dr. Briston, Mr. Legros Clarke, Mr. Sydney Jones, Mr. Croft, and others.

King's College Hospital, situated in Lincoln Inn Fields, is supposed to be the best conducted hospital in London. It is nursed by Protestant Sisters of Charity, who generally are ladies who devote themselves entirely to their calling. Sir William Ferguson, John Wood, Henry Smith, the great advocate for excisions of the joints, Dr. Johnson, and Dr. Playfair, one of the Secretaries of the Obstetrical Society, are to be seen here. Chloroform is entirely used with Weiss' patent.

University College Hospital is another of those institutions, nursed by Protestant sisters. Its Medical Society and library are well known in London. It can boast of such men as Erichsen, Sir Henry Thompson, Christopher Heath, Berkeley Hill, Dr. Wilson Fox, and others. Chloroform vapour is used here in all operations, an apparatus invented by a surgeon connected with St. George's Hospital, being employed.

Charing Cross Hospital is a small but convenient hospital, not nursed by sisters, but by attendants similar to those at the Montreal General Hospital. Its position being central it is easy of access, and offers many advantages to medical men.

St. George's Hospital, the aristocratic hospital of London, is situated at Hyde Park corner, and is principally patronised by men reading for the army. It is one of the best in London, and having a great number of wards, a great deal is to be seen.

Consumptive Hospital, is a building beautifully situated on the Brompton Road, and is really worth visiting. One advantage offers itself to those interested in chest diseases, viz., clinical assistants are permitted to reside in the hospital. Besides the numerous opportunities of watching phthisis in its different stages, considerable expense is saved, which, with many, is a consideration, especially in a place like London.

Western Hospital, Hammersmith, is a rising hospital, and well

worth visiting. Dr. Wiltshire, known to some Canadians for his affable manner and ready willingness to advance the interests of strangers, is connected with this institution being one of its physicians.

St Bartholemew's Hospital, situated in Smithsfield, is one of the largest in London. Among the celebrities is Dr. Greenhalg, whose clinique is certainly very interesting and instructive.

The Royal Ophthalmic Hospital, Moorfields, is one of the wonders of London, the out-patients waiting-room resembling a church with a packed congregation, so numerous are the applicants. The patients are seen every day in the week, there being a large medical staff of officers. Each day is represented by three out of their number, who also operate on their respective days. Among the celebrities are noticed Mr. Bowman, Mr. Critchett, Mr. Soelberg Wells, Mr. George Lawson, whose manual on diseases and injuries of the eye is in every studio. Jonathan Hutchinson, Mr. Cooper, and others are connected with this establishment. Mr. Critchett performs all his operations under the influence of chloroform. Mr. Bowman seems to prefer the Bichloride of Methylene. Having administered the latter and seen it also frequently given, I intend making here a few remarks about its employment. From what I have seen and learned from the House Surgeon, Mr. Morgan, it seems better fitted for operations of short duration. On its being first administered to the patient, a sense of suffocation, compared to fainting, is felt, giving rise to struggling on the part of the patient, after which he falls into the same state as characteristic of chloroform. It has this advantage, that the patient is very soon placed under its influence and is easily resuscitated, which is an important item at Moorfields, where there are so many operations. The procedure for cataract is done according to Von Graeffe's method, and seems to give general satisfaction. Strabismus is performed by the sub-conjunctival incision. A hook is introduced under the conjunctiva and the muscle laid hold of. It is next divided as close to the eyeball as possible; sometimes the cut edges are brought together by a silk suture; seldom a bandage is applied over the eyes.

Iridodesis, first proposed by Mr. Critchett, is frequently substituted for the ordinary iridectomy, this operation consists in ligating the portion of the iris drawn out of the wound, and allowing it to slough off. Being curious to know the advantages of such an operation, I questioned Mr. Critchett whereupon he informed me that instead, as in ordinary iridectomy, of having an immoveable pupil, through adhesions taking place, and also a shapeless one, an oval and moveable pupil was obtained. Extraction of the

Eyeball, in suitable cases, is done in the following manner: The patient being placed under the full influence of an anæsthetic agent, an incision is made around the cornea with a pair of scissors; the conjunctiva is freely divided from the texture of the eye; then, with an ordinary strabismus hook, each rectus muscle is divided as close as possible to the eyeball; the eye is then slightly drawn forward, and, with a curved pair of scissors, the optic nerve divided. When the eye is readily lifted from its bed, leaving only the oblique muscle to be severed, Mr. Bowman then applies a suture to the folds of the conjunctiva. The other surgeons do not adopt this plan. In cases where the eye has been extracted for carcinomatous disease the interior of the orbit is touched with a solution of the Pernitrate of Iron, with a view of destroying remains of cancer cells; the orbit is then well plugged with sponges, and a compress and bandage applied. Granular lids are treated with a solution of Nitrate of Silver, and washed separate afterwards with a solution of salt and water.

Hospital for Women, Soho Square, being one of the special hospitals, it is restricted to diseases characteristic of the female sex, save those of a venereal character, of which I will speak further on. There are several wards in the interior of the hospital for diseases of an acute or chronic nature, under treatment of the medical staff. There are a full compliment of nurses, under the supervision of a matron and sub-matron. The operating theatre is well adapted for strangers visiting on operating days. The out-patients department calls here for a few remarks. I might venture to say with safety, that an average number of 200 patients per day are seen and prescribed for. One part of the room is entirely devoted to examination by the speculum or otherwise. This hospital, above all others in London, offers a large field for this this kind of practice. I noticed, in ulcerations of the os uteri, the following applications made use of, viz., the solid stick of Nitrate of Silver, Nitric Acid, and the Pernitrate of Mercury; after the latter a solution of Carbonate of Soda is generally used to decompose the solution of Mercury and protect from injuring on the healthy parts. Tannic Acid is generally used in cases where the woman is pregnant. Among the medical officers connected with this hospital the following are the most prominent: Dr. Protheroe Smith, Dr. Alfred Meadows, author of the manual of midwifery, Dr. Christopher Heath, Dr. Edis, and Dr. Squarey. Dr. Meadows, who seems to command the operations for ovariotomy, uses the ligature, allowing the pedicle to return within the abdomen; the abdomen is then stitched up and bandaged, after which the patient is removed to her ward, where every care

and attention is bestowed upon her. Chloroform is generally used. No apparatus is used save a piece of lint folded into a square.

Samaritan Hospital for Women and Children in a good many respects resembles the one in Soho Square. Spencer Wells, of ovariotomy repute, operates here. Medical men from all parts of the world congregate here. In this hospital the operation is performed on the woman in the same ward into which she was conducted on her first admission to the hospital. Having been placed under the influence of methylene, which is generally used, the ordinary incision is made, and after having reached the cyst, a trocar and canula are plunged into the tumor, and its contents allowed to gradually flow out. The upper end of the canula is provided with a grasping apparatus, which takes hold of the walls of the cyst, and being water-tight, the tumor can be dragged out of the abdomen with comparatively little risk of any fluid escaping into the abdomen. A clamp is next placed round the pedicle, as also several ligatures; then an incision separates the tumor from the woman. The cut edges of the abdomen and peritoneum are then brought together by sutures, and the clamp allowed to remain outside the abdomen. After a few days the clamp falls off, through sloughing of the end of the pedicle, and the remainder returns within the abdomen. Muriate Tincture of Iron is freely applied to the cut edges of the pedicle; cotton wool, oil silk, and, finally, bandages, complete the operation. The patient is then removed to bed, and for the next forty-eight hours is simply treated with ice, ice-water, and opium. After that time has elapsed stimulants, such as champagne, are cautiously administered. It is universally acknowledged that Spencer Wells has the lowest average mortality, and when one comes to consider what can be the reason, it would seem obvious that the fact of not subjecting the patient to the influence of a change of temperature, by moving her from one room to another, as also the strictly antiphlogistic treatment she is subjected to for the first forty-eight hours, may have something to do with it. Again, I am told that Mr. Spencer Wells generally operates on patients before their health begins to break down. One case I witnessed where Mr. Wells operated on a patient for double ovariotomy, she recovered and left the hospital cured. Dr. Williams, connected with this hospital, I have seen inject a cancerous mass attached to the os uteri, with a solution of Bromine, a Ferguson's speculum having been introduced. An instrument invented by Dr. Williams, a good deal on the same principle as the hypodermic syringe, only much longer, is filled with the solution, and having a needle attached to it like

the hypodermic apparatus, it is thrust into the tumor and evacuated of its contents. Good results have been obtained by this procedure, and the cancerous tumour is said to have separated from its attachments.

Anoter Hospital for Women, of rather a novel nature, under the immediate management of women, is in vogue in London, at the head of which stands Mrs. Garrett Anderson, M.D., Paris, of undoubted education and capacity. She has a colleague in the person of Miss Morgan, M.D., Paris. I had occasion to visit this hospital with my friend Dr. Yunger, by invitation from Mrs. Dr. Anderson. We were shown around the different wards, which were the essence of neatness, and well stocked with patients. This hospital is in great favor with Londoners, and is making rapid strides towards success. The house-surgeon, apothecary, in fact all connected with the hospital are women. Several lady doctors from different parts of the world make this hospital their headquarters while in London.

Children's Hospital, Chelsea, adjoining the Royal Military Hospital at Chelsea, is situated in the southwest part of London, on the banks of the Thames. It is entirely devoted to diseases of children. It has its medical and surgical wards, as also a detached building for contagious diseases. Hip-joint disease, which is very prevalent here, is dealt with by extension and constitutional treatment. Great stress is laid upon the administration of Cod Liver Oil and the Syrup of the Iodide of Iron, which form the method of treatment of most children's diseases. I had occasion, as house-surgeon, in cases of croup, to perform tracheotomy. In one case the operation was performed early and the patient saved. Ammonia with Seneka is much used in chest affections, with the use of stimulants. Dr. Ellis, the senior physician, has written a work on diseases of children. Mr. Cowell, Dr. Evans, Dr. Cavafy, Mr. Churchill, and others, are the medical officers of this charity.

The Children's Hospital on Great Ormond street is carried on upon the same principle as the Victoria, situated in Chelsea. At both of these hospitals the aspirator is frequently used with success.

St. Mark's Hospital for Fistula, City Road, Islington, is noted in London for the number of operations witnessed there by men from all parts of Europe. The fistulæ are laid quite bare and afterwards plugged with cotton wool and a bandage applied. The patient is then put to bed, and in the course of a fortnight or three weeks he can rise and walk about. Hemorrhoids are treated here with a ligature, having been previously incised at the base, and after the application of the ligature these ends are nipped off.

Mr. Allingham, Mr. James Lane, and Mr. Gowland, are the surgeons of this hospital. They are exceedingly courteous and communicative to strangers.

Lower down on the same road is a hospital for diseases of the chest, of which Dr. Dobell is the senior physician. Good practice may be obtained here with the sthethoscope.

St. Peter's Hospital for stone and diseases of the bladder, situated in the west centre of London. Walter Coulson, and Buxton Shillitoe, are the principal men. Lock Hospital, Dean street, Soho, for venereal diseases. Both men and women are treated at this Hospital for this complaint on different days of the week. Berkely Hill, James Lane, Mr. Gascoyen, and Buxton Shillitœ, are the principal men connected with this hospital.

There are many other hospitals not of much importance. I might mention one in Golden Square, for diseases of the throat, under the direction of Morell Mackenzie. This gentleman is one of the authorities in London on diseases of the throat.

Hospital Reports.

Medical and Surgical Cases Occurring in the Practice of the Montreal General Hospital.

Surgical Cases Treated in the Montreal General Hospital during the Quarter ending 31st December, 1872. Under the care of G. E. Fenwick, M.D. Reported by T. G. Roddick, M.D., House-Surgeon.

Case I.—*Staphylorrhaphy.*

Demithilde Lavoie, aged 25, a French Canadian seamstress, applied for admission on the 7th October, with the hope of having an operation performed for the cure of very extensive congenital fissure, involving chiefly the soft palate. Dr. Fenwick, thinking the case a suitable one for operation, ordered her admission.

With a view of making the throat less sensitive the patient was put on a course of bromide of ammonium, in ten grain doses, thrice daily; besides having the edges of the fisure handled from time to time as a preparatory measure. After a week she was pronounced "in condition," and on the 13th the operation was performed in the following manner:

A number of sewing-machine needles, with the eyes near the point, were in readiness, threaded with waxed white silk, as also

a couple of full-curved, small-sized surgical needles. The patient's head being held by an assistant standing behind the chair on which she was seated, (no chloroform being given), Dr. Fenwick proceeded first to transfix the points of the bifid uvula, each with a separate thread, by which they could be held steady, and at the same time the movements of his knife directed. He then pared the edges of the fissure throughout their entire length, removing from each side a long strip of tissue. The next step in the operation was the division of the tensor palati muscles, known to be effectually done by the absence of all resistance when the threads in the uvula were put on the stretch. Now all was ready for the introduction of the sutures. This was commenced from above, by transfixing the soft parts about three-eighths of an inch from the angle of the fissure, with one of the sewing-machine needles, catching the loop of silk as it emerged behind, and bringing it out of the mouth, withdrawing the needle at the same time. Then immediately opposite he introduced a single thread by means of the curved needle before spoken of, and which subsequently became the ligature by being drawn through the opposite side by means of the loop. Thus it is seen that the loop was used simply as a vehicle for the single thread. The ends of the ligature were then carried out at the angles of the mouth and secured to the forehead by a strip of plaster, so as to keep them separate from each other, as well as from the sutures that were to follow. After this fashion, precisely, seven threads were introduced and tied in the same order, namely, from above downwards, the knot used to bring the edges together being the *simple slip*, made doubly secure with the *surgeon's knot*. The top suture, as might have been expected, was very tense, being chiefly in the hard palate, while the others brought the edges firmly together without the least difficulty. At the completion of the operation the fissure was perfectly closed in every part, even to the very tip of the uvula. The patient was ordered to bed, strict quiet enjoined, and a diet of beef tea and milk. As a mouth-wash, the following was given:

Potas. Chlor., ʒj.	Acid. Carbolic, gtt. xx.
Syrup, ℥ss.	Aquæ ad., ℥viij.

At the end of the fifth day following the operation Dr. Fenwick removed four alternate sutures, and in twenty-four hours after the remaining three. The result was most gratifying, although a portion large enough to admit the smallest pea remained unclosed at the top, where the greatest tension had existed.

She was discharged on the sixteenth day after admission with the understanding that she would return and have the operation completed.

Case II.—*Staphylorrhaphy.*

Catherine McPhail, aged twenty-three, was admitted into Dr. Fenwick's ward on the 13th November, to undergo the operation of Staphylorrhaphy for congenital fissure of the palate. The deformity was not so extensive, although the cleft was much wider and made a less acute angle than in the preceding case. The same preparatory treatment, with the bromide and the manipulation, were gone through, and on the tenth day she was thought ready for the operation. This was performed in almost precisely the same manner as the other, differing in these particulars only: five sutures were found sufficient; there was more difficulty in dividing the tensor palati muscles, and in order to bring the edges in apposition at the anterior portion or apex of the cleft it was found necessary to make a parallel incision on either side, and thus relieve the tension.

The same precautions respecting silence, food, &c., were enjoined as in the former patient, and a similar mouthwash was ordered. On the sixth day union had to all appearance taken place throughout the entire fissure, and three of the sutures were accordingly removed; but on the day following, while removing the uppermost thread, the edges separated, and we had the same gap, though not quite so large, as happened before. The remainder, to the very apex of the uvula, had, however, firmly united by first intention. The tension had apparently not been all removed by the parallel incisions, and the difficulty here was increased by the greater breadth of the apex of the fissure.

Both patients spoke in the manner so characteristic of this deformity; but as to any improvement in the articulation and speech effected by the operation, sufficient time has not yet elapsed to form any definite opinion on this point. Besides neither operation is yet completed. Years will, no doubt, as in the majority of such cases, elapse before they have ceased to speak in their original dialect.

The hæmorrhage was not great, but simply troublesome at either operation, and was readily controlled, from time to time, by means of ice held in contact with the bleeding surfaces. I have described the operation *in extenso* in connection with the first case, not only to make my report more complete, but to bring prominently forward the great advantage in this operation gained by the employment of sewing-machine needles, which, I understand

were first suggested in this connection by a medical gentleman at present practising in Montreal. In using them all expense and trouble in obtention are removed, as they can be either bought or borrowed in any hamlet in the country; so that with a couple of these, a curved needle, and a needle driver, all the apparatus for this operation is at hand.

Case III.—*Gun-shot Injury.*

James M., aged 36, labourer, while endeavouring to make peace between a man and his wife was shot by the former, the ball entering the front of the upper arm, at about the centre of the biceps muscle. He was immediately brought to Hospital and placed in one of Dr. Ross's wards. The point of entrance of the bullet was marked by a blackened and ecchymosed spot, but no opening of exit could anywhere be discovered. It had apparently been arrested in its course by the humerus, which was fractured in an oblique direction at the junction of the upper with the middle third. Careful examination failed to detect the foreign body. No vessels were injured, and the sensibility of the limb was unimpaired below the seat of injury.

The arm was put up in an angular internal splint of pasteboard, extending from the armpit to the metacarpo-phalangioal articulations, with, externally, a broad piece of gutta-percha splinting moulded to the shoulder and reaching beyond the external condyle, all well padded and secured by adhesive straps and a a bandage; a sling to support the hand only was, also applied. To the wound was applied simply a piece of lint well greased with lard.

At the end of a fortnight the dressing was removed. No signs of inflammatory trouble presented themselves, and the lint was barely stained with pus. Repair, however, scarcely began in the fracture, as the broken surfaces of the bone were readily moved on each other. The same dressing was re-applied.

At the end of the sixth week it was thought advisable to examine into the condition of the fracture. The splints being removed, Dr. Fenwick, who then had charge of the case, had the gratification to find that the wound had, to all appearances, been healed for some time, and that the fracture had firmly united and was surrounded by a heavy mass of callus. But what is still more interesting, immediately beneath the skin and opposite the inner aspect of the bone lay the bullet. A simple cutaneous incision was only required to expose and remove it. It belonged to the ordinary pocket-sized Smith & Wesson revolver, and was much flattened and indented, no doubt from its contact with the bone.

There is something further which might be reported in connection with this case. He had suffered for years from granular lids in both eyes, producing considerable shortening of the palpebral fissure, with entropion of all the four lids and consequent inturning of the lashes. He was anxious that something should be done to relieve his condition, so that Dr. Fenwick decided to perform an operation on the right eye for the relief of the entropion. Under chloroform he extended the outer canthus for about an inch, and brought the mucus membrane and the skin of each segment together by a couple of silk sutures. He then, with the scissors. removed, from the upper lid, an elliptical piece of skin, about three-quarters of an inch long by half an inch wide, and to make the eversion still more complete separated, with the knife, the skin from the cartilage at the margin of the lid, for a distance of about three-quarters of an inch. The edges of the ellipse were then brought together with silk sutures and the result seemed most satisfactory. Simple water dressing was applied.

On the fourth day after this simple operation he complained of headache, sore throat, general *malaise;* pulse, 100; heat of skin great, and feeling of stiffness about the face and eyes. The same evening he had a distinct rigor, and next morning the eyelid operated on was distinctly swollen and erysipelatous. He was ordered half-drachm doses of the Tinct. Ferri Muriat. every four hours, with hot fomentations of lead and opium locally. The disease extended over the entire scalp and down the back of the neck. The pulse on the fourth day of the fever was 130; temperature, 104 1-5; tongue dry; great difficulty in swallowing; at times low delirium. His condition was most precarious for a week, when the disease began as rapidly to subside, and at the end of a fortnight he was convalescent.

The circumstance of greatest interest in connection with this attack of erysipelas was the vast improvement noticeable in the condition of the eyes. It is true the erysipelas had not added to the result of Dr. Fenwick's operation; but the granular condition of the lids, and the chronic conjestion of the conjunctiva and cornea had almost disappeared. The entropion was much relieved, however, in the right eye, and in the left there appeared to be a change for the better. That erysipelatous inflammation is, then, one of the most reliable counter-irritants in chronic affections of the eyes there can be no shadow of doubt, and the experience of the staff of this hospital, at least, can fully bear out this assertion. The only pity is that it cannot be induced at pleasure, and modified to suit circumstances.

Reviews and Notices of Books.

A Practical Treatise on Urinary and Renal Diseases, including Urinary Deposits. Illustrated by numerous Cases and Engravings. By WILLIAM ROBERTS, M.D., Fellow of the Royal College of Physicians, London; Physician to the Manchester Royal Infirmary; Lecturer on Medicine in the Manchester School of Medicine. Second American from the second Revised and considerably improved London edition. 8vo; pp. 616. Philadelphia: Henry C. Lea. 1872.

The first edition of this valuable treatise, which appeared in 1865, has long since been exhausted, and in the preface the author states that when a new edition was called for he was unable to undertake its preparation, and that he regrets the delays which have postponed its appearance so long beyond the time originally announced.

Although disappointed at not seeing a new edition of Dr. Roberts' work, yet we have not lost anything by the delay, as the author has perseveringly followed up his subject. The plan of the work remains the same; all the chapters have been carefully revised, and very considerable additions have been made. Two new subjects have been added in this edition; one on the suppression of urine (anuria), which has been placed in the chapter on the physical properties of the urine; the other on "Hæmatinuria," or false hæmaturia, a condition which has been noticed by Oppolzer Vogel, Mettenheimer and others, in which the colouring matter of the blood escapes into the urine without rupture of the capillaries or the presence of blood corpuscles. Under such a condition the urine assumes a deep-red colour and presents to the superficial observer the character of bloody urine, but on more careful inspection no blood-disks nor fibrin will be found. This condition is invariably accompanied by the presence of albumen in the urine, and is noticed in those states of the system which is characterized by rapid destruction of the blood-disks in the blood-vessels, or what has otherwise been termed "a dissolved state of the blood," met with in some forms of what has been termed putrid fever, as in septicæmia, pyæmia, and extreme cases of purpura. Vogel ascertained that if arsenuretted hydrogen is inhaled it will occasion an intense but temporary hæmatinuria. He produced this condition of the urine in animals by making them

inhale arsenuretted hydrogen, or carbonic acid gas, or by injecting substances into the veins which are known to dissolve and break up the red corpuscles. Such is a general description of what our author terms hæmatinuria, but he specially calls attention to this condition as met with in a paroxysmal form, which appears to have been first noticed by Dr. George Harley, and subsequently by Dickinson, Greenhow, Gull, and others. The author gives an analysis of about twenty cases. Indeed, his account of this peculiar affection is based on what he has himself observed in cases which have come under his own charge, as well as on the cases above referred to.

The author draws attention to certain pigmentary particles which are observable under the microscope in fresh specimens of urine. They are especially numerous when there is a copious shedding of epithelium; but they do not appear to be associated with any particular kind of epithelium, but "appear indiscriminately with renal, vesical, urethral, and even vaginal epithelium." They appear under two conditions, as free amorphous particles or irregular cell-like bodies. They present a reddish-brown or orange colour, and vary in size from mere specs to particles larger than pus globules. These pigmentary particles we have frequently noticed in examining specimens of urine, and always deemed them to be of extraneous origin, as we have never seen any description hitherto. These particles keep badly, and entirely disappear as decomposition sets in. They possess no special pathological significance, but are found to be numerous in the urine of Bright's disease. Dr. Roberts states that he has met with similar objects far removed from the urinary passages, as in the brain, in the neighbourhood of old apoplectic clots; in encephaloid growths and other tumours. From these circumstances he is led to regard them as derivatives of hæmatin, but he cannot account for their peculiar forms.

In speaking of albumen, the author remarks that "albumen is "not found in any proportion in healthy urine; but it is the most "common and the most important of the abnormal ingredients "found in disease. Its presence in the urine is due to so many "causes that the fact itself yields little direct information; but "when correctly interpreted, it furnishes several grave pathologi- "cal states which would otherwise remain in great obscurity."

In testing for the presence of albumen the author points out the various circumstances which may mislead in a careless investigation. Full directions are given touching clinical manipulation, and further on is considered the various methods employed for estimating the quantity of albumen present:

"Slight and temporary albuminuria appears to occur, in highly "exceptional cases, from very slight disorders.

"Setting aside these unimportant exceptions, albuminuria must "always be looked on as a grave symptom of disease; and when "discovered, it becomes an anxious question to the practitioner: "What signification has it?

"The pathological states in which albumen appears constantly "or occasionally in the urine may be arranged into the following "groups:

"1. Acute and chronic Bright's disease of the kidneys.

"2. Pregnancy and the puerperal state.

"3. Febrile and inflammatory diseases (zymotic diseases, such as "scarlet fever, measles, small-pox, typhoid, cholera, yellow fever, "ague, diphtheria, &c.; inflammatory diseases, such as pneumonia "peritonitis, traumatic fever, articular rheumatism, &c.).

"4. Impediments to the circulation of the blood (emphysema, "heart disease, abdominal tumours, cirrhosis, &c.).

"5. A hydræmic and dissolved state of the blood and atony of "the tissues (purpura, scurvy, pyæmia, hospital gangrene); also "hæmatinuria.

"6. Saturnine intoxication.

"In the first group albuminuria is dependent on structural "changes in the kidneys.

"In the second group albuminuria is sometimes associated with "structural changes, and sometimes not.

"In all febrile and inflammatory complaints a trace of albumen "is occasionally found in the urine; it usually amounts to no "more than a trace, and disappears on defervesence; sometimes "in pneumonia it is not inconsiderable.

"Albuminuria connected with impediments to the circulation of "the blood is considered under Congestion of the Kidney.

"In a dissolved or putrid state of the blood, albumen appears "in the urine without being connected with organic changes in "the kidney; it is associated with the escape of the colouring "matter of the blood.

"The occurrence of albumen in the urine of persons poisoned "with lead, although repeatedly observed, was not regarded as "anything more than a coincidence until Olivier demonstrated, "by experiments on animals and clinical observations, the exist- "ence of a casual connection between them. Olivier found that "dogs, rabbits, and guinea-pigs, when poisoned with repeated "doses of carbonate of lead, invariably passed an albuminous "urine, and that their kidneys exhibited signs of incipient organic "disease."

We must draw this hurried notice to a close, as already we have exceeded our allotted space. We notice that the author has somewhat improved the wood engravings, and twenty extra cuts have been added. On the frontice page we find a coloured plate, giving nine different varieties of shade, from a pale yellow to a brownish black. We trust our author does not suppose that all his readers are colour blind, and that he finds it necessary to place before them a guage, by reference to which they can judge of the different colours of different specimens of urine. To our mind it does not impart what it is evidently intended to illustrate. Throughout, the work is clear and very readable; indeed the style is most happy. We cordially recommend it to our subscribers as being thoroughly practical, and containing much information which is not to be met with elsewhere.

The Pathology, Diagnosis, and Treatment of Diseases of Women, including the Diagnosis of Pregnancy. By GRAILY HEWITT, M.D., Lond., F.R.C.P., Professor of Midwifery and Diseases of Women, University College, and Obstetric Physician to the Hospital; &c., &c., &c. Second American from the third London edition. Revised and Enlarged. With One Hundred and Thirty-two Illustrations. 8vo; pp. 751. Philadelphia: Lindsay & Blakiston. 1872.

This is the second American from the third London edition, and has received such a thorough revision that it must be regarded, as the author states in his preface, "as substantially a new work." The three editions of the work differ materially. In the first the author considered the then existing state of uterine pathology. In the second edition he announced views of an improved system of uterine pathology, based on his own researches. This was amply illustrated by what he had himself observed. In the present edition the author gives certain generalizations on important questions of the pathology of uterine diseases which have forced themselves on his attention in the course of several years experience, and which lead to the adoption of views in reference to the pathology and treatment of uterine disease different from those announced in the earlier editions of the work. The mechanical system of uterine pathology is enunciated, which the author declares is no "speculative theory"; but, although long convinced of the correctness of his views, he states that had he published them when first conceived they would have been a "speculation only." The author states, in reference to this subject, that "the "system, as now enunciated, commends itself to my judgment as "true, inasmuch as I have found it in conformity with daily obser-

" vations for five or six years past." Thus it will be observed how careful the author has been to convince himself of the correctness of his views, which he has gradually but steadily elaborated during a somewhat extensive clinical experience at University College Hospital. Hence they come to us with the full weight of careful observation, which adds much to their value.

Although admitting freely that Dr. Hewitt is a keen observer, and has enjoyed unusual opportunities of studying these lesions, yet we cannot regard, as correct, his theories of the origin of uterine affections. In plain terms, our author seems to attribute all structural lesions in the cervix and body of the uterus as arising primarily in alterations in the form of the uterus itself, which are described under the general heading of flexions. He says:

" Patients suffering from symptoms of uterine inflammation (or, " more properly, from symptoms referable to the uterus) are " almost universally found to be affected with flexion or alterations " in the shape of the uterus of easily-recognized character, but " differing in degree.

" The changes in the form and shape of the uterus is frequently " brought about in consequence of the tissues of the uterus being " previously in a state of unusual softness, or what may be correctly " designated as chronic inflammation.

" The flexion once produced is not only liable to perpetuate " itself, so to speak, but continues to act incessantly as the cause " of the chronic inflammation present.

" Logically, and, indeed, practically, there are good reasons for " placing flexions first in the order of sequence."

It is certainly not the case, so far as we have been able to observe, that "symptoms referable to the uterus" are invariably associated with flexion or alteration in the shape of that organ. That flexions or alterations in position are of more common occurrence than is supposed we freely admit; the ease and facility of diagnosis is likewise well known; but we cannot agree with the author that these malpositions are met with in all cases in which there exist symptoms referable to the uterus. Nor can we admit the proposition that there "are good reasons for placing flexions first in the order of sequence." This is to presuppose that no cases of uterine catarrh, or by whatever name it is designated, can exist, save and except when some flexion or malposition has been the starting point. However true it may be that flexions and malpositions of the uterus will be attended with congestion of the vessels leading to a chronic inflammatory state, with its attendant evils, yet we cannot admit, as correct, that the *origo mali* is the uterine displacement.

The work consists of thirty-two chapters, with a supplementary chapter on sterility. It is beautifully illustrated with one hundred and thirty-two wood engravings, some twenty of which are new. For the most part these engravings are original, being representations, carefully planned, of cases which have come under the observation of the author in the wards of University College Hospital. Although we differ with the author in many of his views, chiefly as referring to the origin of uterine affections, yet we cannot but speak in the highest terms of the work itself. The style is clear and very readable, and it gives evidence throughout of honest, hard work; not that of the office-book worm, but of the careful clinical observer.

Surgical Diseases of Infants and Children. By M. P. GUERSANT, Honorary Surgeon of the Hôpital des Enfants Malades, Paris; Honorary Member of the Société de Chirurgie, etc. Translated from the French by Richard J. Dunglison, M.D. 8vo.; pp. 354. Philadelphia: Henry C. Lea. 1873.

This is a translation, by Dr. Richard J. Dunglison, of M. Guersant's notes on the surgical diseases of children. It can hardly be termed a treatise, and does not bear comparison with Timothy Holmes' excellent work on this subject. The author states that his object "has not been to embrace the entire domain of infantile surgery, but he desires only to record his views on cases which have most frequently come before him, and which he has used as subjects for his Clinical Lectures at the *Hôpital des Enfants*, from 1840 to 1860. We should suppose that during a lapse of twenty years a lecturer on clinical surgery at a large Parisian hospital would have had ample opportunity of observing the vast majority of surgical cases to which childhood is liable. It appears, however, that some departments, or rather some accidents and diseases presented so seldom, that the author hesitated in giving of them a casual and imperfect sketch. The work then (what there is of it), must be regarded as affording the deductions and practical observations of the author on subjects which have frequently come before him.

The arrangement, of necessity, is rather rambling; for instance, chapter two is on "Cervical Adenitis"; this is followed by a chapter on "Phymosis"; chapter six, on "Hypertrophy of the Tonsils," is followed by a chapter on "Polypus of the Rectum"; "Irrigation of the Pharynx" is succeeded by a chapter on "Vulvitis of Young Children." Then we have Cataract, Abdominal Hernia and

Leucorrhœa, Chilblain, Traumatic Dislocations, Erysipelas, and so on. Throughout, all the subjects treated of are jumbled up, which detracts very materially from the worth of the book. The style is very practical, the author confining himself to what he has himself done in the way of operative procedure. He does not refer to the methods of operation adopted by other authorities, and on some subjects no allusion is made to many valuable modern improvements in the way of treatment. The editor has performed his work well, and deserves the thanks of his professional brethren in affording a faithful translation of a book which is, at least, the practical deductions of an eminent observer of considerable experience.

BOOKS RECEIVED FOR REVIEW.

Contributions to Mental Pathology. By I. Ray, M.D., author of the "Medical Jurisprudence of Insanity" and "Mental Hygiene." 8vo.; pp. 558. Boston: Little, Brown and Company. 1873.

Clinical Lectures on the Diseases Peculiar to Women. By Lombe Atthill, M.D., Univ. Dublin; Fellow and Examiner in Midwifery, King's and Queen's College of Physicians, &c., &c. Second edition; revised and enlarged; with six lithograph plates and wood-cut illustrations. 8vo.; pp. 241. Philadelphia: Lindsay & Blakiston. 1873.

Peculiarities in the Operations of the Great Ovariotomists: Wells, of London; Atlee, of Philadelphia; and Thomas Keith, of Edinburgh. By S. Fitch, M.D., Edin. Pamphlet; pp. 16. Philadelphia: J. B. Lippincott & Co. 1872.

Fœticide; or, Criminal Abortion. A lecture introductory to the course on Obstetrics and Diseases of Women and Children, University of Pennsylvania. By Hugh L. Hodge, M.D. Fourth edition. Pamphlet; pp. 55. Philadelphia: Lindsay & Blakiston. 1872.

Transactions of the Obstetrical Society of London, Vol. XIII, for the year 1871; *with a list of Officers Fellows, &c.* 8vo. pp. 335. London: Longmans Green & Co. 1872.

Wöhler's Outlines of Organic Chemistry. By Rudolph Fittig, Ph. D., Nat.Sc.D., Professor of Chemistry in the University of Tübingen. Translated from the eighth German edition, with additions by Ira Remsen, M.D., Ph.D., Professor of Chemistry and Physics in Willams College, Massachusetts. 8vo.; pp. 530. Philadelphia: Henry C. Lea. 1873.

Surgery.

ABSTRACT OF A LECTURE ON THE EXCISION OF THE KNEE-JOINT.

By T. Holmes, F.R.C.S., Surgeon to St. George's Hospital, etc.

Although, gentlemen, the short time allowed for the course of lectures on systematic surgery obliges us to be very dogmatic, there are, in truth, two sides to almost every surgical operation; and it seems to me that the chief value of these clinical lectures is, that they allow us to explain, separately, these debatable points at greater length, and with the aid of illustrative cases. Excision of the knee-joint is just such a point. It is not many years since it was first performed by Sir William Fergusson, and the number of cases operated on is even now not sufficiently large to enable us to judge of the results with perfect satisfaction. It is only lately, too, that the conditions under which the operation can be favourably performed have been at all clearly defined. In the early days of excision of the knee, the operation was performed on patients advanced in phthisis, or for malignant tumour. No English surgeon would now consider this justifiable. Yet, though the operation has, even now, scarcely passed beyond the experimental stage, its employment has been advocated and condemned with a partisanship which is, I think, quite out of place in such a controversy.

The operation has, indeed, its advantages and its disadvantages. In considering these, it has been the fashion to compare it with amputation; but we must also compare it with an expectant treatment and conservation of the limb.

Disadvantages.—The *shock* of the operation is very severe, and it is followed by severe surgical fever. After amputation for disease in the child, there is usually but little shock or fever; the child often sleeps soundly a few hours after the operation, and mends steadily from that time. The shock and suppurative fever after excision are, however, not often fatal.

Arrest of Growth in the Limb after the Operation.—This is rather common; it is due to the removal of the whole of the epiphysis and part of the shaft of the bones. In the femur, the epiphysal lines come very close to the edge of the cartilage, and, consequently, the risk of removing the epiphysis is great. In some cases this can be avoided by merely slicing off the cartilage, and

leaving a rounded or truncated end to the bone; but often, owing to the extent of the disease, a horizontal cut is absolutely necessary. In the tibia, the space between the articular surface and the line of junction of the epiphysis is greater, and, consequently, there is a better chance of being able to save part of the latter. Of course, the younger the patient the greater would be the relative shortening from this cause.

The Risk of Soft Union between the Bones and of Bad Apposition.—The tibia has always a great tendency to fall back, so that only the anterior part of the cut surface is in apposition with the femur, and the partial union thus formed is not strong enough to support the weight of the body; or, if the cicatrix be stronger, it may yield gradually to the weight of the trunk, and the limb may bow outwards, giving it a shortened and awkward appearance. These deformities may be corrected by splints if treated at once, and, unless the shortening and bending be excessive, the limb is still better than a wooden one. A shortening of six inches, compared with the sound limb, is no great hindrance to walking; the pelvis drops on that side, and this obliquity, with a high boot, readily compensates for the shortening.

These, then, are minor disadvantages; the real obstacles to the operation are its severity, the tedious convalescence which follows, and the liability to recurrence of the disease.

It is very difficult to judge of the comparative mortality after excision of the knee; statistics especially are very fallacious. It is not sufficient to compare the total mortality after excision with the total mortality after amputation. Even the most enthusiastic surgeons limit their practice of excision to young patients and to favourable cases, while amputation is performed at all ages, and often under desperate circumstances. Excision, again, is never done for cases of acute injury; in military surgery it has been exceedingly fatal. To arrive at any satisfactory result, we must compare *similar cases* in considerable number; and this is not an easy matter. I believe myself that the mortality after excision is about double that of amputation. I should say, too, that the period of convalesence is about four times as long after excision as it is amputation. This estimate is, if anything, rather below the mark.

The risk of recurrence of the disease is not great when the wound heals rapidly; but, if convalescence be prolonged, a renewal of the caries often results. And when this does happen, do not be in too great a hurry to amputate; treat it as you would caries in the continuity of a bone; there is now no joint to complicate the treatment. Scrape out the diseased bone or apply caustics; if

this do not answer, you can excise again; though this, of course, increases the shortening.

The *couleur de rose* doctrines which have been advanced by some surgeons have certainly produced very mischievous results. Excision is not an operation which can be applied indiscriminately; it must be reserved for cases of favourable age, and in which the disease is not too acute or too extensive. When it is thus reserved for suitable cases, the result is infinitely superior to that of amputation. The advantages, indeed, are more marked the earlier the age of the patient.

Amongst the lower orders, amputation of a leg almost ruins a child's prospects for life; few will have anything to say to him, and the greater part of his life is passed at the cripples' home and the workhouse. But after excision he is fit for a sedentary or even for a moderately active life. I have known patients who could easily walk ten and fifteen miles a day after excision; and a German surgeon has recorded the case of a man who was able to follow successfully the arduous profession of a chamois-hunter after this operation. After middle life, the advantages are doubtful. The result of the operation is not generally so good, and an adult can seldom afford the long period necessary for convalescence. The complete use of the limb, after excision of the knee, is not fully acquired for some years.

On the other hand, the number of cases which are available for excision, even in the child, are limited by the fact that many of them are curable without any operation, if you can only give them time. In private practice, amongst well-to-do people, where the parents will readily nurse a child for three or four years, you may cure cases of abscess in the knee-joint, or even of chronic disease of the bones, by means of simple expectant treatment, and may even get a tolerably useful joint. In hospital practice this plan of treatment is impracticable, and then it is that, by excision, you can hasten and facilitate the process of cure without materially altering the nature of the result.

On the whole, then, whilst I fully recognise the advantages of excision, I am strongly in favour of the close restriction of the operation to a limited class of cases.

So far, we have been dealing with the operation in the abstract. We have now to consider, more particularly, the principles which should guide us in the selection of cases, the best mode of performing the operation, and the necessary after-treatment.

Age.—The patient must be under forty or forty-five. The elbow or shoulder may be successfully excised at a much greater age; but, after middle life, excisions in the lower extremity are exceed-

ingly fatal. In the case of very young children, free incisions into the joint and expectant treatment are so successful, that formal excision is seldom necessary; the risk of getting an excessively shortened limb is also very great. This is not absolute contra-indication, since excision may be, and has been, practised successfully in early infancy; but the most favourable age for the excision of the knee may be said to be between five or six and twenty. The operation may, however, be performed, with fair hope of success when the other circumstances are favourable, as late as thirty or even beyond.

Constitutional State.—There must be no visceral disease. The lungs must be examined for signs of phthisis, and the urine for evidence of the albuminoid kidney, which often accompanies chronic disease of the bones; nor should examination of the liver be neglected. There must be no acute surgical fever, and no marked depression of the general health; no great wasting or confirmed hectic.

Local State—a.—The bones must not be too extensively softened. Unless you can remove all the softened bone, you will be almost sure to get soft union or no union at all. In excision of the elbow, and even of the hip, this objection does not hold good—you do not want to get firm osseous union, as you do in the knee. In many cases, it is quite impossible to diagnose the actual state of the bones before the operation; you must, therefore, always be prepared to change your excision into an amputation, and must always previously obtain the consent of the patient or of his friends to this course, if necessary.

One of the most favourable classes of cases for excision are those of so-called "strumous" disease of the synovial membrane, though the patient often shows no sign whatever of the strumous diathesis. It is characterised by purely degeneration and thickening of the synovial membrane, and by the frequent presence of small abscesses in the thickness of this pulpy mass, which may or may not have burst into the joint; the bones are scarcely affected at all. The operation also is exceedingly simple in these cases; you need not be particular about removing all the thickened synovial membrane, and have only to remove a thin slice of bone and cartilage from the articular surfaces.

Then there are the cases where a superficial necrosis of some part of the articular surface has taken place, and a sequestrum has formed. In some of the other joints you may just remove this sequestrum, and trust to rest, etc., but in the knee this procedure is followed by such severe shock and profuse suppuration that it is better to excise at once.

b. The disease must not be of too long standing, and the limb must not be too much atrophied. In children especially, if the disease has lasted for any considerable time, there is great risk that it may have extended beyond the epiphyses, and that the operation would, consequently, be followed by arrest of growth in the limb.

c. The soft parts must not be too extensively undermined.

d. The disease must not be in an acute stage. I have seen excision successfully performed for acute abscess in the knee-joint, but, as a rule, the operation under these circumstances should be discountenanced. This rule also does not hold good in the case of other joints, especially of the elbow, where excision may be safely recommended in the acute stage of abscess.

It will thus be seen that the most favourable cases of disease of the knee-joint are those which are selected for excision, whilst the more unfavourable are left for amputation, and that this, therefore, tends to increase the mortality after amputation. Some have argued that the tendency is to some extent neutralized by the fact that, since the introduction of chloroform, amputation has been performed in many favourable cases of old deformity, etc., which would formerly have declined the operation. This may be true, but, on the other hand, a far larger number of favourable cases are saved by conservative surgery of the present day, which would formerly have undergone the operation; so that I do not doubt that, on the whole, amputation for disease is now practised in a class of cases less favourable for recovery than was formerly the case.

The *operation* itself is tolerably simple. Some surgeons, as Mr. Butcher, still adhere to the H-shaped incision; this, however, is rarely required—only when a joint is ankylosed in awkward position, or when you wish to expose the bones very freely. Others make a large anterior flap, enclosing the patella; the only advantage of this is that you can at once amputate, if necessary, without removing much of the femur; the objections are, that there is a large hollow left after the removal of the patella, and that the wound is larger, and, consequently, the shock is increased and convalescence retarded.

Langenbeck, I believe, operates, or used to operate, on a totally different plan, and with a different object in view. He makes a longitudinal incision down each side of the joint, divides the lateral and crucial ligaments, and turns the articular surfaces out through one of the wounds. He leaves the patella and its ligament entire; his object being to get a moveable joint, while we are for firm ankylosis. I have no experience of Langenbeck's treat-

ment, but, from my own experience, should always advise the removal of the patella, or, at all events, of the whole of its cartilaginous surface. When the patella is left it often becomes the seat of the recurrence of the disease, and if the bones are to be firmly united and soldered together, there is no advantage to balance this risk. You will see by the examination of such cases several years after recovery, that the quadriceps extensor cruris becomes atrophied, and the function of the patella entirely abolished.*

I think, then, that the best plan is to make a single straight incision from the back of one condyle to the back of the other, cutting across the ligamentum patellæ, and completely dividing both lateral ligaments. After turning up and removing the patella, the limb is well flexed, the back of the condyles cleaned, and the lower part of the femur sawn off nearly perpendicular to the axis of the bone; the head of the tibia is then cleaned and sawn across horizontally. The danger to the popliteal is not great, unless it be bound down to the back of the bones—glued to them, as it were, by inflammatory products; nor is there any motive for sawing the femur from behind forwards, as has been recommended.

Be very careful to tie all bleeding points. I always use the carbolised catgut ligatures, and cut off both ends quite short; the knots do not interfere in the least with rapid union. I find this much more satisfactory than torsion, especially for small vessels.

Put up the limb at once, before the patient recovers from the chloroform. There are several different forms of apparatus. The limb should be perfectly straight, and the splint should be carefully adapted to it. The plaster of Paris splint is very good; the best form is that of Dr. Patrick Watson, a description of which is inserted in the "System of Surgery." The objection is that, if the limb become inflamed and swells, you have at once to take it all down; and if, as sometimes happens, the limb shrinks, the splint allows it too much motion. The same objection applies in some degree to Mr. Butcher's apparatus; this consists of a sort of trough, formed by three flat wooden splints, open in front. In this hospital we usually use a McIntyre's splint, cut away at the sides opposite the joint. Wooden side splints are applied to this, and a well moulded leather splint is fitted over the front of the thigh.

Whatever apparatus you use, do not disturb the limb oftener than you are absolutely obliged; perfect rest is the great point of the after-treatment. If you can avoid any changes for four or five

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*See an illustration in Holmes' "System of Surgery," vol. v., page 708. Second edition.

weeks, so much the better; by that time there will probably be a sufficient amount of union between the bones to dispense with all special apparatus for the future.

Do not allow the patient to use the limb too soon, and watch him for some little time after he begins to move about on it, so that you may at once check and correct any tendency to bending or bowing at the seat of union.—*British Medical Journal.*

NOTES ON DISLOCATIONS.

By J. HANCOCKE WATHEN, L.R.C.P.E., M.R.C.S. Eng.

Two cases of rare dislocations—viz., those of knee and sternal end of the clavicle.—under the care of Mr. Samuel Hey, having been reported in these columns for November 2, I have thought the notes of the following cases worthy of record:—

Case 1.—*Compound Dislocation of the Knee-joint—Recovery with nearly Perfect Movement of Joint.*

E. T., aged 36 years, until lately an agricultural labourer, healthy, came under observation on January 26, 1868, when he gave the following history:—He was present at the Gadley's colliery explosion, which occured in the first week in October, 1867. A huge block of coal fell on him, striking the left thigh on the outside just above the knee. When brought to the surface it was found that his thigh-bone protruded through a wound on the inner aspect of knee-joint, the limb being flexed. The three centre toes of the same limb were crushed, which necessitated their being amputated. The state of the patient at the time of observation was the following:—He had lost the three centre toes of left foot; on the inner aspect of knee of same side was a cicatrix about three inches and a half long, extending from a point immediately above the internal condyle, downwards and outwards, terminating just below the patella. Over the outer condyle there were three or four small irregular cicatrices.

The patient further stated that the surgeon was able to pass his finger across the joint from inner to outer wounds. Reduction was affected, the limb placed on a back splint, three sutures introduced along the inner wound, and cold water dressing kept constantly applied. Considerable suppuration took place, discharging principally through the wounds on outer side of knee. At the end of six weeks all support was taken off, and patient directed to commence passive movement of joint; and now (January 26), three

months after the receipt of the injury, he has nearly complete movement of the joint. Extension is perfect, and flexion can be made up to a right angle. From the patient's description further flexion is prevented by the anterior aspect of the joint being bound down by adhesions.

On applying for information in this case to Mr. D. Davis, of Aberdare, under whose care the patient made such a satisfactory recovery, he writes that he perfectly recollects the case, and that the patient's description of his state is correct. Mr. Davis adds that his experience of compound dislocation of the knee-joint is considerable, ten such cases having occured to him, eight requiring amputation; two only out of the ten recovering, of which the present case is one. (Mr. Davis does not mention whether the remaining case of recovery was one in which amputation had to be resorted to, or not.)

Case 2.—Simple Dislocation of Knee-joint—Recovery with Fibrous Anchylosis.

This case occured in the person of Mr.—, aged 47 years, a medical man, a near relative of mine, whose horse, while driving, became suddenly restive, and bolted. Mr.—, who was driving a two-wheeled dog cart, finding the horse's feet come into uncomfortable proximity, determined to jump out. He alighted with his left foot partly on the raised footpath on the roadside; the ankle being forcibly driven backwards, the tibia became dislocated from the femur in the direction forwards and outwards; the limb was somewhat flexed. Some passers-by, under Mr.—'s instructions, made extension, by which reduction was easily effected.

The case was at first seen by my friend Mr. E. P. Philips, of Haverfordwest, who kindly undertook the care of it during my absence from home. The limb was placed on pillows, with lateral splints, which were changed after some days for a M'Intyre, and swung in a Salter's cradle. This patient was a martyr to ill-developed gout which very much influenced the case; considerable inflammatory, action came on in the knee-joint; this was relieved by poppy fomentations. Without going into a detailed account of the case, I may state that after running the gauntlet of an attack of hæmaturia and cystitis, together with two or three little accidents when just convalescent, which set up secondary inflammatory action in the joint, the patient recovered with a stiff knee. At present five years after the accident, there is some little mobility in the joint, but Mr.—walks, with a straight leg, at a pace that few with free movement of joint can outdo.

Case 3.—*Dislocation forwards of the Sternal End of the Clavicle.*

David J., aged 16 years, presented himself on August 20. He stated that some three hours before he had tumbled off a load of hay, falling on the left shoulder. On being stripped the left shoulder was seen to be approximated towards the mesial line. Over the sternal end of the clavicle there was a considerable prominence, which was easily made out to be the dislocated end of the bone. Some tumefaction was present. The bone was brought into position by drawing the shoulders outwards and backwards, and a posterior figure-of-eight bandage applied. As the bone became displaced very readily, a large pad and a similar bandage were applied anteriorly over the displaced end of the clavicle. The difficulty of keeping the bone in position, and the fact of the boy living some seven miles away, as well as his inabilty to obtain perfect rest, did not lead me to anticipate a satisfactory result. Every time the boy visited me the whole affair was found out of gear. I saw him a couple of weeks ago, when I found the end of the clavicle somewhat prominent, but of no inconvenience, as he could use his arm as well as ever.

Remarks.—The case of E. T. was evidently one of dislocation of the tibia backwards and outwards, with protrusion of the femur through the wound on the inner side. It is of interest as affording a sample of so complete a recovery after compond dislocation of this articulation, even when treated, as I believe, on simple antiphlogistic principles. These cases have hitherto too frequently called for amputation, the soft parts being, as a rule, so much lacerated; but, armed as we now are with the principles of antiseptics, we may, I think, look for more satisfactory results than were obtained before. The influence of the state of health on the ultimate result is shown by a comparison of cases 1 and 2. On account of the shallowness of the articulation, it is nearly impossible (according to Professor Erichsen) to prevent a return of the displacement in cases of dislocation of the sternal end of the clavicle. Should we be unsuccessful, it does not appear to make any appreciable difference to the patient, except it be a female, who would hardly forgive one for allowing such an irregularity to exist. In these cases it would be advisable to insist on the patient keeping her bed, as has been recommended in fracture of the clavicle in women.—*Medical Times and Gazette.*

CRITICISMS OF DR. CHAUVEAU OF LYONS ON THE DISCUSSION AT THE PATHOLOGICAL SOCIETY ON PYÆMIA.

By J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

I have to thank the Editor of the *British Medical Journal* for having called my attention to a recently published criticism, by my friend Dr. Chauveau of Lyons, of my communication to the Pathological Society last April on the subject of pyæmia. The criticism in question forms an Appendix (entitled "Le poison pyohémique à la Société Pathologique de Londres") to a course of lectures on the Physiology of Infective Liquids, which has been published during the last three months in the *Revue Scientifique*. In these lectures the author has embodied the results of a lengthened and most important experimental inquiry, which in its general bearing somewhat resembles that in which my colleague Dr. Klein and I were engaged last winter. M. Chauveau's purpose is to demonstrate the close relation which exists between the virulent (or, as I prefer to call them, the infective) diseases and ordinary inflammation. He founds this *rapprochement* mainly on the resemblance between the irritant properties of inflammatory products, and those of the specific morbid poisons; and asserts that ordinary pus induces inflammation in any living tissue with which is is brought into relation, in the same way that a virus reproduces the disase from which it originated under similar conditions. Those of M. Chauveau's experiments which have to do with recent—*i.e.*, living—inflammatory products are in close relation with ours. But, in addition to these, he has made others in that older field of inquiry which concerns the toxic action of pus in various degrees of putridity.

Knowing as I do, by personal intercourse with M. Chauveau, the extreme accuracy of his method of working, and regarding myself as in some measure his pupil (for there are few men from whom I have learnt more pathology), I felt perfectly certain, as soon as I found that we were on the same ground and lookind in the same direction, that, if there were disagreement between us, it could only arise from the imperfect manner in which the facts had been presented on one side or the other—in this case on my side.

At the Pathological Society, I founded what I had to say on an entirely new experiment, which I then regarded, and still regard, as a fundamental one. It is to this experiment, or rather to my interpretation of it, that M. Chauveau objects. I shall have no difficulty in showing that his objection arises from a misconception. He describes it in terms which (with the important exception of

the words I have put in italics) are correct: "If a pyæmic liquid, introduced into the peritoneal cavity of a guinea-pig, be left there for a couple of days, *during which it does not determine any intense symptom in the animal*, the toxic power of that liquid, increases to such a degree that, when taken from the first animal and transported to a second, it manifests the most pernicious activity, and produces symptoms which are very rapidly fatal." This, M. Chauveau adds, was demonstrated to the Society in a "dog, into the abdominol cavity of which six drops of a pyæmic liquid which had resided two days in the peritonead cavity of a guinea-pig had been injected."

M. Chauveau expresses no doubt as to the strict accuracy of the facts, but thinks I have misunderstood them, and proceeds to recite an experiment of his own, which appears to him to furnish the key to mine. It is as follows. An old horse was sent to the veterinary school with a seton, the discharge from which was extremely fætid; the animal, however, was in good health; pulse, 32; temperature in rectum, 99.7 deg. Pus was collected from the seton, diluted with twice as much distilled water, and strained. Of this liquid, 15 minims were injected subcutaneously on the right side into the neck of the same animal from which it had been taken. In twenty-four hours, the pulse had increased to 45 and the temperature to 101.8 deg. On the fourth day the animal died. There was an enormous diffuse swelling around the seat of injection, due to "œdematous gelatiniform infiltration" of the subcutaneous tissue. The swelling was gangrenous at the centre, and exhibited elsewhere patches of vascular engorgement or extravasation. There were no internal lesions. Thus, to quote M. Chauveau's own commentary on the facts, "a few drops of the same pus, which when contained in a pyogenic cavity occasions neither local irritation nor any appreciable general disturbance, when injected into the cellular tissue of the same animal destroys it in less than four days; and the inflammation thereby produced is of so violent a character that the circulation stops, hæmorrhagic *infarctus* are formed, the tissues die, and the animal succumbs to poisoning caused by the absorption of the putrid products engendered by this gangrenous phlegmon". The experiment is of great Interest, and, as, Chauveau says, well worthy of the attention of the surgeon, but it is too widely different from ours to admit of comparison with it. To make this difference evident, all that is necessary is to refer to the professed purpose for which it was made. M. Chauveau's object was, to use his own expression, to investigate the action of "pus putride"—*i. e.*, of stinking pus. Our object, on the contrary, was not to inquire into the properties

of putrid liquids, but of the products of inflammation; and for this reason, the most fastidious care was used to avoid the introduction of the element of putridity at any stage of our experimental procedure, by preserving our liquids from the possibility of septic contamination. In the first inoculation, the "pyæmic liquid" (as M. Chauveau calls it) used was simply the product of an acute inflammation, produced by the subcutaneous injection of a chemical irritant. This liquid was introduced into the peritoneum of a guinea-pig in extremely small quantity, and produced there an intense peritonitis. It was the product of this peritonitis which exhibited that extradinary virulence, which I sought to illustrate to the Society by the experiment shown. In describing the results, I applied to them the term *intensification*. To this term M. Chauveau objects, and reasonably enough, for for he supposes that in using it I meant to imply that in the case of the guinea-pig which received the first product and yielded the second, the former was *intensified* by mere residence in the uninflamed peritoneum of a healthy animal. I need scarcely say that this was not what I meant. In using the word *intensification*, I meant to apply it, not to the liquids, but to the *process* which produced it; for obviously the infective liquid finally obtained is not the same with that which was first injected, but simply the product of the inflammation excited by it—*i.e.*, of the peritonitis. Its virulence, its infective activity, depends not on the mode in which the inflammation originated, but on the actual intensity it had acquired during the forty-eight hours of its duration.

There is one other point in M. Chauveau's paper to which I would ask space to refer. He objects strongly to my statement "that the ordinary bacteria of putrefaction do not in themselves possess a toxic action, and that liquids containing them can be injected into the circulation of a living animal without producing any effect." The statement, as it stands, is perfectly correct. Bacteria of putrefactive origin, if cultivated in liquids which are themselves innocuous, can be injected into the veins without producing disturbance. It was suggested that in all poobability the same thing would hold good of the bacteria of infective origin; but it was not stated either that the organisms of an infective liquid would, if they could be separated from it, be innocuous or inactive, or that the liquid without its organisms would retain activity. As a result of these considerations, the opinion was expressed that, although these living particles are probably the carriers of infection, there is as yet no sufficient ground for supposing that their existence is the essential condition of infectiveness of certain products of inflammation.—*British Medical Journal.*

Materia Medica and Chemistry.

ON ANÆSTHETICS.

By WILLIAM ALEXANDER, M.D., F.R.C.P., Senior Physician to the Halifax Infirmary and Dispensary.

The general subject of anæsthetics, to which the *Journal* prominently calls the attention of the profession at this moment, is second to none other in its importance and practical value; and, having had frequent opportunities of witnessing the relative merits of nearly all these agents, and having introduced the hydrate of chloral from Berlin, I have to offer a few reflections as my mite to the appeal of the editor.

During 1847 and the two or three following years, we used ether inhalation at the Infirmary here, and privately pretty generally, without any ill result. We found it very apt to occasion cough and a sense of suffocation, which might probably have been obviated had the patient previously practised with the mouthpiece, and had an anhydrous preparation been employed. Total oblivion was with difficulty obtained, and the cerebro-spinal reflex action never utterly lost. The volatile liquid used had about 85 per cent. of ether, with a gravity of 0.750, and was given in half-ounce quantities every two or three minutes until the desired effect was induced. Its stimulating, intoxicating property was often very often conspicuous, as evinced by very profane ejaculations. As with chloroform, I look to the respiration rather than the pulse, and see that the heaving of the chest is properly performed, voluntary suspension of that function being commonly attempted whilst consciousness remains. No doubt the pulse must be carefully watched, since paralysis of the cardiac ganglia and pneumogastric nerve is unquestionably the customary cause of death.

For etherisation, Morgan's inhaler, used at Mercer's Hospital, would probably answer better than that of my late friend, Dr. Snow, as it altogether obviates the dilution of the vapour by atmospheric air, and thus earlier secures the object desired; but the conical towel and sponge, or even folds of lint, supply a ready method and answer the purpose. An empty stomach is desirable, though after-sickness very rarely follows, and the somnolent effect soon vanishes.

So far as is yet ascertained, the percentage of accidents is very greatly in favour of ether. Dr. Jones, who was a great authority on this matter at St. George's Hospital, feels assured that, efficiently administered, ether will soon supplant chloroform as the anæs-

thetic in general use. It should not be forgotten, however, that casualities have always occurred occasionally, and are incident to operative manipulation arising either from shock or syncope, or from idiosyncracy of constitution. "If a sufficient amount of chloroform be given to produce narcotism," Dr. Jones observes, "there is sufficient in the system to cause death in these cases;" and he illustrates the axiom by reference to a case in which but five per cent. of it was inhaled—the amount prescribed as being within the limit of safety—and yet the patient died suddenly without any warning, by lividity of countenance or other symptom. Unlike such instances, the signals of danger usually come on gradually, and may, fortunately, be arrested. When full narcotism is accomplished and consciousness abolished by chloroform, it seems very desirable, if the effect be desired to be kept up, to change the anæsthetic to ether or nitrous oxide. Mr. S. Charles Smith of this town informs me that this practice is already adopted at most of the London ophthalmic hospitals.

In the selection of one of the two great agents, I should be much governed by the precise nature of the case; as, for example, traumatic injury with hæmorrhage, or a morbid condition of the heart or other viscera. Wherever alcohol would be indicated I should give the preference to ether, its special action being stimulant. Complete stupor by the protoxide of nitrogen is difficult and ephemeral, though safe, and is accompanied by a great mitigation of local pain under the knife. It is rather a curious circumstance, as mentioned by Mr. Woodhouse Braine, that the lowest known temperature is produced on the combined mixture of two anæsthetics—the bisulphide of carbon and compressed liquid nitrous oxide; viz., 220 degrees below zero of Fahrenheit.

On a review of the question so hastily and imperfectly expressed, my impression is, that the late ventilation of the subject has greatly added to the store of our knowledge, and restored ether to its pristine position. It has given us the option of one or other of these agents, or a combination of them in any threatened cardiac failure. Profound narcotism is, no doubt, more easily induced by chloroform, were it unattended by danger. On Tuesday last I administered a drachm and a half on lint to a youth whilst under lateral lithotomy, performed by Mr. Jubb of this place. Complete somnolence continued until after he had been put to bed, and was not followed by any untoward after-symptom. Chloroform is more pleasant in such quantity to take than ether, though in that respect surpassed, perhaps, by the nitrous oxide gas. As observed by Mr. Couper, however, the time relatively consumed in the administration, and the disagreeable perfume of

the vapour of ether, are unimportant, if regarded as safer, and to be free from nausea and other sequelæ.

With the bichloride of methylene, except as spray, we have had no experience here, and it would seem to possess no immunity from danger in its use.—*British Medical Journal.*

CASE OF POISONING BY ACONITE TREATED BY DIGITALIS —RECOVERY.

By WILLIAM DOBIE, L.R.C.S. & P.E., Keighley.

I was requested one morning, between 12 and 1 a.m., to visit a veterinary surgeon who was supposed to have taken poison. The place where he lodged was scarcely a hundred yards from my house, and only a few minutes elapsed before I saw the patient. He was stupidly drunk in bed, and unable satisfactorily to answer questions. His landlady, however, informed me that he returned home the worse for drink about midnight; that he went direct to his surgery, took out a bottle of medicine, and went up stairs to bed; that shortly afterwards he rang the bell, and said he had taken a large dose of poison, which was certain in a short time to prove fatal. There was a two-ounce bottle, with its lable defaced, lying by the bedside. The bottle contained about half a drachm of brown-coloured liquid, a portion of which I applied to my tongue, and was satisfied, by the characteristic tingling induced, that it was aconite. Up to this time there were no symptoms of the patient having taken poison. There had been no vomiting, the breathing was natural, the pulse of fair volume and strength and the extremities were warm. An emetic was prescribed; and, in conjunction with my late partner, Dr. Ramsay, I visited the man again in less than half an hour. By this time he had vomited freely; a considerable discharge had also taken place from the bowels; there was evidence, too, of failing circulation; the pulse was rapid and feeble, and the feet and hands were getting cold. The use of stimulants was clearly indicated; and, in order to give ammonia and brandy, we raised the patient's head. This brought on alarming prostration; the breathing became laboured; the pulse, at the wrist, irregular, intermittent, and finally imperceptible; there was a quantity of frothy mucus discharged from the mouth and nostrils; the skin became dusky; a cold, clammy sweat bedewed the face and forehead: in a word, the patient was dying. We quickly replaced his head upon the pillow, and, as he was unable to swallow, injected subcutaneously twenty minims of tincture of digitalis, and then applied galvanism to the cardiac region, and continued its use for about twenty minutes, at the end

of which period the patient began to rally, and in a few minutes more was able to swallow a mixture of ammonia, brandy, and a teaspoonful of tincture of digitalis. Marked improvement followed the administration of the mixture, and it was twice repeated within an hour, by which time the breathing had become easy, and the circulation re-established. We remained with him about half an hour longer, and, before leaving, gave him a cup of strong coffee, which, however, was vomited. I saw the patient again the following morning, when he expressed his surprise at being alive, as he had taken, he said, an ounce of Fleming's tincture of aconite.

Remarks.—I sent what was left of the aconite to Messrs. Harvey and Reynolds, chemists, Leeds, and they informed me it had been prepared with "cleaned" methylated spirit, and was of rather more than the average strength—that is to say, two minims of it killed a young sparrow in three minutes and a half, while the same quantity of a fresh specimen took half a minute longer to accomplish a similar result.

The case seems to afford decided evidence regarding the action of digitalis. While making due allowance for the combined influence of the electricity and stimulants, it is difficult to conceive if the doctrine, which is far from obsolete, be true, that digitalis is a cardiac depressant, why its administration in this case should not have rapidly proved fatal. Such a conclusion carries with it the force of a demonstration. The old view which prevailed as to the action of digitalis seems to have been the result of an erroneous interpretation of facts. Diminished frequency of the pulse followed the administration of the drug, and it was therefore rashly concluded that the heart's action was thereby weakened. The fallacy consisted in believing that pace meant strength. A slower pulse is not necessarily an evidence of weakened circulation, but generally of the opposite.

It is but fair to state that the idea of using digitalis in this case was probably due to a conversation that we had had a short time before with Dr. J. M. Fothergill, the author of the Hastings Prize Essay for 1871.—*British Medical Journal.*

POISONING FROM THE FUMES OF CARBOLIC ACID—RECOVERY.

By R. E. Unthank, M.R.C.S., Eng., Appleton Wiske.

On Saturday, October 26th, about 1 p.m., I was called to attend Mr. P. a farmer in this district. On my arrival at his residence, I found him in violent convulsions with trismus, and blood passing

from the mouth in consequence of the teeth having wounded the tongue. He was quite comatose; the face and neck were livid; the breathing stertorous; the extremities and surface of the body were cold; the pulse was scarcely perceptible. I had him put into a warm bath immediately. In forty minutes the convulsions ceased, sensibility partly returned, the face and neck had assumed their natural hue, the breathing became quieter, the extremities and body were warm, and the pulse much stronger. He was then removed to bed, wrapped in blankets; a bottle of warm water was put to the feet, cold applications to the feet, and a strong mustard stupe to the nape of the neck. I saw the patient again at 7 p.m.; he was then perfectly conscious; the convulsions had not returned, the breathing was calm the body and countenance had increased in temperature, the pulse was 88, the tongue moist and clean, but sore. He had passed about half a pint of urine, which was more acid than normal urine; but I could not detect in it the colour of carbolic acid. He complained of giddiness, but no pain, in the head; he had pain in the face and neck, with the taste of carbolic acid in the mouth and throat, and a great deal of gastric irritation. I gave him an aperient, and afterwards a mixture composed of nitrate of bismuth, dilute hydrocyanic acid (*P.L.*), acacia mixture and water, a gargle for the mouth of chlorate of potash and tincture of myrrh, and a liniment of equal parts of belladonna and soap liniment, to be applied to the neck and face. At my next visit, on the 27th. at 10 a.m., I found him much better. The mixture, gargle, and embrocation, were continued; and he was allowed a light diet of boiled chickens, sago and milk. He improved daily, and was quite convalescent on the 30th. Had the warm bath not acted so beneficially in restoring my patient, I should at once have resorted to venesection. Mr. P. told me that on the day he became ill he was engaged in his usual occupation amongst the cattle, and had been exposed for three hours to the fumes of strong carbolic acid; and that as he was going to the house to dinner he was seized with giddiness, stupor, and convulsions. In the case of poisoning by carbolic acid, quoted in the *Journal* October 26th, from Dr. Mosler, the symptoms were similar to those under which my patient laboured.—*British Medical Journal.*

CANADA

Medical and Surgical Journal.

MONTREAL, FEBRUARY, 1873.

THE EMPEROR NAPOLEON.

For several years past the Emperor Napoleon has suffered from symptoms which gave rise to the suspicion of the formation of a calculus. These symptoms were accompanied by distressing pain in the rectum. Throughout the late war his bodily sufferings were occasionally very great, and it is now known that the physical and mental fatigue that he must have passed through up to his surrender at Sedan was rendered well nigh unbearable by the presence of a vesicle calculus. Dr. le Baron Corvisart and Dr Conneau, his physicians, declared that he was the subject of stone in the bladder. This was before the Emperor arrived in England in March, 1871. The almost absolute quiet which he enjoyed after his arrival at Chislehurst, greatly relieved the intensity of his sufferings.

In July last Sir Henry Thompson and Sir William Gull were summoned to Chislehurst, but the Emperor would not submit to a thorough examination. After this the illustrious patient went to the south coast of England, where he remained for several weeks, whence he returned with the symptoms more pronounced.

On the 31st October Sir James Paget saw the Emperor with Sir William Gull, and it was then recommended that an examination should be made to decide the presence or absence of a stone. At this time His Majesty was forced to give up horse exercise; subsequently driving in a carriage had to be relinquished, and then his usual custom of walking became distressing. For the next few weeks he was confined to his chamber, the irritability of the bladder being constant and very distressing. Sir Henry Thompson was again summoned, and on Tuesday, 24th December, passed a flexible catheter and ascertained that very little or no urine was left in the bladder after micturition. He advised a thorough examination to be made without delay. In this he received the support of all the medical men present. Accordingly, on the 2nd January, 1873, the examination was made under chloroform, and the presence of a stone the size of a walnut definitely made

out. Sir Henry believed it to be phosphatic, and crushed it, freely removing a large amount of *débris*. There were present on the occasion, Dr. le Baron Corvisart, Dr. Conneau, Sir William Gull, Sir Henry Thompson, Mr. Clover, and Mr. Foster. This was about 3:30 p.m. At 6 o'clock His Majesty had a slight rigor, followed by the usual febrile symptoms. His Majesty passed a good night; slept at intervals, and micturated freely. For the next few days the pain on micturation increased greatly, and the urine became charged with blood. The tenesmus and straining was considerable, and was not relieved by medicinal agents. It was therefore determined to repeat the crushing, and the 6th January was selected. His Majesty was placed under the influence of chloroform by Mr. Clover at noon of that day. On attempting to introduce the lithotrite a large fragment was found impacted in the prostatic or membranous urethra. This, after some manipulation was dislodged, so as to permit the passage of a lithotrite, and a second crushing practised, a larger quantity of the *débris* was removed than on the first occasion. The following day, the 7th, small quantities of broken fragments passed; urine offensive and bloody. During the day it was evident that obstruction existed far back in the urethra, but the irritation was such as to preclude the advisability of prolonged efforts at removal. The patient was watched with care and anxiety throughout Wednesday 8th; His Majesty's physicians visited him at 11 p.m., and 2, 4, and 6 o'clock a.m. of Thursday. At 9:45 a.m. he was so well that arrangements were made for a third crushing at noon of that day. A sudden and unaccountable change, however, took place at 10:25 a.m. Sir Henry Thompson was summoned to his bedside, and he found him much altered in appearance; symptoms of rapid sinking set in, and at 10:45 His Imperial Majesty breathed his last.

We copy from the *London Standard* the official report of

THE POST-MORTEM EXAMINATION.

"The most important result of the examination was, that the kidneys were found to be involved in the inflammatory effects produced by the irritation of the vesical calculus (which must have been in the bladder several years) to a degree which was not suspected, and if it had been suspected could not have been ascertained.

"The disease of the kidneys was of two kinds: there was, on the one hand, dilatation of both ureters and of the pelves of both kidneys. On the left side the dilatation was excessive, and had given rise to atrophy of the granular substance of the organ. On the other there was sub-acute inflammation of the uriniferous tubes, which was of more recent origin.

"The parts in the neighbourhood of the bladder were in a healthy state; the mucous membrane of the bladder and prostatic urethra exhibited the signs of sub-acute inflammation, but not the slightest indication of injury. In the interior of the bladder a part of a calculus was found, the form of which indicated that half had been removed. There were, besides, two or three extremely small fragments, none of them larger than a hemp seed. The half calculus weighed about three-quarters of an ounce, and measured 1¼ inch by 1 5-16 inch.

"There was no disease of the heart nor of any other organ excepting of the kidneys The brain and its membranes were in a perfectly healthy state. The blood was generally liquid, containing only a few small clots. No trace of obstruction by coagual could be found either in the venous system, in the heart, or in the pulmonary artery.

"Death took place by failure of the circulation, and was attributable to the general constitutional state of the patient.

"The disease of the kidneys, of which this state was the expression, was of such a nature and so advanced that it would in any case have shortly determined a fatal result.

(Signed) "J. BURDON SANDERSON, M.D.
"DR. CONNEAU.
"DR. LE BARON CORVISART.
"HENRY THOMPSON.
"J. T. CLOVER.
"JOHN FOSTER.

"CAMDEN PLACE, Chislehurst, Jan. 10."

Sir William Gull left Camden Place as soon as the autopsy was over, and was not present at the careful consideration and discussion of the facts which ensued by the other medical men assembled. He records a dissent on one point only, namely, the origin of the calculus, in the following terms, viz.:

"I desire to express an opinion that the phosphate of lime calculus, which formed the nucleus of the mass, was the result of prior cystitis (catarrhus vesicæ), and not the cause of it. This nucleus was of uncertain duration, and may even have been more recent than supposed in the appended report. However this may be, it was encrusted by two distinct and more recent formations of crystalline phosphate. The inner incrustation around the amorphous phosphate of lime was dense, and supported from the outer incrustation by a looser cellular but crystalline deposit of triple phosphate.

"It seems to my judgment more in accordance with clinical experience to regard a cystitis as a prior lesion, and that by extension, as is common in such cases, it affected subsequently the ureters and pelves of the kidneys. No doubt in the latter stages of the malady, the calculus became, by this formation and increase, an augmenting cause of the lesions.

"The other facts and statements I entirely endorse.

(Signed) "W. W. GULL, M.D.

"BROOK-STREET, Jan. 10."

A MEDICAL ACT FOR NOVA SCOTIA.

From the London *Lancet* we learn that a Medical Act for the Province of Nova Scotia comes into force on the first of May next. One of the provisions of this Act is, that any person, after May, 1873, practising as a physician or surgeon in the Province of Nova Scotia, for gain or reward, without being registered under this Act, shall forfeit a sum of twenty dollars for every day that he shall so practice. We certainly rejoice to hear that the medical profession in our sister province has obtained an Act of incorporation. With regard to the operation of the penal clause we fear that it will be difficult to enforce. There will be the same difficulty which has been experienced in Ontario. The clause being penal, it is held by a large number of members of the legal profession in that province that no judge would enforce it, because the Local Legislatures of the provinces do not possess the power of introducing clauses of this nature into any of their Acts. This power alone rests with the House of Commons for the Dominion. If this be the case, then will the Act of the Legislatures, both of Ontario and Nova Scotia, become inoperative. It will, therefore, become the privilege of each province to adopt what they think best, in respect to the preliminary qualification, the character of the curriculum, and the method of professional examination. Here their powers end. It remains for the Dominion Parliament to state who shall be recognised as Physicians and Surgeons throughout the Dominion, and what penalty shall attach for falsely assuming the title of Physician and Surgeon and exercising the functions of that calling.

We think it is a reflection on our common sense that there is such a lack of unanimity in our ranks. A Bill was submitted to the profession at the first meeting of the Canadian Medical Association, and five years of tedious argument *pro* and *con* had to be gone through, and then the bill was withdrawn by the proposer. There was no desire to amalgamate, no desire to endeavour to rectify

what did not quite suit an individual or a locality. Wordy argument, pointless and objectless, was freely indulged; men spoke and declaimed without actually being aware of the gist of their sayings, and at the end of five sessions of our Canadian Medical Association we separated with the same unpleasant feeling of estrangement. Like oil and water we would not mingle; our interests were at variance, and the utterances of many were looked upon with doubt and suspicion.

The fact is, as a profession we do not want a general Act. Individually, we should like to see it; but what will answer the Province of Quebec will not do for Ontario, and what Ontario asks will not suit Quebec; so that sooner than put up with half a loaf we prefer to go without our bread There appear to be conflicting interests which will interfere with the passage of a general Act. We have good reason to believe that the Province of New Brunswick will obtain an Act at an early date, somewhat similar in its provisions to that passed by the Nova Scotia Legislature, and then will we be in the very anomalous position of forming part of a confederacy, with separate and distinct legislation in matters medical; so that a votary of the liberal profession of medicine will find himself, when in any other province but his own, debarred from practising his calling unless he submits, at the discretion of the board of examiners of the province in question, to a further test of proficiency. The Province of Quebec forms a single exception to this rule, as we are governed by an Act passed in the tenth and eleventh year of Her Majesty Queen Victoria, whereby it is provided that "every person who has obtained, or who may here "after obtain, a medical degree or diploma from any recognised "university or college in Her Majesty's Dominions, shall be enti- "tled to such certificate without examination as to his qualifica- "tions."

In the article in the London *Lancet* above referred to, we find the following: "It will be interesting to see how the newly-created "medical boards and councils in our colonies recognise foreign "and American degrees."

On this subject we regret that our contemporary is so remarkably foggy. As far as our own Province of Quebec is concerned we have no power to recognise foreign and American degrees, and as we possess the power of prescribing a curriculum, no degree hailing from a university or college, even in Her Majesty's Dominions, that does not come up to the curriculum prescribed can be recognised, nor can its graduates obtain our license without a further test by examination. In Ontario British degrees or diplomas are unrecognised; all candidates for registration are obliged

to submit to examination. We are unable to state the provisions of the Nova Scotia Act, as we have not received a copy of that document, but we believe that it is in a great measure similar to our own, which would exclude all American and foreign graduates. The liberality of the Quebec Act recognises all British degrees and diplomas for what they set forth; but if a British graduate presents for license and that his certificates are defective in any particular, he would have to satisfy the Board of Examiners, by examination, as to proficiency on subjects upon which he does not appear as having passed any examination, as in this Province we all hold the double qualification, there being no distinction between physicians and surgeons. No foreign or American degrees are recognised, and a candidate hailing from an American university or college would be required to satisfy the Board: first, that he has fulfilled a curriculum similar to the one prescribed by the college. This will entitle him to an examination which, if he passes successfully, he will then receive the license to practice his profession in the Province of Quebec. This is substantially the practice in Ontario. In both Provinces it is held that two sessions of American colleges are equivalent to one in our own institutions. inasmuch as the sessions of the colleges of the United States are, with few exceptions, barely of four months duration.

AN EXPLANATION.

We exceedingly regret that our review of a pamphlet, headed "Meteorology and its Professors," which appeared in the last number of our journal, has been thrown into form and circulated amongst persons who do not receive our periodical. The review in question was an honest expression of our opinion and what we deemed a fair criticism of the subject under discussion. We must disclaim against the use which has been made of our type in the circulation of the article referred to.

THE TREATMENT OF LUNATICS IN THE PROVINCE OF QUEBEC.

It is with extreme regret that we have again to allude to the treatment of lunatics in this Province. Our attention was recently drawn to the fact that towards the end of last month, or within a few days of our publication, a number of lunatics were removed from the common jail of our city and sent to the asylum at Beauport. Upon inquiry we learnt that some of these unfortunates had been residents in the common jail for several months, and in one instance, the case of a woman, the lunatic had been in prison

since last June. We believe the custom is to retain the lunatics in our prison for a certain period, with a view to having them under the *surviellance* of the jail physician, who is expected to certify before a judge of the Superior Court that they are dangerous lunatics and fit objects for confinement in a lunatic asylum. This form has to be complied with, and no lunatic can, in Canada, be legally incarcerated in an asylum for the care and treatment of the insane, without the certificate of two medical men and an order from a judge of the Superior Court. We regard this as unnecessary, and certainly in the case of the lunatics from this part of the Province of Quebec it is a great hardship.

We have before alluded to insanity being a well recognised disease, having distinct exacerbations. In some overwrought brains the attack is acute in its nature, and if carefully and judiciously treated it will not pass on to that chronic form of the disease which is so apt to be permanent, or, at best, be attended by a lengthened attack of mental alienation. Why then place the pauper lunatic under a condition of such extreme misery that in his lucid moments he must feel himself abandoned and forgotten by his fellow man; an outcast from society; not fit even to herd with swine; cast off, shut up in a loathsome cell of a prison house—deprived of his freedom and denied the light of day, except that which struggles through the grated and barred window of his apartment.

Looking on this subject from an economic point of view, we we would ask, is there wisdom in this course of action? Insanity is a disease, granted, it is an acute disease, and that period, like in all acute diseases, most amenable to treatment is at the outset of the attack. Allow that period to pass unnoticed or maltreated, and what is the result? A confirmed and settled madness, and, as a consequence, an unfortunate fellow mortal thrown upon the country for care and support during the continuance of his natural life. This is the case of the pauper lunatic. The lunatic who has friends willing and able to succour him in his distress is placed under very different circumstances. His disease is recognised at the outset; he is at once placed under judicious treatment; isolation and removal from all sources of worry and annoyance are at once adopted, and in the majority of cases he is enabled to return to the bosom of his family and to his industrial occupation after the lapse of a few weeks or months.

This is no garbled statement nor overdrawn picture. There are many cases that could be cited even in our city, with its hurry and excitement where men striving to become rich, and labouring by night and day their over-taxed mental faculties gave way and tem-

porary derangeme t was the result; but how awful to contemplate if all had to pass through the harrowing routine of waiting in a filthy cell, whose entire surroundings are sufficient to drive a sane man mad, until the jail physician has made his report, and has satisfied the higher official of the correctness of his diagnosis. No; if we desire to remedy this evil we must first begin by providing extra asylum accommodation; and, again, our government ought to insist on inspection of lunatics as soon as possible after committal to the common jail of the district, and if declared insane, instant removal to a proper asylum for their care and treatment.

Death has been very busy in the ranks of the profession in England. Recent exchanges announce the death of Mr. Carden, of Worcester, a surgeon of eminence who, had he lived, would in all likelihood, have received the honour of election as President of the British Medical Association. Mr. Carden is known to the profession as having suggested and practised a method of amputation by the single flap, which is recognised and very generally adopted at the present day, and holds a prominent place in surgical literature.

Mr. Holmes Coote, Senior Surgeon to St. Bartholemew's Hospital and Lecturer on Surgery, died on the 22nd December under very distressing circumstances. For some months past symptoms of brain disease made their appearance, induced by over work, and the unfortunate gentleman had to be isolated in a lunatic asylum. His malady was regarded as temporary, and his colleagues, hopeful of his recovery, attended to his hospital work, which enabled him to retain the title and emoluments of office. Mr. Coote was a skillful anatomist, and active teacher, and a surgeon of considerable resources. His writings are clear and exhaustive, many of which will be found in "Holmes' Surgery". He died at the early age of fifty-six.

A NEW ANTIPERIODIC.

M. Doran has stated in a note to the Academy of Sciences of Paris (*Comptes Rendus*) that he has never known the Laurus nobilis to fail in quotidian or tertian intermittents. Cases yielded to it that were fruitlessly treated by quina. He has no doubt that in quartan ague it would be equally efficient.—*The Doctor.*