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THE

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ANNUS MEDICUS, 1878.

(Concluded.)

The year 1878 will be remarkable, in the surgical history of stone, not only for the publication of the record of Sir Henry Thompson's unparalleled statistics, but also for the good work done within its limits and the two new operations of Mr. Teevan and Dr. Bigelow, of Harvard. Sir Henry Thompson published, at a meeting of the Royal Medical and Chirurgical Society, the statistics of five hundred cases of stone in his own practice. Four hundred and twenty-two were treated by lithotripsy and seventy-eight by lithotomy, with sixty-one deaths, or a mortality of 12.7 per cent. The published cases of Cheselden, Martineau, Brodie, and Fergusson give four hundred and twenty-two cases, with sixty-nine deaths, or 13.98 per cent. The general conclusion reached was that lithotripsy was unsuitable for stones more than one inch in their long diameter. Mr. Teevan has this year combined the operation of lithotripsy with median lithotomy at one sitting, with good result, in the case of a patient suffering simultaneously from calculus, albuminuria, chronic bronchitis, stricture of the urethra and vesical stone. Dr. Bigelow's operation is called lithotomy. It consists in a prolonged and thorough crushing of the stone, (by a new lithotrite which he has invented) and the evacuation of the whole of the fragments at the time of operation by means of special-shaped large tubes, or catheters, and an aspirating table, a modification of Clover's and Nelaton's. The operation has so far been very successful, and not only revolutionizes our old ideas as to the tolerance or intolerance by the bladder of

mechanical interference, but also threatens to supplant the older procedures altogether. Mr. Berkeley Hill records a case in which lithotomy had to be performed twice within two and a-half months, owing to the cystitis favouring the formation of another stone. After the second operation, washings of the bladder by Clover's bottle cured the cystitis. Dr. Andrews, of Chicago, has invented a searcher for minute particles of stone in the bladder. It consists of a metal tube like a catheter, or *Sonde Coude* to which a rubber tube with ear-piece may be attached. This is much more practical and sensible than the application of the microphone, and is almost identical with Dr. Leftwich's auscultatory-sound. Mr. Maunder speaks very highly of Buckston Brown's dilatable tampon in arresting hæmorrhage after lithotomy. Dr. C. W. Dulles, in the April number of the *American Journal of Medical Science*, returns to his advocacy of the too-much neglected operation of suprapubic lithotomy. Mr. Jonathan Hutchinson's case this year, however, does not rebound to its favour. The value of quinine injections (20 grains to 25 ounces water, with a little sulphuric acid or brown vinegar) in bladder affections attended with urine loaded with pus and extremely offensive, has again been pointed out by Mr. Nunn, and confirmed by numerous other observers. Mr. Reginald Harrison, of Liverpool, bears testimony to the efficacy of the local treatment by suppositories, for the introduction of which he has invented a pessary catheter. Reuben A. Vance, of Gallipolis, records a case of inversion of the bladder in a female child reduced without difficulty. Pancoast, of Philadelphia, has introduced a new

urethrotome, on the plan of Syme's modified. Dr. Saint-Philippe records two cases of urethritis due to the internal administration of arsenic. Mr. Gay exhibited to the Pathological Society a specimen of gangrene of the penis, which he had removed, resulting from thrombosis of the pudic and prostatic branches of the internal iliac veins. The patient suffered from tonsillitis, followed by rheumatism of knees and ankles; had never had syphilis. The case was regarded as rheumatic phlebitis; recovery ensued. Dr. Francis Labat treats congenital hydrocele by injections of alcohol. At a discussion upon this subject in Paris lately, the opinion appeared to be pretty general that such cases should be let alone, having a strong tendency to spontaneous cure. Mr. Messenger Bradley treats varicocele by a new method, adopting the retroclusive form of acupuncture of the Aberdeen school. He passes a strong hare-lip pin between the veins and the scrotal-wall, and then turns the point back without penetrating the scrotum on the opposite side, and passes this time behind the veins and out at the point of entrance. Nepveu asserts that the existence of scirrhus of the testicle is undeniable, and he has collected nine cases. Its characteristics are:—Small volume, woody hardness, slight sensibility, slow progress (two to six years). At a discussion at the Surgical Society of Paris on castration, ligature of the cord *en masse* was highly condemned. Tillaux, Sée, Verneuil, and Després advocated the ligation of both arteries and veins. As an evidence of what an amount of traumatism the human body will sometimes stand, the two following cases are of interest:—Schneider, of Königsberg, records a case of gunshot wound of the chest, in which he successfully removed the clavicle and five ribs; and Mr. Hulke records a case of fracture of both humeri, rupture of the left brachial artery, abolished conductivity of left radial and median nerves, broken ilia, and laceration of the quadriceps extensor cruris just above the patella, followed by recovery, with little trace of permanent injury, except some limitation of flexion of left elbow-joint. Dr. Horace Evans records a case of traumatic tetanus, with recovery. The medicinal treatment consisted in biomide

of potash, chloral, and opium. Food was abundantly taken, but no stimulants. A case of traumatic tetanus in Manchester Infirmary, under Mr. Heath, amply demonstrated the power chloral hydrate exercises over tetanic spasms in sufficient doses (20 grains, with 20 of bromide, every two hours). Dr. Bigelow reports a case of tetanus from a rusty nail in the foot relieved in less than thirty minutes by introducing a drachm of chloral into the wound after enlargement by incision. Four fatal cases of tetanus are recorded, in each of which nerve-stretching appeared to afford relief. H. Busch, of Bonn, in the treatment of severe burns, commends disinfection of the parts and the application of lint spread with Lister's boracic acid. The treatment by immersion in a strong solution of soda has received commendation in all quarters throughout the year. The galvanic treatment of bed-sores has, during the year, met with many successes. Dr. Dyce Duckworth advises that, besides the use of a water-bed, patients with bed-sores should lie constantly with the buttocks and sacrum in thick linseed-meal poultices. Mr. Golding Bird's treatment of scrofulous glandular enlargements by the painless electrolytic caustic, which he has devised, has been subjected to further trial this year, with most satisfactory results. A French writer urges that the interior of these glands should be cauterized with nitrate of silver as soon as they are incised. Kappesser records four cases of the beneficial use of regular periodic inunctions of soft-soap in chronic glandular affections. Pasquale Pirochi reports very favourably of the local application of dilute tincture of tayuya in phagedenic and scrofulous ulcers and in blenorrhagia. The local application of peroxide of hydrogen is also highly commended. Mandelbaum treats chronic ulcers by Hebra's scraper and iodoform, followed by mercurial and soap plaster. He is pleased with his results. Mr. Jonathan Hutchinson, Mr. Callender, and Mr. Gamgee add their testimony to the value of Martin's rubber bandage in the treatment of ulcers of the legs. Dr. Martin indignantly repudiates Mr. Solomon's suggestion that his bandage is only a modification of the domett bandage in ordinary use in colliery practice; but Mr.

Sampson Gamgee points out that, although the idea is perfectly original with Dr. Martin, yet the method was long ago employed by Thomas Baynton, surgeon, of Bristol, and mentioned in his work in 1799. Duhring, of Philadelphia, records an example of that rare affection of the skin known as xeroderma. He also reports a case of onychomycosis trichophytina, and Dr. Graham, of this city, has also met with one this year. Mr. Alex. Hawkins records a case of sloughing from elbow to wrist. The wound was treated by skin-grafting—about 100 grafts being used, chiefly from the cadaver—and healed over in five weeks. Duhring and Van Harlingen have found the glycerole of the subacetate of lead chiefly useful in eczema rubrum of the legs, but it possesses no anti-pruritic properties. Bulkley and many others report very favourably of Martin's rubber bandage in eczema. Dr. Lindsay reports in the *Medical Times and Gazette* a case of eczema attended with a pigmented exudation, at times green, at others blue. Mr. Squire reports a couple of cases of port-wine mark cured by linear scarification. He showed at a meeting of the Medical Society of London a scalpel he had devised with sixteen parallel blades, the whole measuring less than half an inch across, for effecting this purpose. He also showed another instrument, consisting of thirty-six needles fixed into a plaster of paris handle, and not covering half an inch square. These should only be heated to a black-heat on their insertion into the skin. Dr. Jno. Brunton reports two cases of nævus cured by sodium ethylate, as suggested by B. W. Richardson. Dr. Sangster presented to the Clinical Society a rare case of urticaria pigmentosa. At the same meeting, Dr. Tilbury Fox read a paper on a hitherto undescribed affection of the hair follicle, which he has denominated cacotrophia folliculorum. Piedra is the new name given to an old affection of the hair, redescribed this year. Dyce Duckworth has introduced a new epilating forceps, figured in the *Lancet* of 6th April. Mr. Balmanno Squire reports the successful treatment of lupus of the face by linear scarification, as in port-wine marks. Prof. De Roubaix has invented a new suture needle, which is made by Denis, of Brussels. It con-

sists of a sharp-pointed hollow needle containing a crotchet-needle, which can be made to slide in or out, and to which, when protruded, a silk or silver suture can readily be hooked. Riedinger has found that the application of the induced current will prevent the hæmorrhage which is apt to follow the use of Esmarch's bandage in amputations. Mr. Lister, of London, this year read a paper before the Académie de Médecine, of Paris, on the effect of posture on the peripheral circulation, showing that elevation, acting reflexly, determined contraction of the arteries, and that, therefore, position alone sufficed to arrest hæmorrhage from the smaller vessels. Amongst the new works, or new editions of old works, on surgery we note the appearance during the year of the following:—Second edition of Gant's *Science and Practice*, Ashurst's *Principles and Practice*, second edition of Holmes's *Principles and Practice*, Vol. II. of Billroth's *Lectures on Surgical Pathology and Therapeutics*, Vol. I. of Hayes Agnew's *Principles and Practice*, Carnochan's *Contributions to Operative Surgery and Surgical Pathology*, Stinson's *Manual of Operative Surgery*, Sampson Gamgee's *Clinical Lectures on the Treatment of Wounds*, second edition of Hill and Cooper's *Manual of Venereal Diseases*, fasc. I. Jonathan Hutchinson's *Illustrations of Clinical Surgery*, eleventh edition of Druitt's *Vade Mecum*, Part I. of Balmanno Squire's *Atlas of Diseases of the Skin*, a *Handbook on the Diagnosis of Skin Diseases*, by Liveing, and the fourth edition of his *Notes on Treatment*, Lane's *Lectures on Syphilis*, further parts of Duhring's *Atlas of Skin Diseases*, Balmanno Squire on the *Treatment of Poriasis*, Erasmus Wilson's *Lectures on Dermatology*, delivered at the Royal College of Surgeons in 1876, 1877, and 1878, Otis on *Stricture of the Male Urethra and its Radical Cure*, Macnamara on *Diseases of Bone*, Francis Mason's *Lectures on Surgery of the Face*, fourth edition of Curling on *Diseases of the Testis, Spermatic Cord, and Scrotum*, and fourth edition of *Surgery of the Rectum*, by Henry Smith.

OBSTETRICS, GYNECOLOGY, AND PEDIATRICS.

Coming now to the highest branch of the profession, the once disdainfully neglected, but

now the most highly cultivated sphere of practice, we find that the men who are both physicians and surgeons, and something in addition, have not by any means neglected their opportunities or failed to advance the subject of their special care and study. At the late meeting of the British Medical Association, Dr. Wiltshire did good service in directing attention to the great improvement in practical results flowing from the improved character of the teaching in this department; but, perhaps, still greater benefit was conferred by his clear and forcible exposition of the lines and method in which this increased utility might be, and should be, still further extended. Upon the subject of puerperal mortality and its relation to obstetric teaching, Dr. Lombe Athill also, on the same occasion, gave utterance to facts and opinions of similar import; and these two speeches alone should suffice to mark an era in the history of the science. Henry L. Horton has this year warmly advocated the injection of atropine into the substance of the cervix uteri, for the purpose of diminishing the pains and shortening the duration of the first stage of labour. He cites eight cases in support of the practice. At the last meeting of the American Gynecological Society, Dr. Emmet read a paper on the necessity of early delivery, as demonstrated by the analysis of one hundred and sixty-one cases of vesico vaginal fistula. Nearly all the speakers agreed that the forceps were less dangerous than delay. Hélot confirms Budin's statement as to the utility of waiting till pulsation in the funis stops before ligating it. Dr. Rigby, of Preston (Eng.), records a case of labour complicated with occluded double vagina, in which delivery was happily effected as far as the mother was concerned. The vaginal orifice was so small as to be found only with great difficulty, and the whole canal so contracted as scarcely to admit the finger. Barnes's water-bags accomplished dilatation of the vaginal canal in an admirable manner; a face presentation, mento-posterior, was found, and the long forceps applied, but craniotomy had ultimately to be resorted to. Dr. Albert S. Morton, of London, has the courage to put on record a case of breech presentation, in which he fractured the femur in endeavouring to draw

down the leg. Schülein, Münster, Schede, Schücking, Kehler, and Chamberlain record the use of antiseptic injections and lavations after every labour; and Zweifel, Langenbeck, and Richter record a similar practice in their hospitals, attended with excellent results. Küstner and Fritsch both report cases of sudden collapse, unconsciousness, and rapid pulse supervening on the injection of disinfectant solutions into the uterus immediately after delivery. Salicylic and carbolic acids were the disinfectants employed. Dr. Gœlet, of New York, reports a case of hour-glass contraction of the uterus before the expulsion of the fœtus. In an interesting discussion at the American Gynecological Society upon the subject of post-partum hæmorrhage, Penrose advocated swabbing the interior of the uterus with linen rags dipped in vinegar; White, of Buffalo, agreed that the practice was a good one, but recommended dilute alcohol or hot water. Thomas maintained that the careful prevention of clots collecting in the uterus would suffice in the majority of cases. Albert Smith agreed, stating that the law of the contractile tissue of the uterus makes it contract if it is empty—a clot acts like a splint, and so does a piece of retained placenta. Atlee and Barker thought that when the hand is introduced it should be allowed to remain until expelled by the uterine contractions. Prevention being better than cure, the lesson of the whole is this: that the fundus uteri should be gently, but firmly, grasped the moment the fœtus leaves the uterus, and that this preventive stimulant should not be intermitted until firm uterine contraction has been established and maintained. The hæmostatic effect of intrauterine injections of hot water has been amply attested during the year by numerous observers, foremost among whom stands Lombe Athill, the Master of the Rotunda. Large doses of turpentine in post-partum hæmorrhage has formed the theme of many minor contributors to the English journals during the year. Saint-Philippe, and Chantreuil, and others report favourably of the use of ergotin hypodermically. Chantreuil records four cases of post-partum anæmia wherein transfusion appeared indicated, but which were successfully treated

by hypodermic injections of ether and alcohol. McClintock, of Dublin, records a successful case of transfusion after labour, after the hypodermic use of sulphuric ether had failed. Cæsarean section is an operation of such high fatality that it is pleasant to record an occasional favourable issue. In the case of death of a parturient woman, or one who has approached the term of gestation, it is the manifest duty of the practitioner, if he arrive within twenty minutes or half an hour of death, to endeavour to extract by the speediest method, and save the life of the child. Dr. D. Pedro Gallardo records the successful extraction of a living child by Cæsarean section five minutes after the death of the mother. Mr. E. M. Wrench, of Basley, reports a case of Cæsarean section in a dwarf with recovery of mother and child. He operated with the patient in a sitting posture. Prof. Späth records a successful Cæsarean section in which he removed the uterus. Müller, of Berne, records another in which he did likewise. He lays great stress on the good result of ligaturing the cervix, and thereby securing a bloodless operation. The operation of laparo-elytrotomy, suggested by Jörg in 1806 and performed by Ritgen in 1820, and which was reintroduced and, in fact, redeviſed by Thomas in 1870, has been attracting a great deal of attention at home and abroad throughout the year. Seven or eight cases (chiefly Thomas's and Skene's) are now on record, and the results have been so far superior to those of Cæsarean section that it bids fair to entirely supplant the older time-honoured (and now time-dishonoured) operation. It appears to avoid the risk of peritonitis, of intestinal incarceration and of septicæmia. There is less shock and no metritis, and the only special caution required is to avoid wounding the ureter or bladder. The abdominal wall on the right side is incised from the spine of the pubis to the anterior superior spine of the ilium; the peritoneum is then shoved up, and the vagina opened near its junction with the uterus (preferably by tearing after making a small incision); the mouth of the uterus is then hooked up and the child extracted through the abdominal wound. Ligature, the actual canterly and

compresses should arrest hæmorrhage if such occur. Mr. Hime, of Sheffield, is the first to perform laparo-elytrotomy in Europe since its reintroduction. He operated on the 14th July; the child was saved, but the mother died. On the 22nd Nov. Dr. Edis also performed the operation at the British Lying-in-Hospital. The child was saved, but the mother was in such a condition that she must have died under any circumstances. He is favorably impressed with the operation. Inventive genius is not yet satisfied with the ordinary mid-wifery forceps, notwithstanding the very general satisfaction they afford to those who have most occasion to use them, and consequently, new inventions are constantly appearing. Tarnier's forceps, introduced last year, have been favourably received by some, while others have sought to apply tractor hooks to the ordinary instruments in, order to make them fulfil one of the indications served by Tarnier's, and still others have given the common tongs a curve in the handle with the same object in view. At a meeting of the Glasgow M. C. Society, Dr. J. T. Whittaker showed a pair of forceps, both blades of which could be applied at once—this being effected by means of a ball and socket joint in the middle of the instrument which enables one blade to move round the other. The introduction of the hand (carbolyzed or otherwise) some time after labour, for the removal of a portion or the whole of the placenta, has not been an uncommon practice either before or since Matthews Duncan's writings on the subject, but one of the most remarkable instances yet recorded is probably that of Dr. Leslie Jones, of Blackpool, this year, who introduced his hand and removed the placenta six weeks after delivery. A remarkable evidence of the retentive power of the uterus and capability of resisting the effect of traumatism is this year recorded at the Lille Hospital. A young girl twenty-two years of age, pregnant and having reached the end of gestation, sustained a penetrating wound of the abdomen, followed by issue of some of the viscera. Three days afterwards labour set in, and in four hours a living and well-formed child was born. The woman made a good recovery, and the sutures which united the edges of the wound (eight centimetres long) were

not disturbed by the act of parturition. The vomiting of pregnancy is always a subject which attracts considerable attention; it is, moreover, one upon which the whole force of the pharmacopœia has been, time and again, vainly exhausted. It is, therefore, comforting to know that there are resources outside of the pharmacopœia to which we can appeal. Dr. Copeman, of Norwich, contributes five cases of its successful treatment by dilatation of the os uteri with the finger. Dr. M. O. Jones, of Chicago, and Dr. Marion Sims testify to the value of the application of the solid stick of nitrate of silver to the os and cervix uteri. Dr. Lloyd Roberts, of Manchester, has also found this beneficial. Lubelsky advocates the application of the ether spray to the epigastrium and back, continued for three or five minutes every three hours. Chaballier, of Lyons, reports good results from morphia hypodermically. S. C. Busey, of Washington, finds Girabetti's suggestion valuable, viz.:—3ss to ʒj doses of bromide of potash, in beef tea, every four hours. Even when the worst comes to the worst we are not without resource. Dr. Henry Campbell, of Augusta, Ga., narrates a case in which for twenty-five days rectal alimentation alone was the sole method of feeding employed. He also gives an account of some experiments on a kid to which nutritious enemata stained with some colouring matter had been given, and when the animal was killed on the 18th day, the colouring matter was found throughout the small intestine as far as the fourth stomach. Dr. Fordyce Barker (in the *American Journal Obstet.*) this year earnestly advocates the non-induction of premature labour in the albuminuria of pregnancy until after a thorough and persevering trial of appropriate treatment. What that treatment is, is so ably set forth in his work on puerperal disease as to need no mention here. Weber records a case of puerperal convulsions controlled by large doses of chloral. But the case is specially noteworthy for the simultaneous existence of albuminuria amaurosis, eclampsia, and inflammation of the kidney, together with polyarthritis, terminating in recovery. Dr. Angus Macdonald brought before the Edinburgh M. and C. Society the report of

and microscopical specimens from, two cases of puerperal eclampsia. It appeared that the Traube-Rosenstein theory of cerebral anæmia is inadequate to the explanation of these cases, and he advanced the theory that irritation of the vaso-motor centre was the cause of the brain-anæmia and the consequent convulsions. The cases are further remarkable for the existence of colloid change in the kidneys without obstruction. The discussion upon this paper showed that in Edinburgh, at all events, the chief reliance in the treatment of this affection is upon chloral and venesection. Morphia has had a good many advocates since Loomis's paper, and a number of cases favourable to its use have been reported. Fehling suggests an infusion of jaborandi as relieving the conditions pre-supposed by the Traube-Rosenstein theory. Several cases of extra-uterine foetation have been recorded in which recovery occurred; in one, the fragments of the foetus passed *per rectum*, in another, through Douglas's *cul-de-sac* and the vagina, and others were relieved by surgical intervention. W. F. Atlee records a case which he treated successfully by laparotomy. With reference to the source of the liquor amnii, Dr. Prochownik affirms that it is derived from the foetus itself, and contains urea (from skin and kidneys) after the sixth week. Dr. John Williams this year points out that the condition of the uterine vessels is the most reliable *post mortem* sign of parity or nulliparity, and exists for a year after delivery. It is pretty generally recognised that plethora may be a cause of sterility, and Prof. Chauffard narrates a case of this kind cured by venesection on the day preceding the menstrual flow. Dr. Lombe Atthill records a case of uterine hydatids successfully treated by the injection of hot water (not under 110°): and he regards the same treatment as a perfectly safe and most valuable means of arresting hæmorrhage in this and other forms of abortion. Ssotschawa records a case of double uterus and vagina, with pregnancy in both divisions of the uterus. Everett, of Stirling, Ill., reports nine cases of uterine fibroids treated by the Faradic current. He regards it as safer and superior to ergot. Dr. John Williams, of University College, reports two cases of fibroid tumour of the uterus suc-

cessfully treated by hypodermic injections of $\frac{1}{2}$ grain of sclerotic acid into the abdomen twice a week. Mr. Spencer Wells this year successfully removed a solid uterine fibroma, weighing 70lbs. Dr. Brumwell, of Mossley, records a recent case of complete inversion of the uterus easily reduced by pressure. Dr. Ford, of Harrogate, records another reduced on the fifteenth day by means of a cup-shaped stem and rubber pad worn for eight days with steady pressure. Mr. W. H. Wright records another reduced after a few hours and followed by puerperal hysteritis. Abbie C. Tyler, of Waukegan, Ill., records a case of reduction by Braun's Colpeurynter of a case of inversion of the uterus of eleven years' duration. Mr. Spencer Wells has this year successfully employed Mr. Golding Bird's painless electrolytic caustic in the treatment of uterine cancer. Dr. Galabin exhibited at the Obstetrical Society of Great Britain a new metrotome on the principle of Civiale's urethrotome. It is a modified form of Peaslee's, and cuts both sides equally and to a very moderate extent. Dr. Greenhalgh has introduced a new form of elastic uterine stem pessary for the cure of dysmenorrhœa, sterility, and the various flexions of the uterus. Numerous cases of its successful employment are recorded. Dr. Gardner, of Adelaide, this year records an extremely rare case of hydatids of the female breast. The name of the applications for cracked nipples is legion. Those chiefly recommended during the year are: a five per cent. solution of carbolic acid by Haussman and by Steiner, who cite numerous cases; powdered acacia, by an Italian physician (it should be dusted on after each application of the child to the breast); suberine (impalpable powder of cork) covered by goldbeater's skin comes recommended by Brochard. It is to be removed at each suckling, but the goldbeater's skin should still protect the nipple during that process. Smolski has discovered that iodide of potash is rapidly absorbed from the vagina. Professor Simpson exhibited at the Edinburgh Obstetrical Society two small round-celled sarcomata from the vagina. They are probably unique, as the uterus was healthy. Secondary vaginal sarcomata are not unknown, but primary have not been hitherto observed. George J.

Engelmann, of St. Louis, this year records two fatal cases of Battey's operation (so-called normal ovariectomy) in his hands. This is followed by a summary of forty-one cases of extirpation of the ovaries. Professor Simpson, on the 10th of June last, successfully removed both ovaries for dysmenorrhœa from a lady aged thirty-five. No reaction followed the operation, and the case progressed favourably. The year 1878 will stand pre-eminent in the annals of ovariectomy. Never in its history, or indeed in that of any great surgical operation, have such successes been recorded. Pronounced not many years ago by one of the boldest of French surgeons to be nothing short of murder, it stands to-day the safest of the capital operations. When the wonders of our day shall have become trite matters of every-day occurrence with a succeeding and perhaps not far distant generation, the great achievements of Thomas Keith and Spencer Wells may cease to excite that astonishment and admiration which they command to-day, but the faithful historian of the future will not fail to note for all time to come that to these two men is due the credit and the honour of that unprecedented record. Higher, honour, it is not within the power of kings or emperors to confer, and Nature's noblemen can well afford to carry to the grave, in their plain, unostentatious, and untitled dignity, such names as Thomas Keith and Thomas Spencer Wells. The question of the employment of antiseptics in ovariectomy is not yet decided; however the weight of authority, especially amongst German surgeons seems to be in favour of their use, Mr. Wells lectured this year before the College of Surgeons, on abdominal tumours. He has completed nine hundred operations of ovariectomy and has performed twenty-seven successive operations without a death. He does not adopt Listerism, and expresses himself as thinking that "if by scrupulous cleanliness germs can be deprived of a soil on which they thrive, Listerism is superfluous." This view is borne out by his experience and by Mr. Callender's statistics of amputations. "Safety from wound-poisoning," says an English writer, "lies in either plan, the greatest security obviously in a combination of both." The burning question of the treatment of the pedicle is still un-

settled: Mr. Spencer Wells prefers the ligature, and so does Knowsley Thornton: Keith prefers the clamp and cautery, but if antiseptics are adopted, the ligature will, doubtless, carry the day. Carl Schroeder, of Berlin, this year makes known the result of his ovariectomies for the last two years. The record is forty-seven cases and seven death, *i.e.* 14.9 per cent. He is a strong advocate of Listerism. Mr. Knowsley Thornton reports thirty-seven antiseptic ovariectomies with two deaths (5.4 per cent.) Two cases of ovariectomy are reported from Germany in which recovery ensued in spite of wounding the bladder and division of a ureter. Dr. John Williams records a case of antiseptic ovariectomy with good result, although the patient was in a state of pyrexia (temperature 102°, pulse 120). Dr. Heywood Smith records another successful ovariectomy during pregnancy without abortion. Barlow and Howard Marsh a successful ovariectomy in a girl aged twelve. Jenks, of Detroit, a case which threatened during the after treatment to prove fatal from tympanites. Speedy relief was obtained by inverting the patient—literally standing her on her head—when the gas escaped, *per anum* with great force. The most marvellous record is yet to be read. Keith has published another series of fifty cases and is a strong adherent to antiseptics. He did not, however, always use them, and so his cases cover both grounds. He expresses the belief that cancerous cases will no more be operated on for they can be recognised beforehand by the microscope, as Foulis, of Glasgow, has done so much to demonstrate. Without antiseptics, the proportion of fatal cases in his hands was one in seven for fourteen years; for a period of five years preceding the use of the spray, it was one in ten and a-half; and for the last five years, one in twenty-one. He attributes his success to (1) drainage in severe cases by large glass tubes perforated going to the bottom of the pelvis, (2) the use of the cautery as proposed by Baker Brown, (3) the employment of Koeberle's compression forceps, and (4) the substitution of ether for chloroform, avoiding after vomiting. With antiseptics, he thinks the intraperitoneal treatment of the pedicle answers best. He uses catgut ligatures or soft iron wire. He has now done forty-nine opera-

tions with the spray; two of the first eight died; the last forty-one all recovered. His record now stands twelve deaths in the last one hundred and fifty-six operations, three in the last seventy-five, and the last forty-one operations without a single death! In the department of pediatrics there are some curiosities to record. Mary Putnam Jacobi reports a case of acute fatty degeneration of the new-born Tapret records a case of acute pulmonary tuberculosis in a new-born child. This is one of the rarest of occurrences. Mr. Ingleby Mackenzie, of Rugby, met with a case of congenitally imperious prepuce. Carl Ruge reports a pneumothorax in a new-born child. Dr. Cuyley, of the N. E. Hospital for children, met with a case of pleurisy with effusion in a child four months old, treated by paracentesis and followed by recovery. This is the youngest case on record. Cheadle records five cases of ague in young children occurring in London. Handfield Jones and Cheadle record the occurrence of a scarlatinoid eruption in some cases of ague in young children. Lefebvre reports a case of extraordinary precocity, in a girl eight years old, at Oberpallen, in Luxembourg. She was born fully developed, menstruated at four years, and became pregnant at eight. Horatio Yates, of Kingston, Ont., another case of a girl aged two years and three months, presenting all the external signs of womanhood and having menstruated for three months—weighed forty-eight pounds. Leared, at the Pathological Society, showed ovarian cysts from twin infants. Each ovary contained a cyst the size of a filbert; one case also presented complete obliteration of the common bile-duct. Mr. Francis Caddell reports a case of umbilical urinary fistula in a girl aged eight. Mr. Wells Hubbard, of Lenham, records a case of varicella occurring in an infant twenty-four hours after birth. Cruse, in a paper on the condition of the urine in sucklings, has shown that the absolute quantity of urine increases rapidly from the second to the tenth day, and from the tenth to sixtieth slowly. That albumen is frequently present up to the tenth day, not afterwards. That compared with the adult secretion, the quantity in proportion to body-weight is three and a-half to four times greater.

Géllé reports favourably of the hypodermic injection of ether in the convulsions of teething. Veiger records the expulsion of a foreign body from the œsophagus of a child by means of two hypodermic injections ($\frac{1}{27}$ grain in all) of apomorphia. Bouchut directs attention to the value of chloral for producing anaesthesia in children for minor operations. He administers one, two, three, or four grammes at a single dose, according to the age, and reports nine thousand cases.

The bibliography of the year includes second edition of Playfair's Midwifery, second edition of Leishman's Midwifery, second edition of Milne's Principles and Practice, part two of Otto Spiegelberg's Text-book of Midwifery, second edition of Barnes' Medical and Surgical Diseases of Women, fourth edition of Thomas' Diseases of Woman, Emmet's Principles and Practice of Gynaecology, Chadwick's Manual of Diseases of Women, Goodell's Lessons in Clinical Gynaecology, The Mechanical System of Uterine Pathology, by Graily Hewitt, third edition of Savage's Surgery, Surgical Pathology, and Surgical Anatomy of Female Pelvic Organs, Angus Macdonald on the Bearing of Chronic Diseases of the Heart upon Pregnancy, Parturition and Childbed, Aveling on the Influence of Posture on Women in Gynaecic and Obstetric Practice, fourth edition of Tilt's Uterine Therapeutics, Bantock on Ruptured Perinæum Guerin's Clinical Lecture on Diseases of Internal Genitals of Women, Skene on Diseases of Bladder and Urethra in Women, Creighton on Physiology and Pathology of the Breast, third edition of Smith on the Wasting Diseases of Children.

MEDICAL JURISPRUDENCE, TOXICOLOGY, AND HYGIENE.

Two cases illustrative of the possibility of the occurrence of impregnation without penetration of the intromittent organ are this year recorded; one a case of vaginismus by Dr. Charles Roth and Dr. Rigby's case of occluded double vagina referred to in the section of obstetrics. Dr. John Williams has this year pointed out that the most reliable *post mortem* sign of parity is the condition of the uterine vessels, and this is good for a year after

delivery. Dr. Pinard communicated to the *Société de Médecine Legale* fourteen cases of subpleural ecchymoses of the new-born. These have formerly been regarded as evidence of infanticide by suffocation, but he shows that they may result simply from difficult labour, thus controverting Tardieu's opinion and confirming that of Liman of Berlin. A fatal case of pistol-shot without perforation of the skin is recorded by Dr. Hofmann. The pericardium contained one and a-half pounds of blood and the muscular tissue of the heart was torn in two places. Zipple relates a case in which a man during delirium, preceding the eruption of smallpox killed his child and was held irresponsible. At the *Académie de Médecine*, on the 19th of February, M. Roche described a method of distinguishing between real and apparent death. It consists in introducing a cotton thread into a vein, allowing it to remain six minutes and then withdrawing it. If it be covered with fibrin life exists; if not, death is certain. A good many cases of arsenical poisoning in children from the external use of violet powder sophisticated with the powder of white arsenic are recorded in London, England. Rouyer has found that a mixture of a solution of the sesquichloride of iron and the oxide of magnesium is the best antidote to arsenious acid and its salts. A death from phosphorus poisoning is recorded at the Netley Hospital, which was treated and regarded even *post mortem* as a case of acute atrophy of the liver. The fact of the poisoning was only discovered subsequently and verified by chemical analysis, and the case corroborates Wagner's opinion that "many of the recorded instances of acute atrophy were probably cases of acute phosphorus poisoning." The question of the toxic properties of copper has elicited a good deal of discussion during the year, and no agreement has been attained. A case of death, attributed to manipulation in the powder of copper was communicated to the Clinical Society of Paris by Dr. Feltz, of St. Denis. The woman, twenty-seven years of age, was engaged in the colouring of feathers and lived constantly in an atmosphere of copper dust. Death appears to have been due rather to the local irritant effects of the particles of copper on the skin and various mucous membranes rather than

to toxic properties in the metal itself. These are generally regarded as very slight. Leopold records a case of fatal poisoning by inhaling dust containing chrome yellow. Several cases of lead poisoning by flour, due to the stopping of holes in mill-stones with lead, are reported in England, France, and Norway. Dr. Geo. Hay, of Philadelphia, advocates the treatment of chronic lead poisoning by chloride of sodium, and not by sulphate or iodide of potash. Mueller Warnek, of Kiel, reports a recovery from poisoning by cyanide of potassium. The patient's stomach was full, and he soon vomited. He was placed in a warm bath and ice-water was poured upon his head from a height of several feet, with remarkable effect. Far too many cases of carbolic acid poisoning are on record. Now that it has come into such general use, its toxic properties should be widely made known and care in its use enjoined. A nurse in one of the Dublin hospitals died the other day through drinking it by mistake. Lime and mucilage make a convenient antidote, but Senftleben recommends sulphuric acid, forming innocuous sulphocarbolates. Viger records two cases of poisoning by methyl spirit, and regards it as a narcotic. Paul Guttman and Ernst Schwerin have independently reached the conclusion that death from the administration of peroxide of hydrogen is due to the liberation of gaseous oxygen in the blood, contrary to the opinion of Assmuth and Schmidt. Dr. Baillée says that ice in the rectum is useful in chloroform narcosis. Prof. J. A. Larabee successfully treated a case of chloroform poisoning by the hypodermic injection of $\frac{1}{10}$ th grain of digitaline, repeated in an hour and a-half, and followed by $\frac{1}{10}$ th grain of atropia. Dr. Francis Ogston records a case of poisoning by chloral-hydrate, and suggests stale sulphide of ammonium as a test. It is only necessary in using this to distinguish between the reaction given by antimony and chloral, the orange colour given by the latter deepening, on standing, to a dull brown. At the Medical Society of London, Dr. Milner Fothergill narrated a case of opium poisoning successfully treated by the hypodermic injection of one grain of atropia in a single dose. Dr. Seldon, of Norfolk, Va., reports several cases successfully treated by immersing

of the feet and legs in scalding water. The late Chantrelle trial in Edinburgh, in which the prisoner, having a knowledge of drugs, endeavoured to poison his wife with opium in such a manner as to escape detection, is a fit parallel to the distinguished Palmer case of 1856. No poison, or trace of poisoning, was found in the body *post mortem*. Stains on the sheet containing morphia and meconic acid were testified to by Drs. MacLagan and Littlejohn and Profs. Fraser and Crum Brown, and the criminal suffered the extreme penalty of the law. Laborde has laboured to show that death in acouite poisoning is due to failure of the lungs, and not of the heart, and that artificial respiration is the best antidote. Dr. S. A. Brown has found bromine to be a remedy for the eruption of poison oak, ivy, and sumach. Glisan, of Portland (Oregon), reports a case of successful treatment of strychnia poisoning by apomorphia. Barff's iron (magnetic oxide) promises to be invaluable in sanitary matters, serving an excellent purpose for water-closet pans, soil-pipes, traps, urinals, water-pipes, water-cisterns, and cooking utensils. Dr. Downes and Mr. T. Blunt, in a communication to the Royal Society, amply demonstrated the antiseptic properties of solar light, and detailed numerous experiments in which sunlight had sterilized organic fluids. A Russian Society of Public Health was inaugurated on the 10th of February, under the presidency of Dr. Zdekarin. An Italian Society of Hygiene has been formed under the patronage of King Humbert, Prof. Alfonso Corradi, president. The literature here is rather meagre:—C. B. Fox's Sanitary Examinations of Air, Water, and Food, Ogston's Lectures on Medical Jurisprudence, and Blyth's Dictionary of Hygiene and Public Health have appeared. In alluding to general topics we shall be as brief as possible. Of primary interest to those resident in the city, we note the inauguration and very successful conduction of the Toronto Medical Society, under the able and genial presidency of Dr. Joseph Workman. The International Medical Congress met in Paris, as did also the International Society of Hygiene, the Annual Congress of German Surgeons met in Berlin on the 10th of April (Langenbeck presiding); the American Association, at Buf-

falo, on 11th June (T. G. Richardson); the American Gynecol. Society, at Philadelphia, on 25th July (Wm. Goodell); the British Medical Association met in Bath, on 6th August (Dr. Falconer); the Italian Medical Congress, at Pisa, on 22nd September; the Canada Medical Association, in Hamilton, on 10th September (Jos. Workman). These meetings, although well attended, did not attract as many as had been expected, and while, as social reunions, they may perhaps serve the purpose for which they are designed, yet there is a rapidly-growing impression that, as scientific congresses, they are a delusion and a sham. It was suggested that Dr. Andrew Clarke's visit to Canada might perhaps be taken advantage of to form a Canadian branch of the British Medical Association, but his early return to the Old Country precluded any step being taken in that direction. The frightful epidemic of yellow-fever which prevailed in the Southern States from July to December, is now, happily, a thing of the past; but the lesson which it teaches ought to be good for all time. Through the beneficence of an American lady, a commission was enabled to investigate this epidemic and trace it to importation from the West Indies in May or June. Unfortunately, the commission is unable to recommend any new therapeutic measures. Yellow-fever has also prevailed during the year in the West Indies, Rio Janeiro, Madrid, and Senegal. Intermittent fever has also been unusually prevalent throughout the world. Cholera prevailed in Mecca and Jeddah early in the year, afterwards in Morocco, and some cases occurred in Malta, being brought thither by the Indian troops destined for Cyprus. The form of fever affecting the newly-arrived troops at Cyprus, not typhoid, and scarcely intermittent, has, for want of a more precise term, gone by the name of Cyprus fever, and is being competently studied. Plague was said to have broken out amongst the contending armies in the East during the early year, but it turned out to be typhus, apparently the inevitable accompaniment of the "arbitrament of the sword." Transfusion of blood is so difficult of proper performance that the substitution of milk is becoming pretty general, and the great record

of the year is favourable to the change. Heurot, Onimus, Verneuil, and Cortez regard any benefit accruing as being due to the stimulant effect of the process, and warmly urge the injection of a few drops of ether or other stimulant (capillary transfusion) instead. Deaths from chloroform continue to be recorded, and about a dozen are reported in the journals, the catastrophe appearing to be associated, in nearly every case, with fatty degeneration of the heart. Ether, too, has some fatalities to answer for. Spencer Wells continues to depend upon the bichloride of methylene, and it is astonishing that his example has not been more widely followed. Wachsuth, of Berlin, believes that the danger from chloroform is diminished by the addition of $\frac{1}{5}$ th of turpentine, and this combination has been very satisfactorily employed. Prof. Occhini, of Naples, has caused ammonia to be inhaled before the chloroform, with, as he believes, beneficial effect. A committee has been appointed by the Royal Medical and Chirurgical Society to determine the comparative merits of the Sylvester, Marshall Hall, and Howard methods of artificial respiration. The application of the microphone to sounding for stone has been tried by Sir Henry Thompson, and to auscultation by B. W. Richardson and Prof. Hughes. It appears incapable of transmitting the character of the cardiac sounds. Its use in cases of surdity may be more gratifying. The mismanagement and neglect of sanitary matters and public health by succeeding governments has led to the agitation this year for a Minister of Public Health. It is not utopian to hope that such a desirable recognition of the importance of this subject may be inaugurated before many years elapse. We have to welcome the appearance of *Brain—a Journal of Neurology*, and also the *Journal of Physiology*, under the able editorship of Michael Foster.

All are willing to admit that the medical profession annually contrives to bear its full proportion of "that weight of care which crushes into dumb despair one-half the human race"; but if an unthinking world would but take deeper cognizance of facts, it could not long be unaware that in the year of grace, 1878, the profession has contributed an inor-

dinate proportion to the discharge of that great debt which humanity owes to nature. It is our melancholy duty to recall, in closing, the names of the year's illustrious dead:—Wm. Stokes, 74; Fleetwood Churchill, 70; Elliott, of Calcutta; James Blundell, 87; Wm. Geo. Porter, 87; Thomas Pritchard and Robert Gardiner Hill, 67 (the fathers of non-restraint in the insane); Henry Jephson, 80; Walter Barton Stott, 79; J. F. Marson, resident at Smallpox Hospital for 40 years; John Hilton, 74; Robert Willis, 80; Eason Wilkinson, 64; Charles Ritchie, who had been practice for 63 years; Sir James Cox, 67; E. R. Peaslee, 65; L. P. Yandell, 73; W. F. Atlee, 70; Francis Gurney Smith, 60; J. Robert Vanmayer, John Morgan, 80; Claude Bernard, 65; Regnault, 68; Becquerel, 90; Voillemier, 69; Hirtz, 69; Raspail; Pascal; Anglada, of Montpallier, 69; Bazin, 71; Rameau, of Nancy; Amussat, 68; Achille Foville, 79; Hermann Lebert, 65; Karl Kohler, 89; Ehrmann, of Strasburg, 86; Rokitansky, 74; Bartels, of Kiel; Ernst Reissner, Kovacs Sebesteny Endre, Giuseppi Repozzi, Serafino Vierucci, 62; Ranieri Bellini, 68; and Luigi Ciniselli. More immediately connected with ourselves, E. M. Hodder, 68; Hector Peltier, 56; Robert Lee Macdonald, Bullen, of Hamilton, and Dr. Benjamin Workman, 84; Lister (Belleville), Wright (Oakville), Waddell of Nova Scotia, and Langstaff. Some young men, too, of brilliant promise, have had their career of usefulness and fame "nipt i' the bud," and having, through lack of years, missed the "full flower of their accomplishment," their names are not so familiar to our ears as they would have been. To this list, alas! already far too long, must be added that hecatomb of martyrs (a full hundred) who laid down their lives in the endeavour to stay that fatal Southern plague whose presence, had the oft-repeated admonitions of the profession been regarded, would never again have sullied our much-boasted civilization. Want of space forbids our making individual mention of them here, but their names are entered on that ancient roll of honour whose daily call elicits the response, "Dead on the field of battle." It is gratifying to observe the advanced years of many whose names are set down above, and

whilst admitting on the one hand that, in the words of the ancient maxim, "*Precandum est sit mens sana in corpore sano*," we also, on the other, cannot fail to have a deep appreciation of that bountiful dispensation of Providence which decreed that these sound minds should be incorporated in frames whose robust physical constitution enabled them, in the case of the majority, to extend the period of their great utility almost to the limit of man's mortal span. The beneficent nature of the physician's labour is its own reward, and his longevity is a direct refutation of the heathen proverb, *ον δι Ξου φιλουσιν αποθνησκι νεος*. Full of honour, as of years, they have gone over to the majority (*abiverunt ad plures*), and we esteem them happy, saying with Solon, *ο γαρ θανατος ακριβης ελεγκος του βιου, και το αχρι προς το τερμα ευδαιμονως διαβιωναι*. Idle repining at their loss were useless; "be ours the pain, be theirs the gain;" for them "the long day's task is done, and they must sleep." To quote the words of Dr. West, "almost without exception they may be said, in words used long ago, to have served their own generation, not themselves." Thus rising to the dignity of their high calling, they have trod in the footsteps of the Master—their great prototype and exemplar—and, departing, have left behind them a record and example which, in the years to come, may it be ours to follow!

THE DIFFERENTIATION OF COMA FROM ALCOHOL.—Dr. Macewen, of Glasgow, alleges that he has observed the temperature in a series of cases of fracture of the skull, opium poisoning, and apoplexy, and that in all these cases the temperature was found very much below the normal. Consequently this point is not to be relied upon for the purposes of diagnosis. He has found contraction of the pupil to be the rule in alcoholic coma. But he had accidentally discovered that if a patient was shaken or disturbed, the pupil dilated, but very soon contracted again. He therefore lays it down as a rule that an insensible person, who being left undisturbed for from ten to thirty minutes, has contracted pupils, which dilate on his being shaken, without any return of consciousness, and then contract again, can be labouring under no other state than alcoholic coma.

Selections: Medicine.

PURPURA HÆMORRHAGICA—HÆMORRHAGES OF THE RETINA—ABUNDANT EPISTAXIS—SERIOUS ANÆMIA AND HYPOGLOBULY—TRANSFUSION—RECOVERY.

BY M. BOUCHUT.

A young girl, thirteen years old, yesterday came into my wards attacked with a disease which was formerly called the spotted disease of Werthof, and which is nowadays designated by the name of purpura hæmorrhagica. I have traced its history in my "History of Medicine and Medical Doctrines."

This disease presents itself in children under three forms:—purpura simplex, purpura febrilis, and purpura cachectica. This last shows itself at the end of chronic diseases of childhood, and when you see it appear, you may be certain that death is near.

"In chronic diseases the appearance of purpura is a certain presage of death," I said in the aphorisms of my "Treatise on the Diseases of Childhood." This is true: and I have for thirty years never seen this sign appear without the fatal march of the disease proving the accuracy of the presage. At the close of pulmonary phthisis, of chronic enteritis, of the scrofulous cachexy, and of all the consumptions, this phenomenon appears and shows the close of life is near.

In addition to this variety of purpura, there is simple purpura and febrile hæmorrhagic purpura.

In our patient we have not to do with a simple purpura of the skin like those we very frequently observe here.

The form which you have before your eyes is rarer. It is the febrile hæmorrhagic type, there are frequent epistaxes, requiring plugging of the nostrils, and, although there may be no hæmaturia nor mæna, this case of purpura is serious on account of the anæmic and excessive hypoglobulic condition into which it has already thrown the patient.

A curious fact is that the child has no scorbutus, that is to say, swelling, softening, nor bleeding at the gums. We have here all that

which generally characterises scorbutus, less the essential lesions of the mouth. Again, there are these multiple hæmorrhages on different points of the body, without hæmorrhagic stomatitis, which characterise purpura.

In the young girl of whom I am speaking, what is the cause of the purpura? Usually this disease results from obstruction, defect of aeration, despondency, poverty, bad nourishment, deprivation of fresh vegetables. In our patient there is nothing of the kind.

She lives at Passy, one of the finest quarters of Paris, one of the best aerated, the one in which diseases and mortality are the least frequent and the least considerable. She has been for four years in the same boarding-house, where she was in good health. She is well nourished, eats fresh meat, drinks wine, and so appears to be in suitable hygienic conditions.

In spite of this she has purpura, that is to say, a blood disease characterised by fluidity of fibrin alteration of the red globules, relative increase of the white globules, and friability of the blood capillaries. By her nasal hæmorrhages, she is much enfeebled, and each day becomes more pallid.

She can no longer get up nor sit up in her bed. She hardly eats, the pulse varies from 120 to 140, and the temperature from 38° (100° F.) in the morning rises to 39° (101° F.) in the evening.

She has slight hæmorrhages of the skin, hæmorrhages of the subcutaneous cellular tissue, and with the ophthalmoscope we find a large number of retinal hæmorrhages of variable volume, announcing a profound hæmorrhagic diathesis.

What must be done against this condition, which becomes serious and upon which I make an unfavourable prognosis? We must seek to fill the indications.

First indication: To augment the plasticity of the blood.—We accomplish this by means of the vegetable or mineral acids internally, by astringents and hæmostatics.

I have here given sulphuric lemonade, one gramme (16 m.) of acid to the litre (quart): nitric lemonade, with the same dose of acid: the juice of three or four lemons in the twenty-four hours.

We may give Rabel water two or three grammes (30 to 45 minims) a day in draughts: extract of rhatany in draughts two or three grammes (30 to 45 minims) in twenty-four hours, finally, the perchloride of iron in sugared water, one or two grammes (15 to 30 minims) daily, or fresh defibrinated sheep's blood in doses from one hundred to two hundred and fifty grammes (25 to 62 drachms) a day.

The hæmostatic waters of Tisseraut, Lécuelle, Pagliari, Brocchieri, and others are not so good as the perchloride of iron diluted in water, nor the defibrinated sheep's blood.

These means employed in our patient have not succeeded. The hæmorrhagic diathesis increases and the anæmic weakness which it engenders is enormous. This leads us to the new indications I am about to show you.

Second indication: To remedy the blood destruction and to replace the blood lost.—When the loss of blood is so great as to endanger life there is only one more resource, transfusion.

Transfusion.—Who could believe that this conquest of anatomism, combatted by the official mandarins of medicine of the seventeenth century, and erased from the science by decree of the Faculty of Medicine, could have regained its place in medical practice? Yet it has risen superior to the condemnations pronounced against it. Those who condemned it are dead and no one now knows their names, whilst it has survived its enemies as the names of our compatriot Denys and the English Lower its inventors. So it is with all scientific discoveries which official corporations and professional jealousies wish to arrest as they pass. They retard their definite advance, they prevent progress for some years, for one or two centuries, perhaps, as in transfusion: but the light is shown a little later, to the shame of the pretended wise men who have judged bad and dangerous what they had not the intelligence to understand nor the knowledge to study.

Thus it was in the seventeenth century. It is still so in the nineteenth, and will still be so in future centuries. I could cite to you many recent examples, but this would be to place my person on the boards, and I prefer to forbear. Wherever there are privileged teachers whom

we commission to judge of what is progressive or discovered, experience shows that impartiality disappears and that the judgments given are inspired only by envy, friendships or self-interests.

Transfusion interdicted by the faculty of the seventeenth century has re-appeared in our days and has saved lives enough to have retaken its citizenship in surgery. As I have related in my "History of Medicine," vol. ii. page 325, it was first thought of in 1657, for the introduction of medicaments into the veins, by Wren, Clarke, Robert Boyle, Henshaw, Richard Lower. This was the idea which in our days modified by Wood became the hypodermic method. As to the transfusion of blood, this had been proposed in 1665 by Lower, who, at Oxford, tried it on dogs, and for the first time, in 1666, was realized in man by Denys of Dijon. His patient recovered. Following his example, Emmerey did the same with a second success.

The other trials were not so fortunate. Instead of attributing them to the procedure, they imputed them to the method. Then the visionaries of the period pretended to make of this treatment a panacea. They were going to restore youth to the aged, virility to the impotent, health to the consumptive, and they even dreamed of lengthening life. It was then that transfusion was forbidden by decree of Parliament at the request of the Faculty in 1675. It was then no more thought of: but in our days, questions of practice are no longer dependant upon the Faculty nor on learned Corporations. Each is obedient to the inspirations of his genius, if he has any, or at least of his knowledge, for those who only have that, a thing that has its own value. Now, in an unlucky day an unfortunate, who was losing his blood by reason of a considerable hæmorrhage, was about to die; blood was injected into his veins, and he was saved. They restored him to life as surely as a drowned person whom we draw out of the water and whom we restore to life. From that day transfusion of blood emerged from the abyss into which official obstructiveness had plunged it.

A great number of transfusions have been made and we count many successes. Quite recently again M. Bitot, of Bordeaux, performed

eight successfully on four of his patients. Only the indications and contra-indications of the operation must be precisely stated.

In my opinion, transfusion ought to be exclusively reserved for excessive anæmias endangering life and due to an arterial or venous wound, to a puerperal hæmorrhage, to certain uterine hæmorrhages, to umbilical hæmorrhages in the newly born (Bélina), to the hæmorrhages of purpura, or to some cases of imminent death from idiopathic anæmia. Every chlorotic blood disease and every hypoglobuly dangerous to life not connected with an incurable organic lesion, may be submitted to this treatment.

I will not say as much for it in cancerous and tuberculous cachexias and some incurable diseases that people have wished to treat by transfusion. The existence of an incurable lesion is a formal contra-indication, and to employ it under these circumstances is to compromise transfusion.

These are the indications for transfusion. But how is it performed? To-day there is no longer question of transfusing the blood of sheep or of any other animal. This method is abandoned. So it is with the transfusion of defibrinated human blood: and after having tried transfusion into the arteries we now generally do it into the veins.

To do this we make use of an ordinary syringe of good quality, of the special apparatus of Bélina, Callin or Mathieu, the description of which is found in our "Dictionary of Therapeutics": or of the very ingenious apparatus invented by Roussel, of Lausanne. A small trocar fitted to this apparatus is placed in the cephalic or basilic vein, or in one of the veins of the wrist or hand.

The blood furnished by a willing subject is gathered into the syringe itself or into the receptacle of the special apparatus which I have named. Some physicians warm the apparatus to 25° or 30° (77° or 86° F.), but this is useless if we operate promptly in five or six minutes: with this promptitude, the blood does not coagulate, and it coagulates even less, it is said, than if we warmed the instruments.

Once the apparatus is charged, we transfuse one hundred and twenty to one hundred and

fifty grammes (30 or 42 drachms) of blood in the adult, sixty or eighty grammes (15 or 20 drachms) in children and thirty grammes (7½ drachms) in the newly born.

After the operation, patients often experience a sensation of well-being: they are a little flushed and are reanimated. During the day they have at times an access of fever with chills, heat and sweat. Some, finally, experience in the evening a sensation of annoying weight in the arm operated upon. That is all.

Accidents of transfusion.—One of the accidents of transfusion is death from embolus, if the blood transfused forms clots, which by their volume may obstruct the exercise of the functions of the vessels. But, in addition to mortal emboli, it causes capillary emboli, giving rise to subcutaneous or visceral infarctus, like that I have described in my "Memoirs on the Infarctus of Diphtheria and Cholera."

Another danger to be feared, rather chimerical than real, is the transfusion of bacteria germs floating in the air, and especially in the air of a hospital ward filled with measles, scarlatinas, variolas, typhus, diphtheritics, etc. In this era of bacteriophobia, we ought to be terrified at transfusing into the veins blood which has come in contact with the air and which has traversed apparatus in which is always found a greater or less quantity of disease-bearing dust. But I do not insist. Up to this day no one has spoken of this danger, which ought to be very great, if the bacteria of which they speak so much were as terrible as they are pleased to say.

If we had this fear, there would, nevertheless, be means of dissipating it. It would be necessary to employ the apparatus of Roussel, of which I have spoken above, or the transfusion apparatus, still better known in Paris, and which has been designed and employed by a very skilful surgeon of Bordeaux, M. Oré. This process consists in receiving the blood of the donor by means of a canula placed in the vein and communicating with a receptacle in which a vacuum has been made.

Thence the blood passes by another tube through the canula, placed in the vein of the patient, and the blood passes from one organism to the other without undergoing

contact with the air. This is very ingenious. Some have wished to replace venous transfusion by subcutaneous transfusion, and Karst made trial of it in rabbits and Schareltz in man. The latter even published the most extraordinary fact that one could meet with and of the reality of which it is permitted to doubt a little. He cured a phthisis very rapidly by eight subcutaneous injections of blood in the dose of 40 grammes (10 drachms) an injection, in eight parts of the body, and this at the same sitting.

—*Gazette des Hôpitaux.*

LACTOPEPTINE.—This valuable aid to digestion has been before the public for several years, so long, in fact, that there are probably few physicians practicing in cities who have not already tested it thoroughly. To these it is unnecessary to say anything in commendation. To the country practitioner, however, it may be well to again refer to it. In the summer diarrheas of children we have found *Lactopeptine* of the very highest value. It is probable that weakening of the digestive powers is a very important factor in the causation of Cholera Infantum. We have found *Lactopeptine* a most important help in restoring these cases, when they have passed through the worst stages of that disease, as well as in warding it off when its onset seemed almost inevitable. In the exhausting vomiting of pregnancy, we have found it of very great value in enabling the patient to obtain some nourishment from the food ingested, even if it remained but a short time in the stomach. In the nausea and indigestion and cardialgia, which causes so much annoyance, even if no great danger, in the later months of gestation, *Lactopeptine* has proved itself almost a specific. The article used was manufactured by the New York Pharmacal Association.

CODEIA IN CANCER OF THE PYLORUS.—Prof. Austin Flint recommends 0.06 of codeia most highly in cancers of the outlet of the stomach, saying that in such a case it completely stopped the emesis and pains.

HICCOUGH.—Dr. Ortille, of Lille, reports a case of hiccough, which resisted all the usual remedies, cured by the hypodermic injection of two-fifths of a grain of pilocarpine.

Surgery.

ANÆSTHESIA IN CHILDREN.

BY M. DE SAINT-GERMAIN.

GENTLEMEN,—At the moment of resuming the lectures which for almost six years I have been giving at the Children's Hospital, I think it necessary to inform you of the modification which I intend this year to make in them.

Up to the present I limited myself to lectures strictly clinical, that is to say, to the description of affections which you have before your eyes and of operations which I performed before you, and, save some few lectures published by me on tracheotomy, I forebore to write anything, to cause anything to appear, fearing to be obliged to say one year the contrary of what I might have said the year before.

From this forbearance, it happens that I have seen published in different medical journals, reproductions of my cliniques, representing not always faithfully my views on such or such subject of infantile pathology.

So, on the one hand, to obviate this inconvenience and, on the other, to expose to you as clearly as possible the results of my hospital practice, on which I begin to have the right to rely, I have resolved, (outside of accidental facts which I will have to point out to you, from a clinical point of view, of the various affections peculiar to childhood), to edit and publish these lectures myself.

So this year I will occupy myself with anæsthesia in children, the treatment of fractures, torticollis, scoliosis, and club-foot.

Experience has taught me that orthopædy, from a teaching point of view, does not succeed in massive doses: so I will not administer it thus, and will take care to intercalate between more accessible subjects the different points of this troublesome and arduous study.

Observation and clinical notes will be the basis of these lectures: you will find in them but little history and pathological anatomy; on the other hand, you will see exposed in them, as minutely as possible, the details of my hospital practice. To defend myself in advance from every accusation of plagiarism, I begin by declaring to you

that I have invented nothing of moment; and that such or such procedure, such or such apparatus as I will point out to you without the name of the author, would, if we wished to be impartial, deserve many names, if we held account of the successive modifications that they have undergone before being adopted by us after a last transformation.

In a word, gentlemen, I will strive to give each his due; but if at times I happen, for the sake of clearness, to describe to you an operation or an apparatus as if I had invented them myself, do not accuse me of having appropriated my neighbour's apples, I shall not have done so purposely.

In this lecture, I will only take up chloroform, my experience being absolutely *nil* on the subject of ether, and numerous failures having demonstrated that chloral is only a hypnotic and cannot be used for anæsthesia even in operations of very short duration. I only speak from memory of the protoxide of nitrogen originally advised by Davis, and to-day almost exclusively reserved for the extraction of teeth, of the tetrachloride of carbon, extolled by Protheroe Smith, of bichloride of methylene, lastly of amylenæ. The greater part of these substances require special apparatus for their employment, and by this very fact would never be generally used.

Giraldès rightly said: If chloroform ought to be banished from surgical practice, it still ought to be retained in the surgery of children. In fact, without mentioning that wonderful fact of the suppression of pain, what precious elements of diagnosis we draw in anæsthesia, and how many questions, if not insoluble, at least very difficult to answer, become clear after the administration of a few grammes of chloroform.

Leaving aside the question of simulation, which, however, has its own interest from the point of view of certain arthralgias and which is thoroughly elucidated by anæsthesia, we might say that at each step the application of chloroform is indicated. I will be within the mark in saying that for six years the number of our chloroformisations exceeds six thousand five hundred.

I take torticollis for example: A child is brought to you with his neck twisted. You come near to examine him, he is afraid, he cries

out, he defends himself, impossible to distinguish in the midst of this agitation the part that must be attributed to the pain produced by certain movements or certain attitudes: you chloroform the patient, and after a very short examination, you are ready to state if the torticollis is permanent: if there is contracture or muscular retraction, if there is deformity of the vertebra; in a word, you establish in a sure and positive manner the form and nature of the torticollis you have to treat.

Another example:—A child has fallen on his elbow. The articulation is enormous, the slightest touch is insupportable and provokes cries. What are you going to do? Wait until the effusion has disappeared and permits you to make out the respective situation of the osseous protuberances? This is impossible for you, for the preservation of the movements will often depend upon a prompt intervention. Chloroform administered in this case allows you to recognise the lesion in its truest details. May be you have to do with a luxation, a subluxation, a transverse or vertical fracture of the inferior extremity of the humerus, or, finally, a fracture of the superior extremity of the radius or olecranon. Again, I say nothing of pure and simple sprain of the elbow, the existence of which I do not think it possible to affirm outside of every other lesion without inducing anæsthesia, likewise, in exploring the bladder, and far more in lithotripsy, extremely difficult operations without the administration of chloroform.

I remember when I took the service from the hands of our regretted colleague Giraldès, to have been somewhat terrified at the prodigality with which he gave chloroform in examining the eyes of children: since that I have likewise had proof of this resistance, the struggle to be sustained with most of them before uncovering the cornea, the necessity of using specula, instruments which the disordered movements of the child render a little dangerous when we have to do with a softened cornea. I have quite changed my first impression, and I esteem that in unruly children chloroform may be employed with benefit, not perhaps for the examination of eyes, but at least for certain cauterizations which we practise by the help of nitrate of silver, pure or mitigated.

You see, gentlemen, that examples of the indications for chloroform are numerous. I will not give you more, and I will now enter into the subject matter.

First principle.—Use only the best chloroform. In the city, always go to a trustworthy druggist, and take care to specify on your order that you wish chloroform for anæsthesia, the chloroform used in the preparation of liniments and pomades not presenting the necessary degree of purity. In every case, always smell your chloroform before using it; and do not hesitate to reject it whenever this experiment causes you to find an empyreumatic odour or an odour of chlorine, which reveals undoubtedly either a defective preparation or decomposition of the anæsthetic agent.

Although the chloroform of the hospitals is generally good, I remember this very year to have observed the odour of chlorine which I have just cited; and as I believed myself sure of the perfect identity of the chloroform in the hospital, I administered it the same morning to many children. The inhalation of this evidently altered chloroform produced in all my little patients attacks of obstinate cough, and in one of them a true convulsive cough, which did not cease without inspiring me for a moment with some misgivings. I complained to the druggist. He answered that the chloroform was always the same and that I was the author of its decomposition. According to my intern dispenser, the chloroform was decomposed by touching the white compress of linen, that I did wrong to place in contact with the neck of the flask in place of pouring the liquid on the linen drop by drop. I hasten to tell you this explanation is bad and in nowise satisfied me; for, allowing that I always employed the same procedure to empty the bottle, how was it that for the first time only I was called to observe the phenomenon. I caused the chloroform to be thrown away. I asked for other, and stuck to my opinion. Do likewise as occasion offers.

I suppose you supplied with excellent chloroform. The night before, you have advised the parents to give the child nothing to eat on the morning of the operation. Doubtless this is an excellent precaution, and I advise you always to take it; but I hasten to add that your advice will rarely be followed and that for the most

part the parents will not have failed before leaving home, or on the way from the house to the hospital, to gorge their children with cakes. Ought you on this account to send them back? I think not: there will result from it for yourself and the child only the inconvenience of more or less abundant vomiting. For certain operations, such as those which are practised on the eyes, it is true, it will be necessary to operate while the child is absolutely fasting, but in most cases it may be overlooked.

Second principle.—Always give the chloroform yourself, and do not confide it to an assistant unless for a very long while you have been able to convince yourself of his prudence and, above all, of the concentration of his attention upon the task entrusted to him. For my part, I am convinced that nine times out of ten accidents under chloroform are due to the negligence or, rather, to the distraction of the assistant, who, by taking a more or less lively interest in the operation performed by his chief, leaves the chloroform compress under the nose or mouth of the patient, looks at the different phases of the operation, and thinks of the chloroform only when it is too late to bring the patient back to life. I am always pleased to chloroform my patients myself until complete resolution, and then only begin the projected operation, taking care to move far away from the patient the compress which I have used to induce anæsthesia. Generally, operations are finished before the patients are awakened; if the contrary should happen, I cause the assistant of whom I am surest to administer a few whiffs of chloroform, for the purpose of prolonging the anæsthesia; if I have no assistant offering sufficiently serious guarantees, I charge myself anew with the anæsthesia and go on with the operation only afterwards.

Third principle.—In whatever situation you may find yourself, never give chloroform alone. In addition to the difficulties which you would experience from the point of view of the struggles of the patient, you might find yourself exposed to serious annoyance, of which quite a recent action at law will give you an idea. Refuse absolutely to give chloroform without help. Refuse equally to give it in your office, and compel the patient to be at his own house, lying in bed and undressed.

Before beginning, you ought to assure yourself that no constricting band exists either around the neck or thorax, and that at any moment, it will be easy for you to uncover the epigastrium. This manœuvre, which will permit you to watch the inspirations, will be your true regulator. It can be accomplished without in the least offending modesty, even in young girls, by leaving covered, either with the shirt or by the help of a sheet, the thorax on one side, the abdomen on the other, and leaving the epigastric region only absolutely uncovered.

The patient lying on his back, with the head on the same plane as the rest of his body and the pillow consequently taken away, you make ready a large handkerchief, folded up in such a manner that by its width it covers the entire face and by its length allows you, on the one hand, to cover the frontal region, and, on the other, may enclose the chin and easily reach the subhyoid region. It is well for this handkerchief to be thick. Too thin, it would not preserve a sufficient dose of chloroform, and would necessitate its too rapid renewal. I do not advise any of the apparatus specially designed for administering chloroform. Their least inconvenience is their never being at hand when we need them. Your handkerchief being prepared, you empty on its lower part a dose of chloroform sufficient to soak it thoroughly, and you present it to the patient in such a manner that with your left hand pressing the upper part on the brow intercepts the air from that side and, at the same time, maintains the head in the position which you have given it, while your right hand carries the inferior border, wet with chloroform, a little beneath the chin, so as to inclose it as in a kind of cup. Surprised at this unexpected manœuvre, the patient seeks to escape the inhalation of the chloroform, and I have seen very few children willingly lend themselves to the beginning of this operation, even then, in place of, as it were, stunning the patient, as I do, they proceed by insinuation, holding and shaking the handkerchief quietly at a certain distance from the nostrils and mouth. One of our young *confrères* has published, in a work on chloroform in children, that we ought to administer chloroform to them as though playing with them. I confess never

to have had this possibility, and, whatever kindness, whatever patience we make use of at the beginning, we finish always by what I believe far more practical to begin with, viz., giving it by force. It was in reference to this that I recalled to you the necessity of putting chloroform only at the bottom of the handkerchief so as not to apply the wetted portion upon the mouth or, still more, upon the eyes. I have seen in a young girl chloroformed without this precaution an acute conjunctivitis which was not slow, thanks to an epidemic of diphtheria we were passing through, to become infected. The patient is kept steady; his arms, legs, and head are well fixed, and the chloroform begins to be evaporated. Some children, at this moment, continue the cries they emitted before the application of the handkerchief, and under the influence of these cries, great respiratory movements are produced: anæsthesia is at times produced with great rapidity. Such is, however, not the rule, more often the child defends himself in his way and refuses to respire. I have seen children resist twenty, thirty, forty-five seconds before making an inspiration. This inspiration is at last produced, however, and the examination of the *creux epigastrique* reveals its intensity. After this first inspiration, a period of rest is manifested, and to obtain a second, then a third, I press quite strongly with the ends of the fingers upon the *creux epigastrique*, and this manœuvre most often suffices to restore the rhythm of the respiration. Children, you know, as well as many women, do not pass suddenly through the phase of agitation to arrive at the period necessary to obtain, calm supervenes, the eyes remain wide open, or are agitated by slight convulsive movements, the pupils, at first largely dilated, are contracted little by little: we have reached the period of tolerance, to which soon succeeds the period of resolution. In reference to this, I have often sought with my interns if the law of contraction of the pupils coincident with complete anæsthesia, was as exact in the child as in the adult; and I confess to have found it very often defective: most often the period of resolution is produced insensibly, and one might very often be embarrassed to recognise that it has arrived, if one did not have, on the one hand, the

experiment of the preservation or non-preservation of the sensibility and this by lightly pinching the skin of the belly or thigh, and, on the other hand, that loud respiration to which is given the name of stertorous. Most often when this phenomenon has been produced, anaesthesia and resolution are obtained.

Then throw far away from you the chloroformed compress, and do not expose yourself to the danger which consists, as I have seen, in turning over the patient, if we have to do with an operation for *fistula in ano*, for example, in such a manner that his nose rests on the compress charged with chloroform. The little girl who was the victim of this imprudence, or rather of this negligence, stopped breathing before my eyes, and would certainly have died had not the operation been of short duration.

Your operation is finished, the patient's wound is dressed, and still he is asleep (anaesthesia is very often prolonged beyond the time necessary for the operation): we see the parents, in their affright, asking for the child to be instantly awakened. Although I hold myself absolutely quiet when the respiration is rhythmical, I think it necessary to break the anaesthetic sleep and, above all, to chase away from the bronchi the chloroform which they still contain. With this intention, I lash the cheeks of the child with a wet towel, or rather, I slap them quietly, but always in the same place. This continuous percussion between the ear and the cheek has furnished me with excellent results in some cases which gave me trouble. I find this treatment much better than that which consists in suspending the patient head downwards, it is also much easier to repeat. After the patient has cried two or three times, the effect is produced, and we may give it up.

We would be greatly deceived if we believed that the time necessary to obtain anaesthesia is in direct ratio to the age of the children, and that more chloroform is necessary, and more time, in a child thirteen years old, for example, than to obtain the same result in one six months old. Practice often comes to demonstrate this proposition, and on a certain number of observations I have drawn up a table, which will show you, with but few exceptions, what I advance.

Let us note, in passing, that the application of chloroform by *sideration*, in the adult, has the great advantage of avoiding those painful wanderings, those unlooked-for revelations, which, however great care the surgeon may have taken to remove interested parties, may have a very bad effect.

There is more: I have had occasion to administer chloroform to twelve adults by the method which might be called *siderante*, and I have always been struck by the extreme rapidity with which complete anaesthesia was thus obtained.

Certain children require particular precautions and special watchfulness: I mean very anaemic children and those attacked with bronchial catarrh. In the first, anaesthesia is extremely rapid, but, as Chassaignac observed, it is absolutely necessary in them to avoid sudden changes in position during anaesthesia, and notably the too rapid passage from the horizontal to the sitting position. This manoeuvre, dangerous in all subjects, offers, above all in these, a special gravity, on account of the frequent tendency to syncope. This reflection is, above all, inspired in me by the recollection of a very anaemic child, twelve years of age, whom we chloroformed this very year for the application of the actual cautery to the knee. The inspirations were made regularly and anaesthesia was complete: hardly was the patient moved even slightly for the cauterisation when the respiration suddenly ceased, paleness became extreme, and for some moments we were obliged to practise artificial respiration, in order to cause this alarming condition to pass off. This, however, of the considerable number of children whom for six years we have submitted to the action of chloroform, was the only one who had inspired us with real anxiety. Allow me to say, in reference to this, that the true method to employ in accidents of apparent death, after the administration of chloroform in children, consists in artificial respiration practised by rhythmical massage of the sides. I much prefer this immediate, instantaneous method, to artificial respiration practised by the aid of the laryngeal tube, for which a certain dexterity is requisite, and to the application of electricity, which we never have immediately

at hand, and which consequently has the inconvenience of always arriving too late. Children attacked with bronchial catarrh take, on the contrary, very long to anaesthetise, and danger might arise from the relatively much greater quantity of chloroform it is necessary to make them absorb. So in them it is especially necessary to watch with the greatest care the inspirations, and after they cease to provoke them by producing them regularly by sudden pressures on the epigastrium. It will be equally necessary, in these subjects in particular, to watch over the sudden congestions, which manifest themselves by a very peculiar flushed condition of the face, and from this moment to cease the inspirations of chloroform.

I ought to say in reference to the manœuvre so frequently employed in the adult, and which consists in traction of the tongue outwards by the help of forceps, in order to prevent the application of its dorsal surface against the velum palati, that I have had only one single occasion of putting it in practice, in a large boy fifteen years of age, and this was held to prove that this manœuvre, so useful in the adult, is rarely indicated in the child, by reason of the extreme rarity of the accident itself.

I come to the contra-indications of chloroform in cardiacs. It ought to have happened to me, amongst the number of children whom I have anaesthetised, to meet with patients attacked with diseases of the heart, and I have never had accidents to deplore. I might argue from this that heart diseases do not constitute an absolute contra-indication of chloroform, but I prefer to report to you the case of a patient whom my friend and colleague, Dr. Labric, confided to me, and who was manifestly attacked with a hypertrophy of the heart. It was absolutely necessary to perform on this patient straightening of the cervical region, which had already for a long while been the seat of a chronic arthritis. We anaesthetised on many occasions the little patient, with a certain slowness, it is true, and an increase of precautions relative to the inspirations, and each time his operation was brought to a happy issue, without the slightest accident.

One might then advance that chloroform may be employed in all children without distinc-

tion. This is not so for the application of chloroform to all operations.

In fact, without mentioning tracheotomy, for which no one, I think, has ever proposed anaesthesia, inasmuch as in a large number of cases the patient is very anaesthetic on account of the affection itself. I believe, in spite of the practice of the English surgeons, that the administration of chloroform is most dangerous in amygdalotomy: it is so in harelip. Although I may have often given chloroform in a like case, I often find myself obliged to suspend the operation to allow the patient to breathe at the time of paring the strips. There falls at this moment into the buccal cavity a considerable quantity of blood, which, not being expelled by the anaesthetised patient, may be engaged in small quantities, it is true, in the respiratory passages. The time of awakening is less dangerous, by reason of the precautions we may take against this accident by causing the two strips to be strongly compressed by the fingers of an assistant. I advise then, especially in very young children, to abstain from chloroform in the operation for harelip.

The cares consecutive to the administration of chloroform have no special feature in children. It is, however, good to strive against the natural sleep, which in them often follows the sleep due to chloroform.

If it is in fact absolutely exceptional (I have never observed it but once) to be able to make the anaesthetic sleep succeed without transition to the natural sleep, it is, on the contrary, extremely frequent to observe a deep irresistible sleep succeed to chloroformisation, at the same time that the patient has been perfectly awakened soon after the operation. I do not think that there may be any veritable danger in this: it is, however, a good thing not to allow the child to be given up to this sleep, were it only to reassure the parents, who imagine that the anaesthetic sleep is not broken up and that the child will not awaken. So it is my custom to cause a strong infusion of coffee to be administered by spoonfuls. It is a good thing to advise the parents to allow the child to eat only three hours at least after the patient awakes: otherwise, one might expose

himself to see vomiting supervene, which it s at times difficult to overcome.

One word more before finishing. People have often attempted to dissuade me from administering chloroform to scrofulous and tuberculous children, in whom a painful operation, and notably the dressing of a coxalgia, was to be performed. The child might, they tell me, be seized with accidents of granular meningitis, and the parents would not fail to accuse you of having given rise to these accidents by the administration of the chloroform.

Convinced of the harmlessness of the anaesthetic agent and of its great utility in this class of cases, I have never given way to these counsels, and accepting the responsibility of my acts, caring very little, above all, for the absurd accusations of which, in case of complication, I might become the object, I have always practised the precept "Do your duty whatever happens."

The moment has come, I think, to repair an omission, which I acknowledge I have made purposely. You have probably remarked that in watching the patient submitted to chloroform we have not consulted the pulse. In fact, I believe this investigation useless, and perhaps even dangerous, if we trust to it in an exclusive manner; in this sense, that it has been observed that the pulse is still perceptible in a very clear manner at the time that the respirations have been wanting for a time already quite long and that, consequently, the position of the patient is as critical as possible.

HUGE VESICAL CALCULUS—Dr. Brown, of Barnsbury, brought to the first meeting of the Islington Medical Society, on the 22nd ult., a human bladder, containing three stones, weighing in all one pound and a quarter, less 20 grains. The largest stone weighed $\frac{3}{4}$ pound, less 20 grains; the next $\frac{1}{2}$ pound, less 40 grains; the third 40 grains.

DERMOID CYST IN THE FLOOR OF THE MOUTH.—Guetterbock reports a case of dermoid cyst, the size of a hen's egg, in the floor of the mouth of a man twenty-six years of age. It was successfully removed.

FRACTURE OF THE STERNUM.

BY H. T. MACHELL, M.B.

Read before the Toronto Medical Society.

Was asked to see Mrs. McMullen, 54 years of age, on the morning of the 22nd of October, 1878. She said, the night before, after undressing for bed, she had gone to the head of the stairs to call her daughter, but failing to make her hear, had attempted to go down, and on stepping on the first step it gave way, precipitating her to the bottom, a distance of sixteen or seventeen feet, stunning her thoroughly for the moment. She was unable to move, and had to lie where she was till her son and daughter came in, when they managed to carry her up to bed. As to how she reached the floor, or what she struck against, she could give me no information. She had slept none all night, and was then complaining of great pain over the breast-bone and on both sides of the chest. In fact, she complained of being bruised almost all over the body.

The pain over the sternum gave her the most annoyance, and on examining it, found it exquisitely tender to the touch, swollen, and considerably ecchymosed. A slight depression could easily be seen about the centre of the sternum, and by passing the fingers over it gently (the slightest pressure causing intense pain), some displacement could be made out. The parts were so tender that the manipulation necessary to obtain crepitation could not or would not be endured. On examining the left side, I felt greatly confident there was also a fracture of the eleventh rib.

I merely gave morphia in sufficient doses to relieve pain—the suffering, on attempting to move her even very slightly, was so great that I did not apply anything in the shape of a roller or adhesive straps to give support to the chest or relieve the intercostal muscles of part of their work. After three or four days the extreme sensitiveness disappeared. I then found that I had been mistaken concerning the rib. There was no fracture—it was merely a severe bruise, but I was able to make out that the fracture of the sternum was a transverse one between the third and fourth ribs. The lower fragment was the more prominent, and rode over the

lower end of the upper one, so that a sulcus, almost deep enough to lay a finger in, was produced. Once or twice I thought I was able to make out crepitation, but was not very certain. At all events it was not very satisfactory. She complained of almost constant pain at the seat of fracture, at a point directly opposite in the spine, and just beneath either clavicle, especially when she made the least movement. After giving her a good deal of pain I managed to get a binder of factory cotton around the chest, with a pad over the lower fragment. A small pillow was also placed just below the shoulders, so as to bend the chest backwards. This seemed to restore the parts to nearly their natural situation. As soon as the pillow was in place she volunteered the information that she was more comfortable than she had yet been. The bandage has been tightened and the pillow adjusted occasionally since then.

Four days ago I saw her. She was able to sit up in bed, and almost all the tenderness, discolouration, and swelling had disappeared. I might say she has no pain now at all, except when she moves. Movement from side to side, or reaching out any distance with either arm, or coughing severely, reminds her that she has a sternum. The chronic bronchitis and emphysema, which she has had for a number of years, seems to be considerably worse since her accident.

If the case progress as favourably as it has done so far, I suppose in the course of a few weeks my patient will have a practically useful sternum.

According to Gross, fracture of the sternum is not so very infrequent; but as I have neither had a case before, nor seen one, nor heard of one in the practice of my medical friends, I have thought it of sufficient interest to relate to the Society.

SODIUM ETHYLATE A CURE FOR NÆVUS.—

This substance is prepared by adding metal sodium piece by piece to absolute alcohol, in a wide mouth bottle, until effervescence ceases, when a deposition of a crystalline substance $\text{C}_2\text{H}_5\text{NaO}$ —occurs. The clear liquid is the part used. It is a potent caustic, causes less pain and scarring than nitric acid, and has been very successfully used for removing nævi.

SURGICAL WRINKLES.—Dr. John H. Packard, of Philadelphia, at a Conversational Meeting of the Philadelphia County Medical Society, made some remarks on practical surgery, of which the following is a brief summary. To avoid scarring in making superficial incisions he divides the skin obliquely. In introducing wire sutures he uses a needle with the eye near the point, passing the needle through the lips of the wound and then threading it. In using the ligature (and especially the elastic ligature, which he favours), for fistula in ano, he passes a bulbous probe through the fistula into the bowel, then the ligature is carried into the bowel on the top of the forefinger in the cleft between the free extremity and the nail; the probe is then slipped alongside of the finger, which is withdrawn, leaving the ligature; the latter is then twisted by its two ends until it grasps firmly the extremity of the probe, so that in withdrawing the probe the ligature is carried through the sinus. To tighten the elastic ligature he crosses the two ends and ties an ordinary ligature around them. Dr. Packard frequently makes use of reflected light by means of the laryngeal head mirror to examine the ear, rectum, or vagina. For the short operations of minor surgery, the reduction of dislocations, or opening of abscesses, the first insensibility from ether is of great advantage. Let the patient take the ether inhaler, or a sponge wet with ether, in his own hand, directing him to hold the other arm up in the air. After breathing the ether for a few minutes, the arm will drop, and you will have from 30 to 50 seconds of unconsciousness in which to operate. The sponge is removed, and the patient is ready to go about his business. It gives rise to no headache, nausea or other unpleasant symptom, and is particularly useful in children. The chief source of disappointment is in not recognizing the right moment, for if this is allowed to pass, unconsciousness will not again occur until full etherization. The first insensibility is sure to come. When the arm wavers, be ready, and as soon as it drops perform the operation. There will be no pain felt.—*Phil. Med. Times.*

APPOINTMENTS.—Dr. James B. Hunter, of New York, has been appointed attending surgeon to the New York State Women's Hospital.

Midwifery.

THE TREATMENT OF PREGNANCY COMPLICATED WITH CANCEROUS DISEASE OF THE GENITAL CANAL.

Dr. Herman read a paper on this subject. He first narrated two cases which had come under his own care. In one, labour was obstructed by a cancerous tumour of the rectum; the patient was delivered by cephalotripsy, and died from peritonitis. In the other, the cervix uteri was fixed by cancerous disease; abortion was induced at the end of the fifth month; the patient lived seven months afterwards, marked relief to the symptoms having followed the abortion. Then followed an analysis of one hundred and eighty recorded cases, collected from different sources, and classified. From them he drew the following conclusions: 1. That whatever influence cancer of the uterus might have upon conception was adverse to its occurrence. This was inferred from the small number of cases in which the patient was suffering from cancer at the time conception took place, as compared with the frequency of the disease. 2. That cancer of the uterus tended to produce the intra-uterine death and premature expulsion of the fœtus. This conclusion followed from the large proportion of premature births and of not only still-born, but decomposing children. 3. That the growth of cancer of the uterus was, as a rule, accelerated during pregnancy. This was supported by *à priori* arguments from general pathology, by the analogy of the breast, and by the improvement which often followed the termination of the pregnancy. 4. That with cancerous disease affecting the whole circumference of the os uteri, labour might be quick and easy, and the patient might recover well and live for months afterwards. 5. That when delivery under such conditions was accomplished by natural efforts, expansion of the cervix usually took place by fissuring. 6. That this fissuring did not usually augment the risk to the mother. 7. That imitation of this natural process, by making incisions, neither increased the danger at the time, nor accelerated the progress of the disease subsequently, and that

it often greatly facilitated delivery. 8. That the cases in which the cancer formed a tumour of great size or hardness were the ones in which delivery by natural efforts would not take place. 9. That where the above characters were absent, no definite criteria could be drawn from the local conditions by which to foretell the behaviour of the os uteri during labour. 10. That where delivery of a living child *per vias naturales* was impossible, such limited experience as we had showed that there was but little difference, as to risk to the mother, between craniotomy and Cæsarean section. 11. That a part of the cervix uteri might with safety be removed, either during pregnancy or during labour. These last eight conclusions were supported by the evidence of recorded cases. The author then considered, from these data, the practice to be followed. He assumed that the life of the mother was the first consideration, and that the production of abortion was justifiable if maternal life could be saved or prolonged thereby. The following were the rules of practice which he thought were indicated: 1. That where it was possible to remove the disease, either during pregnancy or at the time of labour, it ought to be done. 2. That where this could not be done, the safety of the mother was best consulted by bringing the pregnancy to an end as soon as possible. 3. That when labour had actually come on, expansion of the os uteri should be aided by making numerous small incisions in its circumference. 4. That dilatation of the cervix uteri being in progress, if uterine action should be deficient, and it should become necessary to accelerate labour, the use of the forceps was, as a rule, better than turning. 5. That when dilatation of the cervix uteri could not take place, even after incisions had been made, either from rigidity or magnitude of the tumour, Cæsarean section should be performed.—*Obstetrical Society of London.*

TREATMENT OF THE HÆMORRHAGE FOLLOWING ABORTION.—Dr. Boiters, of Berlin, dilates the cervical canal, injects a 3 per cent. solution of carbolic acid, and then goes over the whole of the inner surface of the womb thoroughly with Simon's spoon, after which the carbolic lotion is again injected. This method is claimed to be not only innocuous, but especially valuable in cases in which the uterus and surrounding tissues are in a condition of inflammation, and in which the uterus is bound down by adhesions.

ON SOME REMEDIES CAPABLE OF ALLEVIATING THE PAIN OF UTERINE CANCERS.

Dr. Aus-Laurence has tested comparatively various remedies for mitigating the pain of uterine cancer. From his observations, which were, however, few in number (20 to 30), it results that in cancer of the uterus, the ergot of rye, administered in doses of 30 minims every six hours, affords more relief than any other of the remedies commonly employed. It specially dissipates those pulsatile pains which commonly yield only to hæmorrhage. It probably acts by diminishing the afflux of blood to the womb.

The hydrate of croton chloral is also very powerful against the pains of uterine cancer. But it is adapted rather for those painful irradiations which are observed in loins and thighs and back, than for those manifested at the seat of the disease.

As a local remedy, the author prefers carbolic acid. It is applied to the affected parts with the aid of a speculum, by means of a tampon of cotton wool dipped in a concentrated solution; and the patient is made to take an injection of glycerated carbolic acid, night and morning. Lastly, recourse may also be successfully had to the application of small blisters over the kidneys, which may be dressed with a morphinated ointment.—*Lyon Méd., Jl. de Therapeutique.*

UNIVERSITY OF GLASGOW.—At the medical examinations held in October last, each candidate had to perform on the dead body a given dissection, and on this dissection he was further examined, or, it might be, on some portion dissected by another student. It was found that the plan could be very easily carried out; and the arrangements made by Prof. Cleland were such that two subjects would be sufficient for eighty students.

HAMILTON MEDICAL SOCIETY.—The following officers have been elected for the ensuing year.—President, Dr. G. McKelcan; Vice-President, Dr. Mullin; Secretary, Dr. Wolverton.

Original Communications.

CASE OF TUBERCULAR MENINGITIS OCCURRING IN THE WARDS OF THE HAMILTON CITY HOSPITAL.

BY T. W. MILLS, M.A., M.D.,
Resident Physician.

I submit an account of a case of *Meningitis Tuberculosa*, the diagnosis of which was made shortly after the patient's admission to the hospital, and confirmed by the autopsy, hoping that the subject may not be without interest.

Sept. 10. The patient, John —, æt. 16 years, was brought to the hospital about noon to-day—his father stating merely that he had been treated by Dr. — for remittent fever, and that his bowels had been moved only once, during the last seven or eight days; that he had vomited frequently. With this meagre history the boy was left with us—the father having suddenly disappeared while I had for a moment turned to attend to some other matter.

Condition on entering the Hospital.—The lad has a very scrofulous look; presents evidences of early rickets; is considerably emaciated. He is in a very filthy and verminous condition; expression of face pale and distressed; abdomen tense, retracted, boat-shaped; tongue a typhoid look; pulse strong, and but slightly, if at all, irregular—76 per minute.

Temperature 100 $\frac{3}{4}$ °; respiration irregular. No paralysis of any kind. Liver and spleen normal as to area of dullness; heart natural, except that the first sound is weak. Lungs, on account of patient's crying and restlessness, cannot be carefully examined, but seem healthy. Right pupil contracted—left dilated.

He has vomited once since admission—ordered milk diet with lime water. Later he began to cry out loudly, referring every now and then, as he did for days, to his head. "Oh! my head," and passing his hands frequently over the crown and back.

Sept. 11. Had a fair night's sleep. Food not retained very well; mustard applied to epigastrium. Beef tea added to his diet. As he is still restless is ordered chloral gr. xv, and a few hours later grs. xx. The latter was followed immediately by sleep.

Later: He does not vomit his food, but takes it only by dint of forcing and coaxing. Could not pass urine during the day. As he opposes violently the introduction of the catheter, he is tried in the sitting posture, and then succeeds with difficulty in emptying his bladder. Pupils variable; at times small and not responsive; again dilated and responsive. Pulse, a.m., 74, p.m., 70, irregular. Temperature $98\frac{2}{3}^{\circ}$. Condition in other respects much as before. As his own and family history were gathered with difficulty in scraps, it is presented nearly in the way obtained.

Sept. 12. A very large dose of Ol. Ric. moved the bowels; stool passed in bed; moderate doses of chloral control restlessness; pupils do not respond readily to light; urine examined—not albuminous. Temperature a.m., $99\frac{2}{3}$, p.m., 100° . Pulse a.m., 74, p.m., 70, irregular. A sister who does not live at home states that the boy has been employed in a tobacco factory "to stem"; both parents drink; take his earnings, and often the unfortunate youth has gone to work in the morning without victuals at all—this state of things having existed for some time. She thinks her brother had considerable fever for a few days (was ill from seven to ten days before admission); had now and then complained of his head, especially of pain in the crown for some time, but for the period specified above this was the most marked symptom. He has been losing flesh and failing for some little time—she cannot say how long—at least for six (6) weeks. All of importance that can be learned of the family history is that her mother's brother died of phthisis, and one brother died in infancy (nine months)—cause unknown. "He seemed to pine away."

Sept. 13. General condition much as yesterday; takes nourishment fairly. Left pupil more dilated than the right. Temperature, a.m., 98° ; pulse, a.m., 100° , small; p.m., 66° , irregular. Bowels moved once by a purgative chloral, grs. xv, at night.

Sept. 14. Did not rest well; pupils as yesterday. Respiration when closely watched found to approximate the Cheynes-Stokes type.

Sept. 15. General condition much as before, but inclining to stupidity; he whines but little; this state of things taken advantage of

to examine the lungs more carefully. Dulness on percussion in both infra-clavicular spaces. Pulse, a.m., 75° , irregular, strong; temperature, a.m., 98° , p.m., $99\frac{1}{2}^{\circ}$. Pulse and respiration more regular in sleep. Had no chloral last night—did not sleep—very restless. Night nurse reports that he pulled his shirt completely off four times.

Conversed with another sister of the patient's to-day, who confirms the statements of her sister, and lays stress on the extent to which the boy has been subjected to hardships—the patient has been plainly suffering from partial and continued starvation.

Sept. 16. Saw patient early this morning. The eyes were then drawn to one side; the head retracted; mental condition inclining to stupidity. Motion of bowels without purgative, passed in bed as were all his motions. Urine voided with difficulty: shows no albumen in testing. Pupils this morning as before (right contracted, left dilated); in evening both equally and widely dilated. Towards evening the patient brightens up, but is still delirious; is constantly picking at the bedclothes, or moving his hands in the air, as if catching at objects he sees; movements sometimes seem perfectly aimless; holds firmly any object he grasps; twitchings of upper extremities and mouth noticed. Temperature, a.m., $98\frac{1}{2}^{\circ}$, p.m., 98° ; pulse, a.m., 88° , regular, p.m., 92° , regular.

Sept. 17. Pupils equally and moderately dilated; eyelids half-closed, showing the sclerotics; eyes seem rolled up and somewhat fixed; retraction of head continues; trismus for a few hours; twitchings, &c., most worked in upper extremities; very little fretfulness; considerable stupor. As he has passed only about 2.4 oz. of urine in 24 hours, two pints were drawn off with the catheter, bladder was ascertained to be distended by percussion (absence of paralysis). No chloral given last night; did not sleep well. Temperature, a.m., $99\frac{2}{3}^{\circ}$, p.m., 100° .

Sept. 18. Condition in most respects as yesterday; urine drawn off as before; catheter resisted at the neck—when resistance yields the instrument enters suddenly (spasm of neck). Stupor continues. Temperature, $100\frac{2}{3}^{\circ}$ a.m.

99° p.m. Pulse, a.m., 116°, p.m., 108°, both regular.

Sept. 19. Face flushed in areas with paler intervals; the nurse reported having seen this morning certain purplish spots on the cheek, "as though some one had pressed it with his fingers."

At 4.25 p.m. the pulse is 160°, regular. Temperature has risen to 103°, and it is evident that death is approaching. The patient is now carefully examined for indications of paralysis.

The left leg does respond somewhat to the prick of a pin, but not the right, which on this account, and from its position (everted), is considered paralysed. Uses his hands feebly.

Sept. 20. Patient sank gradually, had no convulsion, and died quietly at 8 a.m. to-day.

Before passing on to the autopsy and pathology, a few remarks on the case, clinically, may not be out of place.

Although in this instance the phthisical family history is not very direct or clear; yet the patient himself was evidently strumous, and had, it would seem, been at some period the subject of rickets. Thoughtful men are now questioning as to where to draw the dividing line between scrofula and tubercle. This case formed, further, no exception to the rule that there is almost always, if not quite invariably, a prodromal stage of decaying health, so gradual, it seems to be, as to escape the notice of the less interested and observing of the sufferer's friends. A large array among the predisposing causes of the formation of tubercle in the brain or elsewhere, had in this case had full scope for a considerable time—such as imperfect ventilation, dirt, wretched housing and clothing, an unhealthy occupation, mental worry, and most notable in this case, food of such quality, and so deficient in quantity, that the unfortunate youth seems rarely to have known what it was to be free from hunger, at least during recent months. An absence of some of the common symptoms in this case, and the presence of a large number of diagnostic ones, renders it not a little instructive. The vomiting, as in all such cases, was without effort, and followed by no prostration; while the constipation was relieved by moderate doses

of purgatives. On this point authorities are greatly at variance; some stating that the strongest purgatives have no effect, while others maintain that the constipation is readily overcome. The latter is, in most cases, probably more nearly correct. The pulse and temperature it will be seen were typical. The *pulsus cephalicus* was well demonstrated in at least two of its stages—that of slowness with irregularity, followed by rapidity and regularity (or irregularity sometimes). The temperature curve copied from the chart shows surely irregularity enough: Sept. 10th, 100½°; Sept. 19th, 103°.

The irregularity is of a triple kind:

1. There is *no uniform* elevation in the evening.
2. It varies much from day to day.
3. It has no definite relation to the pulse.

The breathing deserves more than a mere record. Cheynes-Stokes respiration, it would appear, has been observed in a certain proportion of cases. Both the breathing and the pulse were comparatively regular during sleep; a matter worth a thought, as to "sighing," the term could never in the slightest degree be applied in this instance. If we assume the existence of the following three stages:—1. Brain Irritation; 2. Pressure; 3. Paralysis, it will appear (though all such divisions must fail to a greater or less degree to correspond with nature) that the patient must have passed through the first stage before he was brought to the hospital. He had, when in the wards, on no occasion manifested symptoms of photophobia or intolerance of sound, nor was the temperature ever high before the fatal end was close at hand.

Commonly, both urine and feces are passed in bed. There may be retention of urine however either from paralysis of the bladder or from spasm of the neck, which latter was, I am satisfied, the condition in this case. [See notes.] The urine was febrile, but in no instances was albumen or sugar detected. It seems sugar has never been found in this disease in the urine. The retraction of the abdomen was most marked; in fact, could not have existed to greater perfection or have been more suggestive of the "boat-shape." It will be

noted, too, that there was opisthotonos of moderate degree, and trismus of transient duration. The expression of face, the knitted brows, the whining cry, with but brief intervals of repose, the complaint as to the head, were so marked that the diagnosis was most strongly suggested by these symptoms alone. Once carefully noted, these points never fail to suggest the diagnosis in any case afterwards.

The absence of a convulsion entirely; of facial paralysis; of squint, a common symptom—indeed, of all actual paralysis till within a few hours of death, are not a little remarkable and somewhat inexplicable in the light of the extensive lesions revealed by the autopsy. From the all but constant dilatation of the left pupil during a considerable period, we must infer, as would be natural enough in *M. tuberculosa*, that the pathological phenomena were more marked on one side than the other of the brain. But a word or two in regard to paralysis. It is not common for both limbs on the same side to be paralysed. Again, there may be no absolute and total loss of power, but simply a greater weakness of one limb than another. That such was the state of things in this case, I am satisfied, though I hesitated to record the observation. There certainly was a tendency to L. facial paralysis—a tendency to ptosis, to strabismus [see notes]; but they were neither strongly pronounced nor persistent. Such phenomena, it will readily be seen, might escape from their transient nature the busy practitioner in private. There was marked tonic spasms of a large number of muscles.

Then, as the autopsy shows, the principal lesions were at the base of the brain, it is a little peculiar that the patient, instead of referring the pain to the temples, should have complained throughout of the crown and back of the head. It will be noted, however, later, that the scalp was adherent at the back. The taches méningitiques, on which Trousseau lays such stress as a diagnostic sign, are very lightly spoken of by other writers, among them Vogel. Certainly, if the diagnosis in this case had not been made before their appearance, it would have borne a very close relationship, in point of time, to the autopsy. As to the fatal issue, it is so much the rule, that the best observers state that cases of recovery from well-marked

tubercular meningitis are unknown, and that so-called cases of recovery from this malady are simply examples of errors in diagnosis.

Autopsy made Sept. 21st, 28 hours after death. (Several members of hospital staff present—Virchow's method followed in this and all autopsies.) *Rigor mortis* well marked; body that of a rather tall, slightly-made youth, considerably emaciated. Instead of giving a copy in full from the autopsy book, I shall tabulate, in a brief but instructive and striking manner, in two columns, the relations between the morbid anatomy, &c., in this and a typical case; which latter it so closely approaches as to be worthy, I venture to suggest, of special notice, and this is one of my chief reasons for laying the case before the profession.

TYPICAL CASE.

1. Scalp anæmic and adherent.

2. Hydrocephalic effusion.

3. D. mater may be adherent or not.

4. Tubercles but rarely found in D. mater.

6. Veins of the surface of P. M. deeply engorged; or only moderately so, (pressure.)

7. May or may not be obtrusive evidence of pus.

8. Deposits of lymph along central track of base of brain; minute extravasation of blood in various parts.

9. Opacities of arachnoid—most marked at base.

10. Congestion of vessels moderate in various parts owing to pressure from effusion.

11. N.B.—Miliary tubercles of various sizes and in different stages of development in the P. M., following especially the course of the vessels, and above all, the *M. cerebral artery*; where alone they may be found.

PRESENT CASE.

1. So — congested in patches posteriorly and attached in that situation.

2. 2.3 oz. of a serosanguineous fluid escaped when the cranium removed.

3. Not adherent—its veins moderately distended.

4. Not found.

6. Veins engorged.

7. Ordinary observation discovers but very little pus.

8. N.B.—A deposit of lymph, partly opaque—mostly of a clear, very light amber colour—of considerable depth extends from optic foramen to posterior margin of *pons varolii*, and thus burrows in the nerves all along this tract.

9. Exactly so.

10. Five vessels of the P. M. filled with crimson blood, but not engorged. *Puncta vasculosa* of brain substance fairly distinct.

11. N.B.—Well represented in this instance; the majority were not gritty; most abundant along course of *M. cerebral*, where they are clustered in scores.

12. Convolutions flattened from pressure.

13. Deep central softening; red or white.

14. Engorgement of choroid plexus.

12. Moderately so.

N.B.—On opening the ventricles a pink and white fluid of the consistence of cream found; floor of ventricles so soft it can be washed away by a gentle stream of water *let fall upon it*.

14. In this case thickened, softened, engorged.

LUNGS.

1. Tubercles found in lungs, and in the pleura; in lung tissue beneath the pleura; not usually confined to apices or any one locality; may produce calcification of coats and occlusion of vessels.

1. Pleurae not adherent; lungs crepitant throughout—are spots of congestion; tubercles in both pleurae and in different parts of both lungs; most numerous beneath the pleura a little way. Not so numerous as in brain and spleen by any means. Vessels occluded and calcified.

SPLEEN.

1. Often enlarged; then not so generally tuberculous.

1. Not enlarged; capsule covered with tolerably large translucent, smooth tubercles. Pulp *stuffed* with smaller ones, many of them gritty.

Kidneys may contain tubercles, but less common.

No tubercles found; capsules attached in parts rather firmly.

Intestines may contain tubercles—likely, if they exist, to be in Peyer's patches.

None found.

OMENTUM.

Often studded with tubercles.

Tolerably large, gritty, and abundant.

The other organs presented no special morbid lesions, and hence all notice of them is here omitted.

Certain eminent pathologists, among them Buhl, lay stress upon an original *cheesy focus of infection*, as giving rise to tubercles in every case in which they are found. This focus may ultimately itself disappear. In this, as in hosts of other cases, no such cheesy focus was found.

Wet pepper, it seems, throws off great quantities of carbonic acid gas. On board an English steamer in a Chinese port lately, a quantity of pepper was taken on board, a part of which had been wet with rain. Next morning a Chinaman went into the hold and fell senseless. Four English sailors went down to render assistance; they, too, became senseless; and finally all five, after a ventilation of the hold, were found dead.

Translations.

THE MANAGEMENT OF COMPENSATORY AFFECTIONS OF THE HEART.

The first effect of a mitral insufficiency or stenosis will be to produce a distension of the left auricle: on the one hand, because the blood passing slowly from this latter into the ventricle will have a tendency to accumulate; and on the other, because at each ventricular systole a portion of the blood will flow back into the auricle. After the lapse of a certain time this distension will reach the pulmonary veins; then little by little a stasis in the lesser circulation will supervene. In order to overcome the obstacle thus presented to the performance of its functions, the right ventricle will increase its muscular action, and will become hypertrophied, and at the same (?) time dilated. This difficulty will react upon the corresponding auricle, and the whole venous system, which empties into it, will in turn participate in the distension. Then the left ventricle will commence to modify its mechanism, because, the greater circulation being in turn affected, it will be forced to take on compensatory action and struggle against the obstacle thrown in the way of its functions. It will become hypertrophied and dilated. But, in the course of the vascular system important organs are comprised which exercise a preponderating influence in the formation of the blood—the liver and the kidneys. Thus to the mechanical disturbance of the circulation there will succeed, little by little, profound alterations of the blood, whence arises the condition designated by the name of cardiac cachexia. From the knowledge of this evolution are deduced the principal indications for the treatment of those affections of the heart known as compensatory. To keep the heart equal to its task by respecting the hypertrophy instead of combating it, as was formerly done, is the first indication. But it must not be forgotten that all exaggerated physiological muscular labour, although it at first produces increase in volume of the muscle, also gives rise to phenomena of chemical combustion which rapidly modify the structure of the muscular fibril, which in the end loses its contractile properties. In short, to the physiological augmentation of

its muscular elements soon succeed granulo-fatty degeneration and all its consequences of local affections of the heart and general perturbations of the circulation, whence the second indication, which corresponds to this second phase of the disease, to oppose as far as possible this granulo-fatty degeneration of the heart. It is upon these two fundamental data, based alike upon pathological physiology and clinical observation, that the entire therapeutics of mitral diseases rests. It will be readily understood that the means must materially differ in these two periods. In the first period—that which corresponds to compensatory hypertrophy—there should be employed merely hygienic precautions, such as the surveillance of bodily exercise, which should be regularised and moderated, and direction in the choice and exercise of professions, in view of the expenditure of force required. Amongst the avocations which the physician should, as far as possible, interdict to cardiac patients stand in the front rank the military profession, those which expose to cold or damp and which may provoke rheumatism, those which demand great efforts, those in which an impure air, or one charged with noxious principles, is respired, and those which predispose to anæmia, &c.; the regulation of food, which plays so important a rôle in the dietetic treatment of cardiac affections, as well as the condition of the digestive organs, abstinence from alcoholic beverages, and the cessation of the use of tobacco, &c. The choice of climate, in which those of excessive temperatures should be excluded, and that of habitations should be objects of the physician's consideration. Besides these hygienic precepts he should take moral hygiene into account: every great emotion, every passionate disturbance, every long-continued contention can only aggravate the condition of such patients.

Medicaments, properly so-called, only play an absolutely secondary rôle in the management of compensatory affections. Digitalis ought not to be employed, it is formally contra-indicated, and should be reserved for the uncompensated period or affections. Iron, which has been vaunted as so useful in anæmic affections of the heart, ought also to be proscribed. M. Dujardin Beaumetz greatly prefers quinine, and especially

arsenical preparations which, in anæmia, possess the advantages of iron without its inconveniences, and the tonic action of which upon the heart is happily associated with a stimulation of the general functions. Alongside of this remedy Dujardin Beaumetz places the bromide of potassium, whose action is still better indicated in uncompensated mitral affections. It may, however, be of service in this first phase in combatting the pains, sensations of oppression, and the insomnia, in a word, the whole series of nervous phenomena which are so often observed in the early stages of mitral lesions, especially in many nervous women. Baths, which hold a middle place between hygienic and medicinal measures, can only be permitted tepid; hot baths and cold baths, hydrotherapy and sea-bathing, and lastly the use of mineral waters (although it is true they have been recently recommended in special conditions) are also to be proscribed. Such is the *ensemble* of indications and contra-indications, therapeutic and hygienic, formulated by M. Dujardin Beaumetz.—*Gazette des Hôpitaux*.

TUBERCULOSIS OF PEYER'S PATCHES.— (LAVERAN.)

The alterations I have met with in the intestines of tuberculous subjects may be ranged under the four following heads:—

1. Isolated tubercular granulations, non-ulcerated, bearing much resemblance to hypertrophied closed follicles, from which it is difficult to distinguish them by the naked eye.
2. Annular ulcerations—the most frequent and most characteristic.
3. Ulcerations of Peyer's Patches and of the closed follicles.
4. Diffuse tubercular colitis; the large intestine thickened, ulcerated in a large number of points, presents the same aspect as in dysenteric cases, and, during life, symptoms of dysentery are sometimes observed—tenesmus, small, mucous, and sanguinolent stools.

I shall not delay over the annular tubercular ulcerations of the intestine; these are now days well known, and all authors agree in regarding them as the most characteristic intestinal lesions of tuberculosis. When you see an intestine affected here and there by these trans-

versal ulcerations, the long axis of which is at right angles to that of the intestine, you may affirm that you have to do with tubercular lesions; the diagnosis may be made at arm's length. The mechanism of the formation of these ulcerations is explained by the development of the tubercles along the course of the vessels of the intestine, which have, as you are aware, a circular (annular) direction; the effects of thrombosis are added to those of the tuberculosis. These annular ulcerations often give rise to strictures of the intestine.

If the tubercular ulcerations of Peyer's patches were always accompanied by annular ulcerations in other parts of the intestine the diagnosis of the nature of ulcerations would be easier; but such is not the case: lesions of Peyer's patches may be general in the absence of any annular ulceration, and you have under such circumstances lesions which present a great analogy with those of typhoid fever. The small intestine, in fact, presents a series of elongated ulcerations, the long axis of which is parallel to that of the intestine, and which are located opposite to the insertion of the mesentery, occupying, in short, Peyer's patches. These ulcerations are generally more numerous and more extensive in proportion as you descend towards the ileocaecal valve; sometimes a dozen may be counted strictly confined to Peyer's patches. In the interval between the chief ulcerations hypertrophied closed follicles, and these frequently ulcerated, are found. The mucous membrane of the large intestine presents a series of small ulcerations which appear to be located in the closed follicles. At first sight it appears almost impossible to differentiate these lesions from those of typhoid fever; nevertheless, an attentive examination of the intestinal ulcerations almost always enables one to recognize their true nature. The differences which exist between tubercular ulcerations of Peyer's patches and typhoid ulcerations may be summed up as follows:—

1. Tuberculosis of Peyer's patches is not accompanied by a tumefaction *en masse* of these patches, as in typhoid fever; there is, moreover, no typhic material on the surface of the ulcers; the ulceration occurs *in separate points*, and, in the intervals between the little ulcera-

tions, patches of Peyer sometimes preserve an almost normal appearance.

2. On inverting the intestine again and examining the peritoneal surface corresponding to the ulcerations, small tubercular granulations are often seen, which, it is unnecessary to say, are wanting in typhoid fever; sometimes, even, islets of granulations are detached from the white tracts of tubercular lymphangitis.

3. As a last resort in this differential diagnosis, there remains the histological examination, which, in those cases in which the ulcerations depend upon tuberculosis, reveals the existence of the typical granulations. For this examination fragments of intestine are hardened by the ordinary methods, and sections made. It is often necessary to examine a considerable number of sections before discovering well characterized granulations: these granulations are not seated in the superficies of the ulcers, but in the cellular tissue or even the serous membrane. To sum up, from an anatomical point of view, I believe that it is necessary to admit a variety of intestinal tuberculosis located in Peyer's patches, one which presents a great analogy with the characteristic lesions of typhoid fever.—*L'Union Médicale*.

Book Notices.

On Gastro-Elytrotomy. By HENRY J. GAR-
RIGUES, M.D. New York: D. Appleton & Co.

*Annual Report of the Pennsylvania Free
Dispensary for Skin Diseases.* No. 920 Wal-
nut Street, Philadelphia, U.S.

Fifty Years Ago. An Address to the Gradu-
ating Class of the Medical College of the
Pacific for 1878. By HENRY GIBBONS, Sen.,
M.D.

The Index Medicus, a monthly classified
record of the current medical literature of the
world, compiled under the supervision of Dr.
John S. Billings and Dr. Robert Fletcher, is
announced to appear in January, 1879, F.
Leypoldt, 37 Park Row, N.Y., Publisher.
This will be a useful journal for reference.

Prescription and Case Record. By JOEL A.
MINER, M.D., Ann Arbor, Michigan. Price
75 cents.

This is a very useful pocket prescription
book. By using a carbon paper a copy of
every prescription is recorded without the
trouble of writing it twice.

Miscellaneous.

We regret to have to announce the death, at the age of 17, of Mr. R. A. Lavell, son of Dr. Lavell, of Kingston.

Dr. Yates, of Kingston, has returned from Bermuda. We are glad to hear that his health has greatly improved.

The death of Cimiselli, of Cremona, who was the first to demonstrate the possible applications of electrolysis in surgery, is announced.

APPOINTMENTS.—Dr. W. Forrest has been appointed head-master of the Bradford High School.

PRURITUS VULVÆ.—Dr. E. B. Stevens, in the *Obstetric Gazette* for October, recommends the application of sulphurous acid, full strength, in cases of pruritus vulvæ.

REMEDY FOR POISON IVY.—A saturated solution of chlorate of potash applied locally to the affected parts is sure to cure or greatly improve, within twenty-four hours, the worst of cases.

FOR LICHEN URTICATUS.—Milk of sulphur, 2 oz.; hyposulphite of soda, 1 oz.; dilute sulphuric acid, $\frac{1}{2}$ oz.; gelatine or patent size, 2lbs., to be well mixed with a pint of warm water and added to a tepid bath, in which the patient should remain an hour twice weekly.

THUMB-SUCKING AND IRREGULAR TEETH.—Dr. Chandler states that there is no cause so productive of malformation of the bones of the mouth and irregularity of the teeth, as the habit of thumb-sucking during infancy, the different positions of the thumb giving rise to different kinds of deformity.

NEW MEDICAL JOURNALS.—The *Southern Clinic*, a Monthly Journal of Medicine, Surgery, and New Remedies. Published in Richmond, Va. C. A. BRYCE, M.D., and J. R. WHEAT, M.D., Editors and Proprietors. Terms, \$1.50 per annum. *National Medical Review*. Published at Washington, U. S. WALTER S. WELLS, M.D. Editor. *The Southern Practitioner*. Published at Nashville, Tennessee, monthly. Subscription \$1.00 yearly.

MALTINE.—At a late meeting of the British Medical Association, at Bath, in August last, among the exhibits of pharmaceutical and medical preparations, much interest was shown in one called *Maltine*, which may be described as a highly concentrated extract of *malted barley, wheat and oats*. Extracts of malt (*i. e.* malted barley) are pretty widely known, but this is the first example of a combination of the nutritious principles of these three cereals that we have seen; and the greater value of this combination is apparent, as wheat and oats are especially rich in muscular and fat-producing elements. This preparation is entirely free from the products of fermentation, such as alcohol and carbonic acid, and is very agreeable to the taste. Clinical experience enables us to recommend it as a nutritive and digestive agent, in virtue of its albuminoid contents, and its richness in phosphates and in distaste, likely to prove an important remedy in pulmonary affections, debility, many forms of indigestion, imperfect nutrition, and deficient lactation. It will, in many places, take the place of cod-liver oil and pancreatic emulsions, where these are not accepted by the stomach. The manufacturers, Messrs. Reed & Carrick, issue a pamphlet describing fully the process of manufacture, which no doubt they will supply to any medical man; and we are disposed to believe that maltine, which is less known here than abroad, is well worthy of practical attention.—*British Medical Journal*.

Births, Marriages, and Deaths.

DEATH.

At Berlin, on January 4th, John Philip Jackson, M.B., aged 36 years.

TWO fourth year Students are open for engagements as assistants to a medical practitioner, during the summer vacation from 1st to October, 1879.

Apply to this Office.

UNIVERSITY OF TORONTO

The time for acceptance of the CERTIFICATES OF MATRICULATION before the College of Physicians and Surgeons of Ontario, has been extended to MARCH 1st, 1879, after which date such Certificates will not be accepted in lieu of Matriculation in this University.
W. G. FALCONBRIDGE, M.A., Registrar.