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CANADA

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Original Communications.

ON WATER ANALYSIS.

By J. M. MACDONALD, M.D., L.R.C.S.E.

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(Read before the Canada Medical Association, at Halifax, 3rd August, 1881.)

I am frequently asked, by both medical men and laymen, to give some ready method by which the fitness or unfitness of water for domestic purposes can be ascertained. For answering the question several difficulties present themselves. The cost of apparatus for a complete examination of water is a serious matter; few persons have the time or inclination to carry out detailed chemical analysis, and, lastly, a conclusion as to the purity or impurity of water must be based upon a collection of all the evidence that can be obtained, rather than from the results of one or two tests. The vital importance of the subject and the lively interest which is being awakened in regard to it, have led me to attempt the description of water analysis, which will be sufficient for ordinary purposes, and at the same time fall within the means and the opportunities of every medical practitioner. Two years ago I imported from Savory and Moore of London, one of the Parks' cabinets for water analysis. It cost me, inclusive of duty about \$150.00, and nearly one half of the contents were destroyed by breakage. As few would care to go to that expense, I have endeavoured to meet the difficulty by preparing a small, cheap, and at the same time efficient case of chemicals and apparatus, which should not cost

more than \$12.00 or \$14.00. The case is 18 inches long, 5 inches wide, and 9 inches high. Inside it contains the following chemicals in three ounce bottles :

Standard solution of Nitrate of Silver.
 Sol. of yellow Chromate of Potash.
 Solution of Soap.
 Solution of Nitrate of Barium.
 Two shaking bottles for soap test.
 Nessler's solution.
 Dilute Sulphuric Acid.
 Sol. of Iodide of Potassium and Starch.
 Standard Solution of Ammonium Chloride.
 " " Permanganate of Potassium.
 Oxalate of Ammonium.

The apparatus consists of :

1 Flask with ring for boiling.
 2 India rubber caps with two necks.
 1 retort stand.
 1 Burette with clamp.
 India rubber tubing.
 Spirit lamp.
 5 Test tubes
 Glass rod.
 " measure 50 C. C.

In the examination of water, the coarser physical characters such as colour, smell, taste and transparency should first be noted. The *colour* is best observed by pouring the water into a tall glass vessel and looking down upon it. A perfectly pure water has a bluish tint, and the bottom of the vessel is clearly seen through several feet of water, while some waters are so turbid as to obscure the bottom when only a few inches are looked through. A green colour as a rule indicates vegetable impurity, a yellow or brown colour (excepting in peat water), animal impurity. *Smell* is best observed by warming, boiling, or distilling the water, when characteristic odors are frequently given off. The evidence derived from an examination of the physical characters is very unreliable, we must therefore proceed to an examination of the dissolved solids, which gives us the most valuable evidence. The examination is divided into the qualitative and quantitative.

I. *Qualitative*.—The most useful tests are the following :

SUBSTANCES SOUGHT FOR.	REAGENTS TO BE USED AND EFFECTS.
Reaction	Litmus and turmeric papers—Usual red and brown reactions.
Lime	Oxalate of Ammonium—white precipitate.
Chlorine	Nitrate of Silver and dilute Nitric Acid—White precipitate becoming lead colour.
Nitrous Acid	Iodide of Potassium and Starch in solution and dilute Sulphuric Acid—A blue colour.
Ammonia	Nessler's Solution—A yellow color or yellow-brown precipitate.
Nitric Acid.....	Sol. of Sulphate of iron and pure Sulphuric Acid—Olive colored zone.
Oxidisable matter including organic matter ...	Permanganate of Potassium—Red colour disappears.

II. *Quantitative*.—1st, Determination of chlorine: Prepare a solution of Nitrate of Silver by dissolving 17 grammes in one litre of water. Take 100 C. C. of the water to be examined, place it in a white porcelain dish. Add enough solution of yellow chromate of potash to make it just yellow. Then add the nitrate of silver solution from a burette and stir. A red colour is produced which disappears as long as any chlorine is present. Stop when the least red tint is permanent, then read off the number of C. C. of nitrate of silver used, each of these represents 3.55 milligrammes of chlorine. Multiply by 10 to give the amount per litre, and this again by .07 for grains per gallon. Chlorine in water is very suspicious of the presence of the liquid excreta of men or animals. If in addition we find nitric and nitrous acid, ammonia and phosphoric acid the evidence is very strong. Chlorine however may be due to strata containing chloride of sodium or calcium. In this case the water is alkaline from sodium carbonate. In some cases the chlorine is due to impregnation from sea water. It is then large in quantity, there is also magnesia, and little evidence of organic matter.

2nd, *Hardness*.—This is estimated by Clarke's soap test and by it we determine—

1st, *Total hardness*, representing the aggregate earthy salts and free carbonic acid.

2nd, The *removable hardness* or that which disappears on boiling.

3rd, The *permanent hardness* which is unaffected by boiling.

By the soap test can also be determined the amount of certain constituents such as lime, magnesia, sulphuric acid and free carbonic acid.

Apparatus required for the soap test.—Measure of 50 or 100 C. C. Burette divided into tenths of a cubic centimetre, two or more stoppered bottles to hold about 4 ounces. We also require the following solutions :

1 *Standard solution of Barium Nitrate.*—Dissolve 26 grammes of pure barium nitrate in 1 litre of water, or 18.2 grains to 1 gallon. A concentrated solution of ten times this strength may be made and diluted with nine parts of water when used.

1 *Solution of soap.*—Dissolve a piece of soft potash soap of the British Pharmacopœia in equal parts of water and alcohol ; filter and then graduate as follows :

Put 50 C. C. of the standard solution of barium nitrate into the shaking bottle and add to it slowly the soap solution from the finely graduated burette. After each addition shake vigorously and place the bottle on its side. Continue this until you have a thin beady lather over the whole surface permanent for five minutes. Read off the amount of soap solution used ; if exactly 2.2 C. C. have been taken the solution is correct. If less the soap solution must be diluted with spirit and water. The amount of dilution can be ascertained by a simple rule. Suppose 1.8 C. C. have been used and the whole of the unused soap solution measures 200 C. C. then

$$\begin{aligned} \text{As } 1.8 : 2.2 :: 200 : x. \\ x = 244.4 \text{ C.C.} \end{aligned}$$

The 200 C.C. must then be diluted with equal parts of spirit and water to 244.4 C.C.

With these solutions, and having all glasses, burette, etc., perfectly clean, for the least quantity of acid would destroy the accuracy of the process, we can proceed as follows :—

1. *To determine the total hardness of the water.*—Take 50 C.C.

of the water in a stoppered bottle, and add the soap solution from the burette, shaking strongly after each addition until a lather permanent for five minutes spreads over the whole surface without any break; then read off the number of tenths of soap solution used; from this number subtract 2, as that quantity is necessary to give a lather with 50 C.C. of the purest water. The soap solution which has been used indicates the hardness due to all the ingredients which can act upon it; as a rule, they are lime, magnesian salts, iron, and free carbonic acid. It is usual to express this hardness by degrees of Clarke's scale. Though dependent upon various causes, it is considered as so much calcium carbonate per gallon, one grain of calcium carbonate per gallon being one degree of Clarke's scale.

The calculation is as follows: Each tenth of the soap solution corresponds to .25 milligrammes of calcium carbonate; multiply this co-efficient by the number of tenths of soap solution used, and the result is the hardness of 50 C.C. Multiply by 20 for the amount per litre, and by .07 for grains per gallon or degrees of Clarke's scale.

To obtain the permanent hardness.—Boil a known quantity briskly for half-an-hour, replacing the loss with distilled water from time to time; cork the vessel and allow it to cool. Then determine the hardness in 50 C.C. as before.

Removable hardness.—This is very easily calculated, for we have only to take the difference between the total hardness and the permanent hardness and express the result as removable hardness. The permanent hardness is the most important, for it represents the most objectionable earthy salts, viz., calcium, sulphate and chloride, and the magnesian salts. The permanent hardness of good water should not exceed 3 or 4° of Clarke's scale.

The next step in our investigation is the

Determination of free or saline Ammonia, and of Nitrogenous Organic matter.—Ammonia in water is chiefly derived from organic substances, either vegetable or animal. In the detection and estimation of ammonia, the very delicate test known as Nessler's solution is of the greatest value. Nessler's solution is thus prepared: Dissolve 50 grammes of iodide of potassium

in 250 C.C. of distilled water ; reserve a small quantity ; warm the larger portion, and add a strong aqueous solution of corrosive sublimate until the precipitate ceases to disappear, then add the reserved solution of iodide so as to just dissolve the red precipitate ; filter, and add to the filtrate 200 grammes of solid potash dissolved in boiled water. Dilute to 1 litre, and add 5 C.C. of a saturated aqueous solution of mercury bichloride. Allow to subside, decant the clear liquid, and keep in a dark place. In addition to this solution, we require *Standard Solution of Ammonium Chloride*, which is of the strength of .0315 grammes to 1 litre of water ; each C.C. represents .01 milligrammes of ammonia. The mode of procedure is as follows : Place in a flask 250 C.C. of the water to be examined ; distill off about 120 C.C. ; measure this distillate carefully, test a little with Nessler's solution in a test-tube, and observe the colour ; if not too dark, take 100 C.C. of the distillate and put it into a cylindrical glass vessel, and place it upon a piece of white paper. Add to it $1\frac{1}{2}$ C.C. of Nessler. Put into another similar cylinder as many C.C. of ammonium chloride as may be thought necessary, and fill up to 100 C.C. of pure distilled water which has previously been proved to be free from ammonia ; drop in $1\frac{1}{2}$ of Nessler. If the colours correspond, the process is finished, and the amount of ammonium chloride used is read off. If the colours are not the same, add a little more ammonium chloride, so long as no haze shows itself ; if it does, then a fresh glass must be taken and another test made. When the colours correspond, read off the C.C. of ammonium chloride used ; allow for the portion of distillate not used ; multiply by .01 and we have the number of milligrammes of free ammonia in the 250 C.C. acted upon ; multiply this amount by 4, and we have the number of milligramme per litre.

Example.—From 250 C.C. of water 123 were distilled ; 100 C.C. were taken for the experiment ; 4.5 C.C. of ammonium chloride were required to give the proper colour ; then $4.5 \times \frac{1}{2} \times .01 \times 4 = 0.2214$ milligrammes of free ammonia per litre.

The free ammonia or saline ammonia is the ammonia combined with carbonic, nitric, or other acids, and also what may be derived from any easily decomposable substance such as urea. The

quantity should not exceed .02 milligrammes per litre in good water. Having calculated the free ammonia, the residue of the water in the retort is used to determine the nitrogenous organic matter as measured by albuminoid ammonia. The nitrogen is converted into ammonia by means of potassium permanganate, in presence of an alkali; the ammonia is then distilled off and estimated as above.

Dissolve 8 grammes of permanganate of potassium and 200 grammes of solid caustic potash in one litre of water; boil thoroughly to drive off any ammonia and destroy any nitrogenous matter. This is known as Wankhyn's solution. Add to the residue in the retort 25 C.C. of this solution; distil over 110 to 120. Calculate the ammonia as before, and state the results in this case as *albuminoid ammonia*. The standard limit of albuminoid ammonia in good water is stated by Wankhyn to be .05 milligrammes per litre; some other authorities place it at .08. Much albuminoid ammonia, little free ammonia, and almost entire absence of chlorides, is, according to Wankhyn, indicative of vegetable contamination.

Oxidisable Matter.—The chief sources of oxidisable matter in water are oxidisable organic matter and nitrous acid as nitrites. The estimation of these affords valuable evidence of the character of water and are conveniently determined by means of permanganate of potassium. We calculate first, *total oxidisable matter* in terms of oxygen required for its oxidation. Make a solution of permanganate by dissolving 395 grammes of the crystallized salt in 1 litre of water. Each C. C. of this solution yields 0.1 milligramme of oxygen in presence of an acid. Test its accuracy by a solution of crystallized oxalic acid, of the strength of .7875 grammes to the litre of water. This solution, acidulated with diluted sulphuric acid, should exactly decolorise an equal quantity of the solution of permanganate. The process as recommended by Woods is as follows:

“Take a convenient quantity of the water to be examined, say 250 C.C.; add 5 C.C. of dilute sulphuric acid (1 to 10); drop in the permanganate solution from a burette until a pink colour is established; warm the water up to a 140° F., dropping

in more permanganate if the colour disappears ; when the temperature reaches 140 remove the lamp, continue to drop in the permanganate till the color is permanent for about ten minutes. Then read off the number of C. C. and multiply by 0.1 to get the milligrammes of oxygen and by 4. to get the amount per litre." The amount of oxygen obtained by this process includes that from organic matter and nitrous acid. To separate these we must drive off the nitrous acid by boiling with sulphuric acid as follows : Take 250 C. C. of the water under examination ; add 5 C. C. of dilute sulphuric acid as before ; boil briskly for 20 minutes, then allow it to cool down to 140° F. add the permanganate solution until a pink colour remains for ten minutes ; then calculate as before. The result in this case must be stated as milligrammes per litre of oxidisable organic matter or *organic oxygen*.

Nitrous acid is now easily determined for it is represented by the difference between the two preceding processes. Each milligramme of oxygen is equivalent to 2.875 milligrammes of nitrous acid, the difference must therefore be multiplied by this factor and the result is nitrous acid in milligrammes per litre. From the foregoing tests we can gain sufficient evidence to form an opinion of the character of a given sample of water. The inferences from this evidence can be drawn as follows : A large quantity of nitric and nitrous acids, much oxidisable and nitrogenous organic matter, with much chlorine indicates recent sewage impregnation. With little oxidisable organic matter and nitric acid in large amount, we assume that more or less complete conversion of organic matter has taken place. Albuminoid ammonia and nitric acid in abundance, and free ammonia and chlorine in small amount is indicative of vegetable contamination. Little chlorine with much albuminoid and free ammonia, nitrous and nitric acids show contamination from gaseous emanations.

To those who have not the inclination or the opportunity to carry out an analysis such as I have described, a few ready tests may be useful. Any druggist can prepare from the formulæ already given the following solutions : Nitrate of silver, Nessler's solution, solution of permanganate of potassium and

solution of Iodide of Potassium and starch. Provided with these they can proceed as follows :

1. Observe the colour.
2. Observe the smell, particularly when the water is boiling.
3. The taste.
4. Add to a small quantity of the water, in a test tube or wine-glass, a little of the solution of nitrate of silver. If it gives a white colour it contains chlorides. This is a very suspicious sign.

To another portion of the water add a small quantity of Nessler's solution. A yellow colour or yellow-brown precipitate shows the presence of ammonia.

6. Add a few drops of the solution of permanganate of potassium. The pink colour remains if the water is pure ; it disappears if the water contains organic matter.

These simple tests would in most cases settle the question of the purity or impurity of a suspected water. The amount of disease and suffering caused by the use of impure water is in this country assuming terrible proportions. Epidemics of typhoid and other zymotics are constantly occurring which could be easily prevented by a little care in examining the water and discontinuing the use of impure wells. This is one of the evils arising from the want of public health legislation. Surely the day is near at hand when our Legislature will protect the lives of our people from this as it does from other forms of poisoning, and furnish us with the means whereby we can control the causes of preventible disease. Then shall we gain a happy victory over those dread enemies which are desolating the homes and destroying the lives of so many of the brave sons and daughters of this prosperous Dominion.

A QUARTERLY RETROSPECT OF SURGERY.

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Resection of the Stomach and Intestines.—Prof. Nussbaum of Munich says that it is not so very long since a suggestion, made by the surgeon, Carl Theodor Merren, to remove cancer

of the stomach, was looked upon as a "beautiful dream of youth." However, Prof. Czerny demonstrated practically five years ago that a person can continue to live after the whole stomach has been removed; he cut out the entire stomach and stitched the oesophagus to the intestine, the digestive functions were carried on very well, and the patient had good health. Three cases of resection of the intestine have lately been recorded by Czerny. In two, a coil of intestine, which had become gangrenous as a strangulated hernia, was removed; and in the third, a malignant tumour of the colon was excised. In one of the first two instances the patient recovered without fever or reaction of any sort; in the second, the patient died during the operation in a fit of vomiting. In the third case, a woman, aged 47, had a large tumour of the transverse colon, which was attached to a coil of the sigmoid flexure. Part of the sigmoid was first resected and the ends brought together with thirty-three sutures, and then a wedge-shaped piece of the meso-colon was removed and ligatured. A drainage-tube was inserted, and the wound in the abdomen closed by deep and superficial sutures. The patient recovered, and was living half a year after the operation. Antiseptic dressings were used.—(*Berlin Klin. Woch.* and *Dublin Journal of Medical Science*, July, 1881.)

A still more remarkable case of resection of the intestine, which was successful, has been reported by Koeberlé of Strasburg (*Gazette Hebdom.*, 1881), and in this case the operation was not done antiseptically. A young lady, aged 22, had suffered frequently from colic, and in October, 1880, symptoms of intestinal strangulation occurred twice in fifteen days. Since then she had suffered from persistent colic, which could hardly be subdued by hypodermic injections of morphia. Gastrotomy was performed on November 27th. Four strictures were found involving six and a-half feet of small intestine, the slightest having a diameter of one-sixth of an inch. He removed *six and a-half feet* of intestine, and tied twelve vessels. The ligatures from the two free ends of the intestine were tied together and attached to the fibrous tissue of the linea alba through a suture, which retained them in contact with the peritoneum at the inferior

angle of the abdominal incision. The ligatures of the mesentery were brought out at the inferior angle also, and were retained, together with the sutures of the intestine, in a fixed position. The superior part of the wound was partially closed. Enterotomy was performed on the third day; the ligatures and sloughs separated on from the 12th to the 13th day; the first alvine discharge took place on the 20th day. On the 25th day, communication with the intestine was almost closed, and six weeks after the operation the external wound was also closed and healed. According to latest accounts the patient feels quite well, and suffers no gastric disturbance.

The series of successful operations for *Resection of the Stomach* by Prof. Billroth and his assistant is perhaps the most remarkable advance which has of late been made in operative surgery, not even excepting the successful cases of excision of the kidney which are now not infrequently reported in the various medical journals. The fourth patient on whom Prof. Billroth performed the operation of resection of the stomach lived for several months, sufficiently long to establish the occasional advisability of undertaking this operation. An additional interest attaches itself to this patient from the fact that an autopsy was obtained (*Wiener Medizinische Wochenschrift*, No. 22.) Dr. Zemann, who directed the post-mortem, found that death had resulted from metastatic deposits of cancer throughout the entire peritoneum, duodenum and jejunum. The stomach remained quite natural in form, and no one would have guessed that fourteen centimetres had been removed from it. The woman had not suffered from any digestive troubles, but had taken and retained her food. At the point of junction of the duodenum with the lesser curvature of the stomach there was no stenosis, the thumb being easily passed through the orifice. The union was perfect in all respects, so that hardly a scar could be perceived along the line of suture.

Removal of the Spleen.—This old operation, which was formerly recommended for the cure of melancholy, has, from time to time, been performed, and quite lately a prominent surgeon of Detroit has incurred a great deal of obloquy by removing this organ for hypertrophy. Of course the operation was unsuccessful.

ful. It seems to be much more dangerous to remove it in human beings than in animals; in dogs it has been frequently removed without bad results. The *Gaz. Med. Lombardia* describes a recent operation as follows: "Dr. Chiarleoni performed, at the Casa di Salute, Milan, March 26th, splenectomy on a female patient suffering from paludal cachexia, in the presence of a large number of distinguished colleagues. The operation, executed with great method and freedom, was very laborious, owing to the extensive and strong adhesions of the spleen to the left edge of the liver and the diaphragm. It was impossible to tie all these adhesions before removing them, and a very considerable hæmorrhage from the surface ensued; and this, conjoined with a certain amount of nervous exhaustion, caused the woman's death a few hours after the termination of the operation. As far as we are aware, so bold an operation has not been executed in Italy except on one occasion by Drs. Zaccharelli and Fioravanti, at Naples, in 1549." (*Med. Times and Gazette.*) The propriety of such heroic operations is, to say the least, questionable, notwithstanding the "great method and freedom" with which they are "executed." Whilst on the subject of "heroic operations," I shall quote the following: "*Surprising Surgery.*—Those who are interested in the advance of operative surgery will not fail to be struck by some of the recommendations of German surgeons. During the proceedings of a congress held in April last, Dr. Zeller of Berlin suggested that, as a prophylactic measure in operations about the mouth and throat, the trachea should be divided about the 3rd and 4th rings. The lower end should be fastened at one corner of the transverse incision in the skin, the upper end at the other corner, so that the discharges from the operation wound may be prevented from obtaining access to the lungs. After the operation, the two ends of the divided trachea may be brought together again. That this operation would be attended with danger to the patient probably few persons would be prepared to deny—perhaps with a danger as great, or greater, than that it is intended to guard against,—and we must congratulate Dr. Zeller's dogs on having so well recovered from it. But in ingenuity of suggestion and

in boldness of performance, this operation of Dr. Zeller's cannot compare with that of Dr. Gluck (Berlin), for this gentleman hopes that, sooner or later, the complete removal of the bladder and prostate—which he has carried out successfully in dogs—may be introduced into surgery. It may, says Dr. Gluck, be performed on men without opening the peritoneum, and the ureters should be fastened to the abdominal wall; for in dogs, the sewing of them into the rectum has not well been borne, and the attachment of them to the cut urethra can scarcely be recommended. We shall watch with interest for Dr. Gluck's account of the first operation of this kind performed upon the human subject. We fear that not many even of our most brilliant surgeons will care much to perform it, and not many patients will care to submit to it when the most favourable result which can be hoped for has been explained to them."—*Beilage Zum Centralblatt für Chirurgie*; quoted in *Practitioner*, July, 1881.

Transplantation of Bone.—Dr. MacEwen, well known for the great success he has had with his osteotomies, presented a paper to the Royal Society on a case in which he had successfully transplanted bone (*Lancet*, May 28). The patient was a child 4 years of age, who had lost two-thirds of the shaft of the humerus by necrosis fifteen months previously, and in whom no osseous repair had occurred. The limb was of course useless. Dr. MacEwen proceeded first to make a groove in the soft tissues in the position of the bone, relying for this on his anatomical knowledge, and then placed in this groove small fragments of wedges of bone removed from other patients for curved tibiae. The result has been that a good new bone has been formed, the new portion has united firmly to the upper epiphysis and lower part of original shaft, and the bone is only half-an-inch shorter than its fellow. The operations were performed with strict antiseptic precautions. This is the first time this operation has been performed in a scientific manner. The necessity for the operation is fortunately rare, as nature generally is so skilful in the repair of bone that the interference of the surgeon is seldom needed. It is strange that before Dr. MacEwen had made his case public, Mr. McNamara, of the Westminster Hospital, intimated to his class

his intention of transplanting bone to supply a deficiency in the tibia of a child. This he has since done, using part of an amputated metatarsus in the transplantation.

This operation resembles greatly that which is said to have been in vogue amongst the Bulgarian peasants for years, viz., when a man has had a compound fracture of the humerus, tibia or other long bone, with considerable loss of substance, they cut out a piece of bone from a living sheep or cow and transplant it into the human subject. Travellers say the results are marvellous, and that the patient almost invariably recovers without any shortening. The transplantation of teeth is now an established operation in dentistry.

Treatment of Hydrocele.—Many new methods for the treatment and radical cure of hydrocele are being continually brought before the profession. According to most authorities, only a very small percentage of the cases treated by the injection of iodine fail to be cured, and after all, the treatment by this method on the whole gives the best results. In obstinate cases, or where the risk of injection of iodine is too great, other means must be resorted to. Dr. Ogilvie Wills, in the *Edinburgh Med. Journal* for July, relates a case of hydrocele of the cord, where, from the age and infirmity of the patient, he was unwilling to risk the iodine treatment, cure was effected by the introduction of catgut drainage, under full Listerian precautions; in another case of vaginal hydrocele, this method completely failed. His favourite treatment, when not contraindicated, is the injection of iodine according to Mr. Syme's plan, and he has rarely seen it fail. When considerable inflammatory reaction ensues, Dr. Wills has found much relief to accrue from the application of a tobacco poultice, made by boiling an ounce of cut tobacco with a sufficiency of water to make a cataplasm, and then adding linseed until a proper consistency is reached.

Mr. Lister has lately had some successful cases treated by Volkmann's "Schritt" method—transfixing the skin and sac with two needles and cutting into the sac between them, then stitching the cut edge of sac to cut edge of skin, and applying salicylic jute dressings under the spray. This, without the Lis-

terian precautions, is a modification of an old method, as is also the insertion of setons and drainage-tubes, and it is hardly fair for gentlemen who merely add the Listerian method, to claim these methods as something quite new. The favourite method in Bellevue Hospital, New York, of treating hydrocele in children is by scarifying the inside of the sac. In my hands this has not been at all successful. Mr. S. Osborn lately read before the Medical Society of London the notes of two cases of hydrocele treated successfully by a single tapping, with the subsequent use of the galvano-suspension bandage. The first case was a hydrocele of the tunica vaginalis, which had been present for seven or eight years; and the second was a case of double encysted hydrocele, present for six years—ages 70 and 63 respectively. The galvanism was believed not only to cause contraction of the muscular fibres of the scrotum, but to impart a healthy action to the serous sac, aiding absorption. Mr. Osborn recommended a trial of this bandage in other diseases of the testicle, such as varicocele and neuralgia of the testis.

Subcutaneous Ligature of Varix and Varicocele.—Mr. John Duncan of Edinburgh, in a lecture published in the *British Medical Journal*, July 9th, advocates the subcutaneous catgut ligature for the above affections. He holds that it is singularly easy of application, free from risk and very certain in its results. This is certainly high praise and if these assertions can be substantiated, surgeons will be inclined to perform the operation for radical cure of varix or varicocele much more frequently than heretofore. Most surgeons in the treatment of varicocele have felt it unnecessary and inadvisable to resort to severe measures and have contented themselves with palliative ones, such as suspension, truss, cold douche, etc. Sir James Paget says, “the cases in which varicocele is more than a trivial affair are very few, and in these few it is not such as the sexual hypochondriacs imagine,” again, “varicocele is troublesome because of the sense of weight and aching which sometimes, though not always attends it, and in some cases the veins are apt to become inflamed or very sensitive. But this, I believe, is the widest limit of the harm that varicocele ever does.” Even after a

successful operation the depressed mental condition often continues. To return to Mr. Duncan's operation, from which I fear I have rather strayed. His mode of procedure is as follows: "The veins are carefully separated by the fingers from the artery and vas deferens, and a needle armed with catgut is thrust through at the point of separation; it is again introduced at the orifice of emergence, made to pass between the veins and the skin and finally brought out at the original entrance. The two ends are then firmly knotted, with as much force as strong catgut will bear, and cut short. By traction on the loose skin of the scrotum, the knot is made entirely to disappear, and the punctures are covered with salicylic wool saturated with collodion. The same manœuvre is repeated at the distance of an inch or a little more. The effect is the formation of a hard lump of coagulum between the ligatures, at first slightly tender, but which soon becomes perfectly callous. Mr. Duncan has performed this operation six times with complete success.

He treats varix of the leg in the same way, but does not advise an early operation. He first tries the elastic stocking, even in advanced cases, but when solid œdema and eczema and ulceration cannot thus be kept in check, or perpetually recur, he advises the subcutaneous ligature as being the safest and surest operation. He has had eight successful cases.

So-called Rupture of the Internal Lateral Ligament of Knee Joint.—In a thesis submitted for graduation at the College of Physicians and Surgeons, New York, and published in the *New York Medical Journal* for June, 1881, Dr. Charles A. Jersey questions the existence of the condition known under the above name, and expresses his opinion, on the strength of clinical observations and experiments on the cadaver (the latter having been performed in the prosecutors room at the College under the direction of Dr. Wm. T. Bull), that the injury in question really consists in a fracture of the tuberosity, into which the ligament is inserted. His conclusions are as follows: 1. Many cases of so-called rupture of the internal lateral ligament of the knee joint are, in reality, cases of fracture of the internal tuberosity of the condyle. 2. Many of the more severe sprains are frac-

tures of the tuberosity. 3. The absence of bony crepitus is no certain sign of non-existence of fracture at this part. 4. The diagnosis rests on the extreme lateral motion, the severity of the pain on manipulation, the localized pain always found at a certain point, and the length of time required for complete recovery.

Tracheotomy.—Dr. Foulis of Glasgow, well known for his successful case of extirpation of the larynx, says that the tubes generally made for children are too large, and that, as a rule, when used in very young children, completely fill the trachea, and if left in for any length of time, might cause erosion. Dr. Foulis employs five tubes; they are as follows: below 18 months, diameter, 4 mm.; 18 months to $2\frac{1}{2}$ years, 6 mm.; $2\frac{1}{2}$ to 10 years, 8 mm.; 10 to 20 years, 10 mm.; largest size, 12 mm. As to the point for opening the windpipe, he, contrary to the rules generally given, recommends that the incision should be made through the isthmus of the thyroid, in the middle line, where it is, he says, as destitute of blood-vessels as the middle line of the tongue or perineum. He says the high operation requires, especially in children, the dislodgement of the isthmus or division of the cricoid. If a tube is to be worn, it is better not to have the cricoid cut, for its elastic spring keeps up a continual pressure on the tube, leading slowly to irritation and, it may be, perichondritis. In the after treatment, he disapproves of the use of steam.—(*Glasgow Medical Journal*, Feb., 1881.)

Mr. Golding Bird (*Lancet*, March 12th, 1881,) holds that it is improper to introduce the tracheotomy tube immediately after the trachea has been opened. He says no tube should be introduced until the trachea has been cleansed, as far as possible, from all foreign bodies, as membrane, blood-clots, &c., but that other means should be adopted to keep the tracheal wound open. He has acted on this rule in his last eight cases, employing a German nose speculum, the blades of the instrument being inserted into the tracheal wound and then screwed open. He has improved upon this, and now uses his instrument instead of tracheotomy tubes. Mr. Golding Bird remarks that under the old method the greatest anxiety is felt lest the tube should become blocked, and constant cleansing with feathers, &c., has to

be carried out at frequent intervals; that the foreign matters can scarcely be expelled *via* the glottis, while the chances of their finding their way out through a rigid bent tube, the end of which hangs freely in the trachea, are very remote. He therefore advises the use of some such method as he has made use of, as being safer, surer, and more rational.

Tubeless Tracheotomy.—Dr. Alfred C. Post of New York, in the *Annals of Anatomy and Surgery* for April, in a short paper, gives his experience of tracheotomy without tubes, according to the method suggested by Dr. H. A. Martin of Boston. He has had two cases; in each, the operation was performed as a preliminary measure to facilitate the continued administration of anæsthetics, and to guard against the entrance of blood into the bronchial tubes in protracted and bloody operations involving the nasal and buccal cavities. In each case the practical result was in the highest degree satisfactory. The opening into the trachea was larger and more direct than in the usual operation, not liable to be clogged with mucus, and unattended by the irritation which is often occasioned by the presence of the tube. He is fully persuaded that the use of the tracheal tube is a source of irritation, and that it is very desirable to dispense with it if possible.

There are objections to both these latter methods. In Dr. Golding Bird's, the constant presence of an instrument pressing against the sides of the trachea would be a continual source of irritation, and might possibly give rise to erosion. What Dr. Bird says with regard to the too early insertion of the tube is sound, and worth making a note of. Dr. Martin's tubeless tracheotomy may be useful as a prophylactic measure in operations about the throat and mouth, but where a permanent opening is needed, there would be great difficulty in keeping it free from exuberant granulations and preventing too early closure. Dr. Zeller of Berlin has, at the congress of German surgeons lately, strongly advocated this operation as a prophylactic measure, as I have noticed above under the heading of "Surprising Surgery."

Thermo-Cautery in Tracheotomy.—Dr. Jules Bœkel, who

advocates this method, gives an epitome of twenty-four cases in which he thus operated in two years. Previously he had published seven cases. In these cases he employed the thermo-cautery to divide all the tissues down to the trachea, generally using it at a white heat, but the trachea he opened with a bistoury for fear of subsequent contraction, a fear which he has since learnt to be hypothetical. He summarises thus: To-day that I have acquired in the manipulation of this instrument a greater experience, I can affirm its superiority . . . The fear of consecutive narrowing of the trachea after the use of the thermo-cautery, enters into the domain of hypothesis." There is rarely, he says, fear of primary hemorrhage and he has never experienced any trouble from secondary hemorrhage. In twenty-four cases there was complete absence of hemorrhage. (*Gaz. Méd. de Strasbourg*, 1880, in *Dublin Med. Journal*, Aug., 1881).

The use of Antiseptics in Surgery to be made compulsory by legal enactment.—Prof. Nussbaum has of late been strenuously advocating that a law should be passed, making the employment of antiseptics in surgery compulsory or rather that the neglect of their employment should be accounted a criminal act. He states that to his personal knowledge fatal cases are constantly occurring, which could be prevented by the use of even the simplest forms of antiseptics. Now this is strong language and Prof. Nussbaum must look through very green spectacles, in an atmosphere rendered dim by carbolized spray. His experience surely has been a very sad one and surgery in Germany must be at a very low ebb indeed. He out-Lister's Lister and must believe we have at last reached perfection in the treatment of wounds. Such legislation would effectually put a stop to any further improvements in the treatment of wounds and an effective bar would be placed on all advance in surgery. It would be a return to the despotism and stagnation of the Middle Ages. This would be only the thin edge of the wedge, soon the State would make it compulsory to treat fevers by cold baths, to cut off limbs by the galvanic wire (under the spray of course), to employ internal urethrotomy in every case of gleet and many other methods might be enforced, which will readily

suggest themselves to my readers. Prof. Nussbaum has been considerably abused for his extreme views and German surgeons hold that the State has no right to enforce the use of any particular method, but, that as long as the surgeon has to bear the responsibility, he must be left free to choose which form of treatment he shall use. It is a pity that the antiseptic system, which has done so much for modern surgery should be thrown into disrepute by the over zeal of its advocates. Prof. Nussbaum after all his tirade would commence his legislation in a very mild manner. There is nothing very objectionable in the following more than the principle involved. "Any person summoned to treat an accidental case or wound, must no longer close it up with charpie and adhesive plaster, nor examine or disturb it with a finger which has not been disinfected; but, after the surgeon has washed his hands and also the wound with some disinfectant (for which purpose a five per cent. solution of carbolic acid seems to be the most convenient), the wound must be thoroughly protected, with an antiseptic dressing. Such dressing may consist of carbolic jute or wadding, chloride of zinc wadding, or some other well known antiseptic material," Such a law he is convinced, would save in his own city alone, the lives of dozens of wounded people and deliver hundreds from a tedious and dangerous suppurative process. Prof. Volkmann, at the recent International Medical Congress in London, delivered a most eloquent address on the advantages of antiseptic surgery or rather Listerism, which has done so much for modern German Surgery. Previous to its introduction the German Hospitals were regarded as *pest houses*, and Listerism has certainly contended successfully against the horrible results of dirt and wound contagion, which were so common a few years ago in Continental hospitals. This great change affords the key to Prof. Nussbaum's vigorous advocacy of compulsory antisepticism. The *Lancet* (Aug. 13, 1881) remarks, that "our admiration for the change effected is only equalled by our horror at the previous condition."

Ear'ly Diagnosis of Hip Joint Disease.—Mr. John H. Morgan, in Vol. X. St. George's Hospital Reports, says that among a

very large number of patients that are brought to the Hospital for Sick Children on account of lameness, the proportion in which it is due to morbus coxæ, is very considerable. The lameness of morbus coxæ is peculiar. The action of the joint itself is very limited, so that in progression there is a tendency for the pelvis of that side to move, and for the sacro-iliac articulation to take on the part of the more or less fixed hip-joint. Often in hip-joint disease the lameness is hardly perceptible after rest, and only becomes evident when the joint is over-worked and possibly inflamed, and thus the lameness varies in the same patient under different conditions. In congenital dislocation of the hip it is otherwise; the lameness is constant, and the head of the bone in its new position freely movable. (In rheumatism, the lameness is more at first, and wears off after exercise.) The best method of examination is by laying the child naked on a couch, and first grasping the sound limb a little below the knee, and flexing the leg upon the thigh, bend the femur on the pelvis until the thigh touches the abdomen; extension should then be made to the full, and the head of the bone rotated in the acetabulum and made to perform all the movements the joint is capable of. This gives confidence to the patient and affords a standard of comparison to the surgeon. If the same course be pursued with the affected limb, it will be found that a point is reached at which further movement in some direction is impossible, and it is checked by firm muscular action; and any attempt at further movement causes the joint to be fixed and the pelvis to be carried in the direction in which the force is applied. This locking of the joint is a certain evidence of disease, one that is never absent and rarely to be mistaken. Verneuil has stated that he has never come across any case of this disease in which abduction of the thigh was not painful; and Mr. Morgan has found no exception to this rule, though he has carefully sought for it. Extreme extension is next to abduction, the movement in which this fixity of the joint is most frequently found. Fixity of the joint due to rheumatism is sometimes seen in children; but this affection is rare in young children, and in them there is no shortening or wasting of the limb, or flattening of the buttock; all the move-

ments of the joint, except flexion, can usually be performed without pain, and there is no pain on pressure over the trochanter. Chronic rheumatic arthritis occurs only in the elderly, so may be dismissed without further remark. Mr. Morgan states that there is one most important disease which, in an early stage, gives rise to all the appearances which have been above described, namely, disease of the lumbar vertebræ, which, by implicating the psoas, causes it to remain in permanent contraction, and thus to render the femur flexed and somewhat adducted on the pelvis. This contraction may be overcome by manipulation under an anæsthetic (though it is by no means advisable to do so); as soon as the influence of the anæsthetic has passed away, the former condition will be regained. Wasting of the muscles of the limb and gluteal region is a feature which is constantly present at very early periods in hip-joint disease. This wasting is, as Sir James Paget has pointed out, far in excess of that which would result from disease of the muscles alone, and to this wasting he aptly gives the name of "reflex atrophy," and he says "it depends on disordered nervous influence, and seems proportionate to the coincident pain, as if it were due to the disturbance of some nerve centre irritated by the painful state of the sensitive nerve fibres."

This wasting of the muscles forms a valuable aid towards the detection of disease in its early stage; and when it is not due to any central cause, as the condition of the cord which exists in infantile paralysis, is not likely to be symptomatic of any other disease.

In long standing cases of hip joint disease there is observed a shortening of the limb, which is not due to any displacement of the head of the bone or actual shortening of the limb, but to the result of an altered position of the pelvis, which on the affected side is raised to a higher level than that of the opposite side. This Mr. Morgan believes is due to the constant contraction of the iliac portion of the erector spinæ and quadratus lumborum muscles, in obedience to reflex nerve irritation.

BI-MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

PREPARED BY WM. GARDNER, M.D.,

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The Treatment of Rupture of the Uterus by Drainage.—

This method of treatment continues to excite much attention in Germany, and cases are occasionally reported. One of the latest of these is by Dr. J. Mann, of the University Obstetrical Clinic of Buda-Pest. The report appears in the *Centralblatt für Gynakologie* for August 6th, 1881. The patient was aged 24, unmarried. She had already been attended at the clinic, premature labour having been induced on account of generally contracted, flat pelvis, of rachitic origin. She made a good recovery. She again became pregnant, and at what appeared to be the end of the thirty-second week, labour was induced by introduction of a bougie to the uterus. Labour pains began an hour afterwards; 30 hours subsequently the membranes ruptured. There was, however, little dilatation, and the head was still high in the pelvis. An hour and a quarter later bi-polar version was resorted to. During the operation rupture took place. On vaginal examination after extraction, it was found to be in a transverse direction on the anterior uterine wall. The hæmatoma about the site of rupture, which is believed by some observers to be pathognomonic, was present in this case. After thorough antiseptic vaginal irrigation, a large drainage-tube was introduced through the rent. The vagina was then plugged with carbolized cotton wool. A "T" bandage, with protective over the end of the tube, was applied to the vulva, and an ice-bag placed over the fundus uteri. The irrigation of the laceration with carbolized water was performed through the drainage-tube twice a day. On the fifth day the tube was expelled. The patient made a tedious, but satisfactory recovery, and was discharged on the thirtieth day.

On Hemorrhage and excessive Sickness during Pregnancy; and on Abortion in connection with Inflammation of the Uterus

and its Cervix.—By J. Henry Bennet, M.D. *Brit. Med. Journal*, July 9th, 1881.

Messrs Boys de Loury and Costilles at the St. Lazare Hospital, Paris, first brought to light the frequent existence of inflammation of the neck of the uterus, and pointed out that it is frequently a cause of hemorrhage and abortion. Dr. Bennet published the first edition of his work on inflammation of the uterus in 1845 and therein brought forward facts new to the profession, confirmatory of those adduced by French observers already mentioned. A long professional career has confirmed Dr. Bennet in the views then enunciated, and these views have proved to him the key to many obscure phenomena and to their successful treatment.

Briefly stated, the great clinical fact, believed in and taught by Dr. Bennet, is that many women become pregnant while suffering from inflammatory and ulcerative disease of the cervix uteri, or from chronic inflammatory disease of the body of the uterus. A train of erratic and morbid phenomena result and modify the usual course of pregnancy, of parturition, and of the puerperium.

During pregnancy, uterine inflammation causes a variety of pains, aches and sympathetic reactions; intractable sickness, profuse leucorrhœa; erratic, periodical or constant hemorrhage; the formation of moles or blighted ova; abortion, and its concomitants and sequelæ. If the patient have had previous healthy pregnancies, she at once recognizes that she "feels differently." Dr. Bennet believes this to be an important element in forming the diagnosis. He believes intractable vomiting in pregnancy to be caused most frequently by inflammation of the body and cervix of the womb, and contends that if such vomiting does not speedily yield to medicinal treatment, the woman must be examined with the speculum and subjected to local treatment if necessary. The so-called menstruation of pregnancy, Dr. Bennet believes to be nearly always due to inflammation of the cervix.

During parturition, Dr. Bennet believes that many of the accidents of parturition, are due to the co-existence of uterine inflammation. Such are hemorrhage, rigidity of the os, laceration

of the cervix, retained placenta and post partum hemorrhage. During the puerperal state, the author believes that uterine inflammation strongly predisposes to most of the accidents of the puerperal period, such as hemorrhage, metritis, puerperal fever, phlebitis, prolonged red or purulent lochial discharge, prolonged inability to stand or walk.

If, on examination, inflammatory disease be found, it ought, Dr. Bennet says, to be treated exactly as in the non-pregnant state, by emollient and astringent injections and if necessary by vitally modifying caustics, such as nitrate of silver, nitric acid, or acid nitrate of mercury, applied to the vaginal cervix and to its cavity if need be. These applications may be made repeatedly if necessary, at 5-days interval for the silver-nitrate and 7 days for the others. Leeches may, and have often been applied by Dr. Bennet to the os with good results and without disturbing the course of pregnancy.

Remembering the frequency of abortion in chronic womb disease, it is well to avail of a hint offered by Dr. Bennet as to the management of such cases. The pregnant woman ought to be told that the fœtus may be actually dead or die soon after the examination. Such being the case, it may be cast off with or without bleeding, and that these results must not be attributed to the treatment.

While we cannot accept *in toto* Dr. Bennet's opinions, we yet believe that uterine inflammatory disease often operates in the manner he has indicated. In any case the presence of the subjective symptoms will at least warrant an examination. One important out-come, if no other will result from such an examination. The practitioner will be prepared for accidents. He will know that he has a bad case to deal with; "that rigidity of the os; slow painful labour; laceration of the cervix; hæmorrhage, during or after parturition; adherent placenta; metritis; ovaritis; hemorrhage, purulent, long-continued lochial discharges—in a word, a bad labour and a bad getting up may be expected, in the natural course of things."

An Improved Method of Treating Uterine Displacements.—Dr. Robert Bell of Glasgow, in the *Edinburgh Medical Journal*

for July, 1881, gives the result of his experience in the treatment of uterine displacements by vaginal tampons of cotton-wool soaked in a solution of alum and carbolic acid in glycerine. The principle is not new, for Emmet and Bozeman of New York, and others, have advocated similar methods. Emmet, however, prefers oakum to cotton. Dr. Bell's solution is the following: Glycerine, 80 oz.; alum, 10 oz.; carbolic acid, $1\frac{1}{2}$ oz. This solution, it will be observed, theoretically—and Dr. Bell claims to have found, practically—fulfils most desirable indications. The glycerine depletes, and so lessens congestion by its affinity for water; the alum constricts, and so braces up the vaginal walls; and the carbolic acid, by its antiseptic properties, renders it possible for the cotton to be retained for a convenient length of time. Dr. Bell at first used the glycerine of tannin of the Pharmacopœia, but although it answered the purpose well, it is expensive, and stains the patient's underclothing. The author of the paper has, during the last two years, treated 200 cases by his method, and for eighteen months has not used a pessary at all. He usually employs only one large tampon, but in some cases of flexion, uses two—a small one pushed well up in front or behind the uterus, and a larger one beneath it. In the case of prolapsus, if there be laceration of the perineum, this must first be rectified. The uterus is elevated as nearly as possible to its normal position, and there retained by a suitable-sized tampon of cotton soaked in the solution. This can be retained for three or four days without becoming offensive, on account of the antiseptic ingredient. The watery depleting discharge excited by the glycerine is believed by Dr. Bell to be much increased by the astringent. He claims to have seen patients thus completely cured of procidentia, which had existed from three to eight years, by perseverance in the treatment for from two to seven months.

Amongst other gratifying results, the author especially mentions the speedy disappearance of bladder symptoms in ante-flexions and versions. To sum up, the advantages are: freedom from the dangers of hard pessaries, such as erosions of vaginal mucous membrane, peri-uterine inflammation, &c.; the deplet-

ing effect of the glycerine and alum in diminishing congestion and hyperplasia; the rare necessity for the use of the (always more or less dangerous) probe or elevator in flexions; and, lastly, the fact that the physician, with only an ordinary amount of experience and intelligence, can, under proper directions, manage an ordinary case of displacement requiring treatment.

The disadvantages are, to the busy physician, the tedious, prolonged nature of the treatment; and to the patient, the annoyance of such frequent repetitions of unpleasant applications, with the watery discharge consequent upon them. In a certain proportion of cases, we believe that these objections will not weigh as against the good effects to be obtained. On the other hand, the practitioner who has the necessary mechanical ingenuity, and has acquired some experience in the use of pessaries, will not readily give up a means of treatment which, combined with the anti-congestive hot water vaginal injections of Emmet, yields such frequent satisfactory results to his patients, with comparatively little trouble to himself.

The Treatment of Uterine Myoma.—Mr. Lawson Tait of Birmingham discusses this subject in a paper in the number of the *Brooklyn Annals of Anatomy and Surgery* for June of the present year. At the outset, Mr. Tait lays down a proposition with which every practitioner who has seen many cases of uterine fibroid will agree. It is, that the larger number of cases need no surgical interference. The experience of the autopsy room shows how often such tumours exist without symptoms and unsuspected. They either do not grow to such size as to endanger the life or disturb the comfort of the patient, or they do not press upon neighbouring organs so as to cause distress and danger; or they are not accompanied by the most formidable of all their symptoms—hemorrhage. The explanation of this is various. They either grow slowly and imperceptibly. The growth is often absolutely arrested at the menopause, or (very rarely) they completely disappear or undergo chalky degeneration; or their relation to the uterine structure is such that they do not cause bleeding.

Myomata requiring surgical treatment for mere size are rare.

Mr. Tait has met with but two cases. In both he removed the tumour by abdominal section; successfully in one case, unsuccessfully in the other. Distress from pressure on neighbouring organs (bladder and rectum) are more numerous. Mr. Tait has treated many such, but has succeeded in relieving most of them by pessaries placed so as to ease the weight of the tumour, so that in one case only has operation been resorted to by him: Here enucleation was the method resorted to, and the result was successful.

As regards the hæmorrhage, by far the most frequent condition requiring interference, Mr. Tait gives his experience. It does not support two impressions rather widely entertained about these tumours. He has not found ergot, however administered, alone or combined, to have a decided influence in restraining such bleeding. The intra-uterine injection of astringents has yielded occasional successes, but these have rarely been permanent, and in two cases death was produced directly from the method. In the second place, he has not found (as is generally supposed) the hæmorrhage to cease at the ordinary climacteric period. The tumour generally causes prolongation of the menstrual activity for some time, occasionally ten years, after the ordinary period has been reached.

In discussing the results of surgical treatment of such cases, Mr. Tait states his belief that it is not generally recognized how often, what he believes to be, a special risk after uterine operations in spanæmic patients obtains, namely, that from the formation of fatal heart-clot. If this be true, its bearing upon the question as to the time when operation shall be undertaken is obvious and important. Here a sound judgment by the light of experience will be needed to enable the surgeon to steer between two difficulties—unnecessary operations and operations too long delayed.

As regards enucleation, Tait's experience has been so unfavourable that he has resolved never to undertake it again. He has not always been successful in securing the expulsion of the tumour, and when this was attained, the subsequent recoveries were slow and unsatisfactory. As regards removal by abdominal

section, it is to be remarked at the outset that a large number cannot thus be removed, as from their formation and relations they afford no pedicle. In two cases Mr. Tait attempted enucleation by the abdomen, but was obliged to desist, and both patients died. In six pediculated cases he has operated with two successes; using the clamp or ligature. The recoveries were in cases treated by his own clamp. All the cases treated by the ligature died from continuous oozing from the stump. Mr. Tait states that the idea occurred to him in 1871 that removal of the ovaries might be an effectual means of controlling the hæmorrhage, which is, as every one knows, almost exclusively menstrual. He put the idea into practice on August 1st, 1871, in the case of a tumour with menorrhagia. This patient recovered. The case is, however, very vaguely stated. The author operated on two other cases, one in 1873, the other in 1874; both died. Mr. Tait has, since then, operated by ovariectomy ten times for menorrhagia due to uterine myoma, with only one death, and with success in arresting the bleeding. The death was due to heart-clot, in a very much weakened patient. He makes the smallest possible incision, often barely two inches in length, and searches with his left and middle fore-finger for one ovary after the other. He does not remove one until he is satisfied that he can remove both. He transfixes the mesovarium with a hooked needle, and brings a loop of silk through. This he ties by a special knot devised by himself, and called the Staffordshire knot. He has never found it to slip or fail, but does not describe it. The ovaries are then removed by scissors or knife, as may be most convenient.

The treatment of Nerve-pain and other Nervous Symptoms in the Diseases of Women.—It is now some years since Dr. Weir Mitchell of Philadelphia, the eminent specialist in diseases of the nervous system, announced to the profession the splendid results which he had obtained by a new method of treatment, for the hitherto obstinately rebellious condition of neurasthenia, with its multifarious symptoms and associated conditions. These results were announced in a little book entitled "Fat and Blood, How to make them." During the last few months the author has published another and larger book, "Lectures on the

Diseases of the Nervous System, especially in Women," in which he confirms all that he has previously asserted.

Two years ago, Dr. Goodell of Philadelphia, in his presidential address, before the American Gynecological Association, announced the great success he had experienced from the method in the neurasthenia of womb disease. Since then the treatment has become very popular in the United States, and from time to time very gratifying results have been recorded.

Dr. Horatio R. Bigelow of Washington, has recently published the results in two cases, (*American Journal of Obstetrics*, July 1881), representing the extremes of bodily habit, the one being thin, sallow, wan and extremely nervous, the other being stout, phlegmatic and well nourished.

In the first case in addition to the features already mentioned, there was scanty irregular menses, backache, headache, inability to walk, extreme nervous depression, rectal and vesical tenesmus, pain in the region of the right ovary and down the right leg. On examination a short vagina, retroflected uterus, doughy swollen cervix, and tenderness at the neck of the bladder. Mechanical treatment by replacement, Sims' position, proper adjustment of clothing and pessaries did no good, on the contrary seemed to aggravate the symptoms. A variety of other local and general tonic and sedative treatment was tried without avail, as the patient grew worse. She was now placed on the "rest" treatment, with speedy gratifying results. Sleep became natural and refreshing, the circulation of hands and feet became natural, the pains disappeared, the complexion which had been subicteroid, became clear, the digestion perfect, the muscles became developed and the weight of body increased.

The results in the second case were equally gratifying.

If there be one lesson more important than another for the practitioner in the diseases of women to learn, it is this, that the most intelligent local treatment without concurrent appropriate general treatment will often utterly fail to remove the symptoms. The pains complained of often persist after the local difficulties have been remedied. "The rapid strides gynecology has made, within a few years, the advancement which it must continue to

make, and the laudable enthusiasm of its disciples, while productive of great general good, have not been without a measure of harm. There is a tendency to meddling interference in many cases, that would be better if left alone, and a proneness to attribute all of her suffering to a uterine cause, in the woman who may have some trouble with her sexual organs. "It is a practice as common as it is unscientific and cruel, to attribute all of these manifestations to the womb, and to suppose that they will subside with the alleviation of the local disturbance." Experience shows the association of uterine disease, chiefly versions and nerve-pain to be most frequent in delicate, sensitive natures, who have known grief or abused themselves in fashionable dissipation. A wifely anxiety for the conduct of a husband, domestic worries, and literary ambition, also frequently conduce to the bringing on of the condition. In some cases the nerve pain is the cry of the whole cerebro-spinal nervous system, rebelling against the extra tax put upon it and demanding rest and nutriment. It indicates the condition of neurasthenia and is associated with dyspepsia, inability to concentrate the mind on a given subject, defective eyesight, gloominess, constipation and insomnia. The primary condition and these its accessories, often exist independently of any womb complications. On the other hand, thousands of women with dislocated wombs go through life, with a certain measure of comfort, without any nervous irritability.

The so-called "rest treatment" consists in absolute rest in bed of body and mind, full feeding with nutritious easily digested food; massage and champoing, swedish movements and electricity. In addition to these, various tonic and analeptic drugs may be administered if there be a clear necessity. A careful, experienced, firm nurse is selected; the patient is put to bed in a large darkened room. She is not allowed to assist herself or move in any way. She is not allowed to see her husband or friends or to receive letters from them. She is not allowed to read, sew, or converse on any subject requiring mental effort. Her diet at first is milk only; skimmed milk at first, then eggs, poultry etc. Then massage, which when appropriately practised

has a wonderfully soothing effect on the nervous system. At the same time electricity, in the form of both currents may be used, the galvanic for its sedative effect on the nervous system and stimulant effects on general nutrition, the faradic to develop the muscles. This is continued in most cases about six weeks. It may be supposed that the restraint will prove irksome to the patient. Experience shows that it is not so, or at all events only for the first few days.

It will be at once apparent from the above description of the method, that the expense of such a course of treatment must prove a serious draw back to its general employment.

Dr. W. S. Playfair, the eminent London obstetrician, is the first to report the results of the treatment in Britain. This he does in a paper in the *London Lancet* for May 28 and June 11 ult., in which he gives an account of four cases of neurasthenia, neuralgia, hysteria, chloral and morphia-habit connected with uterine disease. All were cured. Dr. Playfair concludes by saying:—"My own conviction is that Dr. Weir-Mitchell has made a most important contribution to practical medicine by the introduction of the method I have been describing."

Reviews and Notices of Books.

The Principles of Myo-Dynamics.—By J. S. WIGHT, M.D., Professor of Surgery and Lecturer on Physical Science at the Long Island College Hospital. 8 vo. New York: Bermingham & Co.

This little volume treats of the application of mechanics to the muscles and joints of the body. Prof. Wight defines myo-dynamics as treating of the forces of muscles and their effects. He says there are two kinds of myodynamics, viz., *myostatics*, which treats of muscular forces when they are in equilibrium with some other force or forces, acting on a bony lever, as when the hand holds a weight; *myokinetics*, which treats of muscular forces, when they are moving some other force or forces, acting on a bony lever, as when the hand moves a weight. He then proceeds to describe the different kinds of levers very fully, illustrating, by

diagrams, formulæ, and giving examples of each kind of lever in the human frame, and laying down certain statements which may be regarded as axioms, *e.g.*, the longer the fibres of a muscle the more extensive is the motion it can make and the greater its power; the energy of a contracting muscle is proportioned to the energy of the volition, &c. The whole book is divided into sections, numbering 144; these are again divided into subsections, which in many instances are illustrated by examples. In the main section an assertion is made, and in the subsection this assertion is illustrated or explained. The whole book is stuffed with facts, and in that, according to M. Taine, is truly Anglo-Saxon. We fear that it will be perused by few, except enthusiastic mathematicians, and that for general purposes it will not be much made use of by the surgeon, but will be very valuable as a book of reference. Each articulation is described in the manner I have above related, and the action of each muscle and group of muscle is explained, but the terse, axiomatic manner in which it is done makes it rather difficult reading for an ordinary mortal without a marked taste for dynamics. The last dozen pages are taken up with a description of the myometer. The work is profusely illustrated with diagrams, which will be much appreciated by teachers of anatomy who use the blackboard.

In conclusion, we must congratulate Prof. Wight in publishing such a scientific volume, the first of the kind that we know of.

A Treatise on the Diseases of the Nervous System.—By WM. A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System in the Medical Department of the University of the City of New York, &c. With 112 illustrations. Seventh edition, rewritten, enlarged and improved. New York: D. Appleton & Co. Montreal: Dawson Bros.

This new edition of a deservedly popular work on nervous affections will no doubt be well received. The book itself is so well known that we need do nothing further than point out a few of the more important additions which have been made. These are: considerable amplification of the chapter on cerebral congestion, and chapters on Myxœdema, on Syphilis of the Brain,

the Spinal Cord and the Nerves, and on the Symptomatology of Cerebral and Cerebellar Lesions, and a new section on Diseases of the Sympathetic Nervous System. Besides these entirely new parts, we find, on comparing this with the last edition, a great number of minor additions in several chapters, including many changes necessitated by the investigations of late years in this branch of medical science.

In its present form, with the above considerable amount of new matter, Dr. Hammond's treatise is rendered complete, and will continue to be accepted as one of the foremost text-books on Neurology, one not containing a repetition of the ideas of others, but in many parts showing distinct indications of the strong, if occasionally peculiar, views held by the author.

Therapeutic and Operative Measures for Chronic Catarrhal Inflammation of the Nose, Throat and Ears. Part II.—
By THOS. F. RUMBOLD, M.D. Forty illustrations. St. Louis: Geo. O. Rumbold & Co.

This volume composes the latter part of a work which we noticed a short time ago, entitled "The Hygiene and Treatment of Catarrh," by the same author. It contains full directions concerning the instruments which are requisite and the procedures to be adopted, in all the various disorders of a catarrhal nature involving the nares, fauces and aural apparatus. It is the work of a practical man who has had extensive experience in these affections, and will no doubt be useful to general practitioners. A number of cases are appended, illustrative of the treatment recommended in some of the more unusual diseases described.

Traité de l'Acide Phenique.—Par le Docteur DECLAT. Paris: Chez Lemerre, Libraire-Edition.

The enormous extent to which the employment of this favourite antiseptic has grown is shown by the appearance of this work of no less than 1070 pages devoted to a discussion of the value of carbolic acid and the various complaints in which it has been successfully employed. The author devotes, in the introductory chapters, considerable space to finding out when this agent was first

introduced, and to furthering his claims to be considered in some sense the originator. Then external parasites, both animal and vegetable, are considered, and the carbolic acid shown to be the most reliable destructive agent. Various febrile affections are reviewed in connection with their origin from minute parasitic origin. Charbon and several other diseases of the lower animals, communicable to man, also naturally claim a large share of attention. In all of these, and a great many others, the remedial powers of the phenic acid are highly extolled. This work is of considerable interest to every one concerned with the study of the extensive influence and power for good of carbolic acid as a remedial agent in the numerous diseases which are the result of the presence of parasitic organisms or germs.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Discussion on Listerism.—At the International Medical Congress, London, Aug. 6th, Mr. Spencer Wells read a paper. He took strong Listerian ground, and said that now he had given up drainage altogether, so great was his faith in antiseptic surgery. Several others, Volkman especially, followed in a similar strain. Then Marion Sims arose, and while he declared for Listerism he advocated drainage, and reminded Mr. Wells of a case (ovariotomy), in which he assisted him in a bad operation,—bad on account of adhesions,—and the patient *almost* died, but at last nature opened the abdominal wound and discharged a large amount of fetid fluid, and immediately she recovered. Finally came Mr. Keith to close the discussion. Never in the history of surgery did a few modest words make such a recoil in the “currents of expectant thought” as his.

It has been said, and was repeated by Volkman and Kuget, in this discussion, that intra-peritoneal surgery was the “touchstone of Listerism.” Professor Keith has been quoted the world over, again and again, as not only a warm disciple of Lister, but as illustrating in his remarkable success in ovariotomy,

more than any other surgeon, the value of antiseptic, or rather, the Listerian method. No one can deny this.

So slow were his few words uttered that I can almost repeat every one *verbatim*.

You can imagine the effect much better than I can describe it when he said that for several months past he had "abandoned the antiseptic treatment altogether." "True," he said, "I had eighty successful recoveries under Lister's method, and stopping there it would be a wonderful showing. But out of the next twenty-five I lost seven. One died of acute septicæmia, in spite of the most thorough antiseptic precautions: three of "unquestionable carbolic acid poisoning; one of renal hemorrhage." He went on to say that out of the eighty consecutive cases (or rather he said it first) many came too near dying; that a large number got a high temperature—105°, 106°, 107° Fahrenheit—the evening following the operation, but, he said, "they happened to pull through." He then said that since he had for four months back abandoned the antiseptic method, and relied upon perfect cleanliness, care in controlling hæmorrhage, and thorough drainage, his cases were giving him much less trouble, and he was getting more satisfactory results.

He now stopped for a few moments, hesitating, as he must have realized the importance of his words, knowing that the whole world—surgical—was lending a "listening ear" to his utterances. The silence was "audible." Then he raised his head, and looking his audience square in the face, he said, "Gentlemen, I have felt it my duty to make these statements, for *they are true*," and took his seat. I shall not attempt to describe the applause, nor the effect of his statements. Professor Keith, by the way, told me privately that he almost died himself from using the carbolic acid so much. He got renal hæmorrhage and debility to an alarming degree. He said, moreover, that he never had great faith in it, and should not have continued its use so long—I mean the "Lister method"—but for the fact that so many eminent men were carried away with it; and if, after his remarkable series of cases, he had changed, and lost seven out of the twenty-five, as he did, with-

out Listerism, all the world—he himself—would have attributed the result to the change.

One thing is certain: Mr. Keith's statements, in connection with those of others *and his own experience*, put Mr. Lister in a very unpleasant position; for he was put down on the programme to close the discussion on the treatment of wounds to secure union by first intention, which took place on Monday, 8th inst. Although four days had elapsed, he had no answer. To show how deeply he was impressed by all that had been said, he began his remarks, which were extemporaneous instead of written, as was expected, by saying that he never had admitted that abdominal surgery was the "touchstone of Listerism," and to the surprise and dismay of his followers went on to argue that, with the rapidity with which wounds of the peritonæum heal and the remarkable absorbing power of that membrane, and therefore its ability to take care of its exudates, he "doubted very much" whether, in the hands of a skillful, careful operator, it was not better to dispense with the antiseptic plan. I realize how important are the statements I am making, and lest some of your readers may think that they are open to criticism as to accuracy, I will say that I sat near enough to hear every syllable uttered, and I pledge my honor as a man and a surgeon for the absolute accuracy of every statement, though I took few notes.

Then, seeming to realize the danger of admitting such wonderful absorbent qualities to the peritonæum, he went on to say that he had recently made some experiments that surprised him very much, which proved that serum or bloody serum was "a very poor soil for the development of germs from contact with air-dust, and that blood clots were still more sterile. Indeed, it was very difficult to make them grow or develop at all, unless diluted with water." By the way, he declared that he had witnessed free cell development in a blood clot.

And these remarkable facts, said he, "at once call into question the necessity of the spray."

He then went on to say that he was not yet ready to give up the spray, but if simple irrigation or lavation should prove as

good, he would say, "*Fort mit dem spray;*" and he further said, "I am not certain but I shall give it up. I am not at all sure but that before the next meeting, two years hence, I shall have abandoned the spray altogether." (His recent house surgeon says that he has lost all confidence in its utility.)

As to carbolic acid, he said, "I am forced to admit its unfortunate character." That was all; not a word about oil of eucalyptus or any other substitute. He kept referring again and again to abdominal surgery, but his manner showed to everybody that he was upset.

He gave no statistics, no large comparisons, as was expected by his disciples. He referred to the excellent results in two cases of recent operation, saying that "I could hardly believe I should have got such results without the antiseptic plan; I did not before I used it."

And this is the fault that the best surgeons here find with him. They are all ready and glad to give him or any other man credit for all he has really done, and they all admit that Mr. Lister has done much to improve surgery. I need not explain. But they very properly say, "With his unprecedented opportunities, both in his own practice and in that of his host of followers, why don't he give us large and complete statistics? Instead, he only gives either isolated cases or a small group of successful ones, such as may be found under almost any plan." I quote one of London's most eminent and fair-minded men.

It was curious to watch the effect of the thing. I have alluded to the impression produced by Keith's remarks. As Lister was speaking, one of his ardent admirers—I mean an admirer of his mode of dressing; I am not discussing the man, who is an earnest hardworking, accomplished gentleman—turned to me, and said, "My God, I would never have believed Professor Lister would have admitted that." Another said, "Well, if Lister abandons the spray and carbolic acid, giving us no substitute, where is 'Listerism?' We had drainage, we had animal ligatures, we had air-proof dressings, before." And so on. Every little group of surgeons was discussing the matter; those who

had never accepted the Listerian method being quite as much surprised as its warmest adherents.

“Mein Gott!” said a German whom I did not know, “Lish-terism ist todt.” “Fort dem Spray? Fort dem Acid Carbol-ique? Was giebts zu bleiben?”

And so the pendulum swings.—*Cor. Boston Med. and Surg. Journal.*

How to render Septic Wounds Aseptic.

—The proper measures to render foul wounds aseptic are well illustrated in a recent lecture of Prof. von Nussbaum of Munich, translated in the *Edinburgh Medical Journal*. They are so instructive that we quote them fully:—

In July last a student received a sabre-cut of the head in a duel, which ran parallel to the sagittal suture, to the left of it, and was 11 centimetres long. The bone was denuded and laid bare, so that it seemed like a fissure. One of his friends, a military surgeon, had cut away some of the hair, washed off the blood, and dressed the wound with olive oil and Brun's wadding. For five days it went on very well. The patient then wished to get up, and asked for more to eat. The surgeon, however, noticed a considerable swelling of the edges of the wound, and refused both requests. The next day, at 1 a.m., the patient had a severe rigor, and when the surgeon came he found some erysipelas and the wound dry and smelling badly. The temperature, which had hitherto never been above 38°C ., had now risen to 40.7°C ., and the patient spoke in such an excited manner that one immediately suspected the onset of delirium. The patient's relatives, who had now arrived, insisted that he should be brought to my clinic. This required a few hours' time to carry out, and when the patient came under my care, at 4 p.m., he was very delirious, had a temperature of 40.9°C ., a small pulse of 130 per minute, and the erysipelas had spread over the whole scalp. There was here a probability of getting that unfortunate termination which was formerly so much dreaded in all cases of severe head-injury. Evidently there had been foul-smelling pus pent up in the wound, and this had led to erysipelas. The septic

condition of the secretions had affected the small blood-clots which lay in the deep crevices of the wound, and there could be little doubt that secondary meningitis was imminent. I confess that, having regard to the severity of the septic symptoms, I had very little hope of being able to bring about a favourable state of affairs; however, careful disinfection is always useful and can never do any harm, so I had the patient put under chloroform, then I cut away more of the hair from round about the wound, washed the surrounding parts, which were soiled with blood and discharge, with a five per cent. solution of carbolic acid, slit up the overlapping edges of the wound with the scissors to such an extent that the whole floor of the wound was laid bare. By this means I could evacuate some foul pus and blood-clots, the retention of which had doubtless been the cause of the erysipelas and the serious symptoms. I dipped a pad of Brun's wadding in an eight per cent. solution of chloride of zinc, and disinfected with this the whole floor of the wound, carefully washing and syringing the exposed bare bone. I then put two drainage-tubes in the wound, sewed up the other parts with cat-gut sutures, injected some five per cent. carbolic lotion through the drainage-tubes, washed the surface of the skin with the same, and then put on a Lister's dressing, but without "protective," so that the gauze, which was soaked in two-and-a-half per cent. carbolic lotion, might come into direct contact with the secretions from the wound. I ordered the patient an acid drink and some light soup. He passed a quiet night, after getting a hypodermic injection of two cg. acetate of morphia. The next morning I was as much astonished as pleased when the patient, perfectly conscious, held out his hand and quietly wished me "Good morning." The delirium was quite gone, the temperature 38°C ., and the pulse 98 per minute. Everything had changed so much for the better that we hoped the meningitis had been warded off. As the dressings had shifted a little, I changed them under the steam-spray, and found then that the wound in a satisfactory condition. The erysipelas was quite gone, and there was no retention of the discharge. The temperature soon fell still further, and in sixteen days after his admission to my clinic the happy

patient left for his home, having only a strip of plaster about the breadth of a finger upon the cicatrix on his scalp.

As a second illustration, I may relate a case which was recently under my care. A servant-girl was pushed from her chair in jest, and fell so heavily that she fractured her radius and ulna, and the ends of the bones protruded through the skin. A practitioner who lived near put adhesive plaster upon the wound and bound up the arm in splints in the ordinary way; as it bled rather freely during the night, he sprinkled some styptic powder over the plaster. On the third day the arm was so much swollen, and there were so many blue and green blebs upon it, that the practitioner was afraid to go on treating the case, and called in another medical man, as the patient was strongly opposed to going into hospital. The surgeon who was called in requested to have a consultation with me, and spoke of the possibility of amputation being necessary. The mention of amputation caused great consternation in the house, for the foolish joke had been perpetrated by the son of the girl's master. When I saw the patient the arm was greatly swollen and tense, the wound had a grayish surface, and was covered with foul-smelling pus; round about it there were also numerous blebs of different sizes. The small ones—about as large as a pin's head—were like transparent yellow glassy beads, and were very numerous, and lying close together; the larger ones were black and blue in colour, and filled with blood-tinged serum. There was high fever. The patient's countenance was of a yellowish-brown colour, and the morning temperature was as high as 40.3°C . Under these circumstances I could not say positively that the arm might be saved; but, on account of the patient's youth and good constitution, I said that with the utmost care a good result might probably be obtained. Both the patient and her medical attendant gave me full permission to do what I thought proper. I first put the patient under the influence of an anæsthetic. I then shaved the whole arm, washed it with a five per cent. carbolic lotion, and let two steam sprays play upon the wound. I made a semi-circular incision, which extended about half round the arm, avoiding nerves, etc., and by this means exposed the fragments of the broken bones

lying at the bottom of the wound. The arm could then be bent in the middle, so that it was possible to have the floor of the wound thoroughly washed and purified with 5 per cent. carbolic lotion. (In cases where there is no bleeding, but only foul pus, I prefer to use the 8 per cent. solution of chloride of zinc.) I next ligatured some bleeding vessels, cut off the sharp ends of the broken bones, syringed and washed everything clean, put short drainage-tubes in each corner of the wound, and bandaged the arm on a splint, leaving the widely-gaping wound uncovered; over this wound—which was about half the size of an amputation wound—I put some absorptive gauze, and arrange that a three per cent. carbolic lotion should drop upon this day and night, the drops following each other so rapidly that they formed really a fine continuous stream. In 24 hours about 28 litres of this lotion passed over the arm. After two days, however, the wound became free from odor, and the temperature fell to 37.7°C . to 38.2°C ., so I diminished the irrigation considerably, and allowed from 16 to 18 litres of carbolic lotion to flow over the wound in the 24 hours. In a few days the wound looked so well that an ordinary Lister's dressing was applied, and the wound soon healed up like a fresh injury.—*Med. & Surg. Reporter*.

Pyæmia from an Unusual Source Simulating Enteric Fever.—Enteric fever is so frequently under our observation that its easy recognition would be thought to follow from constant attention to its special features. Nevertheless, those amongst us who are occasionally called upon to give an opinion upon the more complicated cases of this disorder are obliged to confess that, in spite of clinical and pathological knowledge, our diagnostic acumen may be every now and then hampered, if not entirely baffled. To rightly interpret anomalous phases of the disease in question we are often compelled to pass in review other complaints which produce symptoms akin to those that are perplexing us. There are several such, too well known to need enumerating. I recite the following cases because, in our researches to explain its somewhat obscure symptoms, we detect an unexpected source of evil,

which we believe to have been the means of enabling us to arrive at a precise diagnosis of our patient's illness. Moreover, in my opinion its peculiar features recall forcibly to one's mind the notable observations on the absorption of septic products, published as a leading article in the August number of *The Lancet*, under the title of "Blood Disease and the Germ Theory."

I was requested to see in consultation a young man, in good circumstances, reported to be suffering from typhoid fever. I am indebted to a medical friend for the following notes:—

F. B——was first visited on December 6th 1880, suffering from diarrhoea without abdominal tenderness, temperature 103° ; pulse frequent, 120; white tremulous tongue, not red on the tip or edges. Complained of having, for about a fortnight, what he termed a severe cold, aching limbs, and general depression. He had taken medicine from a chemist. He gradually became worse. The pulse became more frequent, with a peculiar thrill, very compressible, and for two days before death, which occurred on December 14th, it rose to 140 and 150. The temperature rose and fell rapidly without any corresponding alternative in the general symptoms. He passed on several occasions copious stools, much resembling the discharges from the bowels in enteric fever. Throughout the illness there were "no spots." During the last week pleuropneumonia supervened, affecting the lower half of the right lung. In the night of December 10th he had a prolonged rigor, and for the last four or five days profuse cold sweats. No enlargement of the spleen could be detected. His urine was high colored and slightly albuminous. He became very deaf, but his mind was clear till four days before his decease; he was without headache or obscurity of thought. The last forty-eight hours he was delirious, talking and shouting. About ten months previous to this last illness he contracted a chancre, which was followed by an unusually severe attack of eczema.

In running through the various symptoms presented by this patient, notwithstanding that many of them resembled to a certain extent those of enteric fever, yet two were wanting, and these two so frequently found in the fully developed form of this disorder that my attention was at once arrested by their absence.

(1) The tongue was not covered with a thin or thick white fur, nor were its margins red; (2) there was no eruption, rose-colored or otherwise. There was no special sanitary defect about the house or premises; during the last few years no case of enteric fever in the village had come under observation; and I may here add that in the five months which have elapsed since the decease no case of fever has occurred in the young man's family. There were no signs of any affection of the joints, or evidence of subperiosteal abscess. We drew back a long prepuce, and exposed the glans penis; this was covered with an abundant creamy pus, and half its surface was occupied by a soft chancre in a sloughing state. We determined that there had been absorption into the system of this pent-up matter, and that our patient was suffering from pyæmia. As the symptoms were acute—that form of pyæmia, in fact, from which patients rarely recover—we gave a most unfavorable opinion to the parents, without detailing our discovery.

It will, of course, be asked how it came to pass that an examination of the penis should have been made. In this way. Some months previously I saw this patient, who was then covered from head to foot with a most copious eruption of acute eczema. He confessed to having had a chancre, was treated with mercury, and gradually recovered. Fortunately, in the above difficulty our researches were thus aided, and our perplexity, as we believe, solved, by a previous acquaintance with our patient's proclivities. No post-mortem examination could be obtained.—*E. F. Russell, M.B., M.R.C.P., in London Lancet.*

The Local Treatment of Phthisis by Carbolic Acid.—By Robert Hamilton, F.R.C.S., Senior Surgeon, Southern Hospital, Liverpool.—A paper which Dr. W. Williams lately read before the North Wales Branch of the British Medical association, draws attention to a mode of treatment of phthisis, which, I believe, will prove extremely valuable, and, I am sanguine enough to think, will be more successful than any other in many allied diseases of the lungs. The inhalation of carbolic acid vapor, in the continuous mode suggested

by my colleague, meets a difficulty which, I have always felt, has stood in the way of all previous methods of conveying drugs to the lungs. He utilizes the carbolic gauze of Lister, and merely saturates it occasionally with an aqueous solution of the acid. The old form of inhalers, as well as the modern spray-producers, necessitate a quantity of aqueous vapour being introduced into the bronchial tubes and into the air-cells, much in excess of what is ever naturally taken in. There is a positive evil in this, such vapor condensing, and being then deposited on the delicate epithelial lining of the air-tubes and cells, interferes with the osmic movements which respiration induces. That respiration is practically impeded is shown by the coughing and the suffocating sensation produced, so that a very few minutes' use, at one time, of inhalers and vaporizers is all that is possible. The suspension put to natural processes is apt to be overlooked in our eagerness to get the drug brought into actual contact with diseased lung-tissue; and the evil produced by the water is far more than commensurate with the good that the drug can do. The mode of conveyance of the minute particles of carbolic acid by Dr. Williams' respirator is not open to the above objection; and as the drug itself has been tested in surgical practice, and found to be of invaluable service in the treatment of all suppurating surfaces which are accessible, it is fair to infer that, if it can be applied *per se* to the lungs, it may be equally efficacious in checking the growth and development of morbid germs in them, and thus allow tissue to be reconstructed.

I have treated several cases of phthisis in the way suggested by Dr. Williams, with good results. The almost constant wearing of the respirator whilst under treatment may be an obstacle to the rapid adoption of the method; but it is, as he says, astonishing how soon the patients become accustomed to the wearing of them. They are only one degree more unsightly than the respirators which many people wear out of doors without hesitation. Further improvement in their shape and appearance is sure to follow, if their value be established. I have desired to draw attention to this mode of treatment of phthisis,

because it is following in the lines of thought in which surgical procedure has run for some time, with marked success. It approves itself to the views of those who uphold the germ theory of disease; and as an undoubted germicide, and nothing more when used in moderation, it carries out another great desideratum—non-interference with natural processes of nutrition and repair of material.—*Brit. Med. Journal.*

Treatment of Diarrhœa in Phthisis.

—Mr. Williams states that the diarrhœa arising in cases of phthisis from the ulceration of the alimentary tract requires very careful treatment. The great point to be kept in view is the healing of the ulcers, and this can only be attained by shielding them from all irritable substances and by promoting a healthy granulating action. The treatment in fact resolves itself into three sets of measures, (1) Rest in bed and the administration of only such food as can be quickly and easily assimilated without causing much distension of the intestine or accumulation of flatus. (2) Warm applications to the abdomen in the form of linseed poultices, &c., to reduce the pain and promote a certain degree of derivation to the skin. If the pain be severe a small blister over the area of tenderness to the touch is advisable. (3) Internal medicines. Where there is reason to suppose that the ulceration is slight and is confined to the small intestines, the diarrhœa may be treated by bismuth and opium, or by some astringent. The liquor bismuthi et ammon. cit. (B.P.) is a convenient form, but not always so effective as the powdered carbonate or nitrate of bismuth in ten to twenty grain doses. Dover's powder combined with it in ten grain doses is often effective. The most powerful astringent is sulphate of copper in a quarter to half grain doses, combined with half a grain to a grain of solid opium. Of the various vegetable astringents tannic acid in four grain doses answers best; but it should, in every case, be combined with a certain amount of opium to reduce the irritability of the ulcers. Indian bæel, especially a preparation of the fresh fruit, is often efficacious in checking the diarrhœa, if the ulceration be limited. If, however, the

ulceration attack the large intestine as well as the small, recourse must be had to injections and suppositories. The enema opii (B. P.) administered twice a day, is sometimes sufficient, and may be strengthened by the addition of acetate of lead (four grains to an injection) or of tannic acid, five grains. When the ulceration is very extensive and involves the greater part of the large intestine, an attempt should be made to apply the remedies more thoroughly to the mucous membrane, and for this purpose injections of larger amount—from a pint to a pint and a-half—may be used, consisting of gruel or of starch, or best of all, of linseed tea, and all containing a certain quantity of opium (thirty to forty minims of the tincture). The linseed tea appears to exercise the same beneficial effect on the ulcers of the large intestines as it does on follicular ulceration of the throat. In cases where the stools are very foetid, glycerine of carbolic acid may be added with advantage to the injection. In many cases where it is desirable not to distend the large intestines, suppositories of morphia (from half a grain to a grain) or of compound lead one, or of those of tannic acid are indicated. When the lardaceous degeneration has so far advanced as to reach the intestine, Dr. Williams thinks that the case is beyond any effectual general treatment; he is therefore content to restrain the diarrhoea by astringents, the more powerful the better. Tannic acid in from two to four grain doses, with dilute sulphuric acid, sulphate of copper, or sulphate of zinc, are the most useful, and injections of these substances do some good.—(*The Lancet*, June 11 & 18, 1881.)

Statistics of Medical Literature.—At the International Medical Conference, in London, Dr. J. S. Billings, of Washington, D.C., read a paper upon medical literature, with especial reference to its character and distribution. The paper opens with the following statistics:—

It is usual to estimate that about one thirtieth of the world's literature belongs to medicine and allied sciences. The number of volumes is computed to be about 120,000, and about twice that number of pamphlets, and this amount is increasing at the

rate of about 1500 volumes and 2500 pamphlets annually. Out of the 180,000 medical men in the civilized world about 11,600 are producers of or contributors to this literature. These are divided among the different countries as follows:

	Number of physicians.	Number of medical writers.
United States	65,000	2,800
France and colonies	26,000	2,600
German Empire	32,000	2,300
Great Britain and colonies	35,000	2,000
Italy	10,000	600
Spain	5,000	300
All others	17,000	1,000

The number of physicians who are writers is proportionally greatest in France and least in the United States. In 1879 the total number of Medical books and pamphlets published was 1643, according to the *Index Medicus*. Of these France published more than any other country, the contributions of the United States ranking third. The special characteristics of the medical literature of the present day are largely due to journals and transactions of societies. These form about one half of the current medical literature, and are by far the most widely read and studied. They amounted in 1879 to 655 volumes, containing about 20,000 original articles which were judged worthy of notice in the *Index Medicus*. Classifying the literary product of 1879 by subjects, we find the scientific or biological side of medicine represented by 167 books and 1543 articles. In this branch Germany leads, while the United States is very low in the list. The practical side of medicine was represented by 1200 books and 18,000 articles. Here France showed the greatest production, the United States next and then Germany. In scientific medicine we go to Germany to school, as that country at present leads the world. It was not long ago that the scientific student of medicine found his career anything but a profitable one. This condition is, however, rapidly changing, with the increasing specialization of his profession, and with the general tendency of science toward achieving practical results. So vast is the present range of medical science that we must now look, for original discoveries, mainly to specialists.—*Phil. Med. and Surg. Reporter*.

The Cotton Pellet as an Artificial Drum

Head.—After giving a short historical review of the artificial drum head, Knapp reports four cases in which its application rendered decided services to the patient. In Case I, a lady of 41, who had copious and offensive discharge following scarlet fever, and who at the age of 12 was so deaf as to necessitate people to speak loud directly into her ears, was treated by Dr. F. A. Caldwell, who put cotton pellets into her ears. He attended her himself until the discharge had almost disappeared. “Since then (29 years) she has worn the cotton pellets, and by their aid has always enjoyed good hearing, and has been free from pain and inflammation.” At present, without the pellets, she understands conversation at the distance of a few feet—with them at twenty. In Cases II, III and IV, the results obtained were also excellent. The points which Dr. K. desires to make in regard to the use of the cotton pellets are summarized in the following statements quoted from his article :—

1. “Cotton pellets moistened with glycerine and water (1.4), and worn as artificial drum heads, are a great aid to hearing in many cases of partial or total defect of the natural drum-head, with or without otorrhœa.”

2. “Their therapeutical action in arresting profuse discharge on the one hand, and preventing the mucous membrane of the drum cavity from drying up, on the other, is most valuable.”

3. “They protect, like natural drum-heads, the deeper parts of the ear against injurious influences of the atmosphere.”

4. “In some cases they are quite indispensable, and may be worn for a lifetime with permanent comfort and benefit.”

5. “In other cases they are needed only periodically, according to the copiousness of the discharge, or the exsiccation of the mucous membrane requires their action, in the one or other direction.”

6. “The period during which a pellet may be left in the ear varies with the condition of the parts. They should be changed frequently—*i.e.*, every day, or every few days, so long as the discharge is considerable. They should not be worn at all when the discharge is abundant and offensive. When there is no dis-

charge, they may be left in as long as they are comfortable and the hearing is good. So far as my experience goes, they are apt to become unclean in a week or two. They then ought to be removed, the ear cleansed, either with dry cotton or cotton steeped in warm soap-suds, and new pellets introduced."

7. "The management of the ear disease should remain in the hands of the physician until a stationary condition, either of slight or no discharge, has been reached. During the time the patient is under treatment, he can be taught how to cleanse his ear and remove and replace the pellets."—*H. Knapp, M.D., in Archives of Otology.*

The Latest Scope.—Ophthalmoscopes, laryngoscopes, *et id omne genus* of explorative agencies have very recently been called upon to welcome an addition to their number at the hands of M. Trouvé at the Paris Observatory. This novel instrument is called the Polyscope, and well deserves its name, if we can realize the numerous uses to which it may be applied. It was exhibited as introduced in the interior of a live fish, the little animal having, in the most accommodating manner, swallowed it, probably for the benefit of science. Through wires held in the hand of the operator, the whole interior of the fish became illuminated, so that its vertebræ could be clearly seen and counted. Already have its applications to the uses of the physiologist and the surgeon been practically tested. According to *La Nature*, it has been employed to demonstrate the texture of the rectum and bladder, to assist in the localization and extraction of a projectile in the posterior nasal region, and to examine the interior of the stomach of a bull suffering from gastric fistula. In this wonderful age of progress, what novel sights may we not hope to see through such polyscopic media; what light we not expect to be thrown upon obscure points of diagnostic value, to guide us through therapeutic intricacies! We hear much said, in these days of moral perversity, about the "true inwardness" of things, but what can equal in personal interest the interior of the human body when brilliantly lighted up under the dazzling rays emitted from a polyscope! We are not yet informed whether, like the

fish, we shall be compelled to swallow this new instrument of diagnosis, in order to detect the quality or amount of our back bone ; but we stand ready to go to the full extent of human endurance to be enabled to pass in review all our internal viscera, in which for so many years we have had a direct and vital interest.
—*College & Clinical Record.*

May Iodide of Potassium excite Bright's Disease?—In view of the very large doses which have been advised and are frequently administered in the treatment of syphilis, the question whether iodide of potassium may excite Bright's disease becomes one of considerable importance. In the *American Journal of the Medical Sciences* for July, 1881, Prof. I. Edmondson Atkinson, of the University of Maryland, calls attention to the large proportion of cases treated for advanced syphilis that present, after death, evidences of marked kidney disease ; and, in this connection, to the fact that syphilitic renal disorder in its characteristic lesion, the gumma, is comparatively rare, while the forms the most frequently encountered are not in themselves syphilitic. In searching for a cause that might produce these changes quite independently of the syphilitic poison, Dr. Atkinson concludes that since iodide of potassium has decided diuretic action, and, as is known to clinical observers, may cause both albumen and casts to appear in the urine, the continuance of this remedy in some cases might lead to the changes observed. He therefore made a series of observations upon seventy cases of late syphilis, of which nineteen presented evidences of renal alterations more or less grave. The relation existing between the administration of iodide in these cases, and the appearance of mucous or hyaline casts and albuminuria, was quite evident ; as in a number, the abnormal elements gradually disappeared after the cessation of the remedy. The condition appeared to be catarrhal in character, and the casts were the results of renal irritation. In no case, however, was extensive parenchymatous inflammation of the kidneys excited ; but an obvious syphilitic disorder of the kidney in one case disappeared under the full and systematic use of the iodide. The author's

conclusion is that while the evil effects of the iodide of potassium are small and for the most part transitory, the occurrence of more severe alterations is not impossible, nay is probable. To these evil effects some individuals are more susceptible than others.

The Value of Belladonna in Intestinal Occlusion.—Dr. C. J. Edlefsen relates, in *Norsk Magazin for Lægevidenskaben*, the case of a ship carpenter, 48 years of age, who had always enjoyed previous good health, but during seven days had had no evacuation of the bowels, and during the past two days had vomited fecal matter. The abdomen was distended and very tender to the touch, the extremities cold, pulse frequent, but feeble; no excrements in the rectum. Various laxatives and injections had been tried in vain. Patient was now ordered 3-5ths of a grain of extract of belladonna every hour. After five doses (three grains) had been taken, the vomiting ceased, and after five more doses, the patient was relieved of about one gallon of thin, gruel-like excrements, after which he improved rapidly. There were no symptoms of belladonna poisoning, although six grains of the extract were given.—*Med. & Surg. Reporter*.

A Study of Primary, Immediate, or DIRECT HEMORRHAGE INTO THE VENTRICLES OF THE BRAIN.—Dr. E. Sanders of New York, in an instructive paper upon this subject in the *American Journal of the Medical Sciences* for July, 1881, says: "Strange as it may seem, though important as the subject undoubtedly is, primary intra-ventricular hemorrhage is either passed by unnoticed, or if noticed, receives a passing mention only, being characterized as very rare, unimportant, and not to be diagnosed (Northnagel, Hughlings-Jackson, Brichteau, and others)." On the contrary, Dr. Sanders considers primary hemorrhage into the ventricles as their most common disease, and says: "Like many other diseases that were formerly classed as very uncommon, but have by later research and observation been found more frequently present by merely being looked for, primary hemorrhage into the ventricles of the

brain when sought for in the post-mortem room will, I am sure, share a like fate." Dr. Sanders has collected and studied 94 cases of this form of apoplexy, which, as compared with ordinary cerebral hemorrhage, is remarkably frequent at the two extremes of life. As regards the diagnosis, Dr. Sanders says, "given a patient with sudden complete coma, partial or complete paralysis, or even without any paralysis at all, contracture and convulsion, with rapidly following death,—in fact, that collection of symptoms which we have come to recognize under the term '*apoplexie foudroyante*,'—the probabilities are that we are dealing with a primary intra-ventricular extravasation." The effusion most frequently occurs in the lateral ventricles. The prognosis is almost always fatal. This important contribution to cerebral pathology contains the clinical histories of 28 cases, with the notes of the autopsies, and several comparative tables, which greatly enhance its value for reference.

Rare Result in an attempt to Deliver with the Forceps.—I was summoned on the night of

December 8th, 1880, to attend A. S. in labour, in consultation with Dr. A. B. I arrived at the bedside at midnight and obtained the following history: A. S., aged 20, short, thick and muscular, was taken with labour pains at 10 a.m., December 8th. The family physician was summoned at 2 p.m., and at 3 p.m. membranes ruptured, vertex presentation, contractions vigorous. The position was not detected, as the sequel of the case will abundantly demonstrate. The second stage progressed slowly, notwithstanding the pains were frequent and powerful. At 8 p.m. the forceps was applied in the pelvic position. The forceps used was that known as the "Reamy forceps." From this time until a short time before my arrival (midnight) every effort was made to deliver, aided by chloroform and the most powerful contractions, but without success. When I arrived I found the woman greatly exhausted; the pains still strong and frequent. Examination revealed an occipito-posterior position; the head at the inferior strait and thoroughly impacted, with the male-blade of the forceps resting beneath the pubic arch, and buried in the vagina to the shank and embracing the head firmly in the region

of the left frontal bone and orbit. The attending physician had attempted its removal, but failed to dislodge it. I employed every manœuvre to effect the removal of the blade, but utterly failed to change its position. Each succeeding pain served to increase the difficulty by wedging the blade still tighter. Here, indeed, was a dilemma without a parallel in my experience. We waited two hours, closely watching the case. At the end of that time no change had occurred for the better; on the contrary, the woman was becoming rapidly exhausted, with no advance of the head. We then decided upon and performed craniotomy upon a living child, which permitted the removal of the blade and delivery without further trouble. The woman made a tedious, but satisfactory recovery.

Remarks.—In my own experience, this case is without a parallel; neither does the literature of the subject, so far as I know, furnish a similar case. The factors leading to the unfortunate result are, in my opinion, the application of the forceps without a knowledge of the position of the head, and the failure to remove the instrument in time to permit the head to execute the movement of rotation in the natural way. Evidently the head entered the brim in the second position, right occipito-acetabular; in this position the application of the forceps before the head had executed the movement of flexion would most effectually prevent the brow from ascending and the occiput from descending, movements highly necessary in the rotation of the occiput under the pubic arch. As it was, however, the traction made by the forceps gave the head a new direction, forcing the occiput into the hollow of the sacrum, while the brow passed from the left sacro-iliac synchondrosis forward under the pubic arch, carrying the blade of the forceps with it. Of course a knowledge of the position in the beginning of labour, or, at least, before the application of the forceps, with a proper appreciation of the mechanism of labour, would have prevented the unfortunate result that occurred in this case.—*Dr. Rossett in American Practitioner.*

Catarrhal Diathesis in Young Girls.—

A special state of the organism has been demonstrated, consti

tuting what we call a *catarrhal diathesis*. We observe in a certain number of young girls, even in very early youth, general impairments of health which plainly call for that term. This peculiar form of catarrh, which often came under my observation at Mont-Dore, is in reality a constitutional affection, and is, in all the extent of the term, a diathesis. Besides, it is not connected with dispositions or tendencies which visibly depend on the constitution of the parents.

Etiology.—Two facts must be considered in this respect: the health of the parents, and the hygienic surroundings of the girl. (1) Most always the parents suffer from what we generally call a delicate constitution, a constitutional weakness, and suffer from some catarrhal affection or die young. In many cases they even show symptoms of adenitis, scrofulosis, or phthisis. (2) As a general rule, these young girls have been exposed to cold and dampness, either in their homes or under exposure to the influences of a cold climate.

Symptoms.—These girls have often a light complexion, are pale, and their flesh is soft; they easily take cold, and they sometimes have what we call a *fatty chest* (an increased secretion of mucus in the respiratory passages.) Although, excluding cases of more or less acute affections of the bronchi, auscultation reveals no important change, sometimes none at all. The digestive functions are often irregular. The general growth of the body is slow and laboured, as it were. The girl is said to have a delicate constitution; her menses set in late; and, in many cases, the most important point is an abundant leucorrhœa, very weakening, which may have started in early infancy.

As might be inferred, from what precedes the nervous element is found a good deal in the catarrhal diathesis of young girls. It is manifested by pains in various parts of the chest, by chokings, which take place without adequate causes, by the erratic and changeable character of the symptoms, by the frequency, obstinacy and the character of the cough, notwithstanding the negative results of physical examinations; by an abundance of expectoration, alternating or existing simultaneously with a profuse leucorrhœa. To conclude, these profuse losses from the

bronchi, or from the genital passages, finally ruin the constitution. This diathesis, we are happy to say, is capable of being cured, by an intelligent observation of the laws of hygiene, by an appropriate treatment; and age may also bring a cure.—*Abstract from an Address of Dr. G. Richelot, in L'Union Medicale, March 3.—Medical Gazette.*

When Men are at their Best.—Dr. Beard states that from an analysis of the lives of a thousand representative men in all the great branches of the human family, he made the discovery that the golden decade was between 40 and 50; the brazen between 20 and 30; the iron between 50 and 60. (*Michigan Medical News.*) The superiority of youth and middle age over old age in original work appears all the greater when we consider the fact that all the positions of honour and prestige, professorships and public stations are in the hands of the old. Reputation, like money and position, is mainly confined to the old. Men are not widely known until long after they have done the work that gave them fame. Portraits of men are delusions; statues are false! They are taken when men have become famous, which, on the average, is at least twenty-five years after they did the work which gave them their fame. Original work requires enthusiasm. If all the original work done by men under forty-five were annihilated they would be reduced to barbarism. Men are at their best at that time when enthusiasm and experience are almost evenly balanced. This period, on the average, is from 38 to 40. After this the law is that experience increases, but enthusiasm decreases. Of course there are exceptions.—*American Practitioner.*

Catarrhal Pneumonia.—Inhalations of carbolized spray, with the administration of ammonium chloride (gr. v–xx), potassium iodide (gr. iii–v), given in compound licorice mixture (̄ ss), or elixir of yerba santa, if there is much spasmodic cough, has given decided results. Night sweats are controlled by ergot or atropia, and emulsion of cod-liver oil and extract of malt, if the nutrition is below par. A moderate amount of stimulant may be required; and if there are great daily fluctuations in the temperature, indicating the onset of pneumonic phthisis, the pill of digitalis, quinia and opium (Niemeyer) is used three times a day.

CANADA

Medical and Surgical Journal.

MONTREAL, SEPTEMBER, 1881.

THE INTERNATIONAL MEDICAL CONGRESS.

LONDON, August 10, 1881.

To the Editor of THE CANADA MEDICAL & SURGICAL JOURNAL.

SIR,—The seventh session of this body concluded last evening by an informal dinner at the Crystal Palace. The majority of your readers have no doubt already been made acquainted with many of the details through the lay press, but, according to promise, I proceed to jot down a brief account of the proceedings, which extended from the 2nd to the 9th.

Six general meetings were held in St. James's Hall, at which addresses were delivered and the business of congress was transacted. The immense assemblies which gathered on these occasions were very impressive, and the scene at the inaugural meeting was one to be ever remembered "while memory holds a seat." The sight of above 3,000 medical men from all parts of the world, drawn together for one common purpose, and animated by one spirit, quickened the pulse and roused enthusiasm to a high pitch. The presence of the Prince of Wales and Crown Prince of Prussia gave great satisfaction, and added a flavour of Royal patronage which even science—republican though it be—seemed thoroughly to enjoy. The address of the President, Sir James Paget, was the event of the meeting, and surprised even those well acquainted with his brilliant oratorical powers. Beautiful thoughts, clothed in the choicest words, and expressed with an ease and grace peculiarly his own, marked each period, and at the close all felt that they had listened to an oration

worthy of the occasion and of the audience. A thrill of pride must have filled the breast of every Englishman present at the thought of having, as the representative of the nation, such a gifted man.

At the subsequent general meetings, addresses were delivered by Professor Virchow "On the value of Pathological Experiment"; "On Scepticism in Medicine," prepared by the late Prof. Reynaud, and read by Dr. Féréal; "On Medical Literature," by Dr. Billings of Washington; "On the connection of the Biological Sciences with Medicine," by Prof. Huxley, and a special one, at the request of the President, by Prof. Pasteur, dealing with the recent experiments in Animal Vaccination as a protective against certain scourges among cattle. To very many, one of the most pleasant features of the gathering was the opportunity it afforded of seeing Professor Virchow, than whom, since John Hunter, no greater name has arisen in our ranks. His extraordinary reputation as a pathologist, and the prominence of his position as a politician in his own country, made all men curious to see him. His address was most characteristic, and his arguments in favour of vivisection were most appropriate, and will, it is to be hoped, do something to lessen the fanatical outcry against its legitimate practice, which has disgraced England during the past few years. It was only natural that Prof. Huxley, who began life as an assistant surgeon in the navy, and who has, in many ways and many works, shown his continued interest in the profession, should discourse in his most lucid style on the relations of Biology to Medicine.

For working purposes the congress divided into fifteen sections, the meetings of which took place in the rooms of the various learned societies at Burlington House and of London University, and one or two other contiguous institutions. Addresses were delivered by the presidents of sections at the first meeting, after which the reading and discussion of papers followed in regular order. The committee had prepared a volume of abstracts of papers to be read, printed in English, French and German, which was ready on the first day, and greatly facilitated the working of the sections. With so much of interest in every section, it

was very difficult to decide each morning which to attend. The daily programme furnished full information of the subjects to be considered at each session, and the list was usually exhausted at the conclusion of the afternoon meeting. I spent my time chiefly in the pathological, physiological and medical sections. Papers on cognate subjects were, as far as possible, read at the same meeting, and those directly bearing upon any fixed subject of discussion were taken up in connection with it.

In the Pathological section, three very interesting discussions took place on Tubercle, on Germs, and on the relations of Cardiac and Renal Disease. In each a strong array of the chief talent of the profession took part, and it was very pleasant to hear the various points discussed by men whose writings were familiar and whose names are household words among us.

The time of the Physiological section was occupied chiefly in discussing certain set topics; very few papers were read. An animated discussion on Cerebral Localization took place, in which Goltz of Strasburg, Brown-Sequard, Ferrier and others participated. In the Medical section a large number of interesting papers on Nervous Diseases were read by Hughlings-Jackson, Brown-Sequard, Buzzard, Erb and others.

In the section on diseases of children, the attendance was good and the range of subjects discussed very varied. The treatment of Potts' disease and the question of inherited syphilis brought together a large array of the authorities on these subjects.

I gathered from friends that the work in other departments was carried on with equal activity, and a glance at the published abstracts is sufficient to show the variety and extent of the papers.

One of the most instructive parts of the congress was the museum, held in the Geological Society's Rooms. This consisted of illustrations of disease in the living subject, as well as a large assortment of rare and interesting prepared specimens. Among the former, Dr. Ord exhibited a remarkable set of cases, illustrative of the disease to which he has given the name Myxœdema, from the mucoid degeneration of the connective tissues, which produces the general swelling of the skin. The cases are usually in women and the affection is progressive. The patients exhibited

by Dr. Ord showed the various stages of the disorder and his lucid description left no doubt in the minds of his hearers that a definite pathological entity was before them.

Mr. Jonathan Hutchinson had a number of cases each morning, and his demonstrations on leprosy, rheumatic arthritis and inherited syphilis attracted large audiences. Rare forms of skin diseases were exhibited by many of the leading dermatologists. The museum of specimens contained about 700 examples of interesting and rare illustrations of morbid anatomy, the great metropolitan museums furnishing the larger proportion. Professor Parrot, of Paris, had on exhibition a beautiful series of bone specimens, illustrating hereditary syphilis and rickets. Prof. Politzer, of Vienna, exhibited specimens showing the normal and morbid anatomy of the ear; and other foreign members brought examples from their cabinets. The walls of the rooms in which the specimens were collected were covered with coloured drawings. Among the most remarkable of these was a set of water-colours by Sir Chas. Bell, illustrating gun-shot and other wounds seen by him after Waterloo. Mr. Hutchinson's enormous collection attracted particular attention, and illustrated most of the special departments in which he has become so famous. What struck me as most remarkable among them was a set illustrating eruptions due to iodide and bromide of potassium, particularly two portraits of a man, the subject of an extensive eruption of tuberculous masses on the skin, many of them ulcerated. The iodide had been given for ten weeks in increasing doses up to 20 grains, for a swelling in one iliac fossa. The patient died two weeks after coming under observation. Several beautiful coloured drawings by Raphael of Montreal were exhibited by our townsman, Dr. Roddick. An excellent catalogue greatly facilitated the inspection of the specimens, and perhaps as much direct benefit to the working members of congress was obtained during the time spent in the museum as in any of the other departments.

The hospitality displayed by the corporations and private individuals, was of a kind that could be offered in London and probably no where else. Among the most brilliant affairs were the conversaciones in South Kensington Museum, at the Guild-

hall and at the College of Surgeons, the Lord Mayor's dinner and the garden party of the Baroness Burdett-Coutts. On Saturday afternoon there were numerous excursions and garden parties. At Folkestone, a memorial statue of Harvey was unveiled and an address given by Professor Owen. Dr. Gerald Yeo, the Professor of Physiology in Kings College, entertained the members attending the physiological section at his residence at Staines, and took them up the Thames in a steam launch, as far as the residence of the Duke of Westminster. Many of the leading medical men kept open house, and the luncheon and dinner parties enabled visitors to meet in a friendly way and compare notes.

The General Committee carried out the various arrangements in an admirable manner, and I did not hear of a single hitch during the entire proceedings. The registration of members took place at the College of Physicians, which formed the central office of congress, and was thronged early and late. The preparation of the volume of abstracts (over 700 pages) and the museum catalogue must have entailed an immense labour on the Committee, but the general expression of satisfaction showed how much the work was appreciated by the members.

A volume of Transactions will be issued as soon as possible, in English, French and German. The members' subscriptions are expected to cover the cost. It is to be hoped that no unnecessary delay will take place in the publication, though, considering the size of the volume, and the unavoidable delays in translating papers, etc., it can scarcely be expected before this time next year.

W. O.

Medical Items.

—The opening address at the Montreal College of Pharmacy will be delivered on Tuesday evening, October 4th, by Henry Lyman, Esq., on "The Progress of Pharmacy in Canada during the last fifty years." At the annual meeting the office-bearers and lecturers were re-elected. The new lecture-hall of the College, which is handsomely fitted up, is at 223 McGill street, corner of Notre Dame, and is very convenient for students.

THE FAILURE OF PILOCARPIN IN DIPHTHERIA.—We cannot but regret to announce that the more recent trials of pilocarpin, advocated so forcibly by Dr. Guttman as almost a specific in diphtheria, indicate that it is of no use at all in that disease. Dr. Joseph Schmid, in the *Wiener Med. Press*, No. 15, 1881, says, after a full trial, he has found it “generally wholly useless, often decidedly injurious.” In serious forms of the complaint, he actually believes the unfavourable termination was hastened by his use of the drug. In the lighter catarrhal forms, the symptoms were not visibly ameliorated by it.—*Cinn. Lancet and Clinic.*

THE BALLAD OF BACILLUS.—(*Dedicated to Prof. Virchow.*)
—“The same *Bacillus* as that found in hay was produced. On the other hand, the innocent organism found in hay might, by a different method of cultivation, be made to acquire virulent properties. Fed on a vegetable diet, it was tame and harmless; but, transplanted to another soil and given animal nourishment, it became savage (*verwildert*) and virulent.”—*Virchow's address.*

Oh, merry *Bacillus*, no wonder you lay
Quiescent and calm when at home in your hay;
You never meant evil in hayfields, no doubt,
Till cruel experiments worried you out.
An innocent germ on a sort of probation,
Oh, why did pathologists try cultivation?

We hear you were harmless and charmingly tame,
So why did our Virchow besmirch your fair fame;
Why should he transplant you, with infinite toil,
To new and to wholly unnatural soil;
When food vegetarian kept you so quiet,
Why tempt you to fury on animal diet?

“*Verwildert!*” says Virchow, who surely must know,
You are, when transplanted, and cause us much woe;
So prithee, *Bacillus*, don't travel so far
As us, but stay peacefully just where you are.
You're innocent now, and have no wish to ravage,
And we've no desire, dear, to render you savage.

“*PAS ENCORE.*”—Prof. Depaul, giving an account to his class of the magnificent obstetrical clinic (constructed at the moderate cost of 12,000 fr. per bed), and stating that an amphitheatre had been provided in which remarks might be made that it would not be proper to make at the bedside, observed that it reminded him of some words which, to his infinite regret, had once escaped him when examining a poor woman who, to all appearance, had succumbed to a uterine hemorrhage. Turning to the persons who surrounded him he said: “This woman is dead.” But to his great stupefaction the patient replied in a feeble voice, “*Pas encore!*” So little dead indeed was the poor woman, in spite of all appearances, that in three weeks she left the clinic perfectly well. This “*pas encore*” corresponds pretty well to what occurred to Récamier one day when he was called by a colleague to see a man, the subject of typhoid fever. Récamier complained of having been called to the case too late, saying that the patient apparently could not survive the night. The latter, on hearing him, emitted a certain noise from the lower passages, accompanying it with the words, “*Qui crepitat vivit!*” and in fact, not only did he not die of typhoid fever, but is alive at the present time.”—*Gaz. des Hopitaux.*

A NOVEL FEMALE CATHETER.—Dr. S. C. Van Antwerp, of Vicksburg, Mich., writes: “While talking with Dr. Barnum of Schoolcraft the other day, he gave me a little of his experience, which was certainly amusing and not without interest in a practical way. Dr. Barnum said he was called one hot summer day to see a patient four miles in the country who wished his immediate attention, but he did not learn the trouble. On arriving at the house he found that his patient was a lady who had been suffering for twenty-four hours from retention of urine. She begged of him to relieve her distress at once. Most unfortunately he did not have a catheter with him, and it would take quite a while to send for one. What he should improvise for one was a question. He thought of a goose quill or piece of elder, but neither were to be had. He then thought of burning a hole through a piece of wood with a knitting-needle, but that did not

work. Lastly he thought of a bent wire. And the woman in her anxiety threw the covering aside and told him not to stand on ceremony but give her relief. Pressing the bent end forward carefully, before he expected a gush of urine struck him in the face and trickled down his well-laundried summer wear, and the transition from extreme anxiety of the woman and her friends to a most ludicrous scene was the signal for a general laugh at the doctor's expense." *Haec fabula docet*, either always carry a catheter or be prepared to improvise something therefrom. While on this subject I am reminded of a suggestion made by a medical friend, which is to use a gum elastic catheter in drawing urine of women, as it can, by such a length of tube, better conduct the urine into a bed pan. I most heartily endorse the use of Nelaton's Catheter in male subjects where there is much difficulty in passing a silver one.—*Michigan Medical News*.

This story reminds us of an occurrence of similar nature on one of our river boats. An elderly woman, second-class passenger, was found during the night to be groaning and suffering much pain. The watchman, after searching the list of passengers, waked up Dr. W., who happened to be on board. He found a greatly distended bladder to be the cause of the trouble. He had no catheter; finally it occurred to him that his toothpick might be pressed into the service. He borrowed a second quill from a friend, and having fastened the two together, passed this novel catheter into the bladder and received the blessings of the sufferer. It is generally believed that the doctor bought a new toothpick on reaching Quebec.

VELUTI IN SPECULO.—“The Nineteenth Century seen through the Speculum” is said to be the title of the memoirs of his time which M. Ricord has prepared as his final literary legacy. These memoirs, like those of many other public men, are not to be published till thirty years after his death. “But,” says the chronicler of the *Union Médicale*, “when to a select and friendly audience he reads a few pages, it is Rabelais, Brantome, or one of the stories of the amiable Queen of Navarre, to which the hearer seems to be listening.”