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Original Communications.

ON THE ALTERATIONS OF THE MYOCARDIUM FOLLOWING SECTION OF THE EXTRA-CARDIAC NERVES. BY G. FANTONI.

Translated from "Il Pisani," by DR. JOSEPH WORKMAN.

Eichhorst and Zander, having studied, in pigeons, the alterations produced in the myocardium by bilateral section of the vagus, found a fatty degeneration of the heart, which was attributed by the former to the absence of the influence of the vagus on the cardiac muscle, and by the latter to inanition. Zander sought for the reasons of his hypothesis in the fact that the animals constantly and progressively lost weight from the day of operation until death.

The writer having, through the introduction and with the support of Dr. Lustig, undertaken the study of this subject in the laboratory of the Hospital of Humbert I., with the view of reaching a more secure result and a more just interpretation of the facts, endeavored to avoid anticipatively a series of complications which might have a damaging influence over the ulterior course of the process—*e.g.*, advanced age, pregnancy, the re-uniting of the stumps of the cut nerve, suppuration of the wound, pulmonitis, fever from whatever cause arising, and decrease of weight of the animal.

By selecting young animals, sound and non-pregnant, and excluding from report those in which suppuration of the wound, or fever, had chanced to occur, the chief indications were satis-

fied. As to pulmonitis, however, Fantoni says that, having twelve times made the bilateral section of the vagus on rabbits and guinea-pigs, in some with tracheotomy and in others without it, this affection always supervened, unless the animals died sooner from other pulmonary disorders. He therefore left these out of account in his conclusions.

By executing, instead, the *unilateral section* of the vagus, pulmonary complications never arose; and not only did they not decrease in weight, but they usually weighed heavier, so that when killed they were in perfect health, and in this state they came under examination.

Under these circumstances it may be held that if alterations be met with, they are the direct results of the defective activity of the vagus. Having thus premised and detailed the methods of microscopic research followed, Fantoni summarizes the results of his experiments as follows:—

In forty-eight hours after section of one of the vagi, there were observed, macroscopically, yellowish-white patches of various size, isolated, and distributed especially on the two faces of the interventricular septum, the gross papillary muscles, and the external surface of the heart, along the sulci of the coronary arteries.

Under microscopic examination, in the fresh state of these parts, there were seen, in longitudinal section, many fibres with striature almost vanished, swollen, with irregular contours, and full of numerous albuminoid granules (reaction with acetic acid). On transverse section (hardened in absolute alcohol and subsequently colored), many fibres were observed devoid of nuclei, others with rich nuclei of chromatin, wrinkled, forming irregular figures, tufted, triangular, octangular, stellate, etc., etc. Around the nucleus thus modified there is always a whitish areola with regular contours and a surface greater than the rest of the fibre.

In the interfascicular spaces there are observed numerous foci of infiltration with small round cells, which gradually invade the interfibrillar spaces. These foci become rapidly diffused in following days; the round cells become fusiform, and they form, in the cardiac muscle, a true netting, whose meshes separate the

muscular fibres from one another. From the eighth to the tenth day many of these fibres present a notable degree of atrophy (in some, simple atrophy; in others, degenerative atrophy); the fibres devoid of nuclei are much more numerous than in previous days, and the special alterations above described, though met with, are more scarce.

In the more advanced epochs (eighteenth to thirtieth day), many fibres have disappeared and are substituted by fascicles of connective tissue, rich in young connective cells. Correspondent to this, the cardiac muscle in the more altered tracts appears consistent (?) and of a whitish color.

The general conclusion which may be drawn from the above mentioned alterations is, that the fibres of the vagus not only have a functional value, but also that they exercise over the heart a trophic influence. The author having afterwards made the same experiments on the sympathetic and the depressor, found that the bilateral section of the sympathetic does not give alterations in the heart, whilst section of the depressor gave the alterations, which have been described for section of the pneumogastric, but less pronounced.

[Perhaps the most important results of the physiological investigation of the heart during the last half dozen years may be summarized as follows:—

1. Clearer and more extensive knowledge of the innervation of the heart.
2. Truer conceptions of the causation of the heart-beat.
3. Broader views of cardiac rhythm.
4. New light on the relation of the cardiac nerves to the nutrition of the organ.

While the investigations of Eichhorst and Zander had led us to more than suspect the truth in regard to the importance of the nerves to the nutrition of the heart, it was desirable that the whole subject should be put in a position in which extraneous factors might be without hesitation excluded. While I believe that, as the result of my own investigations on cardiac physiology, I have been the gainer in all the directions indicated above, and while I think these results flow from the

investigations taken as a whole, which have been carried on in different quarters of late years, there are others which, so far at all events as my own insight goes, are more important, and they have at all events been more helpful to me. I refer to the wider conclusion, that not only the cardiac nerves, but all nerves (*i.e.*, all centres), are in some sense trophic; and that this follows from the view that function and nutrition are but different phases of the one thing—the general metabolism of the body. The results for the heart are quite in harmony with those arising from the section of the nerves supplying other tissues and organs; so that these investigations in cardiac physiology have been stepping-stones by which we have been enabled to reach a generalization which, as it seems to me, is destined to work profound changes in our views of both physiology and pathology. It appears now to be a radical error to separate “function” and “nutrition” except as a matter of convenience; and I much question if it would not be better to alter our nomenclature in the near future to bring it into harmony with the new conception. It would not only result in a broader view of vital processes, but would greatly simplify our classifications of physiological and pathological processes. It would be well if the work on the sympathetic and depressor nerves could be repeated. It is hazardous at present to attempt to interpret it. Hitherto the depressor has been regarded chiefly as an afferent nerve for impressions from the heart to the vaso-motor centre. Sewall thought it also had a similar relation to the cardio-inhibitory centre, a view which he supports by experimental evidence. If the depressor should be shown to contain no efferent fibres, then the conclusion that “nutrition” depends on afferent as well as efferent impulses would appear legitimate. This I fully believe follows as a result of a host of facts, though additional evidence of the kind this paper of Fantoni’s furnishes would be very welcome. I beg to call attention to the rapidity (forty-eight hours) with which these changes were, I will not say initiated, but actually accomplished so as to be visible to the naked eye. If we believe in a constant neuro-metabolic influence this is intelligible and this alone. The changes so pronounced in nucleus and around it also is additional evidence of the importance of that body on the whole cell-life, a truth that the most modern

researches are making abundantly evident. It is most interesting to find the microscope confirming the results of purely physiological experiment.

It remains for me to explain how this paper of Fantoni's appears in an English dress. Having sent a few little reprints of my own to Dr. Workman (knowing that he was a perennial freshman of the right sort), I received in return this paper, translated, and enclosed between some sheets full not only of appreciative thoughts and valuable suggestions, but abounding in that combined wit and wisdom for which the Nestor of our profession is so noted. At once perceiving that I had become possessed of a gem of the highest value, I resolved that no time should be lost in exhibiting it to the medical public. The paper seems to me to be of the highest scientific value at the present time. It supplies another needed link in the physiological chain which is to bind together a host of isolated facts. Personally, I feel grateful to Dr. Workman. He has placed the whole profession under obligations by bringing such a paper to light.—*Wesley Mills.*]

INTUBATION *VERSUS* TRACHEOTOMY FOR THE RELIEF OF LARYNGEAL STENOSIS.

BY GEORGE E. ARMSTRONG, M.D.

(*Read before the Medico-Chirurgical Society of Montreal.*)

Mr. President and Gentlemen :—I do not appear before you this evening as the reader of the paper because I have anything new or original to offer on the subject I have chosen, but because I have a notion that a member of this Society can sometimes do a good thing in gathering together the thoughts of representative men on a subject of general interest to the profession, and present them embodied in a paper for discussion. We probably do not all read the same meaning in journal articles, and we do not all have the same result from any given item of treatment, medical or surgical, and I think that an expression of views on the popular subject of intubation, even if at the expense of the reader of the paper, will result in bringing us all nearer to the truth.

The insertion of a tube through the mouth into the larynx for

the relief of laryngeal stenosis is a new operation. Dr. O'Dwyer began his experiments in this line in 1880, but the results were only given to the profession in a paper which appeared in the *New York Medical Journal* in August 1885. The idea, however, had occurred to others as early as the beginning of the present century. Desault catheterized the trachea in 1801, and Bouchat of Paris, in 1808, first inserted a tube into the larynx for obstruction there, and proposed intubation as a means of relief from impending death from suffocation in membranous croup and in laryngeal diphtheria as a substitute for the old classical operation of tracheotomy. His proposal was critically examined and adversely reported upon by a committee composed of his *confrères*, of whom the great Trousseau was one. Bouchat's tube was short and round. The idea seems to have dropped at that time, and nothing more was heard of it until Dr. O'Dwyer appeared as its champion a few years ago.

Before speaking of the practical application of the tubes, I wish to remind the members that although the mucous membrane of the larynx and trachea is continuous with that of the pharynx, the epithelium changes. In the pharynx, the upper half of the epiglottis, and posterior wall of larynx, as low down as the vocal cords, squamous epithelium is found, and the diphtheritic membrane is infiltrated into the mucous membrane, at least in a percentage of the cases. But in the larynx and trachea the epithelium is of the columnar variety, and the pseudo-membrane does not infiltrate it, but simply lies upon it. This fact might be of importance in discussing the vexed question of the unity or plurality of membranous croup and diphtheritic laryngitis.

In operations on the mouth and in the naso-pharyngeal space I have no experience, but Thomas Annandale of Edinburgh, in a case of operation on the thyroid body, when death was threatened by suffocation, introduced a No. 10 gum catheter and thereby saved his patient. He used the catheter because it was simpler, safer and quicker than tracheotomy, and equally efficient. Dr. Macewen first catheterized the larynx July 5th and 6th, 1878, and he reports several cases of œdema glottidis treated successfully in this way. In operations in the mouth, a catheter

can be introduced in the larynx, packing can be introduced around it, and the catheter continued to some distance away from the field of operation by means of rubber tubing and the anæsthetic administered through it. It has been proposed to introduce the catheter through one nostril, but this is more difficult, and, as a rule, is no more effective.

In chronic inflammatory conditions, and in accidental or surgical wounds, intubation is said to answer better than tracheotomy. Dr. O'Dwyer reports one case where the tube was worn ten months.

One of the many objections to intubation may be appropriately considered in this connection, and that is, the size of the lumen of the tube. Does it admit freely sufficient air to ærate the blood? This question has been well investigated by Lennox Brown of London. He found that the diameter of the glottis at birth was one-eighth of an inch, and at 14 years of age half an inch; the diameter of the trachea at the third ring at birth is three-sixteenths of an inch, and at 14 years of age three-eighths of an inch; the diameter of the lumen of the trachea at 1 year of age is barely one-quarter of an inch, but an adult, at rest, can breathe comfortably through an opening of this size. Dr. O'Dwyer reports the case of a man wearing a canula in the trachea for seven months, and the diameter of the inner tube is exactly a quarter of an inch. The narrowest part of the trachea is immediately below the vocal cords, where, by reason of the rigid cricoid cartilage, it is also the least dilatable.

But it is in croup or laryngeal diphtheria that, as general practitioners, we are most interested in the use of O'Dwyer's tubes. I have used the tubes in ten cases. A description of one of these is practically a description of all of them. All the cases were in children. In all but one there had been pseudo-membrane seen in some part of the pharynx before, after, or at the time of operation. In one case no membrane was seen at any time in the pharynx. The symptoms in each of these ten cases were those of acute suffocative laryngeal stenosis. There was present restlessness, the typical inspiratory and respiratory stridor, marked depression of the epigastrium, and supra sternal

notch and dilation of nostrils during inspiration, and evidence of deficient æration of the blood in the livid countenance and blue lips. In all cases the pulse was rapid and feeble, with more or less elevation of temperature. From my experience in these cases, I firmly believe that all of them would, if they had not been quickly relieved, soon have ceased to breathe. The insertion of the O'Dwyer tube gave as great and as rapid relief to the patient as the insertion of a tube into the trachea. There was less coughing and irritation immediately afterwards than occurs after tracheotomy. The respiration became at once easy and free. The patient passed suddenly from a condition of great restlessness and distress to one of comparative quiet and ease. I have in only one case pushed down membrane ahead of the tube. In this case, on removing the tube and re-inserting it the passage was clear. In one case only did the tube subsequently require to be removed on account of its lumen becoming filled up with the pseudo-membrane. Four or 40 per cent. of these cases recovered. In two of the successful cases the tube was coughed up on the third day, and in two I removed it on the fourth and fifth days. The advantages claimed for intubation over tracheotomy are—

1. No anæsthetic is required.
2. It has less of the horrors of an operation about it. Parents will generally yield a ready assent to the proposal to intubate, while it is with great difficulty that their consent to tracheotomy can be obtained, especially when such small hope of recovery afterwards can be held out.
3. The subsequent attendance is less irksome. All my cases have been in the houses of the poor. The only nurse obtainable has been the mother, who has been obliged to be nurse and at the same time give more or less care to other children and to her house, aided generally only by the kindness of some fearless and sympathetic neighbor. These people often cannot afford a trained nurse, and but few of these mothers possess sufficient intelligence and nerve to perform the difficult task of caring properly for a tracheotomy tube.
4. The mucus does not dry in the tube and diminish its calibre

as it does in a tracheotomy tube. The air enters by the nose, is then warmed and filtered as so intended by nature, and there is less risk of secondary bronchitis and pneumonia.

5. The tube need be left in place only four or five days as a rule, and when it is removed there is no gaping wound to heal.

6. Another important advantage is that the general practitioner can intubate without skilled assistants, and this is no small matter. It is not always easy, even in Montreal, to get a *confrère* at short notice. There are hours in the day when nearly every physician is out, or the critical time comes in the middle of the night when one feels reluctant to call a brother practitioner out of his bed. These difficulties in the country must be far greater.

7. It does not in any way interfere with the subsequent performance of tracheotomy under more favorable conditions, and at a more convenient time if thought advisable.

8. Lastly, and most important of all I believe, the percentage of recoveries is greater after intubation than after tracheotomy. I think I am quite safe in saying that I have performed tracheotomy twenty times for cases occurring in my own practice and in that of my *confrères*; of these only four have recovered. I have intubated ten times, one case in my own practice and nine in the practice of my *confrères*, and of these four have recovered. In other words, 20 per cent. recovered after tracheotomy and 40 per cent. recovered after intubation.

I have reason to believe, however, that this high percentage of recoveries will not continue. Dr. F. E. Waxham has collected 1072 cases of intubation performed in various parts of the United States, with 287 recoveries or 26.77 per cent.; and in his book on "Intubation of the Larynx," the ages of 661 cases are given, with percentage of recoveries at each year of age. The ages run from 1 to 14 years, and the average percentage of recovery is 27.38 per cent. The highest percentage of recovery is at the ages of 9 and 10, of whom 50 per cent. recovered.

Jacobi states, in Meigs' and Pepper's 'Treatise on Diseases of Children,' "that out of 1024 operations of tracheotomy performed in various parts of the world, but principally in Europe, 220 or 21.48 per cent. recovered."

Dr. Max. J. Stern of Philadelphia, at the recent meeting of the International Medical Congress, gave statistics taken from Bourdillat showing recoveries after tracheotomy amounting to 26.40 per cent.

Comparing Dr. Stern's statistics at different ages with Dr. Waxham's statistics for the same ages, we find the following taken from Waxham's book :

<i>Tracheotomy.</i>				<i>Intubation.</i>			
		<i>p.c.</i>				<i>p.c.</i>	
Under 2 years of age	3	Under 2 years of age	15.62		
2 to 2½	“ “	12	2 to 3	“ “	19.46		
2½ to 3½	“ “	17	3 to 4	“ “	30.00		
3½ to 4½	“ “	30	4 to 5	“ “	32.65		
4½ to 5½	“ “	35	5 to 6	“ “	33.92		
Over 5½	“ “	39½	Over 6	“ “	43.33		

Showing that in young children under 4 years of age intubation yields a far larger percentage of recoveries than does tracheotomy.

OBJECTIONS.

1. The tube may push a piece of membrane down ahead of the tube, thereby blocking its lower end and obstructing the ingress or egress of air. This objection applies with equal force in the introduction of the tracheotomy tube, and the objection is only valid in so far as the difficulty of removing and reintroducing the one is greater in the one than in the other; and this is not much. It may be easily withdrawn by the string which is still attached at this time, and its reintroduction scarcely more difficult in the intubation tube than in the tracheotomy tube. It occurred in only one of my cases, and caused no serious harm.

2. The tube may be obstructed by membrane passing into it. This difficulty I encountered once. On the other hand, in the *great majority* of cases it remains clear, requires no attention, and causes no irritation; while the tracheotomy tube is constantly becoming choked by blood and mucus drying in the tube, necessitating the frequent removal and cleansing of the inner tube.

3. Food may pass down the tube during the act of deglutition and set up pulmonary complications. This, it seems to me, is the great objection to intubation. In the last eight of my cases I requested the attending physician to insist upon the child being

fed for the first three days entirely upon peptonized enemata, allowing the child only pieces of ice by the mouth. I think this precaution has contributed largely to the success of the operation. Dr. Waxham has suggested the addition of a false rubber epiglottis to the O'Dwyer tube, and then that the child be fed in the prone position, lying well forward when swallowing. Dr. J. Mount Bleyer recommends a tube more cup-shaped at its upper end, having also a false rubber epiglottis.

The difficulty of swallowing is caused less by the large head interfering with the closure of the epiglottis than by its impeding the action of the ary-epiglottic folds and general constriction of the laryngeal vestibule. That the lid action is not necessary in the act of swallowing in adults is proved by the experiments of Majendie and by the clinical history of patients whose epiglottis has been destroyed by syphilitic disease. Giving semi-fluid food is less liable to result in unpleasant symptoms than is liquid food.

4. The tube may slip down into the trachea. This should not, and hardly can, occur if a tube large enough is inserted. The large head is a protection against this accident. The tube may be coughed up, but in my experience, if the tube is properly weighted, it will not be coughed up until recovery is so far advanced that its re-introduction will not be needed.

5. If it becomes displaced the nurse cannot reintroduce it. This is true. But if the physician waits until the first coughing and expelling of mucus is over, the danger of displacement must be slight. I have not seen it occur.

So far as I have experience in the use of O'Dwyer tubes, I am pleased with them; and if the percentage of recovery is found, after a longer trial, to equal tracheotomy, I think it preferable to tracheotomy in private practice for the reasons given, and I am certain that general practitioners will find permission given them in a much larger number of cases to give the last chance of relief by surgical means to a pretty-large group of patients suffering from a very fatal and distressing disease.

CLINICAL RECORDS.

By R. L. MacDONNELL, M.D.,
Professor of Clinical Medicine, McGill University.

Of late years much has been written concerning the value and importance of personal and family medical records, and, at present, great attention is being given to the subject. The custom of putting the histories of cases on record dates from the earliest times, since the days when the sufferers who obtained relief from their diseases at the temple of *Æsculapius* used to leave behind them a statement of their symptoms and the treatment adopted for their cure. Since these early times, case reporting has been a common custom in the profession, and the form and manner thereof has undergone but little change. The practitioner of to-day reports his case in much the same fashion as did Hippocrates or Galen, adopting a similar style and phraseology. Scientific men of all nations and in all ages have never failed to realize the great importance of clinical records. By their aid they were enabled to compare their own cases together, the one with the other, to compare the modes and results of practice at various periods of their own lives, to compare their procedure with that of former generations, and, lastly, to leave their writings to posterity to form at once a guide to their successors and to enable us, in our day, to judge how much or how little we have improved upon the diagnosis and treatment of our ancestors in the profession. Given certain symptoms, the student of the 19th century can see how Sydenham, Morgagni, Galen or Hippocrates would have regarded such a case, and the treatment they would have adopted.

The new movement has for its object the improvement and extension of this system of record-keeping. The writing was formerly done for the benefit of the practitioner and his brethren, but now it is proposed that the patient should be educated up to seeing that he is the person directly benefited by a history of the symptoms present during his life, the circumstances attending his birth, the medical history of his ancestors and his near and remote relations, and, lastly, that the story of his life and

death, if properly told, will be of inestimable service to his children.

We do not suppose that the public will ever be brought to such a state of intelligence as to encourage a system of record-keeping that would be so serviceable to them, though we like to indulge in ideas of the great utility and importance of such a system. Imagine a family case-book with the history of two or three generations; the family adviser would merely have to make from time to time a short entry of each of the illnesses for which he had attended any member of the family. A light would be thrown upon the origin of obscure diseases and many a doubtful diagnosis would be made clear. Examples suggest themselves in numbers. A youth presents symptoms and signs of heart disease or of chorea, and the previous history of an attack of acute rheumatism is obscure. Were this model life history at hand the practitioner could get at once an accurate report of what had really occurred, not in the unreliable story of the patient's mother, but in the notes of his predecessor in medical charge of the family. And, moreover, supposing that this direct evidence were lacking, a further search might reveal evidence of rheumatic tendencies in the father or mother.

Constantly in our daily practice we feel the need of more accurate information as to antecedent illnesses, and often do we hesitate about prescribing a line of treatment through uncertainty as to the effects which the same treatment is said to have produced in former years. We cannot always depend on previous history, as given by the patient or his relations. We are often told that morphia, for instance, will not agree, or that owing to some supposed idiosyncrasy quinine or iodide of potash cannot be taken, or that salicylate of soda produced unpleasant effects. A glance at the life history would tell us whether these drugs had ever been given, or, if they had been administered, whether the effects produced had been toxic or only those ordinarily observed.

As it is useless to expect that the public will ever aid us in instituting such a scheme, it remains for us to do what best we can under existing circumstances. And very much can be

be done. When a family seeks our protection, a record should be at once begun. An inventory of the new possession should be made, and the course of the present and future disorders noted. Family histories and peculiarities should be inscribed and the effects of treatment recorded. Apart from their advantage in directing treatment, such records may assume an important legal bearing. Dates may thereby be fixed and medical evidence rendered more accurate. Very valuable, indeed, are such histories in the selection of lives for insurance, and in the case of disputed claims. Take, for instance, the case of an applicant whose family history is doubtful. Reference is usually made to the regular attendant, and it frequently happens that the information thus afforded is of a very vague and indefinite character, the result of careless observation and defective recollection. In the settlement of disputed claims, records give important aid, and this was illustrated in a case recently under our notice. A claim was disputed on the ground that a previous attack of acute rheumatism had not been mentioned in the application. Fortunately this attack had occurred in hospital. The case-book showed that the alleged rheumatism consisted merely of plantar pains, for which the applicant had remained three days in the wards. But for this hospital record the widow would have lost the amount of her policy.

Next, it becomes a question as to the best means to adopt to enable a medical man in fair practice to keep his records. We recommend the following simple plan. Let the practitioner provide himself with a supply of square sheets of paper of convenient size. At the right upper corner the patient's name should be inscribed. At the first consultation a few rough notes may be made which can afterwards be enlarged. Papers relating to the case, letters, etc., can at any time be attached to the main record. All these case papers can be alphabetically arranged and kept in a portfolio. Subsequently, when their number increases, they may be bound together in book form. This system has an advantage over the keeping of records in books, because each report can be separated for use in the preparation of papers, lectures, etc., and because those cases at the

moment in progress may be kept in a separate portfolio together. We undertake to say that with an expense of time of not more than half an hour a day the busiest of "busy practitioners" can keep a diary of his life's work which is bound to be of service to himself as well as to his clients.

Retrospect Department.

QUARTERLY RETROSPECT OF OBSTETRICS.

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

Professor of Obstetrics, McGill University; Physician-Accoucheur to the Montreal Maternity, &c.

Adherent Placenta.—Dr. Berry Hart read a valuable paper on this subject before the Edinburgh Obstetrical Society in December last (*Edinburgh Medical Journal*). He was fortunate enough to obtain an inverted third-stage uterus with placenta adherent. He made microscopical sections of the entire thickness of the uterine wall and placenta by the celloidin process, in order to ascertain the difference of structure and arrangement in the serotinal layer as compared with a normal third-stage uterus with placenta attached. He found no evidences of inflammatory action in the spongy layer where separation normally takes place, but rather a defective development. Practically, separation of adherent placenta may occur in the three following plans: (1) where villi and serotina blend, (2) in the normal trabecular layer, (3) even at a superficial distance below muscle, usually only partial.

There is need of a good clinical classification, for cases of adherent placenta vary in degree from those simpler varieties where there is no hemorrhage in the third stage, and where the placenta is easily separated by the hand, up to those graver forms where there is profuse hemorrhage or where separation is very difficult, and where there is great subsequent risk of septicæmia. Dr. Hart suggests the following classification:—

1. Cases of total adhesion, unaccompanied by hemorrhage, where the separation of the placenta manually is easy, and is accomplished in the normal plane of separation.

This is the typical and easy variety. The patient has probably

suffered from endometritis previously, has had a slow second stage, and the placenta is not separated and expelled in the usual time. During the third stage the uterus may contract irregularly, forming nodules in its contour. If the placenta has not come away in three-quarters of an hour, the patient is to be placed in the dorsal position, the vagina douched with sublimate solution (1×3000), and an anæsthetic administered. One hand steadies and depresses the uterus, while the other separates the placenta from below upwards. Complete separation should be effected before an attempt is made to empty the uterus. After the uterus has been emptied, a hot antiseptic douche is administered. The unskilled operator sometimes experiences difficulty from passing his hand *inside* the membranes instead of *outside*.

2. Cases of partial adhesion high up in the uterus, where the placenta is separated in its lower part, often accompanied with serious hemorrhage. The upper adhesion is extensive.

This is a most serious complication at the time. The attachment above hinders uterine contraction, while below blood pours from the relaxed uterine wall denuded of its placenta. Massage, friction, ergot, hot and cold douching fail to check the hemorrhage, and immediate removal of the placenta is imperative. Whenever the ordinary measures fail to arrest hemorrhage during the third stage, it is safer to introduce the aseptic hand and peel off the placenta than to run the heavy risks of continuing hemorrhage. The greater the adhesion above, the greater the risk for the patient.

3. Cases of adhesion low down, the placenta being separated above; not usually accompanied with hemorrhage.

4. Cases of very perfect adhesion usually accompanied with little hemorrhage, but where separation is effected manually with great difficulty. The placenta is usually separated where the villi and serotina meet, and thus the uterus is left with the usual deciduous layer of the serotina still adherent, and often with portions of the foetal placenta attached.

These cases are not accompanied by flooding, but the union between uterus and placenta is so dense that separation is very difficult. A layer of dead tissue is left lining the uterus, and

septicæmia is very apt to occur. In such cases the most stringent antiseptic precautions must be adopted at the time of the operation and throughout the puerperium.

Accouchement after Extirpation of the Sacrum. (*La Semaine Médicale.*)—M. Lihotzky confined a woman upon whom Kraske's operation for cancer of the rectum had been performed. After the operation she enjoyed good health, became pregnant, and was safely delivered of a living child weighing about nine pounds and a half. It was interesting in this case to follow the mechanism of delivery on account of the absence of the sacrum as well as the muscles and ligaments of the pelvic floor. Delivery was normal, proving that in multiparæ or women with roomy pelves the presence of a resisting pelvic floor is not essential to the forward rotation of the occiput. The case is also of interest in proving that Kraske's operation is not necessarily a bar to subsequent child-bearing.

Precocious Menstruation. (*Brit. Med. Journal.*)—The case is reported by Dr. Diamant of Vienna. When a year old the child had cut all her milk teeth, and when barely *two* years of age she began to menstruate. The period lasted four days and recurred regularly for for four years. At six years of age the breasts, loins and pelvis were of adult type, and the axillæ and pubes thickly covered with hair. Menstruation then suddenly ceased, and for six months epileptiform convulsions occurred during sleep at the time the catamenia should have appeared. The fits lasted sometimes three-quarters of an hour, and were becoming more numerous every month. They were still continuing when the case was reported, the child being then six and a half years old.

Alcoholism of the Mother as a cause of Fœtal Death.—M. Charpentier recently reported a case to the Obstetrical Society of Paris (*Le Bulletin Médical*) which gave rise to some discussion. Seven years ago the mother was confined for the first time of a seven months child, which lived four years. After its death the mother, crazed with grief, became a dipsomaniac, and at the end of two years developed symptoms supposed at first to be due to acute general paralysis; but as alcohol was obtained

from the urine by distillation, it was finally concluded that the paralytic symptoms were purely alcoholic. Under treatment she recovered and shortly afterward became pregnant. Gestation was normal. Eight days before term the fœtus was well developed, living, and presenting by the head. Five days later movements ceased, and the following day the fœtus was born dead, slightly macerated, and presenting some phlyctenular spots on the body. In the discussion which followed, it was concluded that the fœtal death was attributable to maternal alcoholism, and Prof. Pajot expressed the opinion that in this young woman pregnancy should not be permitted to occur again for at least one year.

Puerperal Eclampsia.—M. Bar read a paper before the Société de Médecine Pratique on the causation of puerperal eclampsia, and reported a case (*Le Bulletin Médical*). His patient presented none of the usual premonitory symptoms of eclampsia, as albuminuria, etc., but was seized suddenly and died in twenty-four hours. The autopsy showed the kidneys to be normal, but the liver to be softened, friable, and the seat of grave lesions. Although albuminuria and eclampsia are closely connected in the majority of cases, and the kidney is generally found to be at fault, yet in a certain proportion of cases, as Tarnier has pointed out, the causative lesion is in the liver and not in the kidney. In such cases there is no premonitory œdema, and there may be no albumen in the urine up to the time of the first convulsion; the premonitory symptoms are pain in the hepatic region (more or less acute), and signs of commencing intoxication, such as headache, epigastric pain, and often mania. This form of eclampsia may be mild, but is often grave; when it proves fatal, there is coma with high temperature. Occasionally eclampsia may come on during the course of acute atrophy of the liver, beginning with a rigor, followed by fever accompanied sometimes by jaundice. Such cases are usually fatal.

The Microbe of Eclampsia in Gravid Women.—Dr. Emile Blanc has been for two years investigating this subject at the Lyons Obstetrical Clinic under the direction of Prof. Fochier, and now publishes the results in the *Lyon Médical*. Towards

the end of 1887, he found in the urine of an eclamptic patient in the Charité a peculiar microbe which he regarded as a micrococcus. He cultivated this microbe in bouillon and inoculated a rabbit under the meninges; it died in convulsions more marked on one side of the body than the other. He inoculated another rabbit in the auricular vein and produced infectious nephritis. On 21st February, 1889, a woman eight months pregnant took a convulsion while being examined previous to admission into hospital, and one hour afterwards took another. In the interval between the two attacks the urine was drawn off with careful antiseptic precautions, and two tubes of gelatine charged after Esmarch's method. White-bluish colonies of microbes soon developed, which did not liquify the gelatine. These microbes proved to be fine bacilli, with a dark spot in the centre resembling a nucleus, and capable of active movement. Cultivations were made in gelatine, agar-agar, potato and bouillon. The bouillon culture was used for a series of experiments on thirteen rabbits, a dog, a bitch, a pregnant guinea-pig and a rat. In the first series of experiments he inoculated the auricular vein of a rabbit eight days pregnant; convulsions began in one hour and proved rapidly fatal. Another rabbit inoculated with a very small dose of the same bouillon developed localized inflammatory œdema, followed later by gangrene and some slight constitutional symptoms. In a second series of experiments, non-gravid rabbits inoculated with somewhat stronger doses developed the same phenomena. Two dogs were inoculated, and in an hour convulsive spasms of the trunk began, returning every seven or eight seconds and persisting through a whole night. Another rabbit, pregnant three weeks, was then inoculated; in an hour it aborted and died in general convulsions. Those rabbits which resisted the first inoculation bore afterwards the infection of larger and stronger doses without general or local symptoms of any consequence. In a third series of experiments a pregnant guineapig was inoculated first in the peritoneum; for a day or two grave constitutional symptoms appeared, but it recovered. It was then inoculated in the jugular vein; severe dyspnoea soon began and the animal grew rapidly worse. It was finally killed when

in extremis. The autopsy showed profound anatomical changes; inoculation of the blood and urine reproduced the characteristic microbe. In another experiment upon a rabbit the urine was carefully examined; at first it was loaded with albumen and full of leucocytes and casts, then became scanty and finally suppressed, and, post-mortem, intense renal congestion was found with alteration of the epithelium. Different fluids (blood, urine, etc.) from the animals who died after inoculation readily produced the characteristic microbe in culture fluids, and when inoculated in other animals gave rise to the same symptoms and reproduced the same microbes. Prof. Fochier has always insisted that eclampsia is not a distinct disease, but a form of uræmia. In the light of these experiments, it is worthy of consideration whether the nephritis which so commonly precedes or accompanies eclampsia may not after all be an infectious condition due to the presence of microbes.

Creolin in Obstetrics.—The ideal antiseptic for obstetric purposes has yet to be discovered, one which is non-poisonous, non-irritating to the hands and tissues, non-corrosive to steel instruments, while at the same time it is an efficient germicide. *Corrosive sublimate* is the most powerful germicide used in obstetrics, but it has many disadvantages, and must be employed with great care. It roughens the hands of the operator, corrodes steel instruments, hardens and dries the genital tract, and sometimes leads to serious or even fatal consequences from mercurial poisoning. *Salufer*, a silico-fluoride of sodium, proposed last year by Mr. Mayo Robson, is non-poisonous and a good germicide, but it acts on steel instruments and the glaze of porcelain, discolors the finger-nails, and is not a good deodoriser. *Creolin* has been largely used in England and Germany, and seems to have given great satisfaction there. It is prepared from coal-tar by distillation, is a thick, syrupy, brownish liquid with a tarry odor and aromatic burning taste, soluble in alcohol, chloroform and ether, and forms an alkaline emulsion with water. It is non-poisonous, a good deodoriser, does not injure the hands or instruments, and has the very great advantage of lubricating the parts to such an extent that oil or vaseline is not required.

Possessing slight hæmostatic properties, it may be used with advantage to irrigate the uterus or vagina after operations or in cases of hemorrhage. Where there are perineal or vaginal lacerations to repair it is specially useful. In desperate cases of atony, where the uterine cavity has to be plugged, creolin may be used with advantage. Its action upon micro-organisms has been the subject of careful investigation by Prof. Attfeld in England, by Esmarch (Koch's first assistant) in Berlin, by Eisenberg in Vienna, Kortüm and others. As the result of their experiments it has been shown that a five per cent. solution of creolin destroys all pathogenic organisms immediately; a three per cent. solution produces a similar action in about one minute; a one per cent. solution retards the growth of micro-organisms to a considerable extent. Compared with carbolic acid, a three per cent. solution of creolin is equivalent to a five per cent. solution of carbolic, and a two per cent. solution of creolin to a three per cent. of carbolic. In the Munich klinik creolin and sublimate were compared in 280 consecutive confinements, each disinfectant being used in an equal number of cases. With the sublimate, there were two cases of severe and thirteen of mild septic infection; with creolin, no cases of severe and seventeen of mild sepsis. Most of the cases of mild sepsis occurred when only the one-half per cent. solution was used. For vaginal irrigation after labor, two per cent. solution should be used; for uterine douching, one or two per cent. If the lochia are beginning to be offensive, one per cent. is strong enough. Creolin soap is valuable for cleansing the hands before and after examinations or operations. The best preparations of creolin are *Jeyes' Liquor Antisepticus* for medical and surgical purposes, *Jeyes' Fluid* for general domestic purposes, and *Jeyes' 10 per cent. surgical soap* for the hands. These preparations are in constant use in the Montreal Maternity, and give the greatest satisfaction.

Temperature and Pulse Curves in the Puerperal Period.—Drs Temesvary and Bäcker have recently made elaborate investigations in Prof. Kézarszky's klinik in Budapest to determine the normal temperature and pulse curves of the puer-

peral period (*Archiv für Gynäkologie*). The temperature was taken in axilla, rectum and vagina, but it was soon apparent that the axillary temperature is not only more conveniently taken, but also, on the whole, more accurate and less liable to fallacy. During the period of gestation the temperature was found to be quite normal, there being no difference between that of the earlier and later months.

Temperature immediately after the conclusion of Labor:—Much depends upon the duration, difficulty and time of the labor. The temperature is higher in primiparæ than multiparæ, and higher after a difficult or irregular labor than after an easy or regular one. As a rule, the longer the labor the higher the temperature rises afterwards. The temperature is higher after labors ending between 10 A.M. and 12 P.M., showing that the normal daily variation of temperature in the human body exercises a certain influence. With regard to the prognostic value of the temperature immediately after labor, it may be inferred that in high temperatures there is generally trouble ahead, in slight rise of temperature the prognosis is doubtful, in normal or subfebrile temperatures the prognosis is generally good, though not necessarily so. In those cases where a normal or subfebrile puerperium followed, the temperature just after labor was over 99.5°F. (37.5°C.) in only ten per cent.; but where there was subsequently a febrile puerperium, the temperature was above that point in twenty-one per cent.

Temperature on the first day of the Puerperium.—After regular labors the temperature rises continuously and reaches its maximum in six to seven hours, then it falls steadily for ten to twelve hours, and reaches its minimum sixteen to nineteen hours after delivery. The remission is greater than the rise, because at the conclusion of labor the temperature is above the normal. In primiparæ the temperature two to three hours after delivery is almost half a degree higher than in multiparæ, but in eighteen to nineteen hours the effects of the more severe labor have passed off and there is no longer any marked difference between them. After irregular labors the temperature is $\frac{1}{2}^{\circ}$ to 1° higher than after regular labors, and it takes a propor-

tionately longer time to fall to the normal. A normal temperature curve for the first twenty-four hours is a favorable prognostic as far as it goes, but of course is no guarantee of a subsequently favorable puerperium.

Temperature of the Second to the Eighth Day.—In the puerperal woman free from fever and making a normal convalescence the average temperature does not vary from day to day more than $.11^{\circ}$ – $.56^{\circ}$ F. ($.06$ – $.31$ C.) But there are diurnal variations corresponding to those which are normal and physiological which must be borne in mind if we would estimate correctly the temperature at any given time or compare the temperature taken at one time of the day with that taken at another. The temperature rises from 4 A.M. to 10 A.M., remains fairly constant till 6 P.M. (with slight variations after meals), then falls steadily from 6 P.M. to 12 P.M., and remains at its minimum till 4 A.M., when it again begins to rise. The difference between the maximum and minimum is 1.2° – 1.4° F. ($.67^{\circ}$ – $.79$ C.), or on the average 1.3° F. ($.73$ C.), which corresponds to the daily variation in healthy persons. The diurnal variation is the same in primiparæ as in multiparæ. At 6 A.M. and 8 P.M. the temperature is very nearly that of the average for the day; so that if in any case the temperature be taken every day at those hours, a record of the average daily temperature may be obtained which will be tolerably accurate.

If it be required to get a more exact record of the average daily temperature, four observations may be taken and made to check one another as follows:—

$\frac{8 \text{ A.M.} + 10 \text{ P.M.}}{2} = \frac{2 \text{ A.M.} + 2 \text{ P.M.}}{2}$ If the four observations are as follows:

2 A.M. = 36.46C. then $\frac{37.03 + 36.64}{2} = 36.83$ —average temperature.

8 A.M. = 37.03C.

2 P.M. = 37.19C.

10 P.M. = 36.64C. $\frac{36.46 + 37.19}{2} = 36.82$ —aver. temp.

The results of all these observations show that the temperature of puerperal women under regular conditions and with a regular course of the puerperium corresponds entirely with that of

healthy women, not only as regards its average height, but also as regards its diurnal variations, and if on any particular day of the puerperium there is somewhat greater variation, it is still within the limits of normal body-heat.

The Pulse during the Puerperium.—As a rule, the pulse begins to slow down immediately after labor, and slows steadily for the first eight days of the puerperium. It is most rapid at the beginning of the first puerperal week, least rapid at its end. This slowing is equally marked in primiparæ and multiparæ, and amounts in the week to nine or ten beats per minute. Beginning at 61, it falls to 50–51. There is a diurnal variation in the pulse-curve as in the temperature-curve. The pulse is slowest at midnight and quickest at 8 A.M.; it rises most from 6 A.M. to 8 A.M. and from 12 to 2 P.M. The difference between the maximum and minimum rate any one day is on the average seventeen beats (60–77). The pulse rises after meals. The slowest pulse taken during these observations was 36, which was found on two occasions in nursing multiparæ on the seventh day. Blot and Depaul have observed a pulse of 35 in the puerperium, Olshausen and Quinquaud 34, while McClintock has reported a pulse of 30 after the birth of triplets. This is the slowest puerperal pulse yet recorded. The main cause of pulse-slowness in the first puerperal week is probably the altered condition of the blood, while physical and mental repose is probably a subsidiary factor. Has the pulse-rate any prognostic value? As long as the pulse remains slow the puerperal patient is not suffering from any serious febrile disturbance, but as soon as febrile symptoms appear the pulse rises. If there is elevation of temperature without corresponding rise of pulse, the febrile disturbance is probably only ephemeral. Of course a diagnosis or prognosis cannot be safely based upon the consideration of a single symptom; the pulse-rate must be considered along with the temperature-curve, and the other symptoms subjective and objective.

QUARTERLY RETROSPECT OF SURGERY.

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Lateral Anastomosis of the Intestines by Senn's Bone Plates. Catgut rings recommended as a substitute.—In addition to the four cases already reported by Senn, Dr. Robert Abbe (*New York Medical Journal*, March 23rd, 1889) reports another, in which complete obstruction of the colon was successfully relieved by using bone plates. The case was one of carcinomatous obstruction in a man aged 60, in which, under cocaine anæsthesia, the abdomen was opened and the colon found greatly distended. A temporary artificial anus was established, giving escape to a large amount of fæces. Six weeks later an operation was performed to overcome the obstruction caused by the cancerous stricture. This was done very rapidly by the use of Senn's plates. Dr. Abbe says that the bone plates one can secure from the makers seem to be limited in size, so that an aperture between two intestines of an inch and a half is about the largest obtainable. The plates take many days to prepare, and the larger ones do not preserve their shape as well as the smaller ones. The preparation of decalcified bone plates involves two or three days' maceration in dilute ten per cent. of hydrochloric acid, then washing half a day, and compressing between blotting pads, with flat pieces of tin on either side, until quite dry. They warp if not tightly compressed. An oval opening has then to be cut or drilled in the plate, as well as openings for the threads. Finally, the threads have to be secured and connected each with the other by a method not easy to carry out. Dr. Abbe thinks that an effective substitute for the plates will be welcome, and suggests rings of the heaviest catgut softened in water until it ceases to twist upon itself. It is then formed in a ring of four strands on the ends of three fingers, and wound over and over with the same sized gut tightly applied. When completed the ring is stiff and flat, with no disposition to curl. The threads are quickly and simply adjusted around the ring, and insure its making a firm pressure until it has dissolved in the bowel. Such

a ring will need six threads attached to it in place of four, as in Senn's plates. Each thread should be armed with its own needle. Dr. Abbe has used this catgut ring on a large dog; nine days later the dog was killed, the anastomosis between the two parts of bowel was found to be completely established, and the rings had dissolved away. Since then, Abbe carried out his suggestion in a case of fæcal fistula (editorial *Medical News*, April 13, 1889), and the rings were used efficiently. In addition to the threads, Lembert's sutures should be used in the interspaces between the threads. Abbe also suggests that the gut should not be laid side by side with the ends together, but with ends looking opposite ways, then the peristalsis would be in the same direction for both parts. Senn has shown that the cementing of the apposed serous surfaces by plastic exudation during the first five or six hours is sufficient to hold the parts together, but in forty-eight hours union is so firm that severe internal pressure will not part the wound.

At a meeting of the Medico-Chirurgical Society of London, held March 12th, 1889, Mr. F. B. Jessett communicated a paper on the results obtained from an experimental investigation into a novel mode of operating on the intestines (*Lancet*, March 16, 1889) which strikingly confirms the value of lateral anastomosis. The operations were performed on dogs, and consisted of (1) gastro-enterostomy, jejuno-enterostomy; (2) circular enterorrhaphy; (3) ileo-colostomy. Bone plates and India-rubber rings were used. The latter were used in the following way. The portion of intestine being removed, a narrow band of India-rubber was cut the exact size of the circumference of the upper portion of the divided gut; this was formed into a ring by two catgut sutures. This ring was next pushed into the gut and fastened around its free edge by a continuous catgut suture. Two threads armed at either end with a common sewing needle were prepared. One thread passed through the upper end of the India-rubber ring, now fixed in the intestine, and all the coats of the bowel, the needles being passed one on each side of the mesentery. The needles of the other thread were passed equi-distant through the rubber ring and coats of the intestines on the convex surface.

The needles were next passed through the serous and muscular coats of the lower portion of the bowel about one-eighth of an inch from its cut edge at corresponding points; these threads were drawn tightly and the upper portion of the intestine invaginated into the lower, so that the two peritoneal surfaces were in close contact, and the threads were tied sufficiently tight to prevent disinvagination. The bowel was then dropped into the abdomen and the wound closed. The operation as at present practised with the Czerny-Lembert method showed a mortality of 86.6 per cent. as against 24.99 per cent. in those cases of enterorrhaphy performed by Senn's method of invagination, or 7.69 per cent. of those performed by means of approximation discs. The advantages claimed were simplicity, expedition and better results, only four to six sutures were used instead of fifty to sixty by the Czerny-Lembert method, and twenty minutes would complete the operation as against one hour and a half by the old method.

In a letter to the *Medical News*, May 4th, 1889, Dr. M. E. Connell states that a good and easily obtained substitute for Senn's plates is found in the cartilage of the scapula of a young steer. The material may be carved in segments and cut to any size, and has proved successful in dogs which have been operated on.

On a Method of Operating so as to Lessen the Dangers of Exsection of Intestines.—Dr. E. Hahn (*Berlin. Klin. Woch.*, June 25th, 1888) advocates a new method of resection of the intestines and suture of divided ends in cases of strangulated hernia with gangrenous intestine. The peritoneal opening, after the relief of strangulation, is enlarged and the intestine drawn down and ligatured above and below the gangrenous part and resected. The cut ends are thoroughly disinfected and stuffed up to the ligature with iodoform gauze, which is kept in place by a stitch. The ends of this stitch are left long, so that when grasped by forceps passed through the mesial abdominal wound they may serve to pull the ends of the intestines through. An incision six to eight cm. long is next to be made in the linea alba, extending from just below the umbilicus to the level of a line

joining the two anterior superior spines. The centre of this incision will be nearly opposite the point where the mesentery crossed from left to right. The surgeon, after carefully protecting the divided intestinal ends from further contamination by inserting gauze into the original intestinal wound, now passes a pair of forceps from the mesial to the groin wound, and draws them through by the threads left for the purpose. Afterwards he packs the groin wound with gauze and then proceeds to suture the intestine. The mucous membrane is treated with continuous sutures, the peritoneum with Lembert's suture. After the sutured intestine has been again bathed with lotion (two to three per cent. of acid carbolie preferred), it is returned into the abdominal cavity, but to prevent risk of escape of fæcal matter, and to keep the sutured part in position, strips of iodoform gauze are packed around on each side as far as the mesentery. The ends of the strips are left to project at the wound. The sutured part of intestine is thus kept at the level of the parietal peritoneum, opposite the wound, and may be inspected at will by removing an extra piece of gauze which is laid over it. To keep the gauze in place, and to prevent prolapse of intestine from cough, two or three superficial stitches are inserted and knotted over the gauze.—(*Annals of Surgery*, May 1889.)

The Radical Cure of Inguinal Hernia.—Dr. Chas. McBurney on February 21st, 1889, read a paper on the above subject, in which he advocated treatment by open incision (*New York Medical Record* and *New York Medical Journal*, March 23rd, 1889). After reviewing the various methods of treating inguinal hernia by operation, he described the operation practised by himself. He began his operation by making a free incision from a point on the abdomen above the internal ring downward and inward, so as to lay open the whole canal. The spermatic cord was separated and the sac dissected out to its very point of origin. It was then opened, any contained intestine reduced, and any pieces of omentum tied off. The sac was now held up and the finger inserted to prevent the descent of the intestines; it was then tied off close to the internal ring. The conjoined tendon was then brought down, as in Macewen's operation.

Then he proceeded to make an open wound by turning in the integument and suturing it to the superficial layers of muscle ; he also passed several deep tension sutures. The wound was then packed with iodoform gauze and a suitable dressing applied. The urine was withdrawn by a catheter for a few days to avoid soiling the dressings, and in the case of children a plaster of-Paris dressing was used to give additional security, with a coat of shellac added in female children. The supine position was to be maintained during the five or six weeks necessary for healing to become complete, but it was time well spent, for the scar would thus be stronger and the patient got up finally free from the "slavery of a truss." He said that he could safely say of his method that it was the only one which really secured an obliteration of the sac, a union of the walls of the canal throughout its length, and a minimum risk of abscess or infection. It was applicable to every variety of hernia, and cure was effected rapidly. In thirty-six operations of every sort in which he had used this method he had had one death, and that from alcoholic delirium. There had been one relapse. Two patients had passed out of sight and three were still under observation in hospital, but there was every reason to believe the remainder were permanently cured.

In the discussion which followed the reading of the paper, Drs. L. A. Stimson and R. Abbe strongly recommended the operation. Dr. Abbe said he had operated for hernia 117 times, 52 times by Macewen's method, and he preferred McBurney's operation, because it was simple and required no special skill.

Its simplicity is certainly a great recommendation ; besides, it is an operation which will lessen greatly the danger of septic infection. The time taken is rather advantageous than otherwise, and in an operation by any method it is important to keep the patient in bed six or eight weeks to consolidate the new tissue.

Excision of Bone to promote Healing of Soft Parts.—At a meeting of the Medical Society of London, held Feb. 11th, 1889, Prof. Annandale of Edinburgh (*Lancet*, Feb. 16th, '89) read a paper on excision of bone in order to promote the healing of certain ulcers or wounds or to relieve contraction resulting in

connection with this process. He remarked that the proceeding was not new, and that his first experience of it was in the practice of the late Mr. Syme, more than twenty-five years ago, since which time he had himself operated on several cases. He considered the subject under the following four heads: (1) The removal of a portion of bone not including its entire thickness. (2) The excision of a portion of the entire thickness of a bone or of two bones (as in leg and forearm). (3) The partial or complete excision of a joint when the sore or contracture involved the soft parts in its neighborhood. (4) The excision of a portion of the entire thickness of one or other of the bones of the forearm or leg in order to allow the proper approximation of the ends of its companion bone which had suffered some loss of substance. Illustrative cases were detailed; one of the most interesting of these was one in which Mr. Annandale had removed two inches and a half of the shafts of the tibia and fibula in order to promote contraction and healing of a large sore on the leg. The case was perfectly successful. In conclusion he stated that as a primary operation in cases of injury this procedure was not likely to be useful except in rare cases, as it was impossible in the first instance to be certain of the exact amount of the loss of the soft parts, and he expressed a hope that the experience of the operation referred to would encourage surgeons to make use of the principle in suitable cases.

Mishaps from the Use of the Aspirator.—Accidents following the use of the aspirating needle are not common, still cases do occur and sometimes result fatally. Dr. J. M. Ball (*New York Medical Record*, March 9th, 1889) relates a case in which "the needle of an aspirator was plunged past the right pleural cavity, through the diaphragm, and into the liver, with fatal result." The case came before the courts, and at a second trial the doctor was fined fifty dollars damages. The patient was a strong, robust and healthy man of 38 years, a farmer. He contracted a severe cold. When the doctor was called in he found marked dulness over the right side of the chest, extending downward from about one inch above the nipple. The chest was aspirated in the right axillary line, between the sixth and seventh ribs.

The needle was first introduced about an inch, and then finding no fluid, it was plunged deeper. The aspiration was performed on Thursday, and immediately after the breathing became rapid and difficult, and there was great pain in the right hypochondriac region; in twenty-four hours patient was delirious and his abdomen tympanitic and swollen; on the following Tuesday he died. The post-mortem showed that the thoracic organs were healthy, except the lower lobe of the right lung, which was the seat of hepatization. The abdomen showed evidences of acute general peritonitis. The superior surface of the liver presented a wound about one and one-eighth of an inch in length and varying from one-eighth to three-tenths of an inch in depth. Between the superior surface of the liver and the under surface of the diaphragm, and adherent by plastic exudation to the latter, were several flattened clots of blood each about the size of a half dollar. The diaphragm, at a point corresponding to the wound in the liver, presented evidences of an intense inflammation. The length of the needle used was $3\frac{1}{8}$ inches.

This is a remarkable case, and one which is very instructive. The abdomen and liver itself is not infrequently explored by the aspirating needle without any ill results following. In this case there was slight hemorrhage no doubt, and the upper surface of the liver was wounded, but it seems to me that if the needle had been perfectly aseptic a fatal result would not have ensued. This is a point which, however, was not touched upon in the trial—several questions were asked the experts about the parts that could be wounded by a needle passed through the sixth or seventh spaces on the right side.

In the *Lancet* of Feb. 2nd and 9th, 1889, a case is reported where general subcutaneous emphysema followed aspiration of the chest. The case occurred in the Victoria Hospital for Children, and was under the care of Dr. Evans. The patient was a child aged eighteen months, and had been under treatment for broncho-pneumonia. The lungs had cleared, except at the right base, where there was persistent dulness with tubular breathing. Thinking that perhaps there was a localized empyema, a full-sized aspirating needle was introduced just below the angle

of the scapula, but no fluid was obtained. The needle was withdrawn and the puncture closed with wool and collodion. Two hours later there was subcutaneous emphysema extending from the seat of puncture, over the trunk, and up the right side of the face; in six to eight hours the swelling had involved the whole trunk and scrotum and formed a prominent collar around the neck, the eyelids were puffy, and the right eye closed. After twenty-four hours the swelling began to subside, but it was nearly a fortnight before all the swelling had disappeared. For the first three days the temperature was as high as 102° . The child died some time after of diphtheria, and at the site of the puncture the pleural sac was obliterated. The lung was firmly adherent to the chest wall, and contained a number of dilated bronchi. The needle had probably entered one of these dilated tubes.

Excision of Dislocated Semilunar Cartilage.—At a meeting of the Clinical Society of London, held on the 25th of January, 1889 (*Lancet*, Feb. 2, 1889), Mr. H. W. Allingham read a case of removal from the knee-joint of a dislocated internal semilunar cartilage. The patient was a youth aged 20, and the injury was caused by violence whilst playing football in October, 1887. The knee at the time became swollen. He could not use his knee freely on account of the pain; every exceptional exertion produced the sensation of his leg being broken at the knee. Soon every slight stumble caused pain. In Sept. 1888 Mr. Allingham saw him and found on the inner side of the knee, in the interval between the tibia and femur, a hard, fairly movable body about an inch and a half in length. The knee-joint was opened on the inner side by an antero-posterior incision two inches in length. The movable body proved to be the internal semilunar cartilage torn away from its anterior attachment. He could not pull it out because it was firmly attached posteriorly, so a pair of scissors was introduced into the joint and the cartilage was cut off as close as possible. The wound was then sutured, great care being taken to bring together the synovial edges. The patient made a complete recovery, and a few months afterwards could move his joint freely in every direction; he could walk and run as if nothing had happened to the joint.

Mr. Thomas Annandale (*British Medical Journal*, Feb. 9th, 1889) also reports a case of *Excision of the Internal Semilunar Cartilage, resulting in perfect restoration of the joint movements*. He says that further experience of cases of dislocated semilunar cartilage has confirmed his opinion that no mechanical appliances will cure cases in which the semilunar cartilages are much separated from their attachments or otherwise injured. The case is as follows: A strong, healthy miner was first seen at the Royal Infirmary on July 11th, 1888. Eleven months previously a mass of coal fell on his leg and knocked him down. In his struggles to get up he gave his knee a severe twist, and it was with some difficulty that he got home. The joint swelled and was stiff for some days. After returning to work he found that the movements of the joint were uncertain, and that sometimes it would suddenly become "locked." He felt something moving in his joint, and when the knee became fixed it required some little manipulation to restore its movements. An external examination did not detect any unnatural condition except there was slight effusion into its cavity. On the 18th of July Mr. Annandale exposed the affected cartilage and freely opened the joint, when the injured cartilage came into view; the greater part of the cartilage was removed; the wound was closed, no drainage being employed, and the patient made a perfect recovery. He was last seen in December, when it was found that the joint movements were perfectly natural, and he could successfully carry on his employment. Mr. Annandale has already frequently operated on displaced cartilages successfully by bringing them into proper position and securing them there with cat-gut sutures. His first operation was performed as far back as November 1883.

Insanity following Surgical Operations.—Mr. C. T. Dent has an interesting article on the above subject (*Jour. of Mental Science*, April 1889). He says that in three ways a surgical operation may produce physical disturbance (1) by anticipation, (2) by the actual operation, and (3) by the after effects. A more important factor still in producing physical disturbance is mental reaction. The importance of this factor is usually under-

rated. Mr. Dent speaks of the various degrees of mental disturbance occurring in the following order. Emotional disturbance, hysterical disturbance, loss of control, unreasonableness, delusions and hallucinations, and mania in its various forms. Mr. Dent is not inclined to agree with Dr. Savage that many of those cases of insanity following operation are due to the effect of the anæsthetic, but says that the shock of an operation may act like any other shock and give rise to insanity in a person of mental instability. In the majority of cases, however, which he has seen or collected there was no history of mental instability either natural or inherited. And he calls attention to the class of cases in which, after the operation, the mind reverts to its normal condition, but subsequently, after a greater or less lapse of time, symptoms of mental disorder begin. Four cases occurring in the author's practice are detailed, one of which ended fatally—a case of ovariectomy. In only one was iodoform used, and in all the insanity came on some time after the operation. Mr. Dent says the anæsthetic factor cannot be altogether excluded, and that when the mental disturbance is the direct and immediate sequel of the anæsthesia, it is probably due to the anæsthetic. (Why not to the shock of the operation?) He also states that when acute mania occurs shortly after a serious operation the prognosis is always grave, even though the wound be going on well. The more chronic the mania the better the prognosis as far as life is concerned. If the wounds do badly the mania is apt to become chronic; if they do well, the prognosis will be favorable. The author's own impression is that cases of mania after operations are not nearly so infrequent as is commonly supposed, and that many of these cases are set down as delirium tremens, or due to septic conditions.

Dr. Savage (*British Medical Journal*, Dec. 3, 1887) reports a number of cases of insanity following the use of anæsthetics in operations and otherwise, and in most of the cases reported by him there was a distinct family history of insanity.

The writer has reported (*American Journal of the Medical Sciences*, Dec. 1888) six cases of mania following operations, two of which resulted fatally and one never recovered complete

sanity. In all the cases acute mania rapidly followed the operation. In two there was a distinct history of insanity, one was an epileptic, and one a confirmed drunkard. In this paper the writer says that "in persons who have a strong predisposition to insanity, or who have suffered from previous attacks, the surgeon should consider whether it is advisable to operate on such individuals when the operation is of no great urgency and is not essential to the prolongation of the patient's life."

Cases of insanity, melancholia, etc., are reported from time to time following operation on the genital tract, and quite recently Dr. Thomas of New York (*Philadelphia Medical News*, April 13th, 1889) has drawn attention to the comparative frequency of their recurrence. He includes in his cases mania following excision of the breast for carcinoma or tumor. Six cases are reported, four of which died—viz., one ovariectomy, one perineorrhaphy, one laceration of cervix, and one excision of breast.

There is no reason to believe that mania follows more frequently gynæcological than other operations in surgery, and it is most important, in all operations on the genital tract and elsewhere, to consider carefully not only the family history but the mental condition of the patient. In one case operated on lately by the writer, no anæsthetic was given because the patient had been insane on several occasions, and once after the administration of ether for examination purposes. The operation (removal of a sublingual dermoid cyst) was performed without anæsthesia, and there was a rapid and complete recovery without any mental disturbance whatever. In this case an anæsthetic, I have no doubt, would have precipitated an attack of insanity. I cannot agree with Mr. Dent in attributing these cases of mania immediately following the operation to the anæsthetic, for why should not the shock of the operation act as rapidly, and are not cases on record of insanity immediately following an injury when no anæsthetic was given. The subject is full of interest, and it is only now that surgeons are awakening to its importance. No doubt in a short time sufficient data will be available to formulate some definite conclusions.

Rupture of the Quadriceps Extensor Tendon.—Dr. W. T. Bull (*New York Medical Journal*, April 20th, 1889) reports a case of the above successfully treated by suture of the separated ends. (This case was presented at the meeting of the New York Surgical Society, Feb. 27th, 1889.) A table of twenty cases is given where this accident was treated by plaster-of-Paris bandages or posterior splint, and also four cases treated by suture. In these latter the result was excellent. He suggests that in case of rupture, where the separation between the ends of the tendon is trifling—say to the width of an inch or a finger's-breadth—as well as in those where there is no effusion into the joint, the treatment should be by posterior splint or plaster-of-Paris bandage after drawing down the muscle and fixing it by bandaging from above downwards. The patient may begin to walk at the end of four weeks. Where, however, the ends of the tendon are widely separated, say two finger-breadths, or where the joint capsule is distended, the suture should be resorted to at once.

Inguinal vs. Lumbar Colotomy.—At a meeting of the Harveian Society of London, held March 28th, 1889 (*Lancet* and *British Medical Journal*, May 4th, 1889), Mr. Harrison Cripps, after giving an account of the history of colotomy, and drawing attention to the improvements in detail introduced by Mr. Bryant and Mr. Davis-Colley to the lumbar operation, further called attention to the work of Messrs. Reeves, Lawson Tait, Chavasse and Allingham in re-introducing the inguinal or intra-abdominal method of opening the bowel. He recorded 37 consecutive cases, 15 of lumbar and 22 of inguinal colotomy, nearly all the cases being undertaken for malignant disease. There was but a single death in each series of cases, thus the mortality was a little over five per cent. He considered inguinal a vastly superior operation to lumbar colotomy. There were certain grave objections to the lumbar operation; amongst these were the depth of the bowel in a fat subject and the very limited space in which the surgeon had to work. Then, again, there was often difficulty in recognizing the colon, so that numerous mistakes had been made in opening the small intestines and even the stomach. The

gravest objection, however, was that occasionally the course of the colon was so abnormal that it was quite impossible to find it in the lumbar wound. The inguinal operation met all these objections. There was plenty of space and the bowel could be absolutely identified, there was no tension on the stitches, and little difficulty in finding an abnormal colon. Moreover, the inguinal operation had one great advantage, viz., that of enabling the abdomen to be explored and the site of the obstruction to be verified before opening the bowel. The objections raised to the inguinal operation were the subsequent prolapse of the bowel and its unsuitableness for urgent cases. In the author's experience prolapse was not more frequent in one case than the other. As to urgency, he had no hesitation in opening the bowel immediately, as was done by him in two cases with a perfectly successful result. The operation was performed as follows: The incision, two and one-half inches in length, crossed an imaginary line drawn from the anterior superior spine to the umbilicus, an inch and a half from the former bony point. The peritoneum being reached, it is pinched up by fine forceps and an opening made sufficient to admit the finger; it is then divided on the finger by scissors. The colon being found, a loop of it is drawn into the wound. In order to avoid prolapse, which is likely to occur if loose folds of the sigmoid flexure remain immediately above the opening, Mr. Cripps gently draws out as much loose bowel as will readily come, passing it in again at the lower angle as it is drawn out from above. In this way, after passing through one's fingers an amount varying from one to several inches, no more will come. Two provisional ligatures of stout silk are passed through the longitudinal muscular band opposite its mesenteric attachment. The provisional ligatures, the ends of which are left long, help to steady the bowel during the subsequent stitching of the skin; they should be about two inches apart. The bowel should now be returned temporarily into the peritoneal cavity, and then the parietal peritoneum should be stitched to the skin on each side of the incision, the muscular wall not being included; four sutures on each side are sufficient. The bowel is again drawn out and stitched to the skin and parietal peri-

toneum by seven or eight fine sutures on each side, the last suture at each angle going across from one side to the other. The bowel should be so attached as to have two-thirds of its circumference external to the sutures. If all goes well, Mr. Cripps prefers waiting until the fifth or sixth day before opening the bowel; but if the abdomen becomes distended, or there is the slightest vomiting, he advises immediate opening of the bowel. Firm pressure by a pad and several turns of a bandage were important for the first few days, for should vomiting occur the bowel is liable to break away from its stitches. The ligatures may be safely removed on the ninth day.

Mr. Chavasse of Birmingham, in a clinical lecture on *Sigmoid Colotomy* (*Lancet*, January 5th, 1889), says the advantages of this operation are—(1) it is readily performed; (2) the false anus being in front is easily attended to by the patient himself; (3) the patient is able to lie on his back without discomfort; (4) four or five inches more of the colon are left to perform its duties; (5) the limits of the growth are more easily ascertained. Mr. Chavasse has performed this operation thirteen times for malignant disease of the rectum, and has had no ill results. Should the obstruction of the bowel not be complete, he recommends the procedure advocated by Mr. Herbert Allingham. This is to form a "spur" which shall cause a division of the sigmoid flexure into distinct upper and lower openings. A carbolized silk ligature is passed through the edge of the skin incision half an inch from the lower end of the wound, through the mesentery of the flexure and back through the mesentery and skin close to the point from which it started; a loop is thus formed, securing a portion of the mesentery, and the free ends are tied tightly together. Another method which is performed extensively in Germany is to completely divide the colon, close the opening in the lower portion by sutures and drop it back into the abdominal cavity, bring out the upper end and fix it to the wound. This method has the disadvantage of immediately evacuating the fæces and runs the risk of allowing some to enter the peritoneal cavity.

At a meeting of the London Medical Society, held Jan. 14th,

1889, Mr Herbert Allingham read a paper on *An Important Supplement to the Operation of Inguinal Colotomy*. He had observed, after several of his cases of inguinal colotomy, that the patients had suffered from a distressing procidentia of the intestine through the opening. He came to the conclusion that this only occurred when the sigmoid mesentery was of considerable length. To prevent procidentia in these cases he pulled out through the wound all the intestine that would possibly come forth; these portions he allowed to rest on the abdomen, and then sutured. From twelve hours to three days afterwards he entirely removed all these pieces of intestine, first of all applying a clamp about an inch from the wound to prevent the intestine slipping. Experience taught him that the clamp must be spiked, and must preserve a *firm*, tenacious grip, otherwise severe hemorrhage might ensue. The clamp should be allowed to remain on for twelve hours. He admitted that this further procedure, by increased danger of hemorrhage, aggravated the seriousness of the operation. He had treated five cases in this way. The chief points in the operation were: (1) The fact that pain occurred when cutting through the mesentery, but not in dealing with the intestine proper. (2) The supreme importance of using a spiked clamp that would under no circumstances slip or relax its hold; its correct use would prevent hemorrhage, the only thing to be feared. (3) The great length of intestines removed; he had removed from four to twelve inches. He advocated this method in lumbar colotomy where procidentia occurred.

Tapping and Irrigation of the Ventricles of the Brain.—At a meeting of the Philadelphia County Medical Society, held Feb. 13th, 1889, Dr. W. W. Keen read a preliminary report on the above subject (*Medical News*, March 9th, '89). Last autumn he made a proposition for tapping the lateral ventricles. At that time he was not aware that the procedure had ever before been suggested, but he has recently learned that, in 1881, Wernicke suggested it in a general way by the lateral route. The operation, however, Dr. Keen believed, was never performed until he did it in a case of marked choked disc on both sides, with com-

plete blindness dating from last Christmas. He tapped the ventricle five weeks previously, reaching it by the lateral route at a depth of $1\frac{3}{4}$ inches from the dura mater. A half inch trephine opening was made, a crucial incision in the scalp and dura mater employed. From two to four ounces of cerebrospinal fluid escaped from this opening daily. After a week the discharge increased to four to eight ounces daily, when a horse-hair drain was used. On February 8th he trephined the opposite side, thinking there might be a tumor on the posterior lobe on that side, but he found none. On February 12th he washed out the lateral ventricles, passing about eight ounces of a solution of boracic acid (4 grs. to ʒi) from one side to the other. There was some little irritation resulting from manipulation, but the moment the warm solution began to pass through the ventricles the child settled itself into a position of complete comfort. The child did not suffer any notable rise of temperature after the operation.

Treatment of Cystic Tumors.—Dr. Barthe, physician to the Broussais Hospital, has published a note on a new method of treatment applicable to synovial cysts, sebaceous wens, and, in general, to all cystic tumors of the skin and of superficial regions. Starting on the principle that arsenical injections determine a moderate inflammation of the tissues which does not go on to suppuration when certain very simple precautions are taken, and which is often followed by an atrophic process, the author considered this remedy a convenient means of treating certain tumors which are benign in their nature, but are inconvenient, and for which one often hesitates to advise a surgical operation. The first case tried was that of a girl, aged 12, with a synovial cyst of the wrist, the size of a walnut, of several months duration. Two minims of Fowler's solution of arsenic were injected into the cavity of the cyst. The operation produced sharp pain; next day there was swelling and tension of the sac. This soon diminished, and in ten days the tumor had entirely disappeared without leaving a trace of its existence. He has treated other cystic tumors with equally good results.—(*Paris Cor. of N. Y. Medical Record*, April 27, '89.)

Surgical Treatment of Purulent Pericarditis.—At a meeting of the Clinical Society of London, held November 23rd, 1888, Dr. Dickinson reported a successful case of purulent pericarditis treated by free incision and drainage. This is now the third successful case published which has been thus treated. The first two cases are reported in the Transactions of the Royal Medico Chirurgical Society, vol. xlvi. (1883), by Dr. S. West. Many fatal cases have been recorded. Purulent pericarditis is usually such a fatal disease that severe measures may be justifiably employed for its treatment, and although the physical signs which accompany it do not always enable physicians to diagnose with certainty between it and serous pericarditis, it is always possible to undertake a puncture for diagnostic purposes. In Dr. Dickinson's case Mr. Rouse performed the operation, and the fifth right interspace was chosen for incision. The pericardium had previously been aspirated several times, and once as much as 15 ozs. of pus drawn off, much to the relief of the patient, but the pus again collecting, and the general symptoms becoming distressing, incision was performed and a tube introduced. In two months the patient, a lad of 10 years, was perfectly well.

In the discussion which followed several cases were narrated. Dr. West said that, as a rule, the most suitable place for puncture was in the fifth left interspace, close to the sternum. Mr. Godlee drew attention to some anatomical features. In children the left pleura so far covered the anterior surface of the pericardium that if the puncture were made an inch away from the side sternal line the chance of the instrument laying open the pleura before reaching the pericardium was very great, and pneumothorax might be added to the list of symptoms. The internal mammary artery, too, ran so close to the sternum, in the fourth and fifth interspaces, that sufficient distance between it and the side of the sternum hardly existed for the introduction of a knife, and he recommended that the vessel be cut down on and tied before the pericardium was incised.

Hypertrophy of the Tonsils and its Treatment.—In a lecture delivered in Edinburgh recently, Sir Morell Mackenzie said that

chronic tonsillitis or hypertrophy of the tonsils proceeds from two causes. A large number result from a low form of inflammation in childhood. When the tonsils obstruct the breathing, portions should be removed, also if the enlargement be associated with frequent attacks of inflammation. There is another condition which requires a similar proceeding: when the follicles of the tonsil are much enlarged the affection cannot be cured except by taking off a section. Dr. Mackenzie uses a tonsillotome which is a modification of Physick's. As a general rule, lightness of touch is the chief desideratum in operating, but in tonsillotomy it is the reverse. Heaviness of touch is the important thing. The tonsillotome must be pressed well over the tonsil, which is also to be projected into it by pressure with the thumb placed under the jaw. It is most important to take off enough. Dr. Mackenzie says hemorrhage in this operation is rare, but it has occurred; the carotid in some instances has had to be tied. He advises in hemorrhage the use of two parts of tannic acid and one part of gallic in a little water. The patient should be given two teaspoonsful, and should sip them slowly. The bleeding stops almost at once. The patient must be told to swallow the liquid, not gargle. Application with a brush will do no good. He should swallow the fluid slowly, and must on no account wash out his mouth with a gargle. The advantage of the addition of gallic acid is that it prevents the tannic acid from dissolving.— (*Condensed from Edinburgh Medical Journal, May 1889.*)

Operative Treatment of Hypertrophied Prostate.—Dr. F. S. Watson, in a well illustrated article (*Annals of Surgery, Jan. 1889*), discusses the various methods recommended for the relief of enlarged prostate. He divides the operations into *palliative* and *radical*, and his conclusions are as follows: (1) The mortality of the radical operations is certainly not higher than the palliative ones. (2) Of the palliative operations, that of suprapubic puncture with retained canula is by far the most dangerous. Its chief danger lies in the likelihood of urinary infiltration into the prevesical space. The perineal drainage is safer than suprapubic, but the chief objection to all palliative operations is that they do not remove or modify the pathological conditions. The

mortality of the radical methods, though less than half as great as that of the palliative ones, is still high; but it must be remembered that many more cases die from unskilful catheterization than from any or all the radical operations performed by competent surgeons. (3) Operative interference should be undertaken when there is inability to urinate spontaneously, frequent attacks of retention, difficult, very frequent (once every hour), or very painful catheterization, impossibility of catheterization, a purulent or hemorrhagic cystitis, and failure of palliative treatment. (4) As radical operations are not more dangerous than palliative ones, they are generally to be preferred; as, anatomically, two-thirds of all cases are operable from the perineum, and, clinically, the perineal operations are the safest, the surgeon should open the membranous urethra and explore; twice out of three times the operation may be completed by this means. In the other third of the cases, a long perineal distance or a long salient growth will make the supra-pubic method necessary. Dr. Watson reports two cases—one operated on by the supra-pubic method, which ended fatally, and one operated on by the perineal method, which proved successful.

Mr. Mayo Robson, in a paper entitled *Prostectomy: a Sequel to the Operation of Suprapubic Lithotomy* (*British Medical Journal*, March 9th, 1889) advocates in cases of old men with stone and enlarged prostate that suprapubic cystotomy be performed so as to enable the surgeon to deal with both troubles at one sitting. He reports two cases successfully treated in this way. After the stone was removed the obstructing prostate was cut away with scissors. In one case, with the finger and forceps two masses the size of walnuts were removed from either side of the urethra. The masses were lobulate, and presented the character of adenoid tissue. In both cases the patients made a good recovery, being able to urinate through the natural passage.

Mr. Walter Whitehead (*Brit. Medical Journal*, April 13th, 1889), in a paper read before the Medical Society of London on *The Treatment of Confirmed Catheter Life by a Permanent Perineal Opening*, after briefly reviewing the more recent methods

of surgical procedure, stated that the operative part of his plan of treatment differed in no material respect from that of an ordinary median urethrotomy. The originality commenced with the after treatment, when, through the opening made in the membranous urethra, he retained an India-rubber tube until a sufficient time had elapsed for fistulous communication with the bladder to become cicatrized. After this the tube was worn no longer continuously, but the patient was instructed to regularly withdraw the urine through the fistula by means of a catheter. When cystitis coexisted with enlarged prostate, he recommended that advantage should be taken of each extraction of urine to give the bladder suitable medical irrigation before the withdrawal of the catheter. Several successful cases were narrated. The advantages claimed for this operation were that the bladder could at pleasure be completely relieved of its contents; it provided a permanent channel through which a perfect could be substituted for an imperfect system of washing out the bladder, and caused six inches of the most sensitive portion of the urethra to escape the irritation produced by passing the catheter in the ordinary manner. By the maintenance of a permanent opening the relapse which almost unavoidably occurs when the opening closes is avoided. The operation is performed by first passing a staff into a moderately distended bladder; a lithotomy knife with the edge turned upwards is plunged directly into the groove of the staff from a point an inch above the anus to a point a little in front of the apex of the prostate. Mr. Whitehead prefers to enlarge the skin incision as he withdraws the knife, leaving the external wound when finished about one inch in length and directed from the raphé to the centre of the space between the anus and the tuber ischii. This makes a clean cut wound which will not lodge urine.

A great number of operations have been devised for the relief of the difficulties arising from enlarged prostate, and none of them suit all cases or are completely satisfactory. Mr. R. Harrison's method of tunnelling the prostate has been already alluded to in this Retrospect. Mr. Harrison believes that by prolonged retention of a tube in the bladder through the perineum the

prostate undergoes diminution in size. Mr. McGill of Leeds advocates the suprapubic incision and removal of the diseased portion of the prostate through this. By this method he holds that the operator can always see the extent of the growth and remove the obstructing portion (*Lancet*, vol. ii, 1887, p. 1016). Mercier invented a special knife, which he employed through the urethra, the instrument being shaped like a lithotrite. Bottini of Italy used the galvano-catheter with some success. Operations on the prostate are frequently attended with free hemorrhage, but can be readily arrested by pressure or the hot douche. Severe symptoms sometime follow, such as bronchitis, acute pleurisy, and Mr. Jessop of Leeds lost a patient from acute parotitis. These operations should only be performed when there is cystitis with a very irritable bladder, frequent hemorrhages from the prostate, or when the patient is unable himself to pass the catheter. In the *British Medical Journal*, April 27, 1889, Mr. A. Lane, of Guy's Hospital, reports a case in which he operated by the suprapubic method. The man was aged 72, suffered from bronchitis, and had sudden and complete obstruction, which was relieved by catheterization. This was followed by an excessive amount of hemorrhage, which much enfeebled an already broken down individual. The prostate was enormously enlarged. Operation was performed by suprapubic incision and a large mass of the middle lobe removed by a wire écraseur. In ten days the man died from exhaustion. Apparently the lungs were very emphysematous and the tubes full of sticky pus; other organs healthy. At the late meeting of the American Association of Physicians and Surgeons held in Washington, Dr. Hunter Maguire of Richmond, Va., reported several cases operated on by the suprapubic method, where the skin opening was at a somewhat higher level than the opening in the bladder, thus making a valvular canal (a sort of artificial urethra), through which the patient could discharge his urine at will. We have not yet solved the problem how best to treat enlargement of the prostate.

Reviews and Notices of Books.

Physiological Notes on Primary Education and the Study of Language. By MARY PUTNAM JACOBI, M.D.
New York and London: G. P. Putnam's Sons. 1889.

Physiological methods are rapidly revolutionizing psychology; and those engaged in directing education are slowly perceiving that the methods employed in the training of the mind must be based on the nature of the latter in order that they may be rational and so really successful. It is therefore pleasing to find that so busy a physician as Dr. Mary Putnam Jacobi can find time to discuss such subjects as those implied in the title of the little work which has recently emanated from her active brain. We have often asked ourselves the question why so few physicians interested themselves in education. Who should be better prepared to discuss some of its aspects than the physician of liberal culture? That one such has shown herself competent for the task becomes evident enough on reading this book before us. True to the physiological spirit, Dr. Jacobi has a most interesting chapter in her work devoted to "an *experiment* in primary education." Later she discusses the genesis of abstract conceptions and the study of language from a physiological as well as psychological standpoint.

We do not propose to criticise her views, for these must, till we get more light on the physiology of the brain and till more careful experiments have been made in education, expect great differences of opinion. Suffice it to say that this work is an attempt in the right direction and is timely in a high degree. We hope to see more such discussions by physicians who have not forgotten their physiology.

W. M.

Surgical Bacteriology. By NICHOLAS SENN, M.D., Ph.D.,
Professor of the Principles of Surgery and Surgical Pathology, Rush Medical College, Chicago, Ill. Philadelphia: Lea Brothers & Co. 1889.

So vast has the literature of bacteriology become that none but the specialist can afford the time to make acquaintance with

it first hand. That an endeavor should have been made by the present author to give the principal results in a concise form is fortunate for the profession. A very admirable and fairly complete account of the present *status* of the subject has been presented in a readable form within the very moderate compass of 260 pages. Thirteen plates illustrate, we might say embellish, the work, reproductions from Klebs' *Lehrbuch der Pathologischen Anatomie*. However, beautiful though they be, it must not be supposed that in all cases they are strictly true to nature. Brilliant colors are, we would suggest, after all, of questionable utility in a strictly truthful representation to those who are not experts at least. They bring subordinate points into relatively too bold relief.

The sources of the information supplied are fully acknowledged in the body of the text, thus affording one who wishes to pursue any topic further the clue to the details. With the progress of specialism such works as this must be of frequent production, if the rank and file of the profession are not to remain to a great extent in ignorance of what the vanguard in each department is accomplishing.

Selections.

CHARITY AND KNOWLEDGE.*

BY DANIEL C. GILMAN,
President of the Johns Hopkins University.

Thirteen years ago, during the centennial celebrations of Independence Day, the University founded by Johns Hopkins began its work, and now, as we commemorate a completed century of constitutional life, the Hospital (gift of the same donor) throws open its doors. These buildings—complete as thought, time and wealth can make them—are henceforth consecrated to the ministry of mercy and the restoration of life. Science and charity, knowledge and pity, skill and sympathy are here installed in the service of mankind.

That large-minded citizen of Maryland, “who by noble gifts

* An address delivered at the opening of Johns Hopkins Hospital, Baltimore, May 7, 1889.

for the advancement of learning and the relief of suffering has won the gratitude of his city and his country," found two words adequate to his great ideas. "University" and "Hospital" were his chosen terms, and he linked them together by this significant phrase: "Bear constantly in mind that it is my wish and purpose that the Hospital shall ultimately form a part of the medical school of that University for which I have made ample provision by my will." How brief the phrase, how large the purpose? "Apples of gold in pictures of silver."

Like James Henry Roosevelt of New York, "a man upright in his aim, simple in his life, and sublime in his benefaction,"* whose hospital and dispensary give clinical instruction to the College of Physicians and Surgeons; like James Lenox of New York, whose munificence established a public library and gave birth to a hospital, Johns Hopkins, already honored as a patron of learning, will be henceforward remembered in the annals of charity and medicine. May we not almost say of him as Pindar said of Theron,

—and I will swear
That city none,—tho' she enroll,
A century past, her radiant scroll,—
Hath brought a mortal man to light,
Whose hand with larger bounty flows.
The blessings to that man we owe
Say who shall hope to count.†

We may form an idea of what our hospital is likely to be by the study of a like institution in London. About a century and a half before Johns Hopkins died, the days of Thomas Guy, the founder of Guy's Hospital, were ended. Like our benefactor, he had lived unmarried to the age of eighty years, and from humble beginnings had acquired a fortune, with which he provided for the establishment of a hospital. The amount of his gift was more than a million of dollars (£238,292). The beneficent influences of Guy's Hospital are now known in every part of the globe. It is doubtless safe to say that every one of us has shared, indirectly, in its benefits. The name of the great surgeon, Sir Astley Cooper, would alone give renown to the

* This phrase, like that referring to Johns Hopkins, is taken from a memorial tablet.

† Olympic, II, Cary's version.

Hospital to which he was attached ;—Sir Astley Cooper, of whom it was said that from the period of his appointment to Guy's until the moment of his latest breath, he was everything and all to the suffering and afflicted ; his name was a host ; but his presence brought confidence and comfort.* Matthew Baillie's influence on modern pathology is well known. The famous discoveries of one of Cooper's pupils, Thomas Addison, need only an allusion. Hodgkins' disease perpetuates the remembrance of another of the discoverers of Guy's Hospital. The name of Richard Bright is celebrated throughout the medical world in connection with an investigation which qualified authorities have pronounced the most important contribution to medical science, made in the first half of the nineteenth century. Nearly fifty volumes of medical reports embody the observations and studies made in Guy's Hospital since 1836. Thousands of medical students have been trained within its walls ; " their presence," says a competent observer, " has made the Hospital." Hundreds of thousands of patients have received relief from the treatment there afforded. In a single year five thousand in-door patients have been cared for and more than sixty thousand out-door patients have sought advice.

But we are planning for a future much longer than a century and a half ; for a future as long as the past of St. Bartholomew's or St. Thomas's, which now, after many centuries, are more useful than ever.

By a curious coincidence, as I had reached this point in the preparation of my address, I received a volume from the Warden of St. Bartholomew's Hospital in London,† bearing an inscription in his well-known hand, so welcome and so apposite that I will read it. " To the library of the newest of Hospitals this account of the progress of medicine in one of the most ancient is given by Norman Moore, with the earnest hope that the Johns Hopkins Hospital may flourish at least as long as the Royal Hospital of St. Bartholomew in Smithfield, and prove no less useful to mankind,—on the opening day of the Johns Hopkins Hospital, 1889."

The history of St. Bartholomew's is the history of modern

* Letter of Dr. Roots, Memoir, 315.

† Dr. Norman Moore.

medicine. It shows how modern professional training and modern wards adapted to surgical and medical cases have naturally developed from a mediæval germ. "For more than seven hundred and fifty years the Hospital has flourished upon its present site, and its Smithfield gateway, through which passed men of the generation whose fathers saw William the Conqueror enter London, has ever since been open to the sick poor."

In the pages of Dr. Moore you may perceive "how the physician grew from a schoolman into a scientific observer, and how the surgeon, who appeared on the scene in livery and without learning, grew from a handicraftsman to be a man of science."

You may read the names of Caius, Bernard, Pott, Abernethy, Lawrence and Paget; you may learn that Dr. Thomas Young, the originator of the undulatory theory of light, was here a student, and you will come upon the story of one more famous than any person I have named, the discoverer of the circulation of the blood, the illustrious Harvey.*

Time may efface the personality of our founder, as it has effaced the personality of Rahere, the founder of St. Bartholomew's, but the beneficence of Johns Hopkins will last for centuries, and gratitude will cherish the memory of his broad views, his great liberality, his wise and beneficent purposes.

Nor will posterity forget the Board upon which he bestowed this trust. His confidence (the world has even now discovered) was not misplaced. During fifteen years the public has had the unpaid services of twelve of the most prominent and capable citizens of Baltimore, who have endeavored, under the devoted and enlightened leadership of their President, Francis T. King, to ascertain by correspondence, travel, observation, reading and reflection, and by consultation with experts in medicine, surgery, nursing, architecture, education and administration, the most enlightened views of the civilized world with regard to the construction and management of hospitals. They have built these seventeen buildings from the income of the fund, and have even

* Dr. Moore calls attention to the fact that it was a fund given by Dr. Caius to encourage the study of anatomy which was the immediate means of leading Harvey to his discovery, and also to a remark in one of Harvey's lectures that it was a passage of Aristotle which first suggested to him the idea.

increased the principal gift. They have constantly benefitted by the professional advice of the distinguished surgeon, Dr. Billings, to whose words you have just listened ; other medical advisers have also given counsel ; architects have embodied in good form the utmost requirements of suggestive medicine ; engineers have brought to perfection elaborate apparatus for heating and ventilation ; women who have had experience in the management of large institutions, and others who know what skilful nursing is—Florence Nightingale among the number,—have given their wise suggestions. Now we shall see the result of all this thought and care. The noise of the hammer has ceased ; the healing ministry begins.

The exterior characteristics of this Hospital are well understood. It is a private foundation (independent of political or ecclesiastical support), a general hospital (in distinction from these institutions appropriated to special diseases) ; it has separate rooms for those who can pay for their treatment, in addition to the public wards ; arrangements are made for the isolation of those who are suffering from infectious disorders ; through the dispensary many will receive treatment who do not need to remain within the walls ; the grounds are ample for temporary tents and barracks, if emergency requires them, and for permanent enlargement ; a training school for nurses has been provided ; there are attractive rooms for such young physicians as may be allowed the privilege of residence and study ; suitable laboratories are well equipped for pathological investigations ; there are apartments for a medical library and for the conference of medical societies ; the proper theatre for clinical demonstrations and lectures has been built ; careful records will be kept and published ; important papers will from time to time be printed ; and if the funds would permit, arrangements could be soon perfected for a School of Medicine and Surgery, by whose beneficent influence the good of this foundation might be indefinitely expanded.

One hundred years ago John Howard, *facile princeps* among modern philanthropists, published in a quarto volume, just before his death, the observations he had made upon the lazarettos of

Europe. That was the beginning of reforms in prisons, asylums, refuges and hospitals. To this work he prefixed these words of Cicero, and I do not know a motto more appropriate to this day, or one more fit to be inscribed around the central dome of our new building: *Quid tam porro regium, tam liberale, tam munificum, quam opem ferre supplicibus, excitare adflictos, dare salutem, liberare periculis.**

Some of the influences of a hospital are apparent to the most casual observer; others are less obvious. Permit me, therefore, in a few short phrases, to remind you of them. Representing at this time the two foundations of Johns Hopkins, you will not be surprised if I often recur to the close relationship between the advancement of knowledge and the progress of charity.

First, last and always, this hospital is to furnish relief to the sick and wounded. Make the best of it, introduce fresh air and sunshine, and provide the utmost comfort, secure wise physicians, engage the best trained nurses, decorate the walls with pictures, bring fruit and flowers and books and friends, and even the comforting influences of religion, yet you cannot conceal the direful consciousness that this is the home of suffering.

Said Ugo Bassi, in his Sermon in the Hospital (p. 13)—

From any other ill,
(Except it be remorse) can men escape
By work,—the healing of divinest balm
To whom so hath the courage to begin:—
But sickness holds the sick man in a chain
No will can break or bend to earthly use.

The names that have been given to these abodes of the sick are suggestive. Hospitality and hospital alike suggest the bestowal of kindness to guests. The word lazaretto, ultimately degraded, pointed at first to the restoration of life. *Misericordia, la Charité, la Pitié*, the Home of the Good Samaritan, the House of Mercy, bring to mind the kindly influence of love and care. St. John, St. Thomas, St. Bartholomew and St. Luke, above all other apostles, are favorite patronymics. Paracelsus died in the Hospital of St. Sebastian. Bethlehem, Bethany, Bethesda and Jerusalem have recalled the scenes where the

* Cicero, *De Oratore*, I., 5.

Great Physician was present. The name of Christ has been given to many a foundation. In other places the hospital shares with the temple the name of Hôtel-Dieu or House of God.*

By whatever name it may be called, this is a convent where sickness is the abbot. The rule of sympathy for the suffering must govern everybody with a strictness of discipline as rigid as the rules of the Benedictines or Carthusians. Those who daily walk these wards will be the warders of life and health, however high their station or however humble their service; and casual visitors cannot cross the threshold of the wards without pity for those who are disabled or without admiration and gratitude for those whose lives are spent in alleviating distress.

2. This Hospital will not only meet the daily calls of humanity, it will stand ready to render extraordinary services in those emergencies which not even the progress of municipal reform and preventive medicine can entirely ward off. A fire, an explosion, an accident on the rails or on the sea-shore, the fall of a platform or of a building poorly constructed, may at any moment tax the utmost resources of a great establishment. We have no fear of leprosy and the plague; we have almost ceased to dread the coming of the cholera; yellow fever we are hoping to thwart in its approaches to our northern seaports; vaccination, which was spoken of by Sir James Simpson "as the greatest thought ever broached in practical medicine," is a great prophylactic; but we are not certain that diphtheria and infectious fevers will not continue to be epidemic; nor can we always be sure that the boards of health in the city and State will succeed in protecting us, as well as they can, from the inroads of pestilence. Indeed it is well to inquire whether Baltimore is fortified as it should be against the hostile incursions of epidemic disease.

This Hospital therefore stands as a reserve force, a sort of store-house of energy, ready to serve the city if apprehension and disease spread their pall upon it.

Here let me say, in anticipation of the future and in memory of the past, that in all the records of bravery on land and sea,

* How unfortunate that in this country, where broader ideas should prevail, we have introduced the usage of sectarian names.

none are more noble than those of the medical profession. Free from all excitement, free from the hope of reward, free from any commands but those which are divine, they have in times of pestilence gone from bed to bed, firm, fearless, faithful, carrying the offerings of cheer, comfort and relief, and often of restoration to health and vigor. For them there is no repose in time of danger. The black wings of death hovering over a city do not deter them from duty ; and often it may be said of them, as Milton said of Abdiel, " faithful among the faithless," faithful only they.

Read the annals of modern pestilence, of cholera in New York, of fever and famine in Ireland, of yellow fever in the South. Everywhere it is the same story. The more direful the record, the more unflinching, the more self-forgetful, the more humane are the efforts of physicians in their exhaustive ministrations to the sick and dying.

3. While the offices of a hospital are bestowed without money and without price on those who are destitute, those who are able to pay for suitable attendance and for the domestic comforts to which they are accustomed may discover that they can here be better treated than in many private houses. The conditions of quiet are more easily secured ; suitable diet at unusual hours can be commanded ; medical attendance is within call at every moment of the day and night ; manifold appliances for relief are more readily obtained. More and more frequently, travellers, students, all whose homes are in hotels and boarding-houses, and even many who have good private homes, turn toward good hospitals when they see the need approaching for prolonged and special care. For the wants of such persons provision has been made in the wards here set apart for paying patients, male and female.

4. This Hospital would be a very narrow institution if it kept to itself its experience. It is the essence of quackery to deal in mysteries and nostrums ; it is the glory of medicine that it owns no patents and conceals no discoveries. On the contrary, the best hospitals of the world consider it one of their first duties—second only to the care of their patients—to record the cases

they have treated, the methods they have pursued, the results, whether favorable or unfavorable, which they have followed. Scientific studies in pathology and practical medicine must be printed. Special papers, often requiring costly illustrations, must be published upon extraordinary cases and upon new operations and modes of relief. It is thus that the science of medicine is advanced. Where secrecy reigns, carelessness and ignorance delight to hide ; skill loves the light.

5. It is impossible to have a hospital without its becoming a place for medical education. It is interesting to note that in the physician's oath, attributed to Hippocrates, the duty of imparting knowledge is explicitly enforced. Even the country doctor as he rides from village to village takes in his gig an observing pupil, like the squire to a knight-errant. Every great surgeon is watched with the closest attention by the younger physicians who assist him. Every mother is the pupil of the physician whom she calls upon to attend her suffering child. So, of course, a hospital, having upon its staff men of rare qualifications who are in daily consultation with their most skilful brethren, is, from the necessities of the case, a place for instruction. How systematic that instruction will be depends on circumstances that at the moment need not be presented. All that need now be is that hospitals the wide world over are the schools of medicine and surgery.

6. The training of nurses is another form of hospital activity, recently developed, never hence to be abandoned. To the sisterhoods of the Roman Catholic Church, to the Protestant Deaconesses of Kaiserswerth and the Bethanian at Berlin, and to many guilds in many lands, much credit is due for lessons they have taught the world as to the importance of training nurses. Elizabeth Fry was one of the first Englishwomen to propose such instruction. Florence Nightingale, by her influence in the Crimean war and by her subsequent writings, has borne a noble part in this work. So, too, have our own country-women. The civil war, full of sad recollections, has some bright stories, and among them none more inspiring than the labors of brave, self-sacrificing and intelligent women in the hospitals. Who that

has read "What we did at Gettysburg," or "Hospital Days," has forgotten their lessons? As a direct result of the war, Nurses' Schools have grown up in every part of this land. Our Hospital has such a department soon to be opened, where nurses will be trained, not only for their merciful offices within these walls, but for household engagements and for visiting among the poor.

7. A good hospital may readily become the rallying place of the medical profession who are resident in the city. Homer discovered that

"Through mutual intercourse and mutual aid
Great deeds are done and great discoveries made;
The wise new wisdom on the wise bestow
Whilst the lone thinker's thoughts come slight and slow."

One purpose of this central building is to afford opportunities for professional intercourse. Here are rooms set apart for the library that will presently be collected; here the medical journals will be taken in; here are the best appliances and instruments for the treatment of patients; here are rooms for private consultations and for public conferences; here are laboratories for physiological and pathological determinations; and it will not surprise me to hear that within a very short time medical associations are here brought together "for mutual intercourse and mutual aid" at the invitation of Dr. Osler, the physician-in-chief, who this day assumes his great responsibility with the hearty welcome of Baltimorians, and with the well-earned confidence of the profession throughout the entire land.

8. Reference must also be made to the lessons that this hospital has already given to the world before a single patient has been received. The vast amount of thought bestowed upon these buildings, not only in their general arrangements, but in thousands of details which promote their efficiency, has not failed to attract the attention of observers from every part of the globe. The letters which have been received during the last few days from the most distinguished surgeons and physicians abroad, and the presence of this large body of medical men from the distant cities of the United States are indications of this interest.

9. Finally, if this Hospital becomes the seat of knowledge in

all that pertains to the nature of disease, its treatment, its prevention and its cure, it will of necessity be a constant guide to the people of the city and the State in which it is placed ; it will promote the general health of the inhabitants. There is an altar in one of the churches of Messina which bears an inscription to *Æsculapius* and *Hygeia*, the god of Medicine and the goddess of Health ; and their statues are found together on the facade of Guy's Hospital. May they always be associated in Baltimore.

Is all this outlay wise ? I might answer an inquirer in the words which Wordsworth employed in speaking of King's Chapel, one of the most costly structures in the University of Cambridge :

“ High heaven rejects the lore
Of nicely calculated less or more,
Tax not the royal saint with vain expense ;
With ill-matched aims, the architect who planned
This glorious work of fine intelligence.”

For in this Hospital, as in that church, are

“ Thoughts whose very sweetness yieldeth proof
That they were born for immortality.”

But I prefer to give a more specific and appropriate reply to those (if any such there be) who say, “ I believe in everything that is practical, in whatever leads to the relief of suffering ; but I am afraid of this talk about science. I would rather see a thousand beds for patients than any provision for medical education.” Such reflections are to be heard with respect, for they are natural to minds unacquainted with the intimate relations which subsist between the progress of medical knowledge and the progress of medical art. Nevertheless it is true that those who have most carefully studied the conditions by which human life is perpetuated, human sufferings lessened, and human vigor increased, are well aware that every step forward in science leads to many forward steps in practice. May I endeavor to be a mediator between these two divergent views and bring a few illustrations from the doctor's shop to the attention of those who are practically interested in hospitals, but who have paid no attention to the steps, so slow, so difficult, so uncertain at first, but so sure at last, by which the healing art makes progress.

The late Dr. Austin Flint of New York, in an address pre-

pared near the close of his life, has pointed out with the wisdom of experience the probable "future of medicine." It would be presumptuous for me to attempt to do again what he has done so recently and so well. But on this day of promise, in view of all this expenditure, it is fitting that we should bring to mind some inspiring thoughts.

Let us first consider the benefits which have come to mankind from the opportunities which hospitals have afforded for the observation of disease. There is no one among us more competent to speak upon this subject than the pathologist of this hospital, Dr. Wm. H. Welch, who, years in advance of its opening, has been engaged as a professor of the University in the study of the nature and origin of disease. He has called my attention to these noteworthy points:—

"Those who have contributed the most to the advancement of practical medicine and surgery have accumulated their experience largely in hospital service. By the constant attendance of skilful physicians and of well-trained nurses in hospitals, precise observations can be made and the phenomena of disease and the influence of treatment determined under the most favorable conditions.

"Our present knowledge of the natural history of disease, of its diagnosis, prognosis and treatment are based to a very large extent upon experience derived from hospitals. Text-books, monographs and medical journals incorporate this experience and bring it to the knowledge of the medical profession. This is why intelligent physicians are always eager to secure the advantages of a hospital service."

The benefits which medicine has received from purely scientific investigations may be shown by so many examples that it is difficult to make a selection among them. Dr. Welch mentions these:

"Upon the foundation laid by Helmholtz's researches in physiological optics, and his discovery of the ophthalmoscope, the art and science of ophthalmology have developed into the most accurate department of clinical medicine.

"The investigations which received their impulse from Du-

Bois-Reymond in the difficult subject of animal electricity have rendered electricity available for diagnosis and treatment, and have advanced thereby our knowledge of nervous diseases.

“Of the many ways in which the work of the chemist has aided medicine may be cited, as one of its most recent contributions, the introduction into modern therapeutics of many useful remedies which are the products of synthetic chemistry. Doubtless this is a field which will be cultivated still further, and it would be rash to attempt to foretell what agents for the cure of disease and relief of suffering are still hidden in the chemist’s laboratory.

“By the discovery of the specific germs causing various infectious diseases, surgical practice has been revolutionized. It has become possible to prevent the infection of wounds from the exterior, and thus to guard against a host of traumatic infections which rendered dangerous and futile so many surgical operations. Preventive medicine has taken its place among the exact sciences.

“Accurate knowledge of the causes of disease now forms a sure basis for intelligent therapeutics, and there is every reason to expect that the future will bring to light means to overcome the injurious agents which are now for the first time known.”

But there is another illustration so marvellous that it may almost be called miraculous. The relations of advancing knowledge to advancing charity are brilliantly displayed by the history of methods for the relief of pain.

To put a stop to suffering is an instinct of human nature, distinguishing man from animals. The most scientific men and the most practical are agreed upon this, and have been so agreed for centuries. But anæsthesia, most welcome of all the angels of mercy, came down from heaven. When the older surgeons in this assembly were students, opium and alcohol were the imperfect anæsthetics most usually employed. Their use was restricted and unsatisfactory, if not dangerous. No one can tell what was suffered in places where gentle sleep now quiets apprehension and makes the patient unconscious of his woe. To this alleviation, we are so wonted that we accept it as the air we breathe. But if you would learn how man secured this boon, how many

efforts of scientific and of practical men were combined before the results were reached, recur to the history of four modern agencies, which are like "the gentle dew from heaven, which blesseth him that gives and him that takes." It is a chapter more wonderful than any romance of the Arabian Nights.

Let any one present who is skeptical in respect to the usefulness of science to the healing art keep this record in his mind. Let him reflect on the apprehensions that have been removed, not only from the patient but from his attendant friends; let him see how much easier, and therefore how much more certain, the task of the surgeon has been made; and above all, let him think of the hours of pain that have been absolutely annulled, and then let him divide the honors, if he can, which belong to science from those which belong to philanthropy: let him balance half a century of scientific relief with the previous practice of many thousand years; then let him tell us which is better.

From the past let us turn to the future. All the signs of the times point to a new era in the history of mankind. All the sciences are leading up to a better understanding of the laws of life, to a true anthropology, and the consequent improvement of the physical, mental and moral powers of man.

There are four or five directions toward which we may turn an expectant gaze, as in days gone by the merchants watched upon the house-tops for the return of the ships they had sent out to distant ports.

Preventive medicine promises to do more and more for mankind. As the germs of many specific disorders have been discovered, so the means of their destruction have been found out. If legislation and civil administration keep up with science, if knowledge is controlled by virtue and followed by temperance, the community will be freed from many of the foes which in former generations have slain their tens of thousands.

From the chemical laboratory new remedies, as well as simpler forms of old remedies, are to be constantly looked for. The synthetical processes which now receive so much attention have lately made important contributions to the pharmacopœia. It would surprise any one whose attention has not been directed

to this point to know how many claimants are awaiting judgment. Scores of substances, till lately unknown, as I have heard my colleague say, are awaiting the study of competent therapists.* Nobody can foretell what will come from their new contributions to *materia medica*, but one who watches the processes of discovery must feel certain that secrets hid from the beginning are, ere long, to be revealed, and that many of the substances already discovered have properties of the most serviceable character.

No one can say what will result from the attention that has been recently given to the study of psychical phenomena by the exact methods of science, but the outlook is hopeful. If we are as far as ever from elucidating the mysterious inter-relationship of the mind and the body, progress has certainly been made in the knowledge of the laws by which they act upon one another. The knowledge that has been acquired in respect to the functions of the brain and nervous system has already led to the treatment of many disorders and the relief of many diseases which a short time ago were beyond the reach of remedy. We are not without hope that in the physiological and psycho-physical laboratories already established here, important contributions will be made to science which will ultimately prove to be of value to medicine and the conduct of the body in health and disease.

Medical appliances and surgical instruments are greatly to be improved. The surgeon who has just returned from Europe, after visiting in the interest of this Hospital the most celebrated instrument makers, has informed me that the processes of manufacture are even now behind the devices and requirements of surgical science. The hands have not kept up with the brains. It is not possible to buy ready made the instruments which an accomplished surgeon now requires. In the future we are to look for progress in the applications of electricity and magnetism to the treatment of disease as well as to its diagnosis.

Chemistry by its synthetic methods is producing new remedies, which experimental therapists proceed to test and pharmacy then appropriates. The laws of light, heat, electricity and magnetism are found in close relationship to the problems of relief

* Professor Remsen.

and cure. The laws of temperature and climate have their services to render. Even the influence of barometrical pressure upon surgical operations begins to be noticed. The study of the nervous system is sure, at no distant day, to make important contributions to the welfare of man. Psychology is waiting for the results. Experimental physiology is doing its part. Pathology, a term as old as Hippocrates, has become a new science within the last few years. The laws of descent have but just begun to assume a scientific form. Preventive medicine is almost a new conception. The morality of personal hygiene is a new department of ethics. Biology, after having received the same critical reception with which anatomy, astronomy, geology and chronology were greeted, as they approached maturity, will yet be honored as leading to the highest and noblest conceptions of humanity. Anthropology, the knowledge of man in his relations to the universe in which he is placed, will prove to be the culmination of finite knowledge.

So all along the line, in the laboratories of the University and in the wards of the Hospital, knowledge is leading up to the welfare of man. The days of the coming man may not always reach the full allotment to which Chevreul has just attained, but perhaps to die at seventy will be to die in youth, and to reach the age of eighty or ninety in health and vigor will be the rule and not the exception. Nor is length of days our only hope. The disappearance of epidemics, fewer days of confinement in sickness, fewer "minor ailments," a decrease of infantile mortality, greater powers of resistance to the evils of certain occupations, and comparative immunity from many infirmities which are now common, artificial reinforcements and replacements of bodily defects, simpler and surer means of diagnosis, and detection of the nature, origin and history of specific affections, and, finally, the assurance of euthanasia. These, as it seems to a layman, are reasonable expectations which the nineteenth century holds out to the twentieth. Can any outlay be too great if humanity be thus benefited?

To the attainment of these noble aims, "the relief of suffering and the advancement of knowledge," the foundations of Johns

Hopkins are forever set apart. On the one hand stands the University, where education in the liberal arts and sciences is provided, and where research is liberally encouraged; on the other hand stands the Hospital, where all that art and science can contribute to the relief of sickness and pain is bountifully provided. Is there anything wanting? Yes,—there is still a great want to be supplied—an arch to rest upon these pillars. An Institute of Medicine and Surgery, a College of Physicians and Surgeons, a Medical School,—the office of which shall be to promote the training of young physicians, and the encouragement of medical science is imperatively needed. Is it too much to say that there is not such an opportunity on the face of the globe for another Peabody or another Hopkins to benefit his fellow-men?

The University needs all it has, and more, to carry on the non-professional courses to which its funds are appropriated. The Hospital, with all its readiness to co-operate in the advancement of knowledge, will, after all, remain—as I have said before, and cannot say with too much emphasis—the home of the sick, the feeble, the injured and the dying. It is the house of mercy, not the hall of philosophy. But in close alliance with both these foundations there is a place for a school of medicine, which may bear its founder's name, and may render services as significant and memorable as those of Salerno and Bologna, at the beginning of the modern era, as those of Leyden and Edinburgh, where the earliest American physicians received their education; or those of Berlin and Vienna, to which so many students of this decade resort.

This grateful city should no longer delay placing upon one of the squares, near the monument of Washington, the figure of Johns Hopkins, with such designs as an artist, and an artist only, could devise, to typify the great ideas which underlie his gifts, “the advancement of knowledge and the relief of suffering.”

Then might some friend of this Hospital place beneath this dome a copy of Thorwaldsen's Christus Consolator, with the outstretched hands of mercy, to remind each passer-by—the physician and the nurse as they pursue their ministry of relief, the

student as he begins his daily task, and the sufferer from injury or disease—that over all this institution rests the perpetual benediction of Christian charity, the constant spirit of “good-will to man.”

Upon one hill of Baltimore rises a temple, “whose guardian crest, the silent cross,” is an emblem of the Christian faith; upon another, a lofty column reminds us of the patriot’s hope; upon a third, the Hôtel-Dieu is placed—the house of charity. Significant triad! “Here abideth Faith, Hope and Charity, but the greatest of these is Charity.”—*Maryland Med. Jour.*

Schuchardt on Tubercular Fistula of the Anus.* (G. D'ARCY ADAMS, M.D.)—Study of the history of these cases shows that the old observers had noticed how often fistula was connected with consumption of the lungs; but it was reserved to the present day to clear up many things not understood as to their relationship, and to prove that the majority of fistulæ in ano are due to local tuberculosis. To Professor Volkmann belongs the credit of having first shown the tubercular nature of these fistulæ, and in the Klinik at Halle in all these cases the presence of tubercle-bacilli is shown by microscopical examination or by inoculation into the anterior eye chambers of rabbits. Very interesting and demonstrative of the specific character of the disease is the well-known case of Volkmann, in which the secretion from the fistula infected the skin of the anus, giving rise to a *lupus foliatus* (and at the same time an additional proof that lupus is a tuberculosis of the skin). In this case the inguinal glands also became tubercular. One must, from analogy of cancer of the rectum, which only leads to infection of the inguinal glands by encroachment of the carcinoma on the skin of the anus, assume that the secondary lupus has occasioned the tubercular bubo. As to the pathogenesis of tubercular fistulæ, very small lesions of the mucous membrane afford the point of entrance to the tubercular virus, and it is characteristic that these small lesions of the gut must be present so that the virus imported in food or in the swallowed saliva may

* Volkm. Sammlg. klin. Vortr., No. 296, and Deutsche med. Zeitung, No. 86, 1888.

find its way into the loose peri-proctal connective tissue. Large ulcerations, such as only occur in intestinal tuberculosis in the rectum, only very seldom give rise to tubercular peri-proctitis. Only in isolated cases, in which no opening in the mucous membrane can be found, is a primary connective-tissue tuberculosis to be thought of. The rectum, like the cæcum and vermiform appendix, is very liable to acute inflammation and to chronic ulceration from stagnation, etc., of the bowel contents, and, to complete the analogy, one sees perityphlitic fistulæ, which likewise have the character of tubercular abscesses. Coming to the treatment of tubercular rectal fistulæ, the propriety of their operative removal has long been proved. The old idea that the fistula represented a beneficial, natural, derivative action, which hindered the development of the lung disease, and that the cure of the fistula caused the development of the phthisis, was proved false when etiological investigation showed that both diseases were due to a common cause. We have long recognized the necessity of removing a local tuberculosis wherever it is possible, and the rule holds good in these cases. The disease must be removed as radically as possible, by incision and clearing out of all the recesses of the often tortuous and far-spreading fistulous canal. Whether the treatment recommended by American surgeons of diminution of the wound by sutures or the ordinarily employed iodoform plugging of the wound is to be preferred, Schuchardt thinks questionable. The last affords greater security against relapses. As for the rest, he adds, that after radical removal of all diseased tissue, exact suture makes healing by first intention possible, and that, certainly, for simple non-tubercular fistula, the new method certainly deserves the preference. —*London Medical Recorder*, March 20th, 1889.

Value of Casts and of Renal Inadequacy in the Diagnosis and Prognosis of Kidney Disease. (By E. G. JANEWAY, M.D.)—

Casts, whilst they are amongst the surest signs of disease of the kidney, may be misleading either by their presence or absence. The question is raised as to the condition of the kidney by cer-

tain symptoms—nervous, of general malaise, or by reason of the presence of a neuro-retinitis, and in consequence the urine is submitted to microscopic examination. If, under these circumstances, a few hyaline casts are found, are we to consider the cerebral disease, etc., as associated with, or dependent upon, a confirmed kidney disease? The writer has met with illustrations which proved that such association of a few hyaline casts was a temporary condition, did not recur, and after the lapse of years the patient's state warrants the assertion that the few hyaline casts were not indicative of a confirmed or incipient nephritis. Again, a few hyaline casts may be found as the result of examination for life insurance, and the same question is raised. The company's examiners are right to reject such a case as doubtful. Yet it is well to make inquiry as regards the circumstances which have attended their production. The following will illustrate: A gentleman of good physique, fond of sparring, applied for life insurance. His urine examined was found to contain casts. Becoming alarmed, he applied to me, and the examinations of samples of the night and morning urine failed to show casts, except the soft mucous variety, twice after repeated examinations. Questioning him as regards the time of day at which his urine was examined, and the conditions preceding, it was learned that he was in the habit of boxing violently for half an hour, and perspiring markedly, take an alcoholic sponge bath. Urine obtained under similar conditions revealed hyaline casts. After the lapse of four years his urine is of normal character, and had no casts on an examination made this spring. Such a case confirms what experimentation has taught, that hyaline casts may appear in the urine after very slight and temporary changes, quickly form, and as quickly disappear. Again, the absence of casts on single, it may be on repeated examinations, does not assure us that the kidneys are in perfect condition. It is true that in these cases too often not a large enough amount of urine is allowed to precipitate, and enough pains have not been taken to secure preserved settlings. It is especially true of those hospitals in which ducts made of glazed ware are used, whose interior is foul, and causes the urine to decompose rapidly. Mention should be made

of the soft mucous casts, called cylindroids by some, which are at times found in the urine of patients free from kidney disease, particularly where the urine is of high specific gravity, and charged with uric acid or oxalate of lime. All these things considered, are there no sure indications afforded by casts? We can conclude that if urine contains rich epithelial casts there exists an acute nephritis, rarely an acute exacerbation in a chronic case. Blood casts speak for an acute process, whether an acute nephritis, or hemorrhage in the course of an older process in the chronic nephritis of large type. Waxy casts, while they denote a change in the kidney, and hence have a more marked significance than the hyaline and the mucous, may occur in the different forms of kidney disease (Bright's). Present in number, and on different occasions according to the coincidences, they would point toward either the acute, particularly in its latter stages, or the chronic large kidney, or to a combination of waxy with the parenchymatous nephritis. Granular casts, coarse and fine, will not be present, or only occasionally in the small kidney, and absent from the urine of the waxy kidney, unless inflammatory changes are occurring in it. The writer has seen more mistakes made as regards granular casts than of any other variety, by supposing their presence, owing to a confusion with bacterial masses in partially decomposing urine, and this is particularly true of urine containing pavement epithelia turned on its side. The greatest difficulty will be found in the attempt to discriminate the different varieties of renal disease from single examinations of the urine by the microscope. Fatty casts, or casts having fatty particles in them, or in the cells connected with them, whilst denoting a degeneration as regards the example seen, and inferentially of more, do not of necessity indicate that the kidney is in an advanced state of fatty degeneration. If such casts are abundant and repeated, then such inference is correct. The minute crystalline aggregations of uric acid, and more rarely of oxalate of lime, are at times taken for granular casts, and, if a few cylindroids coexist, the kidneys are inferred to be diseased. Again, the number of casts in a single sample of urine cannot be regarded as giving a correct index to

the condition of the kidneys. Either a markedly diminished secretion may prevent their appearance, though many exist in the tubes, or, on the other hand, owing to a recent re-establishment of partly suppressed secretion, a large number may make their appearance. Hence better conclusions can be reached in each of these conditions by several subsequent examinations.

Renal Inadequacy.—Incompetency of the kidney is perhaps as, if not more, important than the preceding events in estimating the extent of lesion and the prognosis. It cannot, however, particularly in the chronic, nor even in the acute forms, be considered by itself. The condition of the heart forms a marked factor. Moreover, this state may be simulated by other conditions than those of Bright's disease. Hysterical anuria illustrates this, as well as the effects of occlusion of the ureter. In estimating its importance in a given case, due regard should be had (1) to the weight of the individual, (2) to the diet, (3) to the effect of profuse discharges, (4) to the effect of rapid absorption of dropsical effusions, and (5) to the nutritive activity of the individual. The sudden entrance of almost complete anuria can be borne for a longer time without severe symptoms than in those cases in which a gradually increasing deficiency has had place. The cases of removal of a single kidney forcibly illustrate this. The specific gravity in connection with quantity of urine per diem forms a good measure of renal competency. The relation is not absolute between the urea and the water. The kidney may be much more incompetent for one than for the other. In acute cases, in which the glomeruli are much more affected than the tubes, or perhaps solely affected, whilst the urine is remarkably reduced in quantity, the specific gravity may be abnormally high without abnormal ingredients, or other than blood, albumen and hyaline casts. After the former of these events we may not even be certain that an inflammation existed, providing recovery takes place. The writer witnessed one case after measles—a child of seven years passed a quart of urine only during a week, of specific gravity 1030. The urine contained no albumen, blood nor casts during or subsequent to this time. The same might be said of the suppression of urine in cholera. In relation

to the diagnosis of the different forms of Bright's disease by the inadequacy of the kidney to perform its function properly many useful rules are laid down in the books; these not thoroughly agreeing, however, because of the discrepancy which prevails about the position of some kidneys, and in proportion as regard is had to the whole course of the disease, or to some particular more typical phase. Liabilities to error exist moreover in the mixed types of kidney trouble as in the small waxy—the combination of waxy with parenchymatous nephritis. In the typical condition a small quantity of urine is characteristic of acute nephritis, but the same may be met with at the terminal period of the contracted kidney, or during the course of the large kidney. So, again, during convalescence from acute nephritis, the quantity of urine may be large, and the specific gravity low, producing a simulation of the small kidney as regards that feature. Hence an absolute diagnosis of the type of kidney trouble could not be had by a consideration of the sufficiency of the kidney as demonstrated by the amount of urine and the urea it holds. But much can be done in effecting a prognosis, particularly in the chronic form. Here, as the end approaches, either in the large kidney, because of the amount of the disease or because of an acute exacerbation, or, again, as in the contracted kidney, because of the failure of the heart, the growing insufficiency shows itself by the lessened quantity of water, the failure of elevation of specific gravity correspondingly, the failure of urea excretion. In the small kidney in such cases, in many instances, better prognostic results may be gained from the heart's capability than from the urine.—*Transactions Association of American Physicians; Pacific Medical Journal.*

Antipyrin in Nasal Hemorrhages and in Intra-Nasal Disease.—The hemostatic properties of antipyrin reported by Hénoque in 1884 have been recently reaffirmed (*Arch. de Lar.*, April, 1888). He considers that the drug produces a constriction of the vessels and of the tissues at the same time that it produces coagulation of the blood. Among the practical hæmostatic applications indicated are

hæmostases of the nasal structures. In epistaxis the antipyrin may be used in powder, in solution, incorporated into gauze, or in ointment. It may be insufflated, and then be covered with wadding or other dressing. During the course of operations in the nose the parts can be bathed with a five per cent. solution. Cotton wadding can be sterilized and then dipped into a concentrated solution and allowed to dry. Hénocque thinks there is antiseptic action in addition to the hæmostatic, and perhaps even an action favorable to cicatrization.

Hinkel (*New York Medical Journal*, Oct. 30, 1888) reports only questionable success from weak solutions of antipyrin in several cases of trifling bleeding following operations in the nose, but in later experience with a four per cent. solution found decided hæmostatic effect, though not superior to that of cocaine. He finds that it possesses, to a certain extent, similar retractive effect on the turbinated tissue to that of cocaine. Sixteen grains to the ounce of water, with a few minims of glycerine, was as strong as could be readily borne, and was sufficient for the purpose. He noticed no blanching and no anæsthesia; but noted a sedative action utilizable in certain cases of sneezing, lachrymation, etc., in coryza, and in hay fever. Antipyrin presented an advantage over cocaine in avoiding numbness and dryness of the parts and over-stimulation of the nervous system. It causes considerable smarting, and is unequal to the relief of severe inflammation or extreme occlusion of the nares. Combined with cocaine it increases the topical action of the latter, so that cocaine can be used in a weaker solution, say from one-half to one-fourth per cent. solution.—*Amer. Jour. Med. Sciences.*

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INFECTION OF SCARLET FEVER.

Dr. John Harley* enumerates views on the subject of the infection of scarlet fever which are not likely to be accepted generally by the profession. Scarlet fever, he says, is regarded on all hands as pre-eminently contagious, but although he has been endeavoring all his professional life to obtain proof of it, as yet he has failed to find it, but has acquired some evidence to the contrary. He has seen whole families affected, falling ill one after another, and has witnessed, as he supposed, the operation of an endemic cause. "I have never known imported cases propagate the disease, and I have never witnessed its spread, under the most favorable circumstances, among the convalescents in the fever hospital. During my connexion with the London Fever Hospital I did not contract scarlet fever, though I had never suffered from it; but eight years after my connexion with that institution ceased, I experienced a sharp attack at a time when I had not to my knowledge been in contact with any case of the disease. I am convinced that a chill was the sole cause of my attack, and I adduce it as an instance both of the spontaneous origin of scarlet fever and of its inability to spread, for neither my guests nor any member of my family caught the disease. Scarlet fever thus resembles common catarrh, springing up in households here and there, affecting some members simultaneously and others after intervals." This is a new and somewhat dangerous doctrine, and the statement of his own case will not go far to prove the truth of the non-contagiousness of

* The Lumleian Lectures on Enteric Fever, delivered at the Royal College of Physicians, April 1889.

scarlet fever. And so with enteric fever. Dr. Harley boldly states his belief that its development is but a mere accident in the progress of those severe congestive strains of the internal organs which always happen to those who are imperfectly protected against diurnal variations of temperature as in warfare. It is the object of Dr. Harley to prove that the diseases we have always regarded as being of specific origin depend merely upon external influences and not upon contagion.

A REMARKABLE EPIDEMIC OF PNEUMONIA.

In the *Maritime Medical News* for May there is an account of an epidemic of pneumonia in Prince Edward Island. During the months of February and March no less than 546 cases occurred in the practice of twenty-six practitioners, and at the date of the report the disease was still very prevalent. As there are over fifty practitioners in the Island, it is computed that the total number of cases is fully upwards of one thousand. As the population of the Island does not exceed 150,000, the number attacked is very great. It appears that in the majority of cases the pneumonia was attended by acute bronchial catarrh. The catarrhal complications, which in some cases also involved the larynx and middle ear, were more frequent in children and the aged. In the 546 cases reported there were only forty deaths, a decidedly low mortality. It is interesting to note, in connection with the cause of this epidemic, that the past winter was characterized by an abnormally high temperature throughout, together with much rain.

In the same number of the *Maritime Medical News* there is a very instructive editorial on the epidemic.

CLINICAL EXAMINATIONS.

At the recent meeting of the General Medical Council of Great Britain a motion was introduced by Dr. Glover urging on the examining bodies the necessity of requiring more proof from students of an acquaintance with common diseases and their treatment. From the report of the examination visitors, Dr.

Glover was much struck with the very narrow, monotonous and, withal, chronic, incurable and unhopeful group of cases constituting the material for examination, giving little idea of the variety and curability of cases in common practice making up the day's work of the ordinary practitioner. At two examinations at the Conjoint Board of England there were 190 cases, of which one-third were cardiac and fourteen were cases of phthisis. All were chronic, and were more interesting pathologically than therapeutically. The following groups of cases had no place in any of the clinical examinations: (1) Infectious diseases of all sorts; (2) infantile diseases; (3) all sorts of ordinary cases; (4) insanity; (5) puerperal diseases; (6) eye diseases. Attention was also drawn to the lamentable ignorance of many candidates in the art of prescribing, the great majority of the examining bodies not demanding any knowledge on this subject.

To remedy these defects, among other things is suggested the necessity of the curtailment of the systematic lectures. Both the teaching and examining bodies in Canada would do well to take into serious consideration the points here referred to.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The Journal of the American Medical Association has issued an extra edition of 75,000 copies. This number is especially interesting, as it contains a tabulated statement of the various medical colleges in the United States and Canada, the date of their organization, and the requirements for entrance and graduation. As is well known, most of the colleges have no matriculation examination whatever, a certificate of good moral character being generally considered enough evidence of a man's ability to enter into the most difficult of all studies.

In the same number there is an illustrative description of Newport, the place of the coming meeting of the Association. The programme for the meeting is very full, and everything points to a highly successful gathering.

CANADIAN MEDICAL ASSOCIATION.

The Grand Trunk Railway offers the usual reduced rates from all points on their line to all practitioners who desire to attend the coming meeting of the Canadian Medical Association at Banff.

The following is the form of certificate to be issued by the C.P.R. for the Banff meeting. Members intending to take part in the meeting are specially requested to make application in writing as early as possible to the General Secretary, Dr. Bell, 53 Union Avenue, Montreal, *stating whether they come alone or are accompanied by ladies or patients.* This is absolutely necessary in order that the requisite number of tickets may be issued in time by the railway company:—

TWENTY-SECOND ANNUAL MEETING

CANADIAN MEDICAL ASSOCIATION

BANFF HOT SPRINGS,

ON THE CANADIAN PACIFIC RAILWAY,

AUGUST 12TH, 13TH AND 14TH, 1889.

This is to Certify that the bearer.....
is a delegate to above and accompanied by.....

.....
and are entitled to..... tickets at the Special Rates to Banff Hot Springs and Return, granted by the Canadian and Grand Trunk Railways.

.....
General Secretary.

MONTREAL,.....1889.

NOTE.—Departure should be arranged so as to connect with train leaving Montreal or Toronto on the evening of 6th August. Delegates from west of Kingston, going by way of Toronto, and from Kingston, Sharbot Lake and East by way of Montreal or Carleton Junction.

Tickets issued on these certificates will be good only for going trip between 5th and 13th August inclusive, by which latter date the journey to Banff must be completed.

THE ROYAL VICTORIA HOSPITAL.

We are pleased to learn that the building of the Royal Victoria Hospital of Montreal has at last been commenced. The estimated cost is upwards of half a million dollars. The appoint-

ments for the comfort of patients and their treatment presents several new features. Very special attention has been directed by the architect to embody into the clinical department of the hospital all those modern improvements which tend so much to promote the efficiency of teaching.

APPOINTMENTS IN THE MEDICAL FACULTY OF MCGILL UNIVERSITY.

Dr. Geo. Ross has been appointed Professor of the Practice of Medicine, and Richard L. MacDonnell Professor of Clinical Medicine, in McGill University.

POLICE MEASURES AGAINST CONSUMPTION.—The studies which Dr. George Cornet has made, under Dr. Koch's guidance, on the propagation of tubercle bacilli, have induced the president of the Berlin police to issue certain regulations for hospitals. Dr. Cornet has proved that the spread of consumption is largely due to the circumstance that the sputum of consumptive patients, which always contains tubercle bacilli, floats about in the air after being dried and pulverized, and is inhaled by healthy people. The president of police has therefore ordered that consumptive patients in hospitals shall be kept in special wards and forbidden to expectorate on the floor or into their handkerchiefs, but only into vessels partly filled with water; that the sputa shall be removed in a wet condition; and that their clothes and linen shall be thoroughly boiled and disinfected. These regulations are to be enforced not only in hospitals, but also wherever consumptive patients live.—(*Berlin Correspondent of London Lancet.*)

A CANADIAN AUTHOR.—"Mes Expériences avec les Esprits" is the work of M. Henri Lacroix, a French-Canadian, and is published in Paris. We are unable at this date to say whether the author has been crowned by the Academy or not, most probably he has. The reviewer (in *Galignani's Messenger*) states that M. Lacroix was born in 1826, in the State of Michigan, of French-Canadian parentage, and his experiences of spirit

manifestations began when he was only 16 years of age, and have continued with increasing intensity down to the present time. He was married at Montreal in 1850, and had fifteen children, of whom twelve died within eighteen months of their birth. According to his statement, he has not only been in constant communication with them ever since, but seen them grow up to be young men and women, exactly as they would have done had they remained upon earth, and in 1887 their portraits were revealed to him. He made sketches of them, under their control, and the book contains the portraits of the entire collection. It appears that in the spirit world boys play at marbles and other games, while young men and maidens fall in love, and contract and break off engagements; in short, their actions, sentiments and passions differ in no appreciable respect from those of mortals here below. M. Lacroix narrates the sayings and doings of his offspring, and of all sorts and conditions of spirits, with the profoundest conviction, and with abundance of circumstantial detail. He apparently expects from his readers the most implicit faith in what he records as facts, but what will to an overwhelming majority of them be regarded as hallucinations. One thing is certain: the wildest flights of imagination can scarcely devise incidents more extraordinary than those which he describes, apparently without the slightest suspicion that they are other than every day occurrences. Those who wish to learn to what an extent the human mind can be influenced by hallucination will find in this work abundant material for an instructive study.

Medical Items.

—Dr. Howard Kelly of Philadelphia has been elected to the chair of Obstetrics in Johns Hopkins University.

—The American Association for the Advancement of Science will meet in Toronto on the 27th of August next.

—The fortieth annual meeting of the American Medical Association will be held in Newport, Rhode Island, on June 25th and three following days.

—Dr. Owen Rees, the distinguished physician and medical chemist, has just died at the advanced age of 84.

—The Episcopal Hospital of Philadelphia has been offered, by the family of the late George Harrison, the sum of \$200,000 to build and maintain a wing for incurables.

—Dr. Edward Liveing has been appointed to the important office of Registrar of the Royal College of Physicians. He is the author of a well known work on Megrin.

—The *Dominion Dental Journal* has made its first appearance. Mr. Beers, who is the editor-in-chief, will, we feel confident, through his energy and ability, make it a pronounced success.

—The death of Professor Breisky of Vienna is announced. Since his appointment to the chair of Midwifery in the University of Vienna, three years ago, he has been unable to do any work.

—A distinguished professor in the University of Aberdeen has been taken to task for making a remark which was understood to imply that, as compared with pathology, materia medica was not of much importance.

—A grand banquet was given Professor Billroth of Vienna on the occasion of his 60th birthday. In returning thanks he touched upon the past and probable future of surgery. He considers that the treatment of tuberculosis from the chemical point of view will be the great problem of the near future.

—The fifty-seventh annual meeting of the British Medical Association will be held at Leeds, on the 13th, 14th, 15th and 16th of August, under the presidency of Mr. Wheelhouse of Leeds. Dr. J. Hughlings Jackson will deliver the address on Medicine, and Mr. T. Pridgin Teale that on Surgery.

—Dr. Herbert Tibbits of London has recovered from Mac-Millan & Co., publishers, the sum of one farthing, for an alleged libel. The claim stated that the "defendants were publishers of a periodical called *Nature*, and in a recent number falsely

and maliciously printed, concerning the plaintiff in his profession as a medical man, in the form of a review of his book, a libel to the effect that the plaintiff, whilst professing to teach massage, had not mastered the first principles of the treatment; that it was seldom a medical book of such inferior quality had been issued from the press; and that the fact that the book had found purchasers was a striking proof how a catching title and an attractive exterior could still mislead the public."

—MM. Babès and Kalindero, at a recent meeting of the Académie de Médecine, presented a note on certain changes they discovered in the cord and posterior nerve-roots in a fatal case of Addison's disease. The changes consisted in swelling and interruption of the axis cylinder and multiplication of the cellular elements, chiefly in the lower part of the dorsal cord.

A GENEROUS GIFT.—The well-known surgeon, Mr. Cadge, has arranged that after the death of himself and of his wife, his private fortune of £10,000 shall revert to the Norfolk and Norwich Hospital, with which he has long been connected.

NEW YORK POST-GRADUATE MEDICAL SCHOOL.—The summer term of this institution opens on June 17th, 1889. The fees for this session are one-half those of the winter term, and yet the advantages in the Dispensary of the School and in many of the Hospitals of the city are quite as good as during the winter.

A QUESTION OF PRECEDENCE.—At the Royal College of Physicians, Sir Andrew Clark, on assuming a second term of office as president, stated that he had been requested to sign his name in his capacity as president to a document which was also signed by the President of the Royal College of Surgeons and the President of the General Medical Council. He maintained that the College of Physicians should take precedence of those two bodies, and the matter being referred to the Herald's College he gained his point. The letter from the Garter King at Arms was entered upon the minutes.

THE PRESENT ASPECT OF THE IODOFORM QUESTION.—The triumphant march of the germ theory received some four years ago an unexpected and, it seemed at that time, a final check.

Just when it seemed to have been surely determined that unhealthy action in wounds was caused directly by the entrance of disease germs from without, and that the exclusion and destruction of germs would secure rapid and normal repair, the startling discovery was made that iodoform, which was widely used as an antiseptic, and which evidently promoted greatly the healthfulness and healing of wounds, was not a germicide, and might in fact be the vehicle in which germs were carried into the wound. In an article in the *Annals of Surgery*, March 1889, Dr. Van Arsdale discusses the matter fully, showing what interesting discoveries have resulted from the refusal of iodoform to fit into the old theory, and giving the literature of the subject. Investigation has proved that disease germs are aided in their septic work by certain chemical substances called ptomaines, which are formed in the tissues as a result of their action upon the tissues. Iodoform, while it does not destroy nor seriously hinder the germs, does destroy the ptomaines. Thus, we may suppose, the tissues, not being enfeebled by the action of the ptomaines, are enfeebled either to destroy the germs or to resist their malign assaults. Clinically, certain facts have been developed which are of practical value, whatever may be the fate of the scientific theories involved. In dressing wounds the surgeon must hereafter use two different sets of antiseptics. He must first seek, as far as possible, to exclude disease germs or to render them inactive, and for this purpose he must use germicides, such as corrosive sublimate. He must next endeavor, by applying agents like iodoform, to prevent the formation of poisonous chemical substances in the wound, or to decompose them and render them inactive if once they have been formed. These latter agents, if they, like iodoform, contain disease germs, must be disinfected before they are applied. Iodoform should be washed in corrosive sublimate solution. It should be brought into as intimate contact as possible with the surface of the wound, and after its application the wound should be covered with germicide and protective dressings.—*Medical Record*.

HOW DOCTORS ARE VIEWED BY A GOOD-NATURED LITERARY MAN.—The doctor who could not laugh and make me laugh I

should put down for a half-educated man. It is one of the duties of the profession to hunt for the materials of a joke on every corner. Most of them have so esteemed it. Garthe, Rabelais, Abernethy and a hundred or so more too near to be named, what genial, liver-shaking, heart-quickening, wit awakening worthies they were and are! To the son who loves her best, Nature reveals most her tricks of workmanship. He knows there is a prize in every package of commonplace and sadness, and he can find it—not only the bit of fun shining to the eye of the *connoisseur* like an unset jewel, but the eccentricity, the resemblance, the revelation, countless signs and token of the evanescent, amusing, pathetic creature we call the human. Heartless, grasping, irreverent? The deepest compassion for human ills, the broadest generosity to human needs, the highest respect for all that is strong and pure and holy in human lives, I have seen in the men who come closest to the mystery of life and the mystery of death, who read the naked heart when it is too weak or too sorrowful to hide its nakedness, who know our worst, and are most of them wise enough to strike the balance. If they are cynics, it is we who have made them so. We are the books out of which they learn their lessons.—*Mr. A. B. Ward in Scribner's Magazine; Southern Practitioner.*

INGLUVIN IN THE VOMITING OF PREGNANCY.—Dr. Popp (*Pester med. Presse*, No. 40, 1888) reports having achieved considerable success with Ingluvin in the vomiting of pregnancy. Having a very obstinate case, upon which he had exhausted the entire resources of the pharmacopœia, he administered three times daily, one-half hour before meal-time, eight grains of Ingluvin, and directly afterward two tablespoonfuls of one per cent. hydrochloric acid solution. An improvement was observed after a few doses had been taken, and a cure effected after the treatment had been continued for three weeks.—*Deutsche med. Wochenschrift*, Jan. 17, 1889.

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