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CANADA
MEDICAL RECORD

SEPTEMBER, 1899.

Original Communications.

FLOATING KIDNEY SIMULATING DISEASES OF THE GENITAL ORGANS IN WOMEN.*

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S., Eng.

Fellow of the American and British Gynecological Societies; Professor of Clinical Gynecology in Bishop's University; Surgeon-in-Chief of the Samaritan Hospital for Women; Gynecologist to the Montreal Dispensary; Surgeon to the Western Hospital, Montreal.

Movable kidney is a much more common disease than is generally supposed, occurring in about 1 in 250 cases in general practice and in about 1 in 5 of the women who consult the gynecologist. It is much more frequent in women than in men; it occurs much oftener on the right side than on the left; less frequent still on both sides at once, and very rarely on the left side alone. It is important that it should be recognized oftener, because it gives rise to symptoms very similar to those produced by lacerated cervix and other diseases of the genital organs.

2. The causes are: (*a*) loss of perirenal fat; (*b*) violence either in the form of a blow on the loins, but more often by the sudden jerk of jumping or prolonged vomiting; (*c*) frequent pregnancies causing relaxation of the abdominal walls; (*d*) tight lacing, which forces down the liver and the liver pushes down the kidney; (*e*) the kidneys are heavier during menstruation, which, therefore, is a contributory cause.

3. The symptoms are disorders of all the organs supplied by the great sympathetic and pneumogastric nerves

* Abstract of paper read before the Canada Medical Association at Toronto, August 29, 1899.

which go to form the solar plexus. As the movable kidney sometimes slips back into place when the patient assumes the recumbent posture, the symptoms may be absent while she is in this position. She cannot sleep on the left side, because then the kidney slips out and begins to drag on the nerves, thus setting up the whole train of symptoms. The symptoms are much worse when the woman walks or works, as the kidney then falls as far as its pedicle will let it go, and the dragging on the solar plexus causes gastric pain, dyspepsia, constipation or diarrhœa, palpitation of the heart and a smothering feeling, headaches and finally hypochondria. All the symptoms are worse during menstruation, at which time there is in addition a pain in the back and down the thighs.

4. The signs are a tumor the size and shape of the kidney, which, in most cases, because the women are thin, can be distinctly felt in some part of the abdominal cavity, sometimes as low down as the right iliac region, and even as the left and occasionally in the pelvis. It can be grasped in the hand, and when squeezed gives rise to a sickening sensation and pain down the back and thighs. The tumor can generally be pushed back to its proper place, only exceptionally forming adhesions to distinct organs which would prevent its replacement. It varies greatly in size at different times, being larger during menstruation, and when the ureter becomes kinked or bent on itself, in which case and when it becomes twisted on its pedicle it forms a tense globular tumor accompanied with severe symptoms resembling an acute attack of peritonitis.

5. The diagnosis is very important, because a great many patients have been treated successfully for some gynecological disease, such as retroversion of the uterus, and yet the patient has continued to complain as much as ever; while many more have been treated for a long time for some gynecological disease which they did not have, and have even had their ovaries removed only to have their sufferings increased. The diagnosis is easy, and the errors which have been committed have arisen from the possibility of this condition not having been present to the mind of the practi-

tioner rather than from the inherent obscurity of the case. In every case, therefore, of reflex disturbances pointing to pelvic trouble the examination must not be considered complete until the position of the right kidney has been ascertained. The patient is placed upon her back with her head raised and her thighs flexed so as to relax the abdominal walls as much as possible; the examiner sits at her right side and looking towards her, pressing his left fingers firmly into the small of the back while the right fingers try to meet them under the ribs in front. The writer has also found the left lateral position convenient, but the best position in doubtful cases is to have the patient standing leaning over with her hands on a chair, thus relaxing the abdominal muscles and, at the same time, giving the kidney an opportunity to fall. In general terms we may say that a kidney which is movable is easily felt, while, on the other hand, a kidney which cannot thus be felt is not movable.

6. The treatment consists first in getting the woman fat by any means in our power. As she cannot digest while the kidney is down, it is necessary to keep her in bed during the attempt to fatten her; the Weir Mitchell treatment is sometimes successful. Second, women loose all their symptoms during the latter half of pregnancy because the rising uterus crowds the kidney up. In those in whom this treatment is not available we may resort to a large soft pad of curled hair or an inflated rubber ball which is placed in the right hypochondrium after the kidney has been replaced, which pad is held firmly in position by a broad elastic bandage encircling the whole of the abdomen. The writer has found the small pad usually sold for this purpose utterly useless as it allows the kidney to slip out from under it. An elastic abdominal supporter with a large pad under it crowding up the bowels is much more comfortable. Third, the best treatment, and one which, in the majority of cases, gives instant relief and soon brings about a permanent cure, is nephrorrhaphy or stitching the kidney to the back. The incision should extend from the last rib down to the crest of the ilium just outside of the erector spinæ and quadratus lumborum. The kidney must be pushed up by an assistant

towards the operator, who first feels it with his finger and then grasps it with a bullet forceps. The capsule is split up along the whole of its convex border and turned aside so as to expose a strip of the kidney half an inch wide; the needle should enter the kidney substance about a quarter of an inch deep, and should include the transversalis fascia. As these stitches are to remain buried in the tissues, only well sterilized silk-worm gut sutures should be used. The peritoneal cavity should not be opened, there should be no mortality, and the buried stitches should not give any trouble in more than five per cent. of the cases. If one should suppurate it can be easily removed with a crochet needle.

The result of the operation has been very satisfactory in the seven cases in which the writer has performed it. Three of the patients had already undergone several gynecological operations, including removal of the ovaries and ventrofixation, one of them by the writer, without having been cured. These patients affirmed a few days after the operation that the real cause of their trouble had been discovered at last, and that they were, for the first time, free from their dragging pains from which they had suffered for several years.

Medical Society Proceedings.

CANADIAN MEDICAL ASSOCIATION.

THIRTY-SECOND ANNUAL MEETING, HELD IN TORONTO, AUG. 30TH, 31ST, AND SEPT. 1ST, 1899.

(Reported for the Canada Medical Record.)

First Day—Morning Session.

The Thirty-Second Annual Meeting of this Association was called to order at 10.30 a.m., Mr. Irving H. Cameron, the President, occupying the chair, and Dr. F. N. G. Starr acting as General Secretary.

TUBERCULOSIS IN CANADIAN CATTLE AND ITS PREVENTION.

Dr. J. GEORGE ADAMI, Montreal, contributed a paper with this title. In connection with the discussion of this subject, there are three questions that are asked and have to be answered:

1. Is tuberculosis in cattle a source of danger to other cattle, so as to seriously affect their well-being and to be a source of loss to the owners?

2. If infectious from animal to animal, is it infectious from animal to man, and thereby a grave source of danger to the human race?

3. If infectious from animal to man, what are the commonest modes of infection, and, as a sequel to this, how are we to diminish the danger?

The answer to the first question was an unqualified affirmative. For instance, there is abundant evidence here in Canada that the introduction of an infected bull into a herd has been followed in a very short time by the appearance of the disease in some members of that herd. Comparing statistics in this regard with other countries, showed Canadian cattle in a very favorable light, and there was no country on the face of the globe that could show such favorable results as Canada. He instanced the case of 90,000 cattle subjected to inspection at Montreal in 1894, out of which number only sixty animals were rejected, and of these only two had tuberculosis to a very limited extent. The doctor then spoke of the importance of keeping all imported cattle for breeding purposes in quarantine, say seven weeks, and if after that length of time has elapsed they fail to react to the tuberculin test, they may be handed over to their owners. Speaking to the second question, he thought the reliable information on this subject was very scant. Canadian cattle were singularly free from the disease. The lungs of 2,504 animals were examined in 1894 in the abattoirs in Montreal, Halifax and St. John, N.B., and only fourteen had any evidences of tuberculosis, *i.e.*, 0.6 per cent. It is exceedingly doubtful if any other country could show better figures.

Results already achieved at the Muskoka Cottage Sanitorium.

Dr. J. H. Elliott, the Medical Superintendent, gave the results already achieved there after an historic description of the establishment of the institution and its management. As discharged, the patients are classified according to the terms, "apparently cured," "disease arrested," "improved," "stationary," "failed" or "died." He proceeded to describe these terms, and then submitted a statement of seventy-two cases discharged during the last nine months of the year ending 30th June, 1899. Of these 61 had bacilli when admitted and 47 when discharged, the average stay at the sanitorium being 152 days. 25 to 35 per cent. of those treated

had no bacilli on discharge, 83 per cent. of the 72 gained in weight, 11½ lbs. being the average gain. For one month the maximum gain was 18 lbs., and 43 lbs. the maximum total gain. Of the incipient cases, 65 per cent. were apparently cured, and this might have been increased to 80 per cent with a longer stay. The time that has elapsed since the discharge of the first year's patients ranges from 12 to 18 months. 12 were reported apparently cured. In none of these has there been a return of the cough, and all are in the best of health.

First Day—Afternoon Session.

CHRISTIAN SCIENCE.

Prof. J. H. RICHARDSON, of Toronto University, handled this topic without gloves. He denominated it "ridiculous muss" quoted freely from "Science and Health," and amidst the hilarity of his audience, riddled and ridiculed the whole subject most unmercifully. It was a conglomeration of deceit, blasphemy, homœopathy, mesmerism and avarice. Mrs. Eddy herself had had four husbands, and, therefore, in her own personal experience the "mental fluid" had not exerted its usual potency. He considered poverty a stern reality, not to be dissipated by the logic that "God is good." In concluding, in future all you have to do to cure your patients is to just whisper quietly to them that they are not sick, that everything will be all right; say it is no disease at all and then the sickness will soon vanish. This is "Eddypathy."

PRESIDENT'S ADDRESS.

Mr. IRVING H. CAMERON delivered an able and scholarly address on the subject of the over-crowding of the profession. He pleaded strongly for the elevation of the standard of matriculation, and thought that if the examiners at these examinations would only do their duty by the profession and the public, that the profession would not be crowded with men who were better fitted for other walks in life. He thought too often men were allowed to slip through these examinations who had a very scanty common school education, and that once through there was no means of stopping them in their medical career, as the pernicious system of allowing them to come up year after year to take one or two subjects would not prevent them from becoming practitioners, though their course extended sometimes from seven to ten years. Lack of proper respect on the part of the younger men towards the older also came in for some attention. He spoke of the undoubted honor conferred on the whole profession of medicine when a short time

ago Her Majesty conferred the honor of knighthood upon Burdon Sanderson, Michael Foster and Mitchell Banks, and, with very perceptible sorrow, concluded his address by a reference to the death of members of the Association during the past year, particularly mentioning three Past Presidents, Drs. J. E. Graham, Toronto; H. P. Wright, Ottawa; and J. H. Mullin, Hamilton.

An Experience in Formaldehyde Disinfection.

Dr. F. Montizambert, Director-General of Public Health, Ottawa, gave the history of an out-break of small pox on board the Lake Huron steamship, 26 days out from port on the Black Sea, with 2,400 Doukhobors on board. All of the passengers were landed on the 9th of June, the vessel disinfected by the 13th and a new crew put on by 4 p.m. the 14th. A solution of formaldehyde was employed, and 12 ozs. of this was allowed for each 1,000 cubic feet of space. 2 and ½ months have since elapsed and there has not been reported a single case of the disease occurring amongst the passengers.

Massage and the Relief of Eye Strain in the Treatment of Glaucoma.

Dr. George M. Gould, Philadelphia, stated that generally all cases of glaucoma first came under the notice of the general practitioner. Four years ago he wrote concerning glaucoma, that massage properly applied would seem to exert a beneficial action in stimulating and arousing normal functions generally. He illustrated this plan of treatment by citing several cases in which it had been employed with beneficial effect, and concluded by describing his method of operation. It was to be done with the soft part of the thumbs and the tips of the fingers. In this way all venous and lymph spaces were cleared and broken.

Treatment of Acute Digestive Disorders of Infancy.

Dr. A. R. Gordon, Toronto, first gave a concise description of the different gastro-intestinal disorders, and then dwelt more fully on the treatment and management of these cases. If the attack is a simple one, the suspension of all food for from 8 to 24 hours may be all that is necessary; water may be allowed for thirst. After this period is past, rice water and such like fluids may be permitted. Liquid peptonoids he had found very satisfactory in those of more serious aspect. There is necessity to persist in this diet for days until all symptoms have disappeared and the child perfectly convalescent. Cow's milk should be the very last article of diet to be allowed. Calomel with soda bicarb, should be early administered

until you get the characteristic bile stools, and even for some time thereafter the bowels should be watched and phosphate of soda or aromatic syrup of ginger employed to keep them in condition. Where the cases become exceedingly chronic, paregoric in suitable doses may be employed.

Dr. HOLMES, Chatham, Ont., spoke of the advantages of hydrotherapy in these cases.

Dr. A. L. BENEDICT, Buffalo, discountenanced opium and astringents, and said he had found catnip tea a valuable sedative to be employed.

A CASE OF SUBCUTANEOUS EMPHYSEMA.

Dr. FRED. FENTON, Toronto, reported this case, which occurred in a child of 6½ months of age. The child had been described to the doctor as being perfectly well up to five months, except a slight attack of bronchitis about the third month. On Dec. 23rd last, five days before death, the baby was very restless, but had no cough to any amount. In fact, cough was not a marked feature at any time. Swelling was noticed in the greater part of neck, chest and shoulders, passing upwards over the head and face, and also downwards over the chest and abdomen. It was limited to the neck behind and as low as Poupart's ligaments over the abdomen. A post mortem was made about six hours after death. The point of entrance of the air into the pleural sac could not be discovered. The spleen was large, and grayish tubercles scattered over its surface ; liver also large. There was no gas formation in any of the internal organs. Microscopic examination of the tissues showed tubercle bacilli in the lungs, a few in the liver and spleen and none in the kidneys. The father, a man of fifty, has suffered from winter cough for years because of chronic bronchitis. There was no direct evidence of tuberculosis in the mother, but she is poorly nourished and looks a fit subject for the disease.

THE SUCCESSFUL TREATMENT OF THREE IMPORTANT CASES BY THE COMBINED FORM OF TREATMENT.

Dr. G. H. BURNHAM, Toronto, recited these histories and his plan of treatment for specific iritis. Pilocarpine is employed hypodermically from $\frac{1}{10}$ to $\frac{1}{4}$ of a grain in a series of sittings, consisting of from 10 to 14 injections. An interval is then allowed to elapse of from 3 to 8 weeks, during which time the patient is taking internally the bichloride and the iodide of potash. Then another sitting is repeated. Before each injection the patient is made comfortable in a room with a temperature of 75 degrees, and lies either on the

left or right side as convenient. In winter a hot water bottle is used to the feet. The proper effect of the injections is shown by perspiration and a free flow of saliva; the latter varying from six ounces to a pint. At the end of an hour the patient gets up and dresses and goes home. Two hours afterwards he can take his food. The doctor generally gives the injection about two hours after the midday meal. As to the length of time this treatment should be continued there is no limit. In some a few months will suffice, whilst in others it is continued for three or four years. No relapses occur in this treatment.

THE BEST METHOD OF DEALING WITH THE CONSUMPTIVE POOR.

Dr. E. J. BARRICK, Toronto, dealt with this subject :—

1. The establishment and maintenance of rural sanitoria in connection with each municipality or group of municipalities.

2. The erection and maintenance in connection with the above sanitoria, suitable buildings for the reception and treatment of such advanced cases of the disease as are unsuitable for treatment.

3. The co-operation of the Dominion Government, provincial legislatures and municipalities, and philanthropic and charitable people.

Dr. BARRICK spoke of the good results that had been obtained in these institutions, and thought that the consumptive poor ought to be allowed to participate at the expense of the public generally.

Second Day—Morning Session.

SKIN CLINIC AT ST. MICHAEL'S HOSPITAL.

There were about thirty cases shown in this clinic, and amongst them were several rare cases, such as Dermatitis Herpetiformis, Larva Migrans, Urticaria Pigmentosa, Hydrocystoma, Hydradenitis, Favus, Molluscum Contagiosum, Exfoliative Dermatitis, following Psoriasis. Drs. A. R. Robinson, New York; Shepherd, Montreal; Graham Chambers, Toronto, and A. McPhedran, Toronto, took part in the discussions.

ERYSIPELAS, WITH TREATMENT BY MARMOREK'S SERUM.

Dr. A. DE MARTIGNY, Montreal, stated that during the last fourteen or fifteen months he had had occasion to treat several cases of erysipelas of the face with Marmorek's serum with very gratifying results. One case which proved more interesting than the others, in which tonic and general treatment had been employed for five days without any appreciable result, the temperature which had been 105 with pulse rate 148, on the next morning after the injection of this serum (20 c.c.) was normal, with the

pulse running at 96. Next day the pulse was normal and in five days she was able to go back to her work. The previous treatment had been a 30 per cent. solution of icthyol as an application with iron and quinine internally. In addition to the injection a solution of bichloride 1 : 4,000 was employed externally. Other cases were cited proving equally interesting, and the Doctor then spoke of the beneficial results the antitoxine exerted in the prevention of relapses.

Dr. R. W. POWELL asked for information concerning the method of injection, and if 20 c c. was the usual amount to be employed.

Mr. CAMERON confirmed Dr. de Martigny's treatment, and said that he had tried this treatment very recently in four or five of his own cases with good results. He further instanced one case in which seven attacks or relapses occurred in fourteen months, but since using this treatment on that patient, no relapses have occurred.

SIR JAMES GRANT, Ottawa, said that thirty-two years ago, when this Association was organized, this subject was not even then in its infancy. Since then, great advances, however, had been made, and he hoped Dr. de Martigny would prosecute his researches further in this direction. In 1860, Sir James himself received a very severe blood-poisoning, and was in a very feeble state of system and near the point of death. In 1863, he was induced to try the influence of the serum of ordinary vaccine injected into his system. He further spoke of the treatment of severe cases of skin disease at that time by the same method, particularly psoriasis, as illustrating the fact that serum therapy was in vogue even in those days.

Dr. IRWIN, Weston, believed in serum therapy, and instanced a case of scarlet fever in which he gave a child 10 c.c. After two weeks, the child developed erysipelas. In twenty-four hours the disease was in a very bad stage. 10 c.c. were injected on the second day of Marmorek's serum with no result and the child died.

Dr. DE MARTIGNY, in replying to the criticisms, stated that 10 c.c. might be sufficient in a given case, providing the serum were taken from the same family of streptococci as represented in the disease, but not always knowing this, then 20 c.c. was the amount best to be administered. He concluded by asking the members of the Association to give this treatment a fair and impartial trial for the next twelve months, and report their results at the next general meeting of the Society.

COMPLICATIONS AND TREATMENT OF FRACTURE OF THE SKULL.

Dr. J. M. ELDER, Montreal, said that his paper referred to fractures at the base of the skull. During the past summer, he had had seven cases of these injuries in the Montreal General Hospital, five of them being there at one and the same time, and the whole seven cases recovered. These series of cases made him study up the subject, and the good results of the routine treatment followed made him wonder whether we, as general practitioners, were not too prone to think that in this form of injury treatment was useless. He considered such an attitude quite unjustifiable, as it would be in a compound fracture of the tibia for instance. The history of the first case cited was an injury to a young girl aged eight years, who on May the 30th was rendered unconscious as the result of a fall of fifteen feet, striking on the head. There was a large hæmatoma about the parietal bone and a depressed fracture above the left ear; pupils widely dilated; blood oozing from nose and ears. Bright red blood in small quantities was vomited, which on examination with the mirror was found to be originally dripping from the vault of the pharynx. Something had to be done at once. The left common carotid artery was immediately tied, the injury being on the left side, and the patient regained consciousness on the third day and the temperature kept fairly good. On the 12th day she developed thrombosis in different sinuses, but she fully recovered and left the hospital perfectly well after a period of 26 days' habitation. She continued well, and the child is perfectly well at the present time. The history of the other cases were given, after which Dr. Elder detailed the routine treatment to be followed out. Absolute rest in bed and quiet was enjoined upon, and attention to the mouth, nose and ears.

Dr. LETT, Guelph, Ont., brought up the question of mental trouble following these injuries, and whether any symptoms of this nature followed the act of tying the carotids.

Dr. SHEPHERD, Montreal, mentioned that he had tied the carotid many years ago for an injury of this character. In his case, there was a gradual loss of consciousness after the accident, and then he had operated and had found a large clot at the base of the skull. The hæmorrhage was so profuse, that he tied the common carotid immediately. There were no mental symptoms afterwards in this case.

Dr. ELDER stated he had assisted Dr. Shepherd in operating on that case, and had but recently heard that that patient had gone insane, which fact Dr. Shepherd, however, took occasion to deny. He was watching this case carefully to see if any such symptoms did supervene.

Dr. ATHERTON, St. John, N.B., stated he had seen the carotid artery tied in a medical man of St. John and no mental symptoms followed, and if any of the members heard him orate on a medical or political topic, he would see his mental faculties were all right.

Dr. JAMES BELL, Montreal, thought that certainly many cases can be relieved by prompt interference. We can do very little to avert the mental symptoms which are the direct result of the traumatism; but we should not let these patients die of hæmorrhage. The great point is to know when to interfere and to interfere promptly.

OBSERVATIONS ON ADENOIDS AND ENLARGED TONSILS AND THEIR REMOVAL, WITH NOTES.

Dr. D. J. GIBB WISHART, Toronto, in a four years' service at the Hospital for Sick Children, gave the results from 1896 to 1899 of a total of 103 operations, 47 being males and 56 females. 24 per cent. were under five years of age, 24 per cent. were over ten years and 52 per cent. were between five and ten years. Some of these were examined some years after operation. In only sixteen cases could an examination be obtained, and only four of these showed any return of the disease. Five of the cases had been previously operated on by other surgeons. Two deaths occurred, both from the anæsthetic. 47 per cent. of the cases had enlarged tonsils. Dr. Wishart spoke of the diagnosis of adenoids, and said that the facial expression was most helpful. The nose is flattened and broadened between the eyes. In discussing the employment of anæsthetics in these operations, he favored chloroform, nitrous oxide gas being too speedy in its effects to prove beneficial. Ether at times could be advantageously substituted for chloroform. Tonsillotomy was too frequently performed.

SIR WM. HINGSTON had rather that Dr. Wishart had confined himself to one or the other topic, because remarks to one does not apply to the other. It occurs to him that as soon as we find these adenoids present we should operate as soon as possible. There is nothing to be gained by waiting. When he comes, however, to the tonsils, that is a very different thing. I think many operate there altogether too frequently. He has seen whole families with enlarged tonsils, and when they grew older, the tonsils came down to their normal condition. He has seen the tonsils almost meeting and yet has hesitated to remove them. He also took exception to the use of the spray in the nasal cavities, as the membrane of the nose is unaccustomed to it. For years he has not used water medicated in any way for use in the nose. He prefers to get there by the proper application of powders.

Tuberculosis and Insurance.

Dr. John Hunter, Toronto, contributed this paper, and spoke of applications for life insurance, having given them the advantages of progressive medicine and of the modern thought of the day. It is the first and most imperative duty for examining physicians to be honest for their employers. It is the duty of the physician to furnish the medical director with a full, accurate and honest report in all cases. The purport of the paper was to invite discussion, that may be used to define more clearly where we are at with reference to the relationship between tuberculosis and insurance. He spoke of the causative and predisposing factors of tuberculosis, viz., environment, physical condition and hereditary tendency. Of the latter, so much stress was not now laid on hereditary as formerly; the disease was infectious just as scarlet fever was infectious, only with a longer incubation period. He quoted Dr. Bryce as saying that about 80 per cent. of deaths from tuberculosis occurred amongst working classes or in individuals working at trades.

Sir James Grant, Ottawa, entered a strong plea for the establishment of a great national society such as instituted by Sir Wm. Broadbent in England over a year ago for the spread of information among the people with regard to this disease and the means necessary to be adopted to stay its ravages.

Cyst of Broad Ligament.

Dr. Chas. Smith, Orangeville, Ont., related his experience with a case of this kind. He described fully the operation he had performed for the relief of his patient, and noted the difficulties encountered in its completion. The tumor was removed through an incision five inches in length, and the patient subsequently enjoyed the best of health for five years, when she succumbed to an attack of appoplexy.

Second Day—Afternoon Session.

Implantation of the Ureters in the Rectum in a case of Exstrophy of the Bladder, with Patient.

Dr. Geo. A. Peters presented the patient, a little boy of 4½ years of age, who, after the description of the operation, was most thoroughly examined by the surgeons present. In addition to the exstrophy, the patient had also procidentia recti. These conditions are very troublesome, loathsome and disgusting to friends, and should be submitted to operative procedures for relief. Two years ago, Dr. Peters operated on this child for the relief of the

rectal condition with very marked and beneficial results. The exstrophy has been removed altogether. The operation was performed extra-peritoneally, and the ureters are conducted one on either side into the rectum. Almost immediately after the operation, the rectum manifested a tolerance for the urinary secretion. The child can now go from 2 to 3 hours without anything passing from his bowel; at night he can go from 4 to 5 hours. Dr. Peters stated there was danger of death in these cases after operation from an ascending pyelo-nephritis. In animals on which this operation had been performed this was the manner of their death

Dr. SHEPHERD, Montreal, considered the case a surgical triumph.

Dr. JAMES BELL, Montreal, said that the question of the tolerance of the urine was still a much debated question.

CO-OPERATION OF SURGEON AND PHYSICIAN IN ABDOMINAL CASES.

Dr. A. L. BENEDICT, Buffalo, took this as the subject of his paper, and pleaded for the co-operation of the medical and surgical attendant upon such abdominal cases of tumors and cancers where both are required in their treatment. He was of the opinion that very often the patient would progress more quickly and efficiently if the case after operation were handed over again to the medical attendant. He proceeded to instance a number of cases in support of his contention as cancer of cardia, etc., and asserted that we should not make a diagnosis at the time of the operation.

Sir WILLIAM HINGSTON said you should not make your diagnosis at the time of the operation, but that by a process of exclusion you should generally be able to arrive at it satisfactorily.

GALL-BLADDER SURGERY.

Dr. J. F. W. ROSS showed a cabinet of gall-stones which he had removed in operations; also a mucous fistula in a specimen of the gall-bladder. He described at some length the surgical operations of the gall-bladder, stating the difficulty he generally had in extracting these stones from the common bile duct. He exhibited an instrument he had devised for this procedure, and had manufactured in England, with which now he could overcome his former difficulty.

Dr. HOLMES, Chatham, Ont., stated that when the gall-bladder is enlarged and the abdominal walls thin, the operation for the removal of these stones becomes a comparatively easy one. He illustrated on the black-board how he extracted the stones from the common bile duct without any difficulty.

ADDRESS IN SURGERY.

Dr. W. B. COLEY, New York, delivered an able and classical address on the radical cure of hernia. He traced the rise and progress of the operation from the earliest times, mentioning the names and dates of those who had anything to do with improving or perfecting the operation. He then took up a discussion of the operation as performed at the present day, and noted the rapid progress brought about within the last decade, apportioning to MacEwen, Bassini, Kocher, Halsted and others the respective honor that should be allotted to these gentlemen. Then a description of their operations was given, and with a reference to femoral and umbilical herniæ he concluded his subject.

Third Day—Morning Session.

ANÆSTHESIA BY CHLOROFORM AND ETHER.

Dr. W. B. JONES, Rochester, described his subject in detail. The anæsthetist was to give his whole attention to the work in hand and take notice of nothing pertaining to the operation. He should be a thorough master of the subject, and should countenance no interference on the part of the operator. The preparation of the patient for an operation was pretty completely gone into, and then the essayist proceeded to touch on the physical condition of the subject. Referring to the heart, it was not so much heart murmurs that one had to fear as it was a degenerated state of muscular fibre. The capacity of the chest should be understood and the total quantity of solids excreted in the twenty-four hours by the secretion of the kidneys should be known. Attention was then given to the quantity of the anæsthetic, from 8 to 12 drops per minute being sufficient to keep the patient anæsthetized. In case of danger everything should be close at hand, so that in case of an emergency or pending dissolution prompt service can be rendered. In conclusion, the anæsthetist should have a knowledge of the operation that was about to be performed and the length of time that ought to be consumed therein.

SOME OBSERVATIONS ON THE TREATMENT OF CANCER.

Dr. A. R. ROBINSON, New York, gave his views concerning the epitheliomata, and illustrated by means of a diagramatic drawing the cases of cancer in which the knife was indicated. He considered that in those cancers where you cannot cut down deeply, as on the scalp and around the nose, that an arsenious acid paste was preferable. The composition of this paste would be equal parts of arsenious acid and gum acacia of the consistency of but-

ter. It should be applied and left on from 16 to 18 hours to get the right effect. From this you will then get a complete necrosis *en masse* and an inflammation, but a simple one, with resulting granulation. The speaker took exception to a recent remark of Mr. Watson Cheyne, that all these cancers should be treated early with the knife, and the knife alone. This was an assertion too sweeping in its character.

Dr. SHEPHERD thinks that in the majority of cases the knife is the proper instrument, but in cases on the scalp or at the side of the nose, escharotics, if properly applied, are better than any other. Cancer, in the first place, is local, and ought to be treated immediately by removal.

DOMINION REGISTRATION.

Dr. RODDICK had this matter in hand, and in an able and exhaustive speech on the whole subject presented the matter in its proper light to the members of the Association. The plan or scheme as outlined by him is as follows : There is to be a central board called the Dominion Medical Council. Each province will have three representatives on that board ; one nominated by the Governor in Council, one appointed by the Provincial Medical Council and the third by the President of each Provincial Council *ex-officio*. All practitioners of ten years standing in any one province will be, should they so desire, licensed by this Dominion Council to practise in any of the other provinces, but no practitioner will be so licensed until he is a licentiate of ten years standing. The Provincial Medical Councils are to remain and go on doing their work as in the past. The Dominion will look after the licensing of young practitioners when they desire to practice in any province they please, and as aforesaid.

Dr. J. ARTHUR WILLIAMS, Ingersoll, Ont., representing the Ontario Medical Council, supported this plan in a strong speech, and at the conclusion moved a resolution endorsing Dr. Roddick's scheme and further authorizing that gentleman to proceed to parliament at the next session and bring about the consummation so much to be be desired.

Dr. MCNEILL, Prince Edward Island, seconded the resolution and numerous other gentlemen supported it, after which it was put to the meeting and carried unanimously.

Third Day—Evening Session.

NOTES ON RECENT EUROPEAN CONVENTIONS.

Dr. R. A. REEVE, Toronto, detailed at some length his experiences at several of these Congresses this summer while in Europe,

at the British Medical, the International Otological and the International Ophthalmological Congresses. He reviewed several of the papers and addresses which he had heard, and spoke of the newer remedies of the silver salts, such as protargol and argentin, which are proving more effective and less irritating than nitrate of silver in conjunctivitis, etc.

Surgery among the Insane.

Dr. A. T. Hobbs, Asylum for the Insane, London, Ont., read a paper on this subject. He spoke of the essential differences in operating on persons in their right senses and these unfortunates. The difficulties of securing examinations, especially in women, were dwelt upon, and the large proportion of insane women having pelvic disease called for immediate attention. Statistics of cases and operations were given and the percentages of recoveries and improvements. The best results accrued from inflammatory diseases of the pelvic organs when operated on; the operations for perineorraphy were not followed by such good results. Ether was always employed as an æsthetic; chloroform having proved weakening after operation, was abandoned.

Dr. Ernest Hall, Toronto, gave it as his opinion that 92 p.c. of insane women had pelvic disease.

Craniectomy for Microcephalus.

Dr. W. J. Wilson, Toronto, read a paper with this title and presented the patient, a boy aged four and ½ years. Before operation, all the child could say was "mamma." In a very short time after the operation, he could say many words and was progressing rapidly. He seemed also to have a good musical ear. He also became straight and erect; previous to operation, he had walked with his body bent forward almost at a right angle.

Election of Officers.

Place of meeting in 1900, Ottawa: President, R. W. Powell, Ottawa; vice-president for Ontario, Dr. A. J. Johnson, Toronto; vice-president for Quebec, Dr. A. R. Marsolais, Montreal; vice-president for New Brunswick, Dr. Meyers, Moncton; vice-president for Nova Scotia, Dr. W. G. Putnam, Yarmouth; vice-president for Prince Edward Island, Dr. S. P. Jenkins, Charlottetown; vice-president for Manitoba, Dr. W. J. Neilson, Winnipeg; vice-president for North West Territories, Dr. Hugh Bain, Prince Albert; vice-president for British Columbia, Dr. O. M. Jones, Victoria; treasurer, Dr. H. B. Small, Ottawa; general secretary, Dr. F. N. G. Starr, Toronto.

Selected Article.

PNEUMONIA AS A GERM CULTURE AND NOT AN INFLAMMATION.

By PROFESSOR ANDREW H. SMITH.

New York Post-Graduate Clinical Society. (Report in the Post-Graduate.)

Pneumonia probably kills more people than any other acute disease which we are called upon to treat, and when you remember that for every one who dies, at least three recover, it means that pneumonia affords the general practioner the opportunity to see a great many very serious cases. Everything connected with a disease so common and so formidable is of special interest. This seems to be particularly true of the phenomena embraced in the crisis, for the reason that this particular field embraces more than any other that phase of pneumonia upon which we have had the most recent developments.

Now, what is the crisis? In the first place, it belongs only to typical cases. In such a case, there is an acute "inflammation" accompanied by a high grade of inflammatory fever for from three to eight days, and then, very suddenly, the fever disappears. Perhaps the temperature will be 105° or 106° F. in the evening, and the next morning it will be normal, or even below the normal. But, if you examine the lungs, the strange feature is that the "inflammation" is still present, and to the same extent as on the previous evening. There will be the same physical signs in every particular. There is nothing parallel to this in any other disease, so far as I know. The temperature may fall very rapidly in many cases of sepsis, but the temperature does not remain down as in pneumonia. Abscesses are sometimes accompanied by a high temperature, which falls permanently on evacuation of the abscess, but in that case the condition, of which the fever is a symptom, has been removed. But in the case of pneumonia, the inflammation which was the cause of the fever remains, and the fever goes. This is a paradox.

A few years ago this statement was emphasized anew by the introduction of the clinical thermometer, and the expression of the phenomena more exactly by the use of figures. At last, the idea was evolved that pneumonia was not an ordinary inflammation of the lungs; such a pheno-

menon as the crisis was inconsistent with such a theory. The theory was propounded that pneumonia was an infectious disease, and that the fever represented at first the constitutional disturbance, and afterwards, that the disease broke out, as it were, in the lung. The disease was said to be self-limited, and that when it had run its course, the eruption in the lung faded away. But it does not seem hardly possible that with the large mass of inflamed lung there should be an absence of fever. In pneumonia there is no secondary fever.

At last, it was discovered that there was a bacillus of pneumonia, and inasmuch as an antitoxin had been discovered for diphtheria, analogy seems to suggest that there might be an antitoxin formed in pneumonia. There was much to support this view, but some maintain, as for example, Welch, of the Johns Hopkins Hospital, that there is no such thing as a pneumonia antitoxin. It had to be conceded, however, that the antitoxin of diphtheria, which is used with so much benefit, is an artificial product—the result of inoculating animals for a long period with the poison of diphtheria. No one has assumed that the antitoxin of diphtheria is spontaneously formed in the system, but to overcome the difficulty in understanding the pneumonic process it was necessary to assume that a pneumonic antitoxin is really formed in the system. It is claimed that the pneumococcus forms a toxin for a time, and that afterward an antitoxin is formed, which neutralizes the action of the toxin. When this point is reached, it is asserted, the decline in the fever is observed.

It is still difficult to understand how such an extensive inflammatory process in the lung can persist without keeping up an inflammatory fever. Authorities still tell us that pneumonia is an inflammation of the lung caused by the presence of the pneumococcus in the lung. I would take issue with this statement, believing that pneumonia is not an inflammation. An inflammation is a perverted nutrition—a process which begins in the nutrient vessels of a part, and which necessarily brings about a change of structure. We must not lose sight of the fact that the lung is peculiar, in that it has two distinct circulations—its nutrient circulation, which is supplied from the left side of the heart through the bronchial arteries, and its functional circulation, which is supplied through the right side of the heart, through the pulmonary artery. These two circulations are absolutely distinct; hence, it comes about that there may be a disturbance of the functional or pulmonary circulation while the nutrition

of the lung remains undisturbed. This fact, it seems to me, underlies the whole question of the nature of pneumonia. I consider pneumonia to be simply a process of germ culture. Every one of the air cells is a tiny culture tube occupied by a culture medium, which medium is exuded from the functional capillaries, and every one of these little tubes harbors a colony of pneumococci. When a person takes pneumonia, the pneumococci which are almost invariably present in the upper air passages, find their way into the air cells, and excite a peculiar and specific irritation. The result of this irritation is the pouring out from the functional capillaries of a fibrinous material, which ultimately fills the air cells. In this fibrinous material, just as in gelatin or other culture media of the laboratory, the pneumococcus multiplies and produces its appropriate pneumotoxin. After a time the air cells first infected become filled, and the process gradually extends until ordinarily the whole of the lobe is involved. It is to be noted that a given amount of culture material can sustain the life of a given number of cocci only for a certain time. All the time these cocci are constantly giving off, as it were, excreta. This toxin poisons the medium, and finally the point is reached at which the medium is no longer able to sustain the organisms. This is what takes place in pneumonia. The contents of each air cell represent just so much culture medium, and after a certain time this is exhausted, and the life of the pneumococcus comes to an end. The supply of toxin which has been steadily absorbed into the circulation, and which has caused the rise of temperature and other symptoms, then ceases, and the result is the fall in temperature or the "crisis." But this is not all; there is yet another factor in this process of defervescence. It is a purely chemical one, and constitutes one of the most beautiful processes imaginable—it is a most beautiful exemplification of the adaptation of means to an end. It has long been known that in the function of respiration a variable amount of sodium bicarbonate is passing constantly through the functional capillaries of the lung, dissolved in the blood. Now, this is brought to the lung in order that the carbonic acid may be exhaled with the breath, and be carried out of the body. But it comes there as a solid substance, and hence it must be liberated first from its combination with the sodium. In the nutrition of the lung it is provided that a special acid shall be formed in the parenchyma of the lung for this special purpose. This acid is pneumic acid, and it is provided for by the nutrient circulation.

As the air cell becomes filled with this fibrinous ma-

terial, which causes the hepatization of the lung, such a pressure is exerted as to interfere with the pulmonary circulation. The right side of the heart is comparatively feeble, and hence, when this pressure takes place, that capillary circulation is brought to a standstill. On taking out a pneumonic lung from the body you will see that it has swelled up between the ribs, and has become furrowed; this is evidence of the pressure to which the lung has been subjected. This cessation of the pulmonary circulation is a well-recognized fact, and the vessels are often thrombosed as far back as the branch going to the adjoining lobe, or even to the other lung. When the pulmonary circulation ceases in the hepatized lung, the supply of sodium bicarbonate no longer arrives, but the pneumic acid is being formed all the time, and is not being neutralized. You can detect its presence there, as I have, by the use of test-paper. One of the peculiarities of the pneumococcus is that it will not tolerate the slightest trace of acid in the medium in which it is growing. It is one of the most delicate and fastidious of all known cocci, and the presence of this acid puts an end to its activity.

A remarkable correlative fact has recently been discovered, *i. e.*, that just at this time the urine, instead of being feebly acid, as it should be, becomes alkaline, probably because the sodium bicarbonate which should be neutralized in the lung, passes by the hepatized portion of lung, and is thrown out by the kidneys. This alkalinity of the urine disappears soon after the crisis.

This, as I have conceived it, is the philosophy of the crisis; at any rate, you may be pretty sure of these two factors. Possibly a third factor is to be found in the anti-pneumotoxin. It is a well-known fact that an enormous number of leucocytes migrate from the capillaries into the air cells along with the fibrinous material, and hence it is not improbable that the leucocytes may be responsible for the formation of this anti-pneumotoxin. This has a bearing on the therapeutics of pneumonia. If we adopt this theory of pneumonia, *i. e.*, that it is not an inflammation, but simply a process of germ culture, it follows that if we can in any way influence that culture medium so as to make it an unfit host for the entertainment of the pneumococcus, we may hope to do something directly in the line of treatment of the cause. You may ask me for the authority for the statement that this process does not affect the nutritive circulation: My answer is, the simple fact that the lung lives through the process. If the nutritive circulation were

stopped just as is the case with the pulmonary circulation, necrosis would inevitably occur. But this is not the case in pneumonia, for after resolution, we find that the pulmonary structure has been perfectly preserved; the wall of the air cell is almost as indifferent to the intense process within it as is the glass containing a bacteriological culture medium.

Progress of Medical Science.

MEDICINE AND NEUROLOGY.

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

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COMPARATIVE THERAPEUTIC VALUE OF RECENT ANTISEPTICS IN PEDIATRIC PRACTICE.*

By GUSTAVUS M. BLECH, A.B., M.D., of Chicago.

The beneficial results which were experienced in all branches of surgery since the introduction of antisepsis have stimulated the clinitians and pathologists to adopt antiseptic medication in the treatment of non-surgical affections. Timidly at first, then bolder and bolder, progressive practitioners, thanks to the advances made by modern chemistry, have commenced to treat microbian diseases with antiseptics.

Of late everything seems to be microbian, and every drug heretofore employed empirically is now described as an antiseptic. We must not go too far in either direction. Not every drug is an antiseptic; nor is every disease due to a microbe or its toxines. The simple fact that a drug will destroy bacilli or its spores in a test-tube does not necessarily make it an antiseptic, or at least a fit antiseptic for medication of man, especially children.

The list of so-called antiseptics, praised in literature, advertised in medical journals, and recommended by authorities, is so large that the general practitioner cannot even as much as remember their names. It is, therefore, no wonder that one is frequently at a loss to know which particular remedy to employ.

* Read before the Section of Diseases of Children of the American Medical Association at Columbus, June 6-9, 1899.

It is well known that we have four great officinal antiseptics; mercury, carbolic acid, iodine and silver.

In their officinal composition they are too toxic to animal cells to be employed internally. Modern chemistry has endeavored for this reason to produce derivatives (synthetically) which, while possessing the antiseptic qualities of the officinal drugs, should be free from the objectionable features of the latter. To a certain extent they have succeeded, and certain mercurial and phenol preparations are employed with impunity in the treatment of adults.

In pediatric practice, however, I have always hesitated to employ them; for I have observed once decided ill effects in a case of a child, three years old, from but three grains of salol, administered in three doses in one day.

For all practical purposes we need four kinds of antiseptics: those which are supposed to act on the respiratory tract; those which act on the gastro-intestinal tract; those which affect the urinary apparatus; and such as influence the entire organism.

The antiseptic treatment of the urinary tract has heretofore been a failure. All drugs employed for that purpose were nothing less than intestinal antiseptics, and their administration in doses large enough and frequent enough to saturate kidneys and urine was, to say the least, an unscientific experiment. Recently, however, urotropin seems to be an ideal antiseptic for that purpose, unsurpassed by any other drug to my knowledge. Its value can be established clinically as well as bacteriologically. Decomposed by acid urine into ammonia and formaldehyde, it destroys the bacteria found in the urine in one or two days. In cases of bladder trouble it is valuable, because the disinfected urine will not undo any local medication we might employ for the bladder itself.

For diseases of the respiratory tract creosote was considered the only suitable medication. That it is an irritant is well known. Children could not take it, and all sorts of emulsions had to be prepared to make the drug palatable. This all is overcome by guaiacol carbonate, which is comparatively tasteless, non-irritant and non-toxic. I have given it to children for weeks, and have observed no ill effects whatever. It is very useful in obstinate cases of bronchitis, but is of doubtful value in tuberculosis of the lungs. I have had lately a good deal of experience with pulmonary tuberculosis, and my opinion can be given in but one straightforward way: there is no drug which will influence to any great extent the bacillus tuberculosis. Murphy's "surgical" cure

has proven a total failure. I have seen cases come to my clinic who have had as many as three injections of nitrogen gas, with the results that the patients got worse. In one case, strange to say, one lung was "collapsed," while the other one revealed a cavity as big as a man's fist. Tuberculosis in its first and second stages can be cured by antitoxic treatment. I have employed injections of tuberculocidin (Klebs') with astonishing results, and am, at this time, inclined to consider it a specific for pulmonary tuberculosis.

"General" antiseptics, to my knowledge, do not exist, unless the various "antitoxic sera" are considered as antiseptics.

With carbolic acid and mercury excluded, there remain but two drugs—silver and iodine.

The former in the colloidal preparations employed by Crédé, has proved a valuable remedy in certain affections of a surgical character; and for meningitis, if applied externally (inunction), but internally has yet to be tested.

Iodine has always been an ideal antiseptic and alterative. Iodoform, since its discovery, was heralded as a panacea for wounds, ulcers, and for certain affections of the stomach. I believe Boinet, in 1840, was the first to call the attention of the profession to the value of iodine as un antiseptic. Reveil, in 1863, showed that it would neutralize the action of viruses and venoms. Jalau de la Croix, later maintained that a solution of $\frac{1}{1000}$ was sufficient to sterilize all the spores of bacteria. Roger and Davoine have shown it to be effective on the virus of glanders. The most important contributor on this drug, however, was Mosetig-Moorhoff, who described iodoform, if I remember right, as a "God-sent drug."

The objectionable features of iodoform, however, are too well known to need any mention here. Chemists have endeavored to produce an ideal iodine preparation, and, in my opinion, they have succeeded; iodol, aristol, europhen and nosophen are well-known products which have become popular. To appreciate the value of these products, clinical tests alone, although perhaps the most valuable to the practitioner, are not altogether definite. Drug-nihilists so frequently sneer at our deductions from personal observations, shrugging their shoulders, with a sarcastic smile, and alluding to "*vis medicatrix naturæ*," and to "getting well in spite of medical treatment." While such sophisms deserve no serious attention, there is a shade of truth in them. Neither do test-tube experiments suffice. The same drug which kills bacteria and their spores in the laboratory will

not always destroy them in the intestinal tract. Animal experiments alone can offer us scientific proof.

Chemic examination of iodol, aristol, europhen and nosophen shows that the last-named drug is the least toxic or, correctly speaking, absolutely harmless. Aside from certain animal experiments made at the University of Bonn, where nosophen and its sodium salt, antinosine—the latter having the distinguishing feature of being readily soluble—were injected hypodermically, the chemic reaction which takes place when these iodine preparations are introduced into the animal organism explains the non-toxicity of nosophen and antinosine. As is well known, iodoform and the other preparations mentioned when introduced into the system liberate nascent iodine. Antinosine and nosophen, as has been proven to satisfaction by Prof. Binz and Prof. Zuntz, of Berlin, however, can be found in an unalterated condition in the excretions, the so-called iodoform intoxication depending entirely on this liberation of nascent iodine; for this reason, nosophen and antinosine are non-toxic.

Nosophen, its sodium salt (antinosine), and its bismuth salt, known as eudoxine, are odorless.

Aqueous solutions of antinosine have been applied again and again by me to the inflamed mucous membrane of the nose and throat of small children, and I have noticed no complaint. Oculists of note use it now in solutions as strong as 2½ per cent. as an antiseptic lotion. This substantiates that antinosine is non irritant.

The skin of children is not only more delicate, but capable of greater absorption than that of adults. Nosophen dusted over forty wounds and ulcers on children showed, after three days, not the least irritation, healing taking place per *primam intentionem*. A few years ago, when employing dermatol, aristol and iodol, such results were not obtained, though the same care was exercised then as now.

If nosophen has received any criticism at all, it has been to the effect that it forms a crust too quickly, thus retaining secretion. Where such is undesirable it is advisable to add 25% of boric acid to a given quantity of nosophen. As an ointment (10%) it has proven of great value to me as an application in cases of eczema, intertrigo, ulcers of the leg, etc.

Antinosine is now used exclusively in my clinic for the disinfection of the nasal passages and to wash out discharging ears, particularly when due to scrofulosis; also in the obstinate forms of follicular tonsilitis angina, and as a local spray in diphtheria, croup, etc. This drug forms an excellent adju-

vant in the treatment of tuberculosis. Regarding the strength of solutions, I use them from ¼% up to 1% in children.

Eudoxine, the bismuth salt of nosophen, has proven an excellent drug in the treatment of all forms of infantile diarrhea. It has arrested a profuse diarrhea in a girl, aged 13, in twenty-four hours, in doses of 5 grains every three hours, after such remedies as salol, bismuth and Dover's powder failed to check it. It was a case accompanying acute pulmonary tuberculosis. I have reported the case in full in an article headed "Eudoxine in Pediatric Practice."

On reaching the acid stomach, the bismuth contained in eudoxine becomes separated from it, and stable bismuth compounds are formed by the gastric juice, which exert a favorable action on diseased conditions of the stomach. The nosophen contained in eudoxine passes unaltered through the stomach, but during absorption in the alkaline intestine it is changed into its sodium salt—namely, antinosine—this being held in solution and acting as an antiseptic on the bacilli and their toxines found in the intestinal tract. In two cases of typhoid fever, the only ones I had occasion to see, the stools were soon rendered aseptic. If experience in adults could be considered here at all, I might add four similar observations on adults.—*St. Louis Med. & Surg. Journal.*

THE DIAZO-REACTION IN TYPHOID FEVER.

The Southern *Medical Journal* for June, 1899, speaks of the value of this reaction in the diagnosis of typhoid fever which has been proved time and time again. Three solutions are used, of which the following are the formulæ:

No. 1.

Sulphanilic Acid	4 gr.
Hydrochloric Acid	1.5 dm.
Distilled Water	4 oz.

No. 2.

Sod. Nitrate	5 gr.
Distilled Water	2 oz.

No. 3.

Ammonia Water	q. s.

To make the test, proceed as follows: Add one drop of the No. 2 to forty drops of the No. 1, and then add an equal quantity of the urine to be examined. Shake well and add a small quantity of ammonia water with a pipette. If the reaction is present, a bright red color will be seen at the

point of contact with the ammonia water. The red color will be diffused and a tinted foam will be seen at the top if the tube be shaken, which may be regarded as positive evidence of the success of the reaction.

From the fourth to the seventh day of the disease, and thereafter until convalescence is begun, the reaction is present. It sometimes happens that the reaction is not to be obtained until twenty-four or thirty-six hours after the urine is passed. The disappearance of the reaction marks the beginning of convalescence, and its appearance marks a relapse in the disorder. This is probably less certain than Widal's test, but has the advantage that it can be employed by anyone, whereas Widal's is practically impossible except in a well equipped laboratory.—*Jour. of the Miss. State Med. Asso. May*, 1899.

AN OINTMENT FOR HEMORRHOIDS.

A writer in the *Nord Medical* for March 16 gives the following formula :

Cocain Hydroch.....	15 gr.
Ergotin.....	60 gr.
Ichthyol.....	65 gr.
Calomel.....	45 gr.
Vaseline.....	
Lanoline.....aa	225 gr.

M. S. A. portion as large as a small nut to be inserted into the rectum after each evacuation.—*N. Y. Medical Journal; Southern Med. Jour.*

TREATMENT OF ASTHMA.

GOLDSCHMIDT (Munich, 1898) closes an essay on this subject with a consideration of the treatment of the affection. He divides it into (1) purely medicinal, (2) the physical, and (3) the inhalation treatment. He attaches great value to the use of morphine in some cases, especially where the attacks are infrequent but pronounced. If morphine is not well borne, then chloral may be used in a dose of two grammes, to be repeated in doses of 0.5 gramme every quarter of an hour until sleep is induced. More than five grammes should not be given in this way. In cases of prolonged asthma with expectoration, iodides combined with expectorants and opium are often useful. Amyl hydrate also acts extremely well,

but sulphonal and trional are useless. Stramonium fumigation may be of great value, but sometimes fails. Occasionally antipyrine and quinine may be useful. The attacks return after the chloroform narcosis passes off. Expectoration must be encouraged, and here the iodides are of most service; they may be given over long periods of time. In cases where expectoration is abundant, iodides may not only be useless but harmful.

Goldschmidt then discusses the value of the compressed air cabinet. This is useful in some of the sequ. læ of asthma, but not in the actual acute attack, which may indeed be made worse by it. Inhalations are far too little appreciated in asthma. Irritating inhalations which produce cough must be avoided. The author attaches some value to hydrotherapeutic treatment in some cases of asthma. The patient should gradually be accustomed to colder baths of short duration with douches. Even when catarrhal symptoms are present the body may be vigorously sponged with water at 18° C. Warm drinks should be given at the same time. In some cases of permanent asthma baths at 27° C. with douches at 12° C. may be of service. When these fail vapor baths may be of great value, but they are sometimes followed by untoward symptoms; they should be limited to two in the week. Finally, in case of an acute attack or an exacerbation, the treatment is begun with stramonium fumigation. If this fails, strong stimulation of the skin with hot water should be tried. If these measures have previously been ineffective, morphine or chloral should be given.—*British Medical Journal*, Jan. 7, 1899; *The Therapeutic Gazette.*

OXYGEN AS A REMEDY FOR ANGINA PECTORIS.

Writing on this subject in the *Medical Record* for July 10, 1899 (*Medical Times*), Dr. Beverley Oliver Kinnear sets forth his reasons for believing that in most cases of angina pectoris the pain is induced by a simple hyperemia of spinal sensory centers. In support of this theory he mentions having wholly cured one severe case of angina pectoris (besides very many cases of neuralgia) by applying cold over the sympathetic ganglia and the spinal cord.

There is another remedy which he believes will be found most valuable in relieving the attacks of angina, and that is oxygen by inhalation. Oxygen, when properly diluted with another gas of lighter specific gravity, is readily absorbed by the pulmonary capillaries; and after it enters the

circulation its first effect is to dilate the coronary arteries, and a normal amount of blood—saturated with oxygen—being thus added to the enfeebled organ the heart muscle is stimulated and strengthened, and its weakened action immediately overcome in the attacks of angina pectoris. The secondary action of the gas is to dilate every arteriole throughout the body and extremities, thus universally distributing the circulation in normal amount to the whole organism, and thereby warming the body, exciting renewed and active metabolic changes, and withdrawing the excess of the blood from the hyperemic sympathetic ganglia and cerebro-spinal nerve centers. Oxygen alone will speedily relieve the attacks of this disorder; but will be found more effectual in combination with cold over the spine and heat to the extremities. The author is convinced that if this combined treatment without the heat to the extremities be continued daily for some months, and in many instances for a much shorter time, in the majority of cases so afflicted a cure will result.

It must always be borne in mind that only pure oxygen, properly diluted and prepared solely for therapeutic purposes, is of any value in the treatment of disease.

The most efficient formula now in use is that of the London Oxygen Hospital, and consists of two parts of pure oxygen, one part of nitrous monoxide, and 1 per cent. of ozone, to keep the mixture fresh when in the cylinder.

Injurious and not beneficial results will follow the use of oxygen gas, unless it be wholly free from chlorine and other deleterious gases always present in commercial oxygen.

It may be noted from the preceding statements that pure and properly diluted oxygen gas when inhaled produces the same effects upon the pulse, respiration, temperature and nutrition as those following the application of cold over the spine.

Oxygen by cylinder is easily administered, as you have only to turn a stopcock, compress the nostrils, place the tube in the mouth, and after complete expiration inhale as deeply as possible, hold the inspired gas as long as you comfortably can, and then exhale slowly through the nasal passages. Two inhalations three times a day, taken standing and before meals, with an interval of two minutes between the inhalations, are sufficient for the daily treatment of angina pectoris; but in a seizure the tube should be placed in one of the nostrils, the gas turned on from the cylinder and the patient allowed to inspire the gas with the respiratory movements, and thus continue until the attack is quite relieved.

UROTROPIN IN CYSTITIS.

Shiller (*Merck's Archives*, June, 1899) states that he has had occasion to employ this remedy in fourteen cases of cystitis in women. In four cases of gonorrheal cystitis the reaction was very prompt, the very troublesome tenesmus disappearing at once and the urine becoming decidedly clearer. The other ten instances were of cystitis of varying degrees of intensity, arising from different causes. A mild cystitis with urethral stricture responded promptly and without any treatment of the stricture. One case presented severe cystitis accompanying urine tumor, the uterus being retroflexed and the tumor through backward traction making the emptying of bladder very difficult. The patient experienced no relief after the administration of about one drachm, and then withdrew from treatment. A third case with severe vesical hemorrhage, after ineffectual treatment with uva ursi and salol, reacted promptly to the first drachm and a half. The patient then discontinued the drug on account of its expense. Five lighter cases of unknown etiology all gave evidence of the antiseptic action of the urotropin. Schiller lays especial emphasis on the speedy remission of the pain. He recommends urotropin in cystitis, but considers that local treatment in addition will very often be found necessary. In the matter of dosage he adheres to the advice of Nicolaier, and gives seven and a half grains three times a day; in one instance he was obliged to give only two doses a day, as three produced burning in the bladder. Complete cure through urotropin was observed after four to six drachms had been taken.—*University Medical Magazine.*

GUAIACETIN IN PHTHISIS.

Bass (*Prager medicinische Wochenschrift*, December 22, 1898) speaks favorably of guaiacetin in phthisis. Guaiacetin, like guaiacol, is a derivative of creosote. It appears as a white crystalline powder, having a faint odor and taste of creosote. It is administered in doses of four to six grains, three or four times a day. It may be taken as a powder or in a cachet and washed down with water. Bass has found it very useful in phthisis and chronic bronchitis. It stimulates the appetite, improves nutrition, and diminishes catarrhal secretion. Too much, however, must not be expected of it in advanced cases or in very active cases of a florid type.—*Univ. Med. Magazine.*

SURGERY.

IN CHARGE OF

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AND

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LOCAL ANÆSTHESIA.

By ALEXANDER B. JOHNSON, M.D , New York.

The subject may be considered under two heads : First, the use and limitations of local anæsthesia; second, the choice of a particular drug or method to suit the individual case.

The only real advantage which can be claimed for local over general anæsthesia is the diminished risk which usually attends the former method. It may be asserted that the disagreeable after-effects which follow general anæsthetics, with the exception of nitrous oxide, constitute a sufficient reason why we should use local anæsthetics by preference when it is possible. But certain other advantages which general anæsthesia possesses greatly outweigh, in the writer's opinion, this objection. Were all operations done under local anæsthesia actually painless, we should be inclined to accord to the method a far wider field of usefulness ; that such is not the case, any one accustomed to their use will admit. To infiltrate painlessly an acutely inflamed area of skin with cocaine is possible, but difficult; and in the majority of cases a good deal of suffering occurs during the process. I am credibly informed by patients that this pain, together with a burning ache, lasting an hour or more after the effect of the anæsthetic has passed off, has caused them to choose to be cut with no anæsthetic at all rather than undergo this suffering a second time. In certain instances in which the inflammatory process is superficial, freezing by ethyl chloride meets this objection ; in other instances it does not. The œdema and consequent distortion of the tissues incident to the infiltration method, and also present to some extent when using solutions of the ordinary strength, render at times an otherwise simple operation unnecessarily difficult, and may annoy the patient for days and even interfere with primary union.

Those of us who have performed many surgical operations are well aware that it is impossible in many instances to know how extensive the necessary procedures may be, and many of us have been obliged to finish an unexpectedly extensive dissection upon a groaning, screaming patient because we had already reached the limit of safety in the use of our local anæsthetic, or because we have found a further extension of the local anæsthesia impracticable for one reason or another. Few surgeons are possessed of sufficient self-control to finish such an operation with the same degree of thoroughness and accuracy as though the patient was unconscious. Cases of alarming intoxication from cocaine administered in doses usually harmless are not very rare. Persons with deficient self control and of a neurotic temperament are often greatly excited by small doses of cocaine; under such circumstances the proper performance of even a simple operation becomes difficult or impossible.

Every one of you will admit, I think, that the surgeon whose mind is concentrated absolutely upon the details of his operative technique is likely to do better work than one whose attention is divided between his operation and the probable or actual suffering of his patient. Under general narcosis the former condition is usually obtained; under local anæsthesia the latter.

It is my belief, then, that the field of local anæsthesia should be strictly limited to operations upon special regions in which local anæsthesia is peculiarly applicable; to operations small in extent and simple in technique, of short duration; and to those other cases, rather rare, in which the strongest contra-indications exist to the administration of a general anæsthetic.

It was formerly hoped that by operating under local anæsthesia the pneumonias which occasionally follow abdominal operations in debilitated patients might be greatly dimished in number. Experience shows, however, that such is not the case.

The regions which appear to the writer most suitable for the use of local anæsthetics are: The general integument, limited areas of which may be rendered analgesic for the purpose of opening superficial abscesses, for the suture of superficial wounds, for the removal of superficial new growths or foreign bodies; the hand, where anæsthesia may be indefinitely prolonged by the use of a rubber constructor applied above the wrist or upon the brachial artery; the toes, the eye, the mucous membrane of the nasal fossæ, of the pharynx and of the mouth; the tonsils; the mucous membrane of the

urethra; the integument of the penis. The knee and other joints may properly be drained under local anæsthesia. A fracture of the patella may even be sutured. Many cases of empyema of the thorax requiring simple resection of the rib are very well done under local anæsthesia.

For reasons already given, the writer regards the use of local anæsthetics for the performance of major surgical operations, excepting in cases of necessity, as unsuitable, unwise, occasionally dangerous, and as likely to impair the operative technique. He makes this positive statement partly in the hope that it may provoke a general discussion of the subject from this point of view. In cases of renal disease, of acute bronchitis and of pneumonia; in a few cases of strangulated hernia, in which the condition of the patient is desperate, in some cases in which the avoidance of nausea and vomiting are of the greatest consequence, and in which, as in cases of gastrotomy for stricture of the œsophagus, the immediate administration of food by the stomach may in rare cases be almost imperative, the writer believes that the surgeon may be justified in performing a moderately severe operation if he considers that the administration of a general anæsthetic would greatly increase the risk of the operative procedures.

The writer has performed several operations, in which a general anæsthetic would ordinarily have been administered under cocaine anæsthesia with satisfactory results and with only moderate evidences of suffering. Among them were: perineal drainage of the bladder, suprapubic cystotomy, excision of varicose veins of the spermatic cord, resection of the vasa deferentia, drainage of the knee joint, a few incisions through the abdominal wall, and the opening of rather deep-seated abscesses in various parts of the body; but he has seen operations done by surgeons under cocaine anæsthesia which he thinks might fairly have been characterized as cruel. That the patient's sufferings were not due to errors of technique on the part of the surgeons may be assumed from the fact that they were thoroughly familiar with the use of local anæsthetics by the several methods.

The Choice of Drugs and of Methods.—Ethyl-chloride: Momentary incisions, through the thickness of the skin merely, may be rendered entirely painless by freezing the skin along the line of the proposed incision with an ethyl-chloride spray. If the skin to be cut is inflamed, the freezing process is often attended by a moderate amount of discomfort. If the vitality of the skin is already much impaired by the intensity of the infective process, freezing may be followed by a

small amount of sloughing of the wound edges. The inser tion of a hypodermic needle into tense and inflamed skin is very painful. This pain may be abolished by freezing the point to be punctured with ethyl-chloride. Operations of considerable extent have, I am told, been done under ethyl-chloride anæsthesia. The incision through the skin for the suture of a fractured patella has been made with little or no pain. The writer has no experience with the method except as a preparation for very small incisions or punctures.

Cocaine and eucaine: Cocaine and eucaine may be applied practically for the production of local anæsthesia in a variety of ways. Since, except for the greater toxicity of cocaine, their actions are almost identical, they may be considered as one, except in regard to the dangers in their use.

1. The simplest method is to paint the surface of a mucous membrane or to spray it with a cocaine solution. A canal lined with mucous membrane, such as the urethra, may be rendered insensitive by injecting into it a small amount of cocaine solution. The parts best suited for this simple method are the mucous membrane of the mouth, pharynx and tonsils, the nasal fossæ, the male and the female urethra, and occasionally the urinary bladder. Rather strong solutions are necessary for the production of anæsthesia in this manner; from one to ten per cent. The mucous membranes also vary considerably as to the rapidity with which anæsthesia may be obtained with a solution of a given strength. The mucous membrane covering the turbinated bones of the nose absorbs with great rapidity; the mucous membrane of the bladder very slowly. These peculiarities are very important to bear in mind when using cocaine in this manner. The duration of the anæsthesia seems to vary directly with the strength of the solution used, within certain limits. The stronger the solution also the more widely does the anæsthesia extend beyond the actual point of application. This is equally true of solutions injected into the tissues. In operations upon the eye, a solution of one or two per cent. appears to be sufficiently strong; anæsthesia is rapidly produced and is unusually perfect. Owing to the small extent of surface, repeated applications may be made with a medicine-dropper, a few drops at a time, and the anæsthesia may thus be prolonged indefinitely.

In the case of the mucous membrane of the mouth, pharynx and nasal fossæ, owing to the large extent of surface, the rapidity of absorption and consequent danger of intoxication, it has appeared to the writer safer to paint the surface to be operated upon with a small amount of a rather

strong solution, and to repeat the painting two or three times in the course of ten minutes, directing the patient not to swallow meanwhile, rather than to use a spray of a weaker solution over a large extent of surface. When a spray is used, a greater extent of mucous membrane than is necessary is exposed to the action of the drug, a greater quantity is absorbed, and symptoms of intoxication are, in the experience of the writer, more apt to occur, sometimes with great suddenness. The writer is in the habit of using for these purposes a solution containing five per cent. of cocaine, painting it on with a camel's-hair brush or a cotton swab; or, in suitable cases, a small pledget of cotton is saturated with the solution, but not to excess, applied accurately to the part upon which it is intended to operate, and left *in situ* for ten minutes.

The urethra appears to be well suited for the use of cocaine. The writer has been in the habit for many years of doing nearly all his internal urethrotomies, back to four and one-half inches from the meatus, under cocaine anæsthesia. In cases in which strictures are to be divided posterior to this point, the usual perineal drainage renders general narcosis more suitable. The method pursued is as follows: After irrigation of the urethra, one half drachm of a five-per-cent. solution is introduced into the canal by means of an ordinary urethral syringe. The meatus is compressed and ten minutes are allowed to elapse, when the remaining solution is allowed to escape and the operation is proceeded with, usually with little or no pain.

As an example of unusual tolerance of cocaine the writer would like to relate the following case: Upon the evening following an internal urethrotomy, one not very familiar with the use of the drug was directed to inject into the patient's urethra a small quantity of cocaine solution in order to render urination painless. By a mistake a quantity of cocaine was injected equal to about ten grains, and allowed to remain for ten minutes or more. The patient suffered from slight nausea and giddiness, and lay awake a considerable portion of the night, but had no severe symptoms of poisoning.

The introduction of one-half ounce of a five or ten per cent. cocaine solution into the urinary bladder is said to produce a satisfactory degree of anæsthesia for the performance of a rapid lithotrity with evacuation. The writer has no personal experience with this method. If an ulceration or other solution of continuity existed in the mucous membrane, the method would surely be dangerous. Ten grains of boric acid to an ounce of cocaine solution prepared with sterile

water preserves it for a month or more without noticeable contamination from the growth of mould fungi. Salicylates are used for the same purpose.

Of more interest to surgeons at the present time are the various methods of producing analgesia by the injection subcutaneously of cocaine or eucaine solutions alone or in combination with other substances. Among these methods are the following:

1. The cutaneous or subcutaneous injections of strong watery solutions of cocaine or eucaine, from one to four per cent. In this method the amount of solution injected is necessarily small. In cases in which it is supposed that the whole or the greater part of the cocaine will be absorbed into the circulation, the limit of safety is ordinarily fixed at one grain or less; practically, however, in many instances this quantity may be slightly exceeded without much risk. If the individual is a strong adult, if the region to be operated upon is not very vascular, if the incision is to be rather free and is followed by some bleeding, a quantity of solution equal to one and one-half grains of cocaine may be used without much risk of producing intoxication. The writer has used this quantity of cocaine certainly several hundred times without having seen symptoms of poisoning. In vascular regions, notably the face, scalp, nasal fossæ and mouth, such a quantity of cocaine would be dangerous in the extreme. The writer has seen five minims of a four per cent. solution, injected into the neighborhood of the exit of the supra-orbital nerve from the orbit, produce very sudden and marked symptoms of intoxication. It is usually considered that a full stomach and a recumbent position tend to diminish the likelihood of the occurrence of intoxication. It is customary in this method to introduce a small quantity of the solution through a fine hypodermic needle into the skin, and after that into the deeper tissues, if they are to be incised, and to wait two, three or four minutes before cutting; testing the sensibility of the parts with the point of a knife or needle, until they seem to be insensitive. This method bears the strong recommendation of simplicity and of economy of time. If during the operation the patient complains of pain, a little of the solution may be dropped into the wound or further injections may be made. It is perhaps the method the most used by American surgeons to-day.

In a series of sixty-eight minor operations done recently in the Roosevelt Hospital, out-patient department, under my direction, by Dr. Sinclair Tousey, two and four per cent. solutions of cocaine were used. Six minims was the average

quantity of a four per cent. solution injected and seven minims of a two per cent. solution. The largest quantity of a four per cent. solution used was fifteen minims for the excision of a carbuncle of the neck. The smallest quantity of a two per cent solution used was four minims, for the excision of an epithelioma of the face. There were thirty-nine cases of abscess. The majority of these abscesses were situated upon the palmar and plantar surfaces of the hands and feet respectively. Some of them were of large size, and the operation included a more or less extensive incision through the infiltrated and inflamed overlying skin. There were also abscesses in other regions. Two carbuncles were excised from the neck. There were several cases of phimosis, several of ganglion of the wrist, several small tumors of the face, and several sequestrotomies of the hands and feet.

In general the analgesia during the operation was satisfactory. A certain number of patients complained of moderate pain from the prick of the needle. In the cases of extensive inflammatory infiltration, notably in the hand, considerable pain was complained of for several hours after the incision was made.

Several important variations in the technique of this method are noteworthy and valuable. They bear the names of various authors, but were doubtless familiar to most of us before we ever heard the names of these writers. For the production of analgesia in the sound skin, a fine needle is introduce obliquely into the skin until these opening at its point is buried ; a fraction of a minim of cocaine solution is then injected, producing, if properly done, a small anæmic elevation at the site of the puncture. After waiting a few seconds the needle is reintroduced a short distance from, at, or within the border of this elevation, producing another elevation of like character. These injections are continued along the line and to the limit of the proposed incision. If the cut is to go deeper than the skin, the subcutaneous tissues are punctured in the same line and similarly anæsthetized. If it is necessary to incise inflamed tissues, the inflamed area may be encircled by a series of intracutaneous injections made in the surrounding healthy integument. The operation may then be made upon the inflamed part with little or no pain.

The hand and to some extent also the foot are favorable places in which to practise another modification of this method. The limb is elevated ; a rubber constrictor is made to encircle it at a point between the site of the proposed operation and the trunk, and is drawn tightly enough to cut off completely the blood supply from the parts. After waiting

a few moments—ten minutes is advised by certain authorities—cocaine is injected into the site of the operation as before described. The writer has been in the habit of reversing the process; first, elevating the limb; secondly, injecting the cocaine, and, thirdly, immediately applying the constrictor. By applying either of these means the local anæsthesia is greatly prolonged, so that the operation may be continued for an hour or more without any return of sensation in the anæsthetized part. It has also seemed to the writer that the dangers of poisoning are diminished by this method. The incision, the manipulation, and the free bleeding which follows the removal of the constrictor should remove a considerable portion of the cocaine. It is noteworthy, however, that the prolonged application of such a constrictor is intensely painful, and I have known many patients to complain bitterly of it, though they did not feel the cutting.

Another valuable modification occasionally applicable is the injection of cocaine into, or near, the sensitive nerve supplying the part to be operated upon. This may be accomplished in many instances with striking success. In the case of the digital nerve of the fingers, a minim or two of the solution is injected deeply into the sides of the finger in the neighborhood of the nerve trunks. The distal portion of the member is thus often rendered quite insensitive; or, if not entirely so, a very small amount injected into the immediate neighborhood of the parts to be cut will produce complete analgesia. As to the choice of the strength of of solution to be used in these methods, it is probable that a one-per cent. solution is abundantly strong.

2. The use of similar solutions in combination with other substances. Several modifications have been made in this method. Some surgeons, notably Schleich, have devised and practised the so-called infiltration method of anæsthesia; according to this method very dilute solutions of cocaine, morphine, and common salt are injected into the tissues to be anæsthetized, in considerable quantities, in such a manner as to distend the tissues with a large mass of fluid; thus adding the anæsthetic effect of extreme pressure and tension upon the nerve filaments to the specific effect of the cocaine itself. The sodium chloride is used to avoid the irritating and painful consequences of introducing pure, or nearly pure, water into the tissues. In the strength of eight-tenths of one per cent. it is osmotically indifferent, and even in large quantities causes little or no irritation. Morphine was added by Schleich with the idea that the anæsthetic action of the cocaine would be strengthened, but it has since

been conclusively shown that morphine is not a local anæsthetic; that on the contrary it is an irritant, and in the minute quantity occurring in Schleich's solution its general systemic effect must be slight or absent. The advantages of this method are, that the quantity of cocaine used is small, always less than a poisonous dose, and that very large areas may be infiltrated without risk. Its disadvantages are, that the method is rather troublesome and requires rather more time; that the repeated needle punctures, and even the mechanical diffusion through wide areas and loose tissues, may disseminate an already existing infectious material into previously healthy parts. In the mouth, for example, this method used for an operation for a small epithelioma of the tongue has been followed by widespread suppuration in the tongue and the floor of the mouth. The anatomical details of structure may be obscure by the artificial œdema, thus rendering the operation more difficult.

Another method which has gained a wide popularity consists in the use of a salt solution eight-tenths of one per cent., containing from one-tenth of one per cent. to one per cent. of cocaine or eucaine, at a temperature a little below that of the human body. With care this method furnishes a safe and satisfactory anæsthesia, and avoids many of the objections which may be urged against the methods already spoken of.

Eucaine with salt alone possesses certain decided advantages over cocaine. It may be sterilized by boiling, cocaine being partly decomposed at a boiling temperature with the formation of irritating substances. To suit the individual case the surgeon may select a salt 1 : 1,000 sterile eucaine solution for infiltration anæsthesia, or a salt one or two per cent. sterile eucaine solution, if he prefers to use that method.

Dr. H. Braun, of Leipsic, Berlin, 1898, quoting Heintze, says: "Heintze has tried a number of substances which have been recently recommended as local anæsthetics, guaiacol, guaiaril, orthoform, aneson, and eucaine A. I will only state here that all possess disadvantages. They are all irritating, some of them injure the tissues, and for infiltration anæsthesia, at least, can be dispensed with." Braun also states in regard to tropacocaine that it irritates more than cocaine, and does not injure the tissues. In its toxicity it stands between cocaine and eucaine. Its solutions keep better than cocaine and may be sterilized. He considers that it is less desirable than eucaine, because it possesses less anæsthetic power, is more poisonous and more irritating.—*Medical Record.*

THE
CANADA MEDICAL RECORD
PUBLISHED MONTHLY.

Subscription Price, $1.00 *per annum in advance. Single Copies*, 10 *cents.*

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Editorial.

THE BUBONIC PLAGUE.

This disease has within the last two or three years, owing to its ravages in India, attracted a great deal of attention, and been the subject of much scientific investigation—some of the investigators sealing their work with their lives. An official report recently transmitted from Alexandria, Egypt, to the State Department at Washington expresses the opinion that the disease is not transmitted by direct contact. This opinion is based on the fact that among persons who have been exposed to the disease, and who were removed to a lazaretto outside the city, none were attacked. Most recent writers on the disease have more or less expressed the same view, and the tend of opinion is now strong in this direction. As there has somewhat recently been expressed the fear that the plague might extend to the British Isles, and possibly to this country, a brief review of it may, therefore, not be uninteresting. It is an acute specific disease characterized by inflammation, and in many cases by suppuration of the lymphatic glands, especially those of the inguinal, axillary, cervical and submaxillary regions. It is attended with very great mortality. According to Yersin, the mortality among hospital cases during the late epidemic

in China was 95 per cent. Investigation points to a specific micro-organism as the exciting cause, while all writers are one in the opinion that the most predisposing causes are the common concomitants of extreme poverty; namely, overcrowding, filth, bad air, poor food and intemperance. Our knowledge of this historic pestilence dates from about the end of the first century of the Christian Era. Its home for centuries was Northern Africa. During, and for a period after the Middle Ages, it was more or less prevalent in epidemic form in Asia Minor, China, India, Egypt, Italy, Germany and France. Beginning in 542 in Egypt, it passed the following year to Constantinople, where 10,000 people are said to have died from it in a single day. During the remaining half of this century it spread pretty generally over the whole of the Roman world. During the fourteenth century it again appeared, and is said to have caused the death of twenty-five millions of people. We have the history of its appearance abont this time in Oxford, in England. It has arisen so uniformly in unclean places that filth is generally regarded as the most potent factor in favor of its origin and spread. Almost, without exception, plague centers have been characterized by a soil poluted with decomposing animal matters, and by overcrowding of destitute, dirty and poorly nourished people. An interesting and important fact that points to the soil as the location of the plague virus is the fact that, during and often preceding the appearance of the disease among human beings, there is an epidemic of plague among rats, mice and swine.

The most important safeguards against the generation and spread of the plague are personal cleanliness, the removal of organic waste from about the dwellings, good drainage of the soil and the prevention of overcrowding. When the disease makes its appearance in a house, the sick should at once be removed to a hospital and there isolated. The healthy members of the household ought to be quarantined for from two to three weeks. In the meantime, the house should be thoroughly cleaned and disinfected. While attending upon those attacked, it ought to be borne in mind that the discharges from the suppurating glands and possibly the

discharges from stomach and bowels are infective. Care must be taken that the infective material does not touch abrasions of the skin.

There is some question as to the propriety of preventing the free migration of uninfected people from a place in which the plague prevails to localities that are free from it. Such emigration enables many to escape the pestilence, and the danger of their introducing the disease into their new abode may be eliminated by a quarantine of from ten days to three weeks. This time is considered sufficient to demonstrate that none of them have already the micro-organism of the disease in their system. If, after such detention, careful medical inspection and thorough disinfection of their clothing and other belongings no cases of the disease are found, they may, with reasonable safety, be permitted to mingle with the general public.

COLLEGE OF PHYSICIAN AND SURGEONS PROVINCE OF QUEBEC.

The semi-annual meeting of the above College was held in Laval University, Montreal, on the fifth of July last. Thirty-three governors were present, the chair being filled by the president, Dr. E. P. Lachapelle. Resolutions of regret at the deaths of the following members of the Board since its meeting in September last were passed, viz.: Hon. Dr. Marcil, Dr. Lemieux and Dr. Guay, M. P. Dr. Marcil, of St. Eustache, was elected to fill the position made vacant by his father's death. In the published reports of this meeting sent to the members, no mention is made as to who was elected to fill the other two vacancies. Thirty-seven candidates presented themselves for the Matriculation examination of the Board. Of these six passed on Letters and Science, nine on Letters only, and two only on Science. The remaining twenty failed on all subjects.

Twenty-five gentlemen, whose titles and qualifications were found correct, received the license to practice from the College. Some who applied were refused absolutely;

while several were deferred till irregularities were corrected. Thirty-one candidates were admitted to the study of Medicine on the registration of the degrees of B. A., B. Sc. and B. Lettres.

The reports of the assessors to the various Medical schools were read, and were more complete and therefore more voluminous than usual.

Six candidates presented themselves for examination on professional subjects. Three of these were successful and three failed.

The Treasurer's report was read and was considered satisfactory, although some members were of opinion that it ought to be more in detail. It showed receipts for the year to have been $3,752.03, which with a balance in hand from last report of $7,750.49, made a total of $11,508.52. The disbursements had been $5,260.91, leaving a balance in the Treasurer's hand of $6,247.61. It will be noticed that the balance at present is less by $1,502.88 than it was at last report.

This seems a somewhat serious inroad on the funds of the College, and if continued, will make large calls on the reserve funds. Some considerable amount of this sum was expended in the prosecution of charlatans, and this activity of the new Board was well received, and the apparent excessive expenditure condoned. In the future, however, this expenditure must be closely guarded, or the College will find itself in an unsatisfactory condition. Thirty-one law suits had been taken out against unlicensed practitioners, and the College had in the cases decided met with good success—although failure had been met with in two or three suits. It has been the desire of the present Board to have the financial history of the College during the past decade fully investigated by competent accountants, and for this purpose two qualified gentlemen were named. Difficulties needless to mention here were met with, and it was found impossible for them to act, so their services were dispensed with. Mr. George Gonthier was then appointed, and began the work, which he found much more arduous and difficult than he thought it would be. He, however, presented an

interim report at this meeting, which goes to show a very unsatisfactory condition of the books of the College—its bookkeeping being of the most primitive kind. He promised a complete report for the meeting which will take place in Quebec at the end of this month.

The powers given by the Act to the Committee of Discipline were, by a letter from a Mr. Mignault, shown to be worthless, so the matter was referred to the Committee itself with instructions to consult the legal advisers of the College. The hope some felt that the present Act could be used to prevent medical men becoming lodge doctors was shown by Mr. Mignault to be impossible of fulfilment. We have always felt such was the case, and believe such a desirable state of things can alone be brought about by the unanimous action of the profession itself.

The draft bill regarding the manner of future elections and numerical district representation on the College was discussed, and its final drafting was left to a special committee, which is to report at the next meeting. The matter of inter-provincial reciprocity was again discussed, when it was unanimously resolved "that the Medical Board of the Province of Quebec is favorable to a measure that would give reciprocity with the sister provinces by establishing a Federal Board, but on condition that provincial autonomy be respected, and that each Province maintain all its rights and liberty of action."

Various notices of motion were given—one by Dr. McConnell that in future candidates who fail on any subject of the Primary or Final examinations shall be subsequently examined only on the subjects on which they have failed. We much question whether it would be wise to pass such a resolution.

Book Reviews.

Electro-Hemostasis in Operative Surgery. By Alexander J. C. Skene, M.D., LL.D., Professor of Gynecology in the Long Island College Hospital, Brooklyn, N.Y.; formerly Professor of Gynecology in the New York Post-Graduate Medical School; Gynecologist to the Long Island College Hospital;

President of the American Gynecological Society, 1887; Corresponding Member of the British, Boston and Detroit Gynecological Societies, of the Royal Society of Medical and Natural Sciences of Brussels, of the Obstetrical and Gynecological Society of Paris, and of the Leipzig Obstetrical Society; Honorary Member of the Edinburgh Obstetrical Society; Fellow of the New York Academy of Medicine; ex-President of the Medical Society of the County of Kings; ex-President of the New York Obstetrical Society. D. Appleton & Co., New York, 1899.

This monograph marks a distinct advance in so ably advocating the electric current in place of ligatures. The author has had this work published as a supplement to the third edition of his book on Diseases of Women, in which the subject of electro-hemostasis was referred to but not discussed with sufficient fullness. The author has perfected his methods before publishing them, and readers may rely implicitly upon his assertions. The subject here dealt with has been an interesting one since the notable success of Keith in the treatment of ovarian pedicles by cauterization instead of deligation. The unsatisfactory results which sometimes follow abdominal operations, treated by the ligature, such as neuralgia and various degrees of uneasiness, are well known. Catgut ligature, even when sterilized, is very uncertain, and being animal tissue is about the worst thing that can be left in a wound which is not completely disinfected, a thing which is not always easy to do where there has been suppurative action. In this work the technique of electro-hemostasis is fully furnished for ovariotomy, myomectomy, abdominal hysterectomy, appendectomy, uterine cancer, etc., etc. Two important chapters on asepsis and antisepsis in surgery are also included in the text. It is thoroughly illustrated by numerous photogravures and other drawings, and the description of instruments and operations is clear and explicit, and every surgeon should possess a copy of this interesting and instructive work. K. C.

The Newer Remedies. Coblentz. Third edition, revised and enlarged. May, 1899. Blackiston, Son & Co., Philadelphia. Cloth back $1.

"Art is long and time is fleeting"—in fact, altogether too short to keep track of the vast army of synthetical preparations hurled at the defenceless practitioner, who almost every day receives some pamphlets with case and hospital reports hy some one more or less eminent, with more or less (generally more) of the alphabet behind his name, extolling some more or less (generally less) useful new compounds. Out of the vast array of drugs that have dropped in the race are several that are destined to endure: Methy salicylate, heroin, urotropine, the sozoiodols, orthoform, the creosote carbonates and phosphates, and a few others.

Professor Virgil Coblentz, of the New York College of Pharmacy, is to be congratulated on a concise, well arranged and most complete summary of our knowledge to date of these newer remedies. I am not acquainted with anything published that approaches the completeness of Coblentz's work, it is worth double the money—one can hardly afford to be without it. R. W.

Materia Medica for Nurses. Emily A. M. Stoney. 264 pp. W. B. Saunders. May, 1899. $1.50.

This work by the authoress of "Practical Points in Nursing," late Superintendent of the "Carney Hospital," South Boston, Mass., will no doubt be found useful to nurses individually. It is a question whether the book will ever attain to the dignity of a text-book in the various training schools for nurses. It is, so to speak, a "filtered" product—a mediocre condensation of fuller works, for which I am glad to see due credit has been given. R. W.

A Text Book of Pharmacology and Therapeutics; or the Action of Drugs on Health and Disease. By Arthur R. Cushing, M.A., M.D., Aberdeen; Professor of Materia Medica and Therapeutics in the University of Michigan; 711 pp. Lea Bros. & Co., Philadelphia and New York. July, 1899.

Next to Lauder Brunton's "Lectures on the Actions of Medicines," Cushing's work is the most readable, condensed and complete that has appeared for many years. It has been written by one who evidently knows what the student and practitioner needs. There is a welcome absence of the (to the medical man of to-day) unnecessary details of plant description and pharmacal technique, and is eminently what it professes to be—a text-book of pharmacology and therapeutics. Another welcome inovation, and, as far as I know, the author is the first to introduce it, is the noting of the British pharmacopœial products as well as those of the United States Pharmacopœia. This makes it a book that can be used by Canadian students particularly. The section on internal secretions is well written, and embraces all that is known on the ferments, secretions and toxalbumins to-day. On the whole, Cushing has done that difficult thing, written an interesting, readable book, singularly free from padding, on a subject that to the student, at any rate, is particularly dry and difficult. The binding and letter press work is done in Lea's usually faultless manner.

R. W.

American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, A.M., M.D., Fellow of the American Academy of Medicine. Containing the pronunciation and definition of over 26,000 of the terms used in Medicine and the kindred sciences. Second edition, revised. Philadelphia, W. B. Saunders, 925 Walnut Street, 1899. J. A. Carvell & Co., Toronto, Ontario. Price $1.25.

A Medical Dictionary is of course a necessary part of every medical man's library. If able to afford it, one that is full and complete on every detail should be obtained. There are, however, many practising in the country towns and villages whose incomes cannot afford such a luxury. To them, this handy little volume, at a very reasonable price, will enable them, to obtain practically all necessary information, and even those possessing a larger volume will find Dr. Dorland's Dictionary to fill a place peculiarly its own. The chief aim of the author has been to make the selection of words

as complete as possible, and from a careful examination we must say he has been successful. We have repeatedly put it to the test, and in not a single instance has it failed to give us complete satisfaction. The order of arrargement of matter is strictly alphabetical.

F. W. C.

Practical Diagnosis.—The Use of Symptoms in the Diagnosis of Disease. Fourth Edition, revised and enlarged. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Medical Society of London, of the Royal Academy of Medicine in Belgium; Corresponding Fellow of the Sociedod Espanol de la Hygiene of Madrid; Member of the Association of American Physicians; Fellow of the College of Physicians of Philadelphia, etc.; Author of a Text-Book of Practical Therapeutics. Illustrated with 205 Engravings and 14 Colored Plates. Lea Brothers & Co., Philadelphia and New York, 1889.

That this has proved to be an exceedingly popular work, is evinced by the rapidity with which the third edition was exhausted since its appearance in September, 1898. Four large editions of a single work within two years is a record of which even so popular an author as Professor Hare may justly feel proud. So short a time having elapsed between the third and fourth editions, one would have thought that no revision of the text would be needed, but the author has seized the opportunity to insert new illustrations and such additions to the text as would make the volume more valuable. This volume, like its predecessors the earlier editions, does not aim to be a complete treatise on physical diagnosis, but rather to present a practical and scientific method of studying disease from the standpoint of symptoms. Instead of giving the several diseases and then attaching to each a list of symptoms, as has so long been the rule, Prof. Hare reverses the plan in this work and discusses the symptoms first, and then makes application of them to determine the character of the disease. The work will undoubtedly prove exceedingly useful to the beginner in clinical medicine. The volume opens with an introduction embracing general diagnostic considerations, such as the facies of disease, the attitude of the patient, and other like features that go so far to prove the aptitude and skill of physicians. The index is very complete, and is so arranged that, given any symptom or manifestation of disease in any organ, one may turn at once to each causal disease and read its differentiation almost at a glance. The engravings and colored plates are excellent, and have evidently been selected chiefly with an eye to practical utility.

R. C.

An Epitome of the History of Medicine. By Roswell Park, A.M., M.D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a course of lectures delivered in the University of Buffalo. Second Edition. Illustrated with Portraits and other Engravings. 6½ x 9½ inches. Pages xiv-370. Extra Cloth, $2.00 net. The F. A. Davis Co., Publishers, 1914-1916 Cherry St., Philadelphia.

This volume is the outcome of a series of lectures delivered in the Medical Department of the University of Buffalo, and is an exceedingly interesting and instructive book, which we most heartily commend to our readers. The truth is the profession of medicine knows little of its history. The time is so occupied with the present and the ever-increasing struggle for existence that the past, and those who figured in it, are but little thought of, still the medical mind almost above all others needs recreation, and in this volume it may be had, while at the same time there is being acquired a vast amount of valuable information. The history of medicine during the last two thousand years is inseparable from the consideration of the various notions and beliefs that have at times shaken the very foundation of Christendom, and those are fully dealt with in a manner so attractive that the reader is loath to put the book down. It is well illustrated, and if the portraits of the early fathers of medicine are as correct as those of the present and recent days, we have in this volume a valuable portrait gallery. F. W. C.

PUBLISHERS DEPARTMENT.