DOMINION
MEDICAL MONTHLY

AND ONTARIO MEDICAL JOURNAL

VOL. XVII. TORONTO, DECEMBER, 1901. No. 6.

Original Articles

NOTES ON THE TREATMENT OF TYPHOID FEVER.*

BY J. L. BRAY, M.D., CHATHAM, ONT.

The treatment of typhoid fever is divided into medicinal, dietetic and hygienic. I am inclined to think the first might almost be eliminated except in cases when complications arise. Still a certain amount of medicinal treatment is useful during the initiatory stages, and when first called I generally give 1-10th of a grain of calomel every hour until one grain is taken, followed by small doses of mag. sulph. or enemata, and repeat this once or twice during the first week. After this I give no more calomel, but keep the bowels well open by enemata, as I think this serves to eliminate the poison, which is of great importance. If diarrhea sets in, bismuth and opium will generally check it. Should hemorrhage occur, I have found acetate of lead, tannin and opium very useful. Should there be much tympanites, a few drops of turpentine in emulsion is beneficial; but tympanites can be avoided to a great extent by proper diet. When the heart becomes weak 1-30th of a grain of strychnine every three or four hours is demanded, and I think in most cases when the fever continues a long time this is necessary. This, I think, is about all the medicinal treatment required. Some practitioners have great faith in antiseptics, but for my part I do not think they are of much value.

Now we come to feeding, and this, to me, is perhaps the most important part of the treatment. The profession as a rule follow the routine practice of giving from one to two quarts of milk daily, and I was no exception in this respect. While for some

*Read at the Canadian Medical Association, August 28-31st, 1901.

time I have had grave doubts as to the wisdom of this, it was not till last year that I finally abandoned milk as the exclusive diet in this disease. I now give very little, and that little always peptonized. My reasons for discarding this much used and abused article of diet were : 1st, That it is not a fluid diet and is not absorbed ; 2nd, That it affords very little nourishment, and often causes trouble. True, the watery portion is absorbed, but as soon as the milk reaches the stomach it becomes solid. The casein hardens and enters the bowels, becoming impacted and producing constipation, thus becoming the culture-ground for the bacilli and a source of reinfection. Of course this does not apply so much to predigested milk, still the casein is not absorbed, and the only portion of the milk of any use is the water. This being the case, why not give water and discard milk, particularly during the first week or two. Make your patient drink two or three quarts of pure water in the twenty-four hours,; give it as regularly as you would milk, but in larger quantities, and I venture to say it will afford almost as much nourishment, and the stomach, already congested, will not be burdened with this undigested matter, nor will we have the painful and distended abdomen so common in this disease. In addition to the water, albumen beaten up with sugar may be given from the first. There is more nourishment in sugar than is generally supposed. After the first two weeks, liquid peptonoids, or some of the numerous preparations of beef, jellies, mutton broth, or a soft-boiled egg may be administered. If this line of feeding is judiciously followed, the patient's strength will be kept up, his appetite gratified and his hunger appeased.

Hygienic Treatment.—Change the bedding and night-clothes daily. Keep the room thoroughly ventilated, admit fresh air and sunshine, and disinfect the surroundings. Sponge frequently with tepid water. I prefer this to ice-water, and never use very cold water either for sponging or in the bath, as it is distasteful to most patients and often causes shock and increases the danger of hemorrhage. Moreover, you get just as good results from tepid water, with none of the disadvantages. I rarely use the bath, as it is more troublesome than sponging, and necessitates the frequent moving of your patient, which is bad, as rest is very essential in the treatment of this fever. The quieter the patient is kept the more likely he is to make a good recovery. A plan that I adopted last year in the general hospital was to sponge the patient lightly and rapidly with tepid water, and then use an electric fan, turning the current of air directly on the patient, and regulating it as necessity required. When the fever is high, turn on the full force, and as the temperature drops decrease the force

of the air current. This method of lowering the temperature is pleasant to the patient and has proved highly satisfactory in young and sensitive children. I have seen the temperature reduced two degrees in ten minutes by this method, and the child fall into a sound and peaceful sleep. The advantage I claim for this mode of treatment is that it does not worry or excite the patient, that it ensures perfect rest, and is, to my mind, the safest, most pleasant, and effectual way of reducing the temperature in typhoid fever.

COUGH.*

By Dr. Dunfield, Petrolia.

The act of coughing consists in one or more abrupt forcible expirations, accompanied by contraction of the glottis. First, a deep inspiration is taken, the glottis is closed for a moment, and then it is opened by the pressure of the air forced out by the combined action of the thoracic and abdominal expiratory muscles. With the air thus suddenly expelled, any foreign matter that may be in the larynx or bronchi is driven into the pharynx or mouth. This is a common description of the act of coughing. The following are some of the causes of cough, viz.: An irritant, mechanical or sympathetic, affecting the surface of the air tubes or the nerves that supply them, and it is the object of the cough to remove this source of irritation. The sensibility of the respiratory surface is greatest at the commencement, the glottis being an ever watchful janitor. It may be increased by congestion or inflammation. For example, in asthma or bronchial congestion, the mere inhalation of cool or dry air is sufficient to cause or excite a cough. The result of the irritation is to increase the natural secretion and change its character.

Cough may be due to numerous reflex causes, such as gastric irritation, called a stomach cough. Hepatic engorgement, liver cough, ear disorder, aneurism, or other pressure on the vagus, recurrent or sympathetic nerves. Cough may be caused by a long uvula or enlarged tonsils, a granular state of the pharyngeal or laryngeal mucous membrane, polypi or other foreign bodies in the larynx, trachea, or even in the external auditory meatus; various affections of the bronchial tubes, *e.g.*, undue dryness, hyperemia, alteration in quantity or quality of the bronchial

*Read at the meeting of the Lambton Medical Society, held in Petrolia on October 9th, 1901.

secretion or inflammatory affections, as bronchitis, pneumonia, or pleurisy, or tubercle, cancer or other growths in or near the lungs. This is a synopsis of the causes of cough. The next and most important thing is the diagnosis of cough.

To be able to cure a cough, you must search for and find the cause before you can treat a cough successfully. Cough is not a disease, but a symptom to be traced to its source. An inspection of the pharynx and larynx, and a physical examination of the chest, will generally suffice to detect the cause.

The character of the cough is often quite pathognomonic, *e.g.*, the whoop of the whooping-cough, the "bark" of hysteria, the catching, painful cough of pleurisy, the slight hack of early phthisis, and the equally distinctive cough of advanced phthisis, with laryngeal ulceration, the loud, clanging cough due to pressure on the laryngeal nerves, the spasmodic cough of asthma.

The tightness or looseness of cough, indicating the absence or presence of secretion, is a valuable guide in diagnosis and treatment. The absence of cough, however, is no proof of serious lesion, while the presence of a few granulations in the lung is often productive of incessant and uncontrollable cough; long-continued and destructive disease may exist without it.

Treatment.—Before prescribing for a cough, it is, of course, essential to ascertain its cause, and the simplest and most innocuous remedies should be first used. The routine treatment of cough by sedatives is as injurious as is their use in diarrheas. The secretions, which ought to be removed, are thus in either case locked up, and the irritation which would have been transient becomes established. You are called to a case of diarrhea. You feel it your duty to stop that disease, and so you give catechu, chalk and opium. The child gets worse, more fevered, and perhaps vomits; an old woman comes and, if not too late, gives castor oil and eases the child, and so it is with bronchial secretions. You give your opiates, the child becomes quiet, but somehow or other there is a glazed look in its eye, the respirations more shallow, and if some old woman does not soon come to the rescue with her emetics, Dr. —— will lose another patient.

If the tonsils are found much enlarged or the uvula pendulous and irritating the epiglottis, caustics or the guillotine will remove the evil. Enlarged papillae on the back of the tongue coming in contact with the epiglottis, which may be enlarged and bent forward, can be lessened in size by caustics or other suitable treatment. If a granular state of the pharyngeal membrane dependent on torpid or engorged abdominal viscera, gout, or hepatic obstruction exists, it may be treated by the curette, local astringents, and general systemic medicines.

A lax or congested state of the laryngeal membrane, due to overwork of voice or the undue direction of attention to the vocal apparatus (clergyman's sore throat), is best treated by the local application of iodine dissolved in olive oil. Undue dryness, simple hyperemia or hyperesthesia of the respiratory mucous tract, may often be relieved by sipping and slowly swallowing cold water, or the decoction of Iceland moss, lozenges, gum arabic, licorice or linseed tea, sucking ice, or inhaling steam, is very often all that is needed.

In the early stage of catarrhal sore throat, chlorate of potash in the form of crystals or lozenges should not be forgotten. Glycerine of tannin, or nitrate of silver dissolved in glycerine, is of more service than alum or tannin gargle. Also the free use of well-selected lozenges, on account of their action being constant, is better than gargles of any kind, which can only be used at intervals. Many other remedies might be mentioned which can be used for suitable cases, of which I might mention a few by way of winding up this paltry paper, viz.: Ipecac, squills, tartar emetic, tincture of aconite, gelsemium, morphia, conium, hydrocyanic acid, Indian hemp, bromides with chloral, sumbul and valerian. Then we have external applications—linseed meal and mustard blister (large or small), skin liniments, iodine, croton oil.

Inhalations.—Infusion of hops, iodine, and chloroform, mixed with eau de cologne.

Sprays.—Sol. of carbonate of soda, tannic acid, alum, ferri perchlor., carbolic acid, adrenalin, chloretone, boracic acid and cocaine. One of the best remedies for a cough is for the patient not to cough. Suppress it, and in many cases the irritation will cease.

Clinical Reports

CLINICAL NOTES ON A CASE OF MUSHROOM POISONING.

By A. J. Harrington, M.D., Toronto.

Patient, Mrs. P.; aged 32; multipara. I was called to see her on the night of October 1st. I reached her mother's house where she was visiting at a quarter to nine, and found the patient in a very distressing state. She had an exceedingly anxious expression of face, with pinched nose and great difficulty in breathing. On inquiry, I ascertained that she had started to vomit

about seven o'clock, shortly after having taken a warm cup of tea, but previous to this she had been dizzy. The vomiting had continued, and diarrhea with cramps had soon followed. She attributed her condition to biliousness. Fainting spells came over her. The efforts at vomiting were so distressing that, together with a cry for want of air, I was sent for. I inquired if she had eaten anything that had disagreed with her, but she said she had not; in fact, she said all she had that evening was the cup of tea which she says started her to vomit. Her condition at first glance seemed somewhat like what one sees in cases of internal strangulation ; but there was no protrusion or tenderness at those places where one usually looks for these conditions. The belly was flattened and reddened over the stomach, where mustard had been applied. The pupils were somewhat contracted; the pulse 110 and thready; temperature, 100. The extremities were cold. The most distressing symptom was the dyspnea, and to relieve this I gave her a hypodermic of 1-50th grain of atropia, as I was really at a loss as to the cause of her condition. In about ten minutes there was some perceptible ease, and she could lie down; previous to this she had to be held up. I remained another five minutes and her respirations were much better. I now left her and returned in an hour, and found her about the same, probably a little better. Pulse, 100; temperature, 100.4; extremities cold; pupils partially dilated; respiration much better, but hampered. She was not so stupid as when I saw her before. She asked me if eating mushrooms would produce this condition, for she remembered that during the afternoon, while preparing some, she had eaten a few small pieces that she had cut off. She had taken two or three pieces, each about the size of a small white bean. I was thus enlightened as to the causation of her condition, and finding her pupil only in the partially dilated state, I immediately gave her another hypodermic injection of 1-50th of a grain of atropia, and in about half an hour her breathing was quite natural. Her dyspnea seemed chiefly inspiratory, thus differing from asthmatic dyspnea, which is expiratory. Her pulse rate was 90, and the application of heat had warmed her extremities; so seeing her condition in no way alarming, with instructions to send for me at once if required, I left her for the night, and saw her early next morning, when she was quite her natural self, with the exception of a heaviness over the abdomen and a dry parched throat, and impaired vision due to atropine. I ordered a diet of thin gruel, with 15 minims of kasagra every four hours, until a free action of the bowels took place. I saw her that night, when she was practically better.

The interesting features in this case are: (1) The quickness

with which the poison acted. (2) The small quantity taken by the patient. (3) The relief given the dyspnea by the atropine, and lastly, the incomplete physiological action of the atropine at the first hypodermic injection.

In the *Medical Record*, Vol. 52, 1897, Dr. Caglieri, San Francisco, reports three deaths in six cases of poisoning by mushrooms in one family.

Boy, aged 8—Ate half mushroom, died 20 hours after.
Boy, aged 5—Ate half mushroom, died 30 hours after.
Boy, aged 10—Ate one-sixth mushroom, died 80 hours after.
Father, aged 38—Ate two mushrooms, recovered.
Mother, aged 35—Ate one-sixth mushroom, recovered.
Daughter, aged 4—Ate one-sixth mushroom, recovered.

In this case the vomiting and depression came on in four hours, perhaps due to the empty state of her stomach, and to the fact that, after having eaten the particles of the mushroom, she had taken nothing except the cup of tea, which she had vomited.

The amount taken would be about 1-12th part of a medium-size mushroom. The relief given by the atropia. which I gave her when I first saw her was most likely due to the antidotal action of atropia to muscarine, and to the size of the dose. Most authorities, I find, recommend from 1-120th to 1-60th of a grain, but even the 1-50th of a grain did not have the full physiological effect, as the pupils did not fully respond until half an hour after second hypodermic. There is no way of determining the amount of poison in the system in these cases, consequently each case must be judged from its own particular standpoint, and measures used to counteract the most prominent and dangerous symptoms. In this case I gave atropia for no other reason than to relieve the dyspnea, and when I found out that mushrooms were an element in the case, I gave her the second hypodermic of atropia to get its full physiological effect. I have nothing to add regarding the ways of distinguishing edible from poisonous mushrooms, as those who go by any rule of thumb, such as the color of the gills or the presence of a volva on the stem, or still more by such crude tests as the discoloration of the silver fork cooked with the mushrooms, will be likely to come to grief sooner or later. Some German authorities go so far as to say they (the variety) are all poisonous, but cooking destroys the tox-albumens in them. I think the poison in this case was muscarine, or its combination with some other unknown toxins, as phalline, the other tox-albumen which has been isolated in the death-cup (amanita phalloides), acts much more violently than muscarine, and has an effect on the patient almost similar to Asiatic cholera.

845 Bathurst Street.

Reports of Societies

TORONTO CLINICAL SOCIETY.

The regular meeting of the Toronto Clinical Society was held in St. George's Hall, Elm Street, Toronto, on the evening of the 6th of November, and in the absence of the President, Dr. J. F. W. Ross, the Vice-President, Dr. Edmund E. King, occupied the chair.

The following fellows were present : Drs. Pepler, J. A. Temple, Ryerson, H. B. Anderson, H. J. Hamilton, Peters, Fotheringham, Baines, Small, McIlwraith, Orr, King, Elliott, Bingham, Harrington, Bruce, Boyd, Lehman, Rudolf, Garrett, Nevitt, Oldright, Primrose, Parsons, Aikins, Thistle, and Fenton.

THYROIDECTOMY.

By Drs. George A. Bingham and J. T. Fotheringham. This occurred in a female aged thirty years. Several years ago she noticed an enlargement in the thyroid region, to which she paid no attention. Her health then began to fail, and she lost flesh from 167 pounds to 120 pounds in four or five years. The eyes were prominent; breathing embarrassed; heart action very rapid. The thyroid gland was enlarged, and the whole mass circumscribed. Dr. Bingham advised an operation, which was performed, an oblique incision being made from the left mastoid process to the sternum. The inferior thyroid was tied off close to the tumor and the whole mass removed. Chloroform was only fairly well borne, so normal saline solution was introduced into the rectum during the operation. The cavity was obliterated by several rows of catgut sutures, by quilting. Subsequent to operation tachycardia developed, with an elevation of temperature—103; pulse, 170; respiration, 46. The ice-pack was used over the precordia with good results. On the eleventh day pulse, temperature and respiration became normal. Vocal phonation was lost entirely. Electrical treatment was begun under Dr. Wishart. One night she woke up suddenly from her sleep and found she could talk. As to her present condition, she has not felt so well in five years. The following points are interesting : One source of danger in the operation is the anesthetic,—and if we dispense with general anesthesia we remove this danger. Another source of worry has been the yawning cavity behind the sternum and clavicle. This can be entirely overcome by a careful resort to the method of quilting in these cases. Aphonia is not necessarily pronounced, and may result from hysteria

and laryngitis. As to post-operative treatment, Dr. Bingham insisted upon the imperative necessity of careful and scientific attention to the patient. He was particularly strongly impressed with the ice-pack to the heart, which relieved the patient so quickly.

Dr. Fotheringham.—The diagnosis was early made of course, and mainly on five or six points. There was fine tremor of the hands and tongue. Von Graefe's sign was absent. For years she had refused to sleep with enough clothing on, even in winter. She also had flashes of heat characteristic of the climacteric. The knee jerks were very active, and then there was the goitre.

Dr. Anderson stated he had made a microscopical examination of the tumor, and it showed a condition of parenchymatous goitre, the thyroid vesicles being extended and filled with thyroid material.

Drs. Boyd, Pepler, Thistle, Oldright, Hamilton, Peters, Nevitt, Bruce and King also spoke on the subject, after which Drs. Bingham and Fotheringham replied.

TEMPORO-SPHENOIDAL ABSCESS.

Dr. Herbert A. Bruce.—This case was originally presented to the Society by Dr. Bruce at the May meeting of 1901; and he gave this further report in compliance with a request then made by Dr. Grasett. Dr. Bruce stated that the wound had completely closed, there was no discharge from the ear, and the boy is now in perfect health.

PAGET'S DISEASE OF THE NIPPLE.

Dr. J. A. Temple presented this specimen and recited the history of the case. Paget's eczema of the nipple is not a very common disease. This was a fresh specimen, Dr. Temple having removed the breast the day before, assisted by Dr. Macdonald. The patient was an unmarried woman of forty-five years of age. A year ago she consulted her physician, presenting to him an excoriated nipple. At that time he examined her very carefully and found no growth in the breast at all. He tried various applications to effect a cure, but failed to do so. He did not see the case then for eight or ten months, when she again came under his observation, and he noticed that there was a lump immediately beneath the nipple. This disease is very frequently associated with cancerous deposit in the breast; and Paget pointed out, and other writers since that time, that the cancerous deposit is situated immediately beneath the nipple. In this woman there was a very thin ichorous discharge issuing from the nipple. The history would lead clearly to show that the disease commenced as an ordinary case of Paget's eczema of the nipple, which Thin

describes now as malignant dermatitis, which leads to duct cancer. Dr. Temple removed the entire breast, with all of the fatty tissue clean down as far as the pectoral muscle.

Dr. Anderson spoke of the two forms of this disease.

GEORGE ELLIOTT, *Rec. Secretary.*

Physicians' Library

Nothnagel's Encyclopedia of Practical Medicine. Edited by ALFRED STENGEL, M.D., Professor of Clinical Medicine in the University of Pennsylvania; Visiting Physician to the Pennsylvania Hospital.

It is universally acknowledged that the Germans lead the world in internal medicine; and of all the German works on this subject, Nothnagel's "Encyclopedia of Special Pathology and Therapeutics" is conceded by scholars to be without question the best system of medicine in existence. So necessary is this book in the study of internal medicine that it comes largely to this country in the original German. In view of these facts, Messrs. W. B. Saunders & Company have arranged with the publishers to issue at once an authorized edition of this great encyclopedia of medicine in English.

For the present, a set of some ten or twelve volumes, representing the most practical part of this encyclopedia, and selected with especial thought of the needs of the practical physician, will be published. The volumes will contain the real essence of the entire work, and the purchaser will therefore obtain at less than half the cost the cream of the original. Later the special and more strictly scientific volumes will be offered from time to time.

The work will be translated by men possessing thorough knowledge of both English and German.

Each volume will be edited by a prominent specialist on the subject to which it is devoted. It will thus be brought thoroughly up to date.

The American edition will be more than a mere translation of the German; for, in addition to the matter contained in the original, it will represent the very latest views of the leading American specialists in the various departments of internal medicine. The whole system will be under the editorial supervision of Dr. Alfred Stengel, who will select the subjects for the American edition, and will choose the editors of the various volumes.

Unlike most encyclopedias, the publication of this work will not be extended over a number of years, but five or six volumes

will be issued during the coming year, and the remainder of the series at the same rate. Moreover, each volume will be revised to the date of its publication by the American editor. This will obviate the objection that has heretofore existed to systems published in a number of volumes, since the subscriber will receive the completed work while the earlier volumes are still fresh.

The usual method of publishers, when issuing a work of this kind, has been to compel physicians to take the entire system. This seems to us in many cases to be undesirable. Therefore, in purchasing this encyclopedia, *physicians will be given the opportunity of subscribing for the entire system at one time; but* any single volume, or any number of volumes, *may be obtained by those who do not desire the complete series.* This latter method, while not so profitable to the publisher, offers to the purchaser many advantages which will be appreciated by those who do not care to subscribe for the entire work at one time.

This American edition of Nothnagel's Encyclopedia will, without question, form the greatest System of Medicine ever produced, and the publishers feel confident that it will meet with general favor in the medical profession.

Progressive Medicine, Vol. III., September, 1901. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 428 pages, 16 illustrations. Per annum, in four cloth-bound volumes, $10.00. Lea Brothers & Co., Philadelphia and New York.

This volume will prove of more than usual value to the general practitioner. Dr. Ewart presents the most recent views on pneumonia, tuberculosis, and other conditions of the respiratory tract. The advances in the treatment of pneumonia and phthisis have been so remarkable in the past year that this section will be read with especial interest. The surgical treatment of various affections of the lungs and pleura has been extended of late in a manner which opens a field which gives promise of great benefit to sufferers from these conditions. In the consideration of the diseases of the heart and blood-vessels, Dr. Ewart discusses very fully the recently exploited forms of treatment by baths, medicated and otherwise. The section on dermatology and syphilis, by Dr. Gottheil, besides giving the most advanced information concerning the ordinary problems presented in those subjects,

discusses very fully the new and important subject of phototherapy, and the Finsen light treatment; blastomycetic dermatitis, and inoculation tuberculosis. In the section on diseases of the nervous system Dr. Spiller devotes a large portion of his space to an able discussion of tumors and abscesses of the brain. He also describes the commoner forms of the peculiar nervous diseases which are sometimes so puzzling to those who have not made a special study of neurology. In obstetrics Dr. Norris discusses very fully the treatment of eclampsia. He gives also the most recent views on the subject of symphysiotomy, and discusses the large number of recently reported cases in which lumbar anesthesia has been employed in obstetric practice.

Physical Diagnosis in Obstetrics. A Guide in Ante-Partum, Partum, and Post-Partum Examinations. By EDWARD A. AYERS, A.M., M.D., Professor of Obstetrics in the New York Polyclinic Medical School and Hospital; Visiting Physician to the Mothers' and Babies' Hospital, New York. With illustrations. New York: E. B. Treat & Co., 241-243 West 23rd Street. 1901. Price, $2.00.

In the preface of this work Professor Ayres informs his readers that the work is intended as a clinical guide to the student in obstetrics. No student or up-to-date physician nowadays would think of being without a work on physical diagnosis in internal medicine, and we think there is just as much need for a work on physical diagnosis in obstetrics. We feel satisfied that it will prove of great value to any one studying obstetrics, as it presents the subject of physical diagnosis in this field of medicine in a very clear and practical manner. We think that every physician who is practising obstetrics should have a work such as this, and we feel that the professional standing of Professor Ayres, and his long experience in the clinical teaching of obstetrics warrant us in giving this work our hearty support.

The Principles of Hygiene: A Practical Manual for Students, Physicians, and Health Officers. By D. H. BERGEY, A.M., M.D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Octavo volume of 495 pages, illustrated. Philadelphia and London: W. B. Saunders & Company, 1901. Canadian Agents : J. A. Carveth & Co. Toronto. Cloth, $3.00 net.

This book is intended to meet the needs of students of medicine in the acquirement of a knowledge of those principles upon

which modern hygienic practices are based, and to aid physicians and health officers in familiarizing themselves with the advances made in hygiene and sanitation in recent years. The book is based on the most recent discoveries, and presents the practical advances made in the science of hygiene up to date.

Among the important subjects considered are Ventilation, Heating, Water and Water Supplies, Disposal of Sewage and Garbage, Food and Diet, Exercise, Clothing, Personal Hygiene, Industrial Hygiene, School Hygiene, Military and Naval Hygiene, Habitations, Vital Statistics, Disinfection, Quarantine, etc. The idea of the book is to give the reader a clear understanding of the general principles of this broad subject. The rapid strides made in our knowledge of the entire subject has rendered such a book, reflecting the more recent discoveries, a necessity to physicians and students of medicine.

Atlas and Epitome of Labor and Operative Obstetrics. By DR. O. SHAEFFER, of Heidelberg. From the Fifth Revised German Edition. Edited by J. CLIFTON EDGAR, M.D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 14 lithographic plates, in colors, and 139 other illustrations. Philadelphia and London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co. 1901. Cloth, $2.00 net.

There is no branch of medicine or surgery that is so difficult to demonstrate as that of midwifery; hence any positive aid, such as this Atlas furnishes, is to be hailed with satisfaction. The author has added to the multitude of obstetric subjects already shown by illustration, many accurate representations of manipulations and conditions never before clearly shown. As a guide in the perusal of text-books and as a volume of ready reference, this book will prove invaluable.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F.R.S., Lecturer on Anatomy at St. George's Hospital, London. Thoroughly revised American from the 15th English Edition. In one imperial octavo volume of 1,246 pages, with 780 illustrations. Price, with illustrations in black, cloth, $5.50 net; leather, $6.50 net. Price, with illustrations in colors, cloth, $6.25 net; leather, $7.25 net.

A revision of Gray's Anatomy interests every student of medicine. It is a perennial favorite, and with good reason. Henry Gray was doubly a genius, being equally a born anatomist and a born teacher. His methods of presenting anatomical

knowledge in text and picture were such a conspicuous and rational advance in his first edition that it instantly won the foremost place, which has never since been disputed. The foremost anatomists have been engaged in the many successive revisions, of which the present is perhaps the most thoroughgoing. Every page has been scrutinized and whole sections rewritten, notably those on the brain, spinal cord, nervous system, and viscera. The magnificent and unique series of illustrations has been enriched with 231 new engravings, and the use of colors has been greatly increased. Thus this great work is again brought to date with lavish expenditure of labor and money. It is probably the cheapest of all products of the press, considering the fact that it contains the ripest anatomical knowledge of the world, and presents it with an unequalled wealth of illustration.

Atlas and Epitome of Obstetrics, Diagnosis and Treatment. By DR. O. SHAEFFER, of Heidelberg. From the Second Revised German Edition. Edited by J. CLIFTON EDGAR, M.D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 122 colored figures on 56 plates, 38 other illustrations, and 317 pages of text. Philadelphia and London; W. B. Saunders & Co. Toronto: J. A. Carveth & Co. 1901. Cloth, $2.00 net.

This book treats particularly of obstetric operations, and besides the wealth of beautiful lithographic illustrations, contains an extensive text of great value. The symptomatology and diagnosis are discussed with all necessary fulness, and the indications for treatment are definite and complete. In this new edition both text and illustrations have been subjected to a thorough revision. Most of the colored plates are new, and illustrate the modern improvements in technique as well as a vast amount of new clinical material.

Essentials of Obstetrics. By CHARLES JEWETT, A.M., M.D., Sc.D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, and Obstetrician and Gynecologist to the Hospital, etc. New (2nd) edition, revised and enlarged. In one 12mo volume of 376 pages, with 80 engravings and 5 colored plates. Cloth, $2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The early exhaustion of the first edition of Dr. Jewett's practical and compendious little work is very satisfactory proof of its value and helpfulness. Its object is to place the essential facts and principles of obstetrics within the easy grasp of the

student, and to aid him in following the lectures and practical teaching of his college course. To this end its language is simple, every statement is clear cut, its arrangement is systematic and logical, and illustrations are freely used. Works of this character have a distinct value in medical teaching. Once the student masters the elements in any branch, a complete and systematic knowledge becomes a matter of comparatively easy growth. The new edition shows a careful revision throughout to bring it to date; much new matter has been added and several new illustrations. As a trustworthy guide to the beginner in the study of obstetrics "Jewett's Essentials" may be confidently recommended.

Clinical Lectures on Stricture of the Urethra and Enlargement of the Prostate. By P. J. FREYER, M.A., M.D., M.CH., Surgeon to St. Peter's Hospital, Lieut.-Col. Indian Medical Service (Retired). London: Baillière, Tindall & Co., 8 Henrietta St., Strand. 1901.

This is a small book of about one hundred pages, the reproduction of lectures delivered by the author at the Medical Graduates' College and Polyclinic, in November, 1900. The aim has been to give a clear, concise and practical résumé of our present knowledge of the subjects dealt with. The palliative and operative treatment of both conditions is dealt with at length. The methods advocated are based upon the author's personal experience. It will be found to be of real value to every practitioner.

The American Illustrated Medical Dictionary. For Practitioners and Students. A Complete Dictionary of the Terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, including much collateral information of an encyclopedic character, together with new and elaborate tables of Arteries, Muscles, Nerves, Veins, etc., of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc., etc. By W. A. NEWMAN DORLAND, A.M., M.D., editor of the "American Pocket Medical Dictionary." Second Edition, Revised. Handsome large octavo, nearly 800 pages, bound in full flexible leather. Philadelphia and London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co., Canadian Agents. 1901.

The first edition of this medical dictionary has been exhausted in less than a year, a fact which speaks well for the popularity of the work. We think that those of us who have used the book can

state that it is deservedly popular. The short, concise definitions, the etymological, and pronunciation features; the illustrations of bones, arteries, nerves, bandaging, etc., together with the convenient size, clear typography, and flexible leather cover, at once stamp it as an up-to-date, modern working medical dictionary. This book contains all the important new terms that have appeared in medical literature during the last few years, and in this new edition the author tells us that he has added upward of one hundred important new terms that have appeared during the past few months. These additions at once show the importance of a physician or student having a dictionary thoroughly up to date.

Essentials of Refraction and of Diseases of the Eye. By EDWARD JACKSON, A.M., M.D., Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic. Third edition, revised and enlarged. 12mo., 261 pages, 82 illustrations. Philadelphia and London: W. B. Saunders & Co,. 1901. Cloth, $1.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

In this edition the work has been carefully revised and very much enlarged, the contents being more complete and more symmetrical than was possible in the earlier editions. Injuries of the eye by traumatism, and the ocular symptoms and lesions of general diseases have now been given a consideration proportioned to the great importance they assume in the work of the general practitioner. There has been added also an account of the application of the tests of vision required in the army, navy, and railway service. This work has long since proved its usefulness to the beginner in ophthalmic work, to the student, and to the busy practitioner. Dr. Jackson, its author, is well known as a successful teacher. The entire ground is covered, and the points that most need careful elucidation are made clear and easy.

Gonorrheal Arthritis, its Pathology, Symptoms, and Treatment. By L. VERNON JONES, M.D. London: H. K. Lewis, 136 Gower Street, W. C. 1901.

We have taken a great deal of pleasure in reading this little book on gonorrheal arthritis, as the author presents the subject in a style which makes it very interesting reading.

The subject of gonorrhea as a constitutional disease deserves a good deal more attention from the medical profession than it has hitherto been given, and we feel satisfied that this work on the most common type of gonorrheal systemic infection will serve a very useful purpose.

DOMINION
MEDICAL MONTHLY

AND ONTARIO MEDICAL JOURNAL

EDITORS:

GRAHAM CHAMBERS, B.A., M.B. WALTER McKEOWN, B.A., M.D.

ASSOCIATE EDITOR:

GEORGE ELLIOTT, M.D.

Address all communications to the Publishers, THE NESBITT PUBLISHING COMPANY, Limited, 44 Adelaide Street West, Toronto, Canada.

VOL. XVII. TORONTO, DECEMBER, 1901. No. 6.

PROHIBITION AND INEBRIETY.

Nothing daunted by the fact that the accumulated experience of ages has not taught the human race that it would be better without alcoholic beverages, a number of enthusiasts whose zeal and good intentions cannot be doubted have arisen in this century of advancement and new ideas to proclaim the fact that alcohol under all circumstances is unnecessary and harmful. Many who cannot endorse such a sweeping statement, yet recognize the evils of intemperance, have joined hands with the nephalists in demanding as the most effective way of improving the existing condition of things the total prohibition of the sale of intoxicants for any other than medicinal purposes. The decision of the Privy Council, affirming the right of the Province of Manitoba to enact a prohibitory law, has suddenly fanned into flame their dormant energies. The long looked-for moment has come—*tandem expectata dies adest,* and with one accord they are ready to advance, demanding legislation in accordance with their views. That prohibition is the best and most effective means of promoting temperance and diminishing drunkenness to the minds of the advocates of such a measure is undoubted; but none will go so far as to state that prohibition will absolutely prohibit. The best that can be hoped for is that the enactment of such a law would diminish the consumption and promote temperance.

Every one admits the evils of intemperance. None can draw an exaggerated picture of the misery and wretchedness brought

upon the world by the abuse of strong drink, and no one realizes this more than the physician whose calling constantly brings him into contact with its unfortunate victims. And yet we venture to say that the great majority of physicians, could their views be obtained, would be opposed to a prohibitory law.

The idea of a prohibitory law is to diminish drunkenness. Admittedly, it will not abolish drunkenness. In order that such a law should secure the endorsation of a majority of the voters, it should be plain to them that not only will this law diminish drunkenness, but that it is the most effective means possible to adopt toward this end.

What is drunkenness? Many men go "out for a night," get drunk, yet turn out at their work the next morning with nothing worse than an aching head and an empty pocket. An occasional lapse such as this would not merit the term "drunkard." Where, then, is the line between moderate drinking and inebriety? There can be no question that many men can go through life using liquors daily without ever going to excess, or even losing control of themselves, yet others, after years perhaps of moderate drinking, suddenly discover that their self-restraint is gone. Can a line of demarkation be drawn between moderation, on one hand, and inebriety on the other? We think it can. Most men, after a hard day's work, can take a glass of beer and feel refreshed and the better for it. The desire for stimulation, in other words, after exertion, is physiological; but another class demand stimulation after no exertion, physical or mental. This is pathological, and the first manifestation of the passing from moderate drinking to inebriety. If we were asked what is the first indication of dipsomania, we would unhesitatingly say the demand for alcohol in the morning. No healthy man should feel the desire for stimulants before mid-day, and any one so affected should realize that he is at least in "borderlands." These facts will appeal to most men who know the world. Every man, be he total abstainer, moderate drinker, or even drunkard, will admit that there is no necessity for a normal man to drink before, at the earliest, twelve o'clock noon. Here we have something upon which the whole community is a unit. What lesson can we draw from it? Drunkards never become such until they drink in the morning, generally strong liquors, upon an empty stomach. In this connection it may be stated that beers and light wines are less likely to produce a craving for stimulants in the morning, if they ever do so, than strong alcoholic liquors. Two inferences may be drawn guiding us towards the promotion of temperance. One, that the use of beer and wine should be encouraged rather than whisky. It may not be

absolutely true, but we have never known a man become a dipsomaniac who confined himself to beer and wine, which are beverages as well as stimulants. The second is that, instead of devoting their energies to the "early closing" of bars, and to the adoption of prohibition, the temperance people should allow saloons to remain open to any reasonable hour at night, but strive to prevent the sale of any intoxicants before the hour of noon. There is no reason why bars should be open in the morning except to satisfy an unnatural craving for stimulants.

No prohibitory law, even if vigorously enforced—which it will not be—can possibly be as effectual in the prevention of drunkenness as the realization by the community of the danger of drinking in the morning, and the adoption by the State of measures calculated to enforce matutinal abstinence. Prohibition at best would only have the support of a bare majority of the electorate. Abolition of the opportunities of drinking in the morning would have the moral support of practically the whole community.

TUBERCULOSIS AND CONTAGION.

There are indications of a commencing reaction in public feeling in regard to the cruel and unwarranted manner in which the unfortunate victim of consumption has been ostracized as a thing unclean. The exclusion of such patients from hospitals and the inability to find any place in the city of Toronto, with the exception of the House of Providence, where the sufferers from advanced disease may lie down and die, has awakened the public conscience to a realization of the fact that, even if danger be present, the selfish fear which prompts the isolation of such suffering human beings from association or contact with their fellow-men, is not, to say the least, strictly in conformity with our accepted ideas of Christian charity.

The trouble has all been that a few enthusiasts insisted on shouting; the newspapers, ever ready for something new, re-echoed their wails, and the public, gathering from all this only one fact, namely, that tuberculosis was contagious, and that therefore contact spelt danger, jumped from the one extreme of indifference to the other of hysterical dread.

It is almost certain that, in order to meet the pressing necessity of providing some place of refuge for the consumptive sick, that each of the hospitals in Toronto will set apart at least one male and one female ward for the reception of such cases. This

once accomplished, there is no necessity for precipitate action, as is demanded by some, and time is afforded for outlining the plan likely to prove most effective in reducing the very high death-rate from tuberculosis.

Before this can be satisfactorily accomplished, it is necessary that the distinction between the prevention and the cure of tuberculosis should be thoroughly appreciated. Take the city of Toronto. It is intended to erect a consumption hospital large enough to accommodate the demands of the city population. The idea in the minds of 99 per cent. of the people of Toronto is that the establishment of such an institution would tend, by removing patients who are likely to infect those with whom they are in close association, to rapidly lower the death-rate from phthisis in the city. It will do no such thing. True, it will have some effect in this direction, but it will not be marked. What will be accomplished by such an institution is the cure of a certain percentage of the patients, the lives of others will be prolonged, and advanced cases may find there a retreat, now denied them, where the pillow of sorrow will be smoothed. Any plan looking to the prevention of tuberculosis, the only effective means of reducing the death-rate, must begin far back of this. There can be little doubt that, almost without exception, the victims of tuberculosis fall into two classes: A small group, the offspring of tubercular parents, in whom the normal resistance to the invasion of the disease is very low, but who enjoy all the advantages of good food, good homes, and freedom from exposure—some of these will develop consumption in spite of the most exacting care. The other group—the great body—comprise those with or without a hereditary taint, who are compelled to spend a large portion of their daily lives in ill-ventilated workshops or bedrooms, often in both. In such people a pre-tubercular condition appears. The resistance is lowered, and infection, impossible under healthy conditions, occurs readily.

Removal of a few patients whose circumstances will permit them to lie idle, without depriving those dependent upon them of their only means of support, will not accomplish much. It is well that this should be recognized and appreciated to avoid subsequent disappointment. As we have said previously, before anything further is done the whole subject should be taken up from a provincial and not a local standpoint. There is no question which is likely to come before the provincial authorities which will begin to compare with this in importance. Our view is that the Local Legislature should appoint a commission to investigate and report upon the question. We venture to say that the following would be some of the conclusions arrived at :

1. A person in normal health is practically free from liability to infection.

2. With rare exceptions, a pre-tubercular condition, produced by an insufficient supply of oxygen, is necessary before the bacillus tuberculosis can successfully attack the organism.

3. Isolation of all patients suffering from tuberculosis is manifestly impossible, and if possible, unnecessary.

4. The only means of successfully attacking the disease with the idea of diminishing its prevalence, is by preventing persons falling into such a condition as to admit of infection. This would be accomplished by a proper enforcement of the Factory Act, compelling the owners to supply abundance of air and light; regulation of the number of inmates in dwellings, forbidding the placing of two or three persons in a small bed-room, as is frequently found, especially in boarding-houses, and the appointment of inspectors for all new buildings, who would insist upon the proper lighting and ventilation of every structure intended for human occupation.

5. Finally, that an attempt should be made to educate the public to the fact that it has become unnecessarily agitated and alarmed over the danger of contagion—that a lowered condition of health is necessary to infection, and that the disease will only be stamped out by ordering the lives of the non-tubercular rather than those of the tubercular.

LESSLIE M. SWEETNAM.

Lesslie M. Sweetnam did all that man could do. He died at the post of duty, and gave up his life for his fellowman. Gentle, quiet, and unobstrusive, his life was spent in the service of humanity. No man was ever more devoted to his profession nor more self-sacrificing in his service to his patients.

He accomplished in his all too short lifetime an enormous amount of work. The number of operations performed by him in the last five years must have been as great as the number performed during the same period by any surgeon in America. His results were brilliant; and the tears from many eyes which but for his skill would have ceased to shine, will water the grave of one whom they had learned to love, not only as a surgeon, but as a kindly, honorable gentleman.

Editorial Notes

BLOOD-PRESSURE AND CHLOROFORM.

In the course of some very instructive experiments on the effect of chloroform upon the blood-pressure in the lower animals, Dr. R. D. Rudolf, of Toronto, records the following observations: He was struck by a curious fall of pressure which occurred more than once when dogs were under the influence of morphine and chloroform. In these cases the latter drug had been discontinued for several minutes before the fall occurred, and although no steps to restore the pressure was taken—indeed, while the conditions of experiment remained unchanged except by the lapse of time—the pressure rose to its original level. The tracings given suggest vagal irritation, a possibility Dr. Rudolf discusses, but no reason for the irritation was present, and as the pressure recovered itself under unchanged conditions, it is hard to understand how such a factor was really at work. With regard to the effect of gravity upon the circulation, this observer's experiments confirm those of Leonard Hill and Barnard. Thus a chloroform-morphined animal will, upon raising its head and body, show a marked fall of carotid pressure; when it is placed horizontally the blood-pressure becomes over-compensated, but soon returns to the normal. The compensation is held to be due partly to increased rate of heart-beat and to arterial constriction, and partly to contraction of the abdominal walls. Dr. Rudolf found that "the lowering of a pole of the body does not raise the arterial blood-pressure in it so much as raising that pole lowers it." It is important to note that dogs vary very much in the extent to which blood-pressure is modified by the action of gravity under chloroform, and that cats especially are immune from such effects, while, as Leonard Hill has pointed out, some monkeys actually over-compensate, showing an increased blood-pressure when put into the feet-down posture. Generally, animals which habitually carry themselves vertically compensate more rapidly and better than those which normally assume a horizontal position. But such compensation sooner or later fails if the feet-down posture is maintained. Dr. Rudolf believes further—and his tracings appear to bear out his contention—that pressure exerted upon the abdomen is unable to restore carotid blood-pressure unless it is so firm as to compress the aorta. He regards as wholly inadequate the commonly-accepted view that pressure acts by forcing the blood out of the abdominal veins, and so fills the heart. It has long been known that a tourniquet upon the abdominal aorta is one of the best means of raising general blood-pressure. Fur-

ther, he finds that division of the spinal cord always produces a great lessening in the compensation for the feet-down position. Even when the vessels of the splanchnic area are not paralyzed, the spinal section having been made well below the seat of the issue of these nerves, a very marked fall seems to follow the feet-down position, while no compensation occurs. "This would point," Dr. Rudolf says, "to the fact that the vessels of the lower part of the body are very largely concerned in the keeping up of the normal blood-pressure in the feet-down position, because when they are paralyzed the pressure markedly falls." These conclusions—or perhaps it is more accurate to say these facts—are of great importance, and are grouped by Dr. Rudolf as an introduction to his further researches.—(Annotation) *The Lancet.*

THE CANADIAN MEDICAL PROFESSION.

A Canadian journal* takes up the proposition to establish a branch of the British Medical Association in Toronto, and does not look upon it altogether with a favorable eye. It complains of the small part Canadian physicians take in the medical progress of the world, and sees but little stimulus to effort in the small and ill-supported provincial medical societies. It doubts whether making themselves an appendage to the larger bodies of the mother country will be a remedy. It says that Canadians lack confidence in themselves; they are always looking to England, over-rating English medical qualifications as compared with their own, which really represent as high or even higher attainments, and generally accepting the subordinate position that seems to be considered proper. They are, our contemporary suggests, too content to "bask in the reflected light of British medical achievements," and not independent and enterprising enough to make a name for themselves. We would have hesitated to offer these criticisms ourselves for fear of hurting their feelings, and in repeating them here we do not wish to unqualifiedly endorse them. There are Canadians doing good work in McGill and elsewhere, and we hope there will be still more. Some of the leading Canadian physicians have taken an active part in special associations on this side of the line, where they seem to find adequate stimulus and professional sympathy. There is much truth, nevertheless, in the statements made by our Canadian exchange, that so long as the Canadian profession is willing to keep up a merely colonial spirit, and play second fiddle to Great Britain in professional matters, it will suffer not only in its proper self-appreciation, but also

* DOMINION MEDICAL MONTHLY, October.

in the appreciation of others. Its best scientific spirit and work cannot be evolved so long as such a condition exists. Britain is too distant and too insular in many ways to have the best influence on the medical profession of half a continent, even admitting that two-thirds of that half is not inhabited. The American profession is closer in medical thought to the Canadian physician than is that of Great Britain, and it will be a pity if our brethren over the line persist in ignoring this fact. We may say there are no boundaries in science, but there is a certain affinity and influence in contiguity, and like environment even in scientific matters all the more when there are no racial or linguistic barriers. The suggestion that Canadian medical men intermingle more with their American professional confreres and look less humbly up to English medicine, is one that perhaps they will do well to consider. It is in no way disparaging to British medicine—which we in this country duly respect and appreciate—to say that it can not in the nature of things influence so advantageously the profession of Canada as can that of the United States. Whether the Canadians realize this or not is less a matter of importance to us than to them. The best of their leading men do realize it and give evidence of it in the professional associations.—*Journal American Medical Association.*

"THE VIOLET CURE."

A paragraph has been going the rounds of the press, describing how a tumor of a tonsil, the diagnosis of which was "made certain by microscopic examination of a small portion removed," was "cured by the application of a number of fomentations made from an infusion of green violet leaves. The patient, in gratitude for her recovery, has had printed some leaflets describing the mode of preparation and application of this infusion. We can fully enter into her feelings. She had suffered greatly for four months from a throat affection, which was relieved by no treatment. She grew steadily worse and her life was despaired of. The diagnosis of "cancer" seemed to be confirmed by microscopic examination. Within a week of the application of infusions of violet leaves much of the swelling had disappeared and all pain had ceased, and in a fortnight the "cancer" of the tonsil had entirely disappeared. Overjoyed at her own recovery, she hastens to make known to other sufferers the marvellous and simple method of treatment, ignorant that already many hopes of recovery have been founded on similar unsubstantial basis. The whole importance of the story depends on the accuracy of the diagnosis of epithelioma. All who are familiar with the

clinical signs of a malignant disease of the tonsil can easily believe that it is not difficult to mistake deep-seated inflammation of the region for a malignant growth. As to the microscopic examination, the arrangement of the epithelium of a normal tonsil may easily resemble the epithelial down-growths of an epithelioma, and the resemblance is still more striking when chronic inflammation is present. The history of the case points to a very natural error of diagnosis. The violet leaf, by the way, figures not infrequently among the recipes of the old Anglo-Norman writers whose manuscripts are preserved in the British Museum. In modern pharmacopeias the violet is noted for its cathartic and emetic qualities, or, to speak more accurately, the *Viola tricolor,* or pansy, possesses these useful attributes. The dog violet also is vaguely recorded in an old edition of Balfour's "Botany" (1854) to have been at some time or other prescribed for "skin disease." In the age of the Plantagenets monkish medical writers treated most diseases with the violet, whether dog pansy or sweet March they do not state. Intermingled with a multiplicity of other ingredients the modest flower was used to treat "a streytness of the hert," an illness akin, we may suppose, to dyspepsia. It was said to be good also for the stone, and if a broken fragment of bone had to be expelled from the flesh the violet, with other herbs, was considered most useful. Into these old medical mixtures the violet was always introduced in "a good handful," and we are at liberty to suppose that its pleasant perfume, in an age when contrasts were much insisted on, was supposed to work wonders against noisome suppurative ailments. The Anglo-Norman writers of Manuscript B in Henslow's valuable account of early English recipes, gravely mentions that a decoction of violet leaves, in conjunction with several other herbs, will enable the sufferer to slay the worm in a sore after its presence has been duly discovered by the all-night application of a piece of new cheese. The violet leaf, according to the same forgotten scribe, whom Professor Skeat pronounces to have been a Norman-Kentish man unfamiliar with English, is useful in the process of wound-healing, but the mediæval authorities never thought of "curing canker" by means of violets. Nor do we think that such a method of therapy will find a place in twentieth century pharmacology.—(Annotation) *The Lancet.*

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

We have received a copy of the prospectus of the above Association, whose organization was consummated at the Winnipeg meeting of the Canadian Medical Association. Having received

unanimous sanction at that time, the officers apparently at once set to work, and have lost no time in getting the aims and scope of the Association before the medical public. The desirability of the Protective Association is admitted, and is well worthy of patronage, at least from all who have signed the roll of the parent association. We urge these to hasten to become members, so that their influence may the means of inducing others to do likewise. The executive officers are all located in Ottawa, with the exception of the Vice-President. Dr. F. W. McKinnon, 70 Elgin Street, Ottawa, is the man to apply to to become a member.

QUERY DEPARTMENT.

We have determined to open a "Query Department," and will try, to the best of our ability, to answer as fully as possible all requests for information from our readers which may be sent the editors, in regard to diagnosis, treatment, or other matter bearing upon the practice of medicine or surgery. We will make this department not only a source of strength to this JOURNAL, but also, we hope, one which will prove of value to our subscribers.

News Items

DR. K. MCILWRAITH, Toronto, has been elected a member of the Obstetrical Society of Edinburgh.

THE smallpox outbreak in Ottawa has cost $15,000 so far, and there have been over one hundred cases.

THE Sick Children's Hospital, Toronto, is to receive $5,000 by the will of the late Mr. W. E. H. Massey.

QUEBEC has had eighty-one centres where smallpox has appeared in the present outbreak, and there have been over 340 cases.

TORONTO has just opened a fine new Smallpox Hospital. It has accommodation for twenty-five patients and was erected at a cost of $5,000.

GENERAL vaccination has taken place at McGill University. There are over 1,200 students attending lectures in the different departments of the University.

APPOINTMENT.—Dr. R. Boulet, Montreal, has been appointed Director of the Dispensary of the Eye and Ear Department of the Hotel Dieu Hospital of that city.

DR. G. E. MCCARTNEY, of the class of '01, Toronto University, has gone to New York, where he will act as House Surgeon of the New York City Hospital for the next two years.

A CASE of tetanus has been reported in the public press following on vaccination, in the city of Three Rivers, and another at Halifax. The Quebec Board of Health only recommends the glycerinated vaccine.

THE death of Dr. George T. Orten, of Winnipeg, is announced, November 14th. Dr. Orten was formerly a practitioner at Guelph, Ontario, and represented Centre Wellington at Ottawa from 1874 to 1890.

MESSRS. PARKE, DAVIS AND COMPANY announce that not one of the recent tetanus fatalities following vaccination at Camden, N.J., Atlantic City, Bristol, Brooklyn, Cleveland, and St. John, N.B., succeeded the employment of their vaccine virus.

ON November 10th, Hamilton opened a fine new wing of the City Hospital. The donor of the handsome memorial was Mr. John Billings, of that city, and it will perpetuate the memory of his late wife, who took a prominent interest in the affairs of the hospital.

SURGEON-CAPTAIN KEENAN, who was with the Strathcona Horse, has been presented with the cross of the Distinguished Service Order, a decoration only eclipsed in value in so far as military decorations are concerned, by the Order of the Indian Empire.

THE Phi Beta Pi Medical Fraternity of McGill University held an installation at the Windsor Hotel a short time ago, when delegates were present from Ann Arbor, from the University of Western Pennsylvania, Pittsburg, and from Starling Medical College, Columbus, and Rush Medical College, Chicago.

A CHRISTIAN SCIENTIST SENTENCED.—Under date Victoria, B.C., Nov. 28th, a despatch appears in the public press announcing that an elder of Dowie's Christian Catholic Church in Zion was the day previous found guilty and sentenced to three months' imprisonment without hard labor for aiding and abetting a citizen of Victoria who was recently found guilty of manslaughter, in not providing his children with medical attendance when they were suffering from diphtheria, from which they died. The prisoner received a respite pending a decision of the Appellate Court on the question as to whether medical attention was a necessity of life.

A CASE of wholesale poisoning from eating canned apples occurred recently in Montreal. An examination of the can showed four leaks in it due to incomplete soldering, and an analysis of the apples and the juice showed them to contain dissolved tin. An entire family took ill suddenly, and the cause was traced to eating apples from this tin.

OTTAWA'S DEATH RATE.—The total number of deaths in the Capital for the last civic year was 1,273, which is a slight increase over the previous year, when 1,146 were registered. Tuberculosis claimed the largest number of adults, 125 in all. Pneumonia came next with 102; heart disease, 88; convulsions, 72; old age, 73; diphtheria, 65, and scarlet fever, 52.

THE College of Physicians and Surgeons of Quebec will hereafter issue licenses to all doctors on presentation of their university diplomas, and without further examination. This applies to those who come under the operation of the statute of the Quebec Legislature, known as the Roy law, adopted by that body two years ago. Recently the Courts have rendered several decisions holding that the College was bound to grant licenses to those who came under the operation of this law.

THE MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.—This Society is seeking for incorporation by an order of the Lieutenant-Governor of the Province. The following names appear on the petition for incorporation : Drs. J. George Adami, George E. Armstrong, Alfred T. Bazin, H. S. Birkett, F. Buller, J. M. Craik, J. M. Elder, Wm. Gardner, Sir William Hingston, J. M. Jack, H. A. Lafleur, F. A. Lockhart, J. G. McCarthy, James Perrigo, F. J. Shepherd, and J. W. Stirling.

VICTORIA HOSPITAL FOR SICK CHILDREN.—The Twenty-sixth annual report of this institution shows that, since the foundation of the Hospital for Sick Children, 43,204 children have been treated, 20,000 of whom have been restored to the full vigor of health. During the last hospital year, 770 patients were cared for indoors, while 5,152 were looked after in the out-door departments. Of the 770 indoor patients, 530 were cured, 154 were improved, 44 were unimproved, while 42 died. Of the number who died, 32 deaths occurred within one month of admission. There is at present a deficit of $13,000 to be met, and the hospital management is making an earnest appeal to have this encumbrance wiped out.

DR. T. G. RODDICK, M.P., has been appointed by the Medical Faculty of McGill University to succeed Dr. Craik, who recently resigned from the office of Dean. The new Dean has had a bril-

liant career in medicine. He was born at Harbor Grace, Newfoundland, on July 31st, 1856. Commencing his medical studies at McGill, he was graduated as Holmes' Gold Medallist from that institution in 1868. He entered general practice after six years as assistant House Surgeon at the Montreal General Hospital. He became connected with the teaching faculty of McGill in 1872 and at the present time holds the chair of surgery. He has been president of the Montreal Medico-Chirurgical Society, the Canadian Medical Association, and was the first citizen of the British dominions beyond the seas to be appointed a President of the British Medical Association. He is particularly well known to the medical profession in the Dominion for his untiring efforts to advance the cause of Dominion Registration. He was elected a member of the House of Commons for Montreal West in 1896.

Obituaries

DR. LESSLIE M. SWEETNAM, TORONTO.

Toronto lost one of her most prominent and successful surgeons when Dr. Lesslie M. Sweetnam departed this life on December 11th. Dr. Sweetnam was born at Kingston, Ont., on August 1st, 1859, and was the second son of the late Matthew Sweetnam, who for many years was Post Office inspector at Toronto. He was educated at Upper Canada College, and was graduated in medicine from Toronto University and from Victoria University in 1881. At the time of his death he was Associate Professor of Clinical Surgery at Toronto University, and surgeon to the Toronto General and St. Michael's Hospitals. He was also a member of the Canadian and Ontario Medical Associations and a Fellow of the Toronto Clinical Society. The unfortunate circumstances leading up to his illness and subsequent death will tend to remind surgeons of the dangers of their art and calling. On November 4th, Dr. Sweetnam, assisted by Dr. J. F. Uren, performed an operation on the arm of a young man which was in a gangrenous condition, the result of a gunshot wound. After the amputation was performed Dr. Sweetnam was attending to his toilet when he accidentally pricked one of his fingers under the nail with a bristle of the nail-brush. Septicemia set in, but the surgeon continued to perform his work for a week or more, when he decided to go to Baltimore, where his wife was then visiting friends. He was progressing favorably until uremia intervened, which caused his death. His funeral took place from his late residence, Shuter and Church Streets, Toronto, on the afternoon of the 13th inst., and was very largely attended both by the medical profession and the laity.

The bearers were Mr. I. H. Cameron, Dr. R. A. Reeve, Dr. J. F. Uren, Dr. R. J. Dwyer, Dr. B. E. McKenzie, Dr. Alex. McPhedran, Dr. W. P. Caven and Dr. H. Wilberforce Aikin . The patient upon whom Dr. Sweetnam had operated subsequently died of malignant edema.

SIR WM. MacCORMACK.

The cable announced a few days ago the sudden death of one of England's greatest surgeons. William MacCormack was born on January 17th, 1856, at Belfast, Ireland. His father was a physician before him, and he received his general and professional education at Belfast, Dublin and Paris. He was several times elected president of the Royal College of Surgeons; and he was the recipient of many honors from the home as well as from foreign governments. It was owing to the great success of the International Medical Congress of 1881, of which he was honorary secretary, and to which success he contributed largely, that he owed his knighthood. In 1897 he was made a baronet and surgeon in-ordinary to the Prince of Wales, now King Edward VII. At the time of his death he was emeritus lecturer and consulting surgeon in clinical surgery at St. Thomas' Hospital. At the comparatively early age of sixty-five the profession in England has been deprived of a shining light. His self-sacrificing conduct in connection with the South African War is still fresh in the memory of all.

Selected Abstracts

TYPHOID BACILLURIA.

J. C. Lewis (*Edinburgh Med. Jour.*, Sept., 1901) writes in part as follows: There may be no symptoms to call attention to this condition, and unless the physician is aware of this and on the lookout for the condition, it may be present without recognition. This is specially true during convalescence, when all is going well and nothing occurs to excite suspicion. On the other hand, there may be symptoms which should at once direct attention to the urine. In a considerable proportion of cases pyuria is present; the pus is not necessarily present in large quantities, but if the urine be examined microscopically, pus cells as well as bacilli are present. In these cases the urine is faintly acid, certainly not alkaline, and contains no sediment and no albumin, or such a small quantity as to render its recognition a matter of delicate testing.

This is the condition which may be regarded as typical typhoid bacilluria; there is little or no frequency of micturition, no discomfort in the region of the bladder; the urine is acid when freshly passed and contains large numbers of typhoid bacilli in pure culture, along with some pus cells and no albumin.

If the fresh urine be transferred to a test-tube and held up to the light it is seen to be very slightly turbid throughout, and if the tube be shaken a peculiar "shimmer" is seen, such as is sometimes noticed in a broth culture of certain organisms after a few hours' growth. A different type of the disease is occasionally met with in which the urine is very cloudy, thick with urates and pus, but seldom alkaline in reaction; the typhoid bacillus may be present in pure culture, but usually there are other organisms also present, notably the B. coli communis. This form is accompanied by pain and discomfort in the bladder, frequency of micturition, and is a cystitis with its usual phenomena. There is often albuminuria, and the shimmer is present.

Cuset and Duration.—Typhoid bacilluria is rarely present in the early stages of the fever; it may come on in the second or third week, not usually before the third week, and may then continue for a varying length of time; sometimes it only lasts until a few days after the temperature has become normal, or it may persist for several weeks during convalescence, or even months after the illness commenced.

If its duration does not long exceed the period of fever, the organisms disappear from the urine very rapidly, being present in large numbers one day and entirely absent a few days later. On the other hand, the bacilluria may not begin until convalescence is progressing, and may then last a long time.

The urine in typhoid bacilluria is in fact a culture, more or less pure, of the B. typhosus, which is present in enormous numbers. From 5 to 170 millions are reported as present per cc., and the cc. being little more than a quarter of a teaspoonful, the number passed per diem is prodigious.

The condition is believed to arise in the escape of a few organisms through the kidney and their multiplication in the bladder. They have been found in the glomeruli of the kidney, but the balance of experimental evidence is in favor of the view that some breech of excretory membrane is necessary for their escape and that there is no true elimination by the kidney.

Infectivity.—Proof that the typhoid bacillus is excreted in the urine in a condition capable of infecting other persons has been very definitely forthcoming. Picture to yourselves a khaki-clad warrior returning from South Africa to his village home, after a severe attack of fever, micturating in the privacy of his

own garden, the drainage from which was thoughtfully directed into a well-water supply. An epidemic breaks out in the houses supplied by this well, and an alien and virulent B. typhosus finds a suitable environment for its ravages.

The evidence directly connecting the outbreak with the soldier's return is circumstantial and probable, if not actually proved, but actual proof of the infectivity of typhoid bacilluria is, like the toys, "made in Germany." Petruschsky relates the case of a nurse who contracted the disease by drinking out of a drinking glass which a patient, when suffering from bacilluria, had in an urgent moment used as a urinal.

Frequency.—Concerning the prevalence of the bacilluria, there is much difference of opinion, some observers finding the bacillus present in all the enteric urines examined, and others in very large percentages; other observers have failed to find them in any case examined, and the truth is very hard to find. The dubiety is due to the similarity which the typhoid bacillus bears to certain other organisms, especially that very ubiquitous organism, the B. coli communis.

All the early observations are ruled out by the fact that the distinguishing tests between these organisms have only been recently perfected. Horton Smith in London, and Richardson in America, whose observations are worthy of credence, on account of their careful bacteriological execution, agree in stating that 25 per cent. of cases of enteric fever show typhoid bacilluria. I have no doubt that they are correct as to their cases, but I think that even a smaller percentage may be found correct in other cases.

Petruschsky's results give a percentage of 6; he found it three times in fifty cases, and his work also is bacteriologically indisputable. Carver met with no instance of it in sixteen cases, and others report varying percentages.

I have recently examined forty-five cases occurring in the Edinburgh City Hospital, involving a large number of specimens, and found the condition present in only one of the forty-five. The explanation appears to me to lie in the gravity of the cases investigated. Enteric fever in London has a higher mortality than in Edinburgh, and typhoid bacilluria is certainly more often associated with grave attacks, even though non-fatal, than with mild ones. If all the mild cases were examined as well as the severe ones I think the percentage would not exceed 10 per cent.—*Pediatrics.*

THE TREATMENT OF SYPHILIS, WITH SPECIAL REFERENCE TO THE BEST METHODS OF ADMINISTERING MERCURY.*

The author calls to mind the facts that mercury has been used in the treatment of syphilis for over four hundred years, and there are few physicians to-day who do not use it in some form. Although the method of treatment with mercury is still discussed, he is firmly of the opinion that there is no hope of eradicating the disease unless the full dose is given constantly for something like three years. The treatment should begin just as soon as the diagnosis can be made. There is no ground for supposing that enucleation of the chancre has the effect of aborting the disease. If a positive diagnosis cannot be made from the appearance of the initial lesion, general tonic treatment should be instituted.

In some cases the protiodide controls the symptoms, but in the majority it is of very little use. Experiments with Mercurol were conducted at Bellevue Hospital, for eight and a half months, with 180 cases; the histories of 95 of these are recorded. The remainder could not be kept under observation, and are therefore passed over. The dosage of the Mercurol, regulated either by reaching the point of tolerance or control of the disease, varied from one-half to six grains. In 64 of the 95 cases the disease was controlled as follows : In two weeks, 8; three weeks, 12; four weeks, 14; five weeks, 6; six weeks, 5; seven weeks, 2; two months, 8; ten weeks, 2; three months, 5; and four months, 1. The remainder are marked thus : Decidedly improved, 17; improved, 8; no improvement in two weeks, 3; no improvement in four weeks, 1; and no improvement in three months, 2. The latter were all dispensary patients, and it is uncertain whether they took their medicine regularly.

The writer states that his plan was to increase the dose steadily from one grain until the symptoms were controlled, or until there was a slight tendency on the part of the teeth and gums to become tender. If the symptoms were not controlled before the physiological effect of the Mercurol made itself felt, small doses of potassium iodide were added, and in every case where the Mercurol was taken according to directions, with the exceptions noted above, the symptoms were controlled.

In 67 out of 95 cases tabulated, no other medicine than Mercurol was given. In 15 out of the remaining 28, the addition of iodide of potassium was found to be sufficient to control the disease, while in 6 others the addition of an iron tonic sufficed for this purpose.

The cases are not reported at length, but a few of the more

* Abstract of an original paper by the author in *The Lancet* (London, Eng.), October 19th, 1901.

remarkable results, and some cases in which other medicines failed to control the disease, are briefly mentioned.

Case 1 had been taking bichloride for one month with very little improvement. Under mercurol, three grains maximum dosage, the symptoms were under control in five weeks.

Case 2 had been under biniodide of mercury (one-sixteenth of a grain) and potassium iodide (five grains), which caused iodism. His symptoms were controlled in one month under half a grain of Mercurol.

In Case 3 unguentum hydrargyri had failed to control the disease. The patient was put on Mercurol, and the dosage pushed up to six grains three times a day. The disease was thoroughly under control in seven weeks.

Case 4 had been on three-eighths of a grain of biniodide of mercury and twenty grains of potassium iodide for two months. The medicine caused nausea and vomiting. Having been put on Mercurol and the dosage gradually increased to five grains three times a day, the symptoms were controlled in three weeks.

Case 5 had been taking hydrargyrum bichloride (one-twelfth of a grain) three times a day, under which an eruption on his face had faded, but the eruption on his body still persisted. His symptoms disappeared in two weeks under a maximum dose of three grains of Mercurol three times a day.

Case 6 had been on bichloride of mercury (three-sixteenths of a grain) for three months, in spite of which he had palmar syphilide of an eczematous variety. All appearances of the disease disappeared after he had been one month on Mercurol, his maximum dose being three grains three times a day.

Case 7 had been taking one-quarter of a grain of Mercurol and fifteen grains of potassium iodide, with the result that the eruption had decidedly improved, though not to the extent that it should have done. There were thickened red patches on the face, covered with scaly eruptions. The symptoms almost entirely disappeared within three weeks under a maximum dosage of five grains of Mercurol three times a day and fifteen grains of potassium iodide.

Case 8 had been treated with inunctions of mercury, under which the eruptions disappeared, but the pains in the bones still persisted. He was relieved in three weeks under a maximum dosage of four grains of Mercurol three times a day.

Case 9 had been taking other forms of mercury for six months. The form which had done him most good was bichloride. Yet one-fifth of a grain did not entirely control the disease. He had been taking that for two months when he was placed on Mercurol. The dosage in his case was pushed up to six grains

three times a day, and at the end of seven weeks all his symptoms had disappeared.

Case 10 had been taking medicine off and on for two years, but his symptoms never disappeared entirely. After being two weeks on Mercurol (two grains three times a day) with the addition of potassium iodide, all symptoms had disappeared.

Ayres, in conclusion, states that he uses Mercurol in his private practice to the exclusion of all other drugs. His experience is that he gets better results. He has found no form in which mercury can be given with such good results as in that of Mercurol.—*By Winfield Ayres, M.D., Genito-Urinary Surgeon Bellevue Hospital, O. D. P., New York; Instructor in Genito-Urinary Diseases in New York University and Bellevue Hospital Medical College; Instructor in Genito-Urinary Diseases in the New York Post-Graduate Hospital, etc.*

TRENDELENBURG'S OPERATION FOR VARICOSE VEINS IN FIFTY-SEVEN LOWER EXTREMITIES.

Trendelenburg, nearly ten years ago, showed that if pressure is made with the fingers on the saphenous opening, after emptying the veins of the leg by elevation, and the patient is then made to stand up, the veins continue more or less empty, and as soon as the pressure is removed the veins rapidly fill from above downward. He therefore advised excision of a part of the vein in the thigh, to relieve the varices of the tension caused by the weight of this column of blood. Ramsay, during the last four years (*Intercolonial Medical Journal of Australasia,* April 20th, 1901), has made a trial of this operation on fifty-seven limbs.

Varices were present in all the limbs, the troublesome complications being ulceration of the leg in twenty-five cases, thrombosis in three, and troublesome eczema in six cases. The other twenty-three limbs were operated upon to cure the varices, or to relieve symptoms caused by them alone. In the three cases with thrombosis, the pain and tenderness were present over the cord-like vessel, and in one case it extended almost up to the groin, preventing bending or straightening of the knee. The other two were confined to the leg. In the six cases with eczema, present for years, ulcers had not yet formed. In the twenty-five cases with ulcers of the leg, these last varied in size—sometimes single, sometimes multiple, of duration up to twenty years, and usually in the lower half of the leg. The varices in all cases antedated the ulcers, so that it was presumed that the tardiness of healing was perhaps due to the varices. Most of these cases came to be treated for the ulcer. Some gave his-

tory of injury to account for the ulcer, with or without a preceding thrombosis; others followed rupture of a varix; others formed in the site of a patch of chronic dermatitis.

As to the results of operation, the wounds all healed kindly, except where thin skin over a very superficial varix was left after its excision; this would often be better removed. Of course, thrombosis was frequent in, and led to the permanent cure of many of the sacculated varices, but this was considered as a fairly natural result of the operation. There was a complete disappearance of the varices and all the symptoms due to them in many cases. In others disappearance of the symptoms was accompanied by a diminution in the size and number of the varices. In others a trifling symptom, such as a very slight swelling or aching, appeared after a longer or shorter period of perfect freedom from symptoms. In every case relief of the symptoms was the prominent feature, but in the unsuccessful cases a recurrence took place, leading to the breakdown of healed ulcers, the outbreak of eczema, and the reappearance of some of the previous symptoms.

Roughly, 75 per cent. were successful and 15 per cent. doubtful; but 10 per cent. of these undoubtedly improved, and the rest were practically well for two and a half years.

The cases in which the operation should be avoided are those in which the deep veins of the limbs are presumably thrombosed, and the superficial ones compensatorily dilated, and perhaps varicose. The signs which might help in a diagnosis of this contra-indicating condition are the history, *e.g.*, after thrombosis in typhoid, or after a strain, etc., pain and tenderness being present over the middle of the calf, and the limb being long weak; the deep veins may, however, become pervious again after the superficial varices have developed; and, as a second sign, the presence of thickening and enlargement of the whole leg, with or without edema of the limb, perhaps the presence of severe cramps. In such a case as the last, a bandage properly applied, perhaps with some massage, is about all that can be done.—*Therapeutic Gazette.*

POSTURAL TREATMENT OF PHTHISIS.

Schenk (*Wien. med. Woch.*, July 6th and 13th, 1901) has applied the principle of passive hyperemia, introduced by Bier for arthritis and tuberculous joint disease (Epitome, Vol. i., 1900, par. 181) to pulmonary tuberculosis, and considers it specially suitable owing to the antagonism which is said to exist between phthisis and those heart lesions which are accompanied

by pulmonary congestion, such as mitral stenosis. According to Benecke, congenital predisposition to phthisis depends on a disproportion between the size of the lungs and the heart, the former being abnormally large and the latter abnormally small, so that a permanently deficient pulmonary circulation results. Acquired predisposition consists essentially in the malnutrition, which is the cause or result of anemia, and which affects the nutrition of the lungs among other organs. In order to increase the supply of blood to the apices, the foot of the couch or bed is raised on blocks, so that the patient lies on an inclined plane, with the head at the lower end. The more obliquely the patient lies, the more rapid is the improvement. The cerebral hyperemia produced is grateful to anemic subjects, but if it causes headache an icebag or Leiter's tubes may be applied to the head. The hyperemia produced mechanically in the apices of the lungs renders them an unfavorable medium for the development of the tubercle bacillus. The principle involved in the writer's treatment is not new, and was advocated by Schian in 1899 (*Deut. militaraerzt. Zeit.*, February). In dry weather the patients lie in this position the whole day out of doors, in rainy or misty weather in the dry air of a heated room. Damp air is injurious in phthisis, as it diminishes inspiratory exosmosis. During the night the foot of the bed is raised on blocks. In order to further increase the pulmonary hyperemia, for some hours every morning and afternoon a moist bandage is applied to the chest; over this is drawn a kind of vest made of indiarubber tubing, through which water at 113 degrees F. or more is made to circulate, as in Leiter's tubes, and a dry flannel bandage is applied over all. The rest of the body is lightly clothed—in summer with a single sheet—so that the determination of the blood to the chest is aided by the contraction of the cutaneous arterioles in other parts. For the same reason the feet, hands, and abdomen are rapidly moistened every five minutes with a sponge wrung out in cold water. The patients are allowed off the couch or bed only for their meals. The proof that the hyperemia produced by the application of warmth affects the lungs as well as the skin is that, after the treatment has been applied for a few days, a systolic murmur appears at the apex, with accentuation of the pulmonary second sound. The heart can be made to meet the extra work thrown upon it, and the murmur disappears if a separate coil of tubing through which cold water circulates is placed over the cardiac region. During sleep the oblique position of the patient allows the secretion in the smaller bronchi to gravitate to the larger, with the result that on waking the sputum is very copious, but is lessened during the day. Cough, there-

fore, is greatly lessened, partly through the posture, partly through the sedative action of warmth. The pulmonary hyperæmia produced does not increase the danger of hemoptysis.—*British Medical Journal.*

THE TAMPON IN GYNECOLOGICAL THERAPY.

Maxwell Benjamin (*Medical Record,* July 20th, 1901) has a paper prepared especially in the interest of the general practitioner in reference to the use of tampons. This treatment is indicated in the large class of patients who find their way to physicians and who are not in need of surgical intervention. In too many cases practitioners neglect the proper application of the tampon, being content with any kind of material and with the patient in any position. It is not contended that tamponing, even if properly done, can replace radical measures, but it often affords relief in cases which refuse more radical measures.

Material.—Any substance which is non-irritating, and which provides for capillary drainage, and is easily introduced and retains its resiliency when wet, may be used. Practically, the choice is restricted to cotton, wool, and gauze. Absorbent cotton is invaluable for the application of fluids, but it is easily compressed into a hard mass and does not afford drainage. This can be obviated by separating the fibres. Non-absorbent cotton may be used where an antiseptic or astringent powder is to be applied, and in some cases it may be used for its mechanical effect; it may be used as a support for an absorbent tampon. Wool is the best material; it is soft, allows drainage, and retains its resiliency for a longer period than cotton. The wool tampon should, previous to its insertion, be covered with vaseline. Wool may be covered with a layer of absorbent cotton, the latter absorbing the medicament, while the central portion of the tampon retains its elasticity and acts as a perfect drain. Gauze is never used by the writer, except in cases where it is necessary to check hemorrhage.

Size.—Numerous small tampons are better than one large one, as the latter cannot be easily manipulated. The cotton tampon which the writer employs is made from a piece of cotton five inches long and three inches wide; it is folded into four thicknesses, and a double thread about six inches long is tied about its centre. The wool tampon is prepared in the same manner and covered with a layer of absorbent cotton about one inch in thickness.

Application.—In using the tampon the patient should be in

the Sims' position, as a rule, as the distention of the vagina is not so great as in the knee-chest position, and the danger of overpacking is lessened. In backward displacements of the uterus the knee-chest position has the advantage of throwing the uterus forward and permitting of the application of the tampon to the posterior fornix. In removing the tampon, which should be done at the end of twenty-four hours, it should always be withdrawn by pulling upon the thread downward and backward, its removal being facilitated by pressing the perineum toward the coccyx.

Purposes.—Tampons are used for their medicinal and mechanical effects. The medicament may be used for the relief of pain or to produce counter-irritation or the absorption of an inflammatory product, or contraction of relaxed tissues. Glycerine is the best adjuvant to other drugs; it is hygroscopic and will assist in the reduction of enlarged uteri. In erosions of the cervix a tampon carrying a 25-per-cent. solution of ichthyol in glycerine will, besides its germicidal action, cause a desquamation of the epithelial cells of the cervix. This is sometimes followed by a regeneration of the mucous membrane and a return of the cervix to the normal condition. In chronic endometritis or parametritis, a tampon of boro-glycerine or ichthyol and glycerine is often of benefit; and altered position of the uterus improves the circulation and helps the local condition. If after several applications there is no improvement, more radical measures are indicated. Tampons are useful in hemorrhage, which they control, not only by pressure, but by carrying the astringent or hemostatic remedies directly to the part. In inflammation of the vagina and vulva a solution of nitrate of silver can be applied directly to the inflamed mucosa, which are then kept apart by a tampon impregnated with boric acid. In malpositions and prolapse the organ can be sustained at a higher level, and its circulation improved. In cystocele and rectocele prolapse may be prevented by the introduction of a tampon. In cases of miscarriage prior to the fourth month, a tampon serves a useful purpose in terminating the premature labor. For this purpose gauze is the preferable material for packing.—*Medicine.*

THE PARASITIC THEORY OF CANCER.

Borrel (*Annales de l'Institut Pasteur,* Vol. xv., 1901) gives an excellent brief review of the literature on the theory of the parasitic origin of cancer. He divides his work into three stages:

1. "Parasites" described by Neisser, Darier and others, and

believes that their "parasites" were epithelial cells undergoing special changes.

2. "Parasites" of the type described by Thoma, Sawtchenko and others. These are intracellular bodies, round, single, or multiple, occurring chiefly with carcinomatous epithelium of glandular type. These bodies show a superficial resemblance to certain stages in the development of coccidia. Borrel believes that these bodies arise from peculiar changes which occur in the attractive sphere and centrosome of carcinoma cells.

3. "Parasites" believed by some men to be blastomycetes. Borrel says that the men who believe in this theory have assumed that all sorts of cell inclusions with a circular outline are blastomycetes, while in fact the inclusions have no morphological likeness to blastomycetes, and the infinite variety of cell inclusions even in carcinoma cannot all arise in the same way. The objections to the blastomycetic theory are: the nodules produced in animals by inoculation with blastomycetes are, with the exception of two cases, of Sanfelice (cf. *infra*), of mesoblastic type; most men, with decent asepsis in making cultures, do not obtain cultures of blastomycetes from carcinomata, and there is no evidence that yeasts are found within epithelial cells. Borrel analyzes Sanfelice's two "successful" cases and decides that there is no evidence that the tumors were due to the action of blastomycetes.

Borrel's own contribution is a demonstration of the fact that bodies morphologically identical with the "parasites" of cancer are produced in normal and carcinomatous cells by certain peculiar changes in the attractive sphere and centrosome. He employs special technique in hardening and staining tissues. In the testicle of guinea-pigs the attractive sphere and the centrosomes of cells which are to become spermatozoa show stages of development in which they resemble the parasites seen in cancer cells. In the cells of carcinoma the attractive sphere with included centresomes may give rise to exactly similar appearances. At times there comes a collection of portions of the sphere about each of several centrosomes, producing appearances like those seen in the "spore cyst" of various believers in the parasitic theory.

Hence, Borrel concludes that the so-called "parasites" are due to peculiar changes of the attractive sphere about the centrosome. He says that the theory of parasitic cause is attractive, but that at present there is no evidence to support any of the theories.—*American Journal of the Medical Sciences.*

Special Selections

REMARKS ON THE TREATMENT OF DIABETES MELLITUS.*

By R. T. Williamson, M.D.(Lond.), F.R.C.P.
Physician to the Ancoats Hospital, Manchester, and Assistant Lecturer on Medicine, Owens College.

It is well known that the results of treatment in diabetes mellitus vary considerably. In some cases, chiefly those of the milder forms, treatment is of great service, and though the sugar excretion cannot usually be permanently arrested, still it can be diminished temporarily more or less; the disease can be kept in check, and the patient enabled to live and do his work without much discomfort. But in other cases the results are unsatisfactory, and in some of the most severe forms in young persons, treatment is of little service. Very much depends on the form of the disease. In the present state of knowledge there is no *single* method of treatment suitable for all cases of diabetes mellitus. Each case should be treated according to the form of the disease. Diet or drugs suitable for the mild form are often unsuitable for the severe form. The recognition of this principle is of great importance; as the custom of placing all cases, whatever the form of the disease, on a very rigid diet, with large doses of opium or codeia, is objectionable for many reasons.

In trying to form an opinion as to the value of any method of treatment, it is important to bear in mind, that occasionally in some of the mildest cases, the sugar excretion may, for a time, disappear apparently apart from any influence of diet or drugs. Also the occurrence of complications such as phthisis, granular kidney, etc., may cause a diminution of the sugar excretion, which at first may appear to be the result of treatment. Further, it is important to distinguish between the results due to diet and those due to drugs.

For therapeutical purposes three forms of the disease may be recognized: (1) the mildest form; (2) the more severe form; (3) the most severe form, with the perchloride of iron reaction in the urine.

1. In the *mildest* form, the sugar excretion ceases when a rigid diet of nitrogenous and fatty food is given. The urine gives no reaction with perchloride of iron. Usually the sugar excretion is small and the symptoms slight.

* Paper read at the Manchester Therapeutical Society.

These cases are distinguished from temporary glycosuria by the persistence of the sugar excretion. Some writers would describe the milder cases of this form as chronic or persistent glycosuria; whilst by those who regard all cases of *persistent* sugar excretion as diabetes mellitus, they would be described by the term last mentioned.

2. In the *more severe form,* the sugar excretion does not cease when a rigid diet is given; but the urine gives no reaction with perchloride of iron. This is the form most frequently met with in hospital practice, and the cases vary considerably as regards the sugar excretion and diuresis.

3. In the *most severe form,* a rigid diet also fails to arrest the sugar excretion; and in addition, the urine gives a dark brownish-red coloration with perchloride of iron. In this form there is great danger of coma developing.

This classification is not a scientific one, but it is useful for practical purposes.

The treatment in these three forms should be different, and hence it is important in every case of diabetes to recognize the form of the disease before prescribing treatment. For this purpose the urine should be tested with perchloride of iron. Some estimate should be made of the sugar excretion and the amount of urine, in hospital practice daily, in private practice once a week or at longer intervals. It is important to examine the lungs also for signs of phthisis, especially in the second and third forms, and to examine the heart for signs of dilatation, muscle failure, or other disease, especially in elderly patients.

The condition of the bowels should be noted. At the commencement of the treatment the weight of the patient should be taken and a record should be kept of the weight once a week or once a month. The weight of the patient is probably a more important guide in carrying out the treatment of diabetes, than is the exact amount of sugar excreted.

In making accurate observations on hospital patients respecting the action of diet, it is a common practice in Germany and Austria to calculate the value of the food in *calories*. The quantity of proteids, carbo-hydrates and fats in the various articles of diet is calculated, and their value expressed in calories (1 grm. of proteid equals about 4 calories; 1 grm. of carbo-hydrate equals about 4 calories; 1 grm. of fat equals about 9 calories). The total value of the diet in calories is thus estimated, and from this total, the value in calories of the sugar lost in the urine is subtracted; the remainder should not be less than 2,300 calories. This is the value in calories of the food required daily by a healthy man. These estimations are of service in indicating

when a diabetic diet is deficient (*i.e.*, when the total value in calories of the food taken daily is too low). There are several reasons, however, for believing that such estimations are not quite so scientific and valuable as they at first sight appear.

Test diet.—It is a common practice in commencing the dietetic treatment of diabetes to prescribe at first a very rigid diet of nitrogenous and fatty food, in order to ascertain whether it is possible to arrest the sugar excretion thereby. This is a useful practice in the first and second forms of the disease (as already classified). But in the most severe form in which the urine gives a reaction with perchloride of iron, I do not think it is desirable to try the effects of a very rigid test diet. In these most severe forms diabetic coma is very readily excited, and there is good evidence that coma may be brought on by a sudden change of diet, or by making the diet very rigid.

If the urine gives no reaction with perchloride of iron, then a rigid test diet should be tried; but in the more severe cases of the second form the effect of this rigid diet should be carefully watched. In such cases I think it is advisable not to commence abruptly, but to allow several days to elapse before the rigid diet is attained—cutting off sugar and potatoes first, then other carbohydrates, and finally bread.

The following diet sheet would be suitable when a rigid diet of nitrogenous and fatty food is required as a test for the form of the disease, or when a very rigid diet is desirable for the treatment of any case.

Sanctioned.—Butcher's meat of all kinds (except liver); potted and preserved meats; ham, tongue, bacon; poultry, game; fish (fresh, dried, and preserved), sardines, shrimps; broths, animal soups, and jellies (prepared without the addition of sugar or starchy materials); eggs, cheese, cream; butter, suet, oils, and fats; custard (without sugar); reliable bread substitutes (gluten bread, almond and aleuronat cakes); green vegetables (mustard and cress, watercress, endive, lettuce, spinach, turnip-tops, cabbage, broccoli, Brussels sprouts, spring onions); cucumber; mushrooms; pickles (cucumber, walnuts, and onions); nuts (walnuts, almonds, filberts, hazel nuts, Brazil nuts), but not chestnuts.

Forbidden.—Sugar; articles of food containing sugar and starch; pastry and farinaceous puddings; rice, sago, arrowroot, tapioca, macaroni, vermicelli, semolina; potatoes; wheaten bread and biscuits; carrots, turnips, parsnips, beetroot, beans, peas, large onions; liver; oysters, cockles, mussels, the "puddings" of crabs and lobsters; honey; all sweet fruit and dried fruits.

Sanctioned.—Water, soda-water, and mineral waters; tea,

coffee; dry sherry, claret, Burgundy, hock, Moselle, Ahr wines, most Rhine wines, Austrian and Hungarian table wines (but only in moderate quantities); brandy in small quantities.

Forbidden.—Port, Tokay, champagne, and sweet wines; must, fruit juices, and syrups; sweet lemonade; liqueurs; beer, ale, porter, and stout; rum and sweetened gin; cocoa and chocolate; milk in large quantities.

Dietetic Treatment.

The dietetic treatment of diabetes mellitus should vary according to the form of the disease.

In the *mildest* form, a rigid test diet of nitrogenous and fatty food, such as that already indicated, causes the sugar excretion to cease. In some cases the addition of the smallest quantity of carbo-hydrate, in the form of bread, to this rigid diet, causes the sugar excretion to return. In other cases the patient can tolerate a certain amount of carbo-hydrate food, and it is only necessary to restrict the carbo-hydrates to check the sugar excretion.

In either case, the diet which is *just sufficient* to arrest the sugar excretion should be prescribed after the effects of the test diet have been ascertained.

It is sometimes found, after the sugar excretion has been arrested by the rigid test-diet for a short time, that the patient can tolerate more and more carbo-hydrate food, without the sugar excretion returning. In these cases ordinary bread should be added to the rigid diet, and its quantity steadily increased until the maximum amount is reached which the patient can tolerate without the glycosuria returning.

In other cases, even after a period of rigid dieting, the addition of a small amount of bread or other carbo-hydrates causes the sugar excretion to return, and it is only by the most rigid diet that the urine can be kept free from sugar. In this last group of cases, after a few weeks or months, often the patient will no longer tolerate a strictly rigid diet; or it is found that he is losing weight rapidly. It is then necessary to relax the diet, especially as regards bread, and to be content, if by moderate restriction of the carbo-hydrates, we can keep the daily excretion of sugar down to about 500 grains.

In the second form—the *more severe* form (*without* the perchloride of iron reaction in the urine)—the most rigid diet does not arrest the sugar excretion, and much care is needed with respect to the dietetic treatment. The patient's weight and general condition are a useful indication as to the amount of restriction desirable.

In this more severe form sugar and articles containing sugar, fruit, potatoes, rice, and farinaceous puddings, can be excluded from the diet without injury to the patient. In some cases a very rigid diet, such as that already indicated, is of service for a time, and may cause a marked diminution of the sugar secretion; but where the sugar secretion remains abundant, and the patient is losing weight on this diet, and the general condition is becoming worse, I think it is always important to allow a certain amount of carbo-hydrate food in the form of ordinary bread and milk, and to make the diet less rigid the worse the general condition. Fatty food (especially cream and butter) is of great value in this form.

In the third form—the *most severe form*—in which the urine gives a brownish-red reaction with perchloride of iron, a very rigid diet is injurious. The view that, in such cases, the complete exclusion of carbo-hydrates from the diet tends to bring on diabetic coma, is now accepted by many physicians. Prof. Ebstein's rule appears to be a useful one in practice, viz., that the appearance of the perchloride of iron reaction in the urine, is an indication for diminishing the albumen, and increasing the carbo-hydrates in the diabetic diet.

In this most severe form fatty food, in large quantities, is indicated, especially cream and butter. (A teaspoonful of brandy is of service in aiding the digestion of large quantities of fatty food). All kinds of nitrogenous food, of course, are suitable. I think it is advisable to allow milk freely in these cases, and a certain (small) amount of carbo-hydrates, in the form of ordinary white bread. Sugar, and articles containing sugar, rice and farinaceous puddings should, of course, be forbidden.

When coma is threatening, several German authorities even allow a very small quantity of potatoes, and think that this addition to the diet is often of some service.

There are now a few points with respect to the separate *articles of diet* to which I may briefly refer.

Nearly all kinds of nitrogenous and animal food may be allowed in any form of diabetes, but the following, which contain much carbo-hydrate material, should be excluded:—liver, oysters, cockles, mussels, crabs, and lobsters. Milk contains about 4 per cent. of objectionable milk sugar, but it also contains much valuable fat and albumen. Cream contains less milk sugar, but seven times the amount of fat; it may be allowed freely in all forms of diabetes. Milk may be allowed in the most severe form, as already mentioned. In the other two forms, sometimes milk does not increase the glycosuria; it may then be

allowed: but in these forms, when it increases the glycosuria, it should be forbidden, or allowed in small quantities only.

I have prepared an artificial milk, practically free from sugar, which may be taken in unlimited quantities by diabetic patients in all forms of the disease. Four tablespoonsful of cream are added to a pint of water and well mixed. The mixture is allowed to stand in a cool place. At the end of twelve hours the fat of the cream will have floated to the surface. (It can be skimmed off with a teaspoon, and on examination it will be found practically free from milk sugar, which will remain dissolved in the pint of water.)

The cream fat is skimmed off from the surface of the water in the first vessel, and then placed in another vessel, and to it are added water, the white of an egg, and a little salt (and a trace of saccharine if desired). By practice a palatable artificial milk can thus be prepared, which is practically free from milk sugar. (The egg albumen may be omitted or added, according to the patient's preference.) Lauritzen,* of Copenhagen, has recorded good results obtained by the use of this artificial milk in cases of diabetes.

Fat of various kinds are of the greatest service in all forms of diabetes, and may be taken freely. The most useful are cream, bacon, cheese, eggs, suet, and cod-liver oil. Cream is sometimes best taken mixed with a little soda-water. A little brandy, as already mentioned, sometimes aids digestion if the large quantities of fatty food cause dyspepsia.

Of the various carbo-hydrates, starch is less injurious than sugar. Fruit sugar (levulose) is less injurious than cane sugar and grape sugar. A small amount of fruit sugar is utilized in the system in the mild forms of the disease. Fruits which contain much sugar—as grapes, dried fruit, dates, figs, raisins, currants, etc.—should be forbidden; but some fruits contain only a very small percentage of sugar, which is chiefly in the form of levulose; a small quantity of such fruit may be sometimes allowed when a very rigid diet is not necessary. When the patient is desirous of having his tea, coffee, and articles of food sweetened, he may use saccharine or saxin.

Bread is the article of diet which causes the greatest difficulty when a rigid dietetic treatment is indicated, since it contains about 49 per cent. of carbo-hydrates, and 2 per cent. of sugar. The substitutes usually employed are often unreliable on account of the high percentage of carbo-hydrates which they contain;

---

*Lauritzen. "Ueber Williamson's Milch für Diabetiker." *Zeitschrift f. diätetische und physikalische Therapie*, 1899, Bd. III., H. 3.

also, their taste is often disagreeable, and usually the diabetic bread or biscuits prepared by various firms are too expensive for continued use, except for wealthy patients.

Hence it is best, when a *very rigid* diet is not indicated, to allow a small amount of ordinary white bread daily. When a very rigid diet is indicated, either for diagnosis, for a test diet, or for treatment, then some bread substitute should be employed. It is important, however, to test with a solution of iodine specimens of the bread and biscuits employed, or specimens of the substances from which they are made. I have often found, by this simple test, that special articles of food recommended and sold as bread substitutes for diabetic patients, have been loaded with starch. In other cases, I have found that they contained a considerable amount of sugar.

I think it is always best that the bread substitute should be prepared in the patient's house, or in the hospital. Home-made preparations are usually less expensive and more reliable. The following are the most useful bread substitutes:

1. Gluten bread. It is necessary to examine a specimen of the gluten flour roughly with an iodine solution, since it is so often loaded with starch. Only those specimens should be recommended which contain very little starch.

2. Soya biscuits and bread. The taste is often objectionable, and frequently the biscuits contain much starch.

3. Almond cakes. Four ounces of almond flour are mixed with a little water and German yeast; the mixture is allowed to stand in a warm place for about twenty minutes (the action of the yeast destroys the small amount of sugar present in the almond flour). Then an egg, beaten up, and a little water (or a little cream and water) are added and the whole made into a paste. This is divided into cakes and baked for fifteen to thirty minutes.

4. Cocoa-nut cakes. These are prepared in the same way as almond cakes, desiccated cocoa-nut powder being used in place of almond flour.

Both almond and cocoa-nut cakes sometimes give rise to dyspepsia, owing to the large amount of fat they contain, but the dyspeptic symptoms may be prevented by taking a little alcohol (in some form) after eating the cakes.

5. Aleuronat. This is a vegetable albuminous substance, which contains only a very small percentage of carbo-hydrates. It has been strongly recommended by Prof. Ebstein for the preparation of diabetic bread substitutes. I have found that by mixing aleuronat and desiccated cocoa-nut powder, cakes can be easily prepared from this substance without the addition

of any starch-containing material. The proportions are as follows: Two ounces of desiccated cocoa-nut powder are mixed into a paste with a little German yeast and water. The mixture is kept in a warm place for about twenty minutes. Then two ounces of aleuronat are added and afterwards one egg (beaten up), water, and a little saccharine solution. The whole is well mixed, divided into cakes, and baked.

These cakes are quite reliable, and give no reaction for starch with iodine, and also no reaction for sugar. When freshly prepared, most people find them palatable, and most diabetic patients like them, but some do not. They should be well buttered, and many persons like them best when they have been warmed before the fire for a few minutes. They should be freshly prepared every day or two, as by keeping for several days the taste becomes unpleasant. I have published elsewhere observations showing the decrease of the sugar excretion when a diabetic patient used these cakes in place of ordinary white bread. With the exception of bread, the diet and treatment were kept the same in this case for fifteen days. During the first six days the patient's diet contained fourteen ounces of ordinary white bread daily; the average sugar excretion daily for this period was 4,143 grains, and the amount of urine 224 ounces daily. The fourteen ounces of white bread were then replaced by fourteen ounces of aleuronat and cocoa-nut cakes daily for five days. During this period the average sugar excretion was 2,150 grains daily, and the amount of urine 144 ounces daily. The aleuronat and cocoa-nut cakes were then replaced by fourteen ounces of white bread for four days. During this period the amount of sugar excretion averaged 4,585 grains daily, and the amount of urine 221 ounces.

Thus, through replacing bread by aleuronat and cocoa-nut cakes, the sugar excretion was reduced by practically 2,000 grains daily, and the amount of urine by eighty ounces.

Bread can be made of aleuronat and cocoa-nut powder. In Carlsbad, diabetic bread was largely sold a few years ago, which consisted of aleuronat, mixed with ordinary white flour in different proportions. Such bread contains less carbo-hydrates than ordinary white bread.

I have recently had biscuits prepared from plasmon, and small rolls can easily be made at the patient's house without the addition of any starch-containing substance.

In Germany, Professor Ebstein* has recently used another vegetable albumen, ergon (an albumen from rice), for the pre-

*Ebstein, W. "Handbuch der praktischen Medicin." Ebstein and Schwalbe, Stuttgart, 1901. Art.: "Zuckerkrankheit."

paration of diabetic bread. Loewy and Pickardt* have employed roborat (an albumen derived from corn) for diabetic bread, and Schreiber† has used casein biscuits. These three preparations are strongly recommended by Professor Ebstein, who now regards them as preferable to aleuronat.

Almond flour, cocoa-nut powder, aleuronat and gluten flour can all be used in the preparation of puddings and other articles of food for diabetic patients.

As regards *beverages,* those which are free, or almost free, from carbo-hydrates can be taken, as already indicated in the diet sheet. I believe that alcoholic excess, especially the drinking of large quantities of beer, is very injurious, and that sometimes it has played an important part in the causation of the disease. I have seen great benefit derived from discontinuing beer drinking. For the relief of thirst, dilute acid drinks are of service, and a lemonade may be made by dissolving a little citric acid and glycerine in water.

There are several points respecting the mode of life, which may be briefly referred to. The patient should be relieved of mental anxiety and worry as much as possible, and the hours of work, business, or study should be diminished. A holiday and complete rest from work often have a good effect in patients who have much worry or strain in connection with their work.

In the mild form, open-air exercise is of service, providing the heart is not affected; but in severe forms much vigorous exercise is injurious. The danger of long railway journeys should not be forgotten in the severe forms of the disease. It is important that attention should be paid to the ventilation of the patient's rooms, in order to diminish the risk of phthisis developing as a complication. It is well known that marriage has a most injurious effect on diabetic patients.

Treatment by Mineral Waters.

Certain continental spas—Carlsbad, Marienbad and Neuenahr—are much frequented by diabetic patients, though the value of the waters is disputed. There can be no doubt that many patients, suffering from the mild form of the disease, do derive much benefit from a visit to these spas, whatever the cause of the improvement may be. From the evidence published by Professor Seegen‡ respecting Carlsbad, and from the papers by Dr. Schmitz on Neuenahr, as well as from conversations I have

* Loewy & Pickardt. *Deutsche med. Wochnschr.*, 1900, No. 51.

† See Ebstein, l.c.

‡ "Der Diabetes Mellitus," Berlin, 1893.

had with medical practitioners in Carlsbad and Neuenahr, during visits to these spas a few years ago, I am inclined to believe that the drinking of the waters *at the spas, whilst hot,* from the spring, has a beneficial effect quite apart from good hygienic conditions, dieting, rest, etc. But, of course, it is difficult to put forward definite evidence on his point. The good results are only obtained, however, in the mild cases, especially in stout and gouty individuals; in severe forms of the disease the waters are useless, and the long journey has very often been the exciting cause of diabetic coma, and has thus killed the patient. It is important, for this reason, never to send patients suffering from a severe form of the disease from England to these spas. Schmitz has pointed out that the waters of Neuenahr are contra-indicated in cases in which there is considerable cardiac weakness, or arterio-sclerosis with a tendency to hemorrhage.

Medical Treatment.

Whilst it must be admitted that there is no specific remedy for the disease, there are several drugs which have some good effect, especially in the milder forms.

Of course, in judging of the value of drugs, it is especially important to remember what I have mentioned at the commencement of this paper, *i.e.*, that in the mildest forms of the disease, occasionally variations occur in the sugar excretion apart from treatment; also the occurrence of complications may cause the sugar excretion to diminish. Further, it is important to distinguish between the action of the drug and the action of diet.

In the *mildest* form of the disease, if the sugar excretion is arrested by a restricted diet, no drug treatment is required; but often the patient will not tolerate for long periods a diet sufficiently rigid to arrest the sugar excretion, and then it is well to try the action of several drugs.

In the *mild form* and *in the more severe form* (without the perchloride of iron reaction) there are several drugs which are believed to be beneficial. Opium, morphia and codeia have been shown to have a beneficial action, in some cases, in diminishing the sugar excretion. The cases which are most influenced are those of the milder forms of the disease. Not infrequently in the mild forms occurring in women just after the menopause, the sugar excretion will temporarily cease or greatly diminish on a restricted diet with opium. In the more severe forms of diabetes, these drugs rarely produce much real benefit, whilst they usually cause most obstinate constipation. As constipation apparently increases the tendency to diabetic coma, opium, mor-

phia, and codeia do not appear to me to be suitable in the very severe forms. I have tried the new morphia derivative, heroin hydrochloride, in several cases, as it is said not to product constipation. I found, however, that it had a slight tendency to constipate, but not so markedly as opium, morphia and codeia. In several mild cases, the sugar excretion ceased whilst the patient was taking heroin along with a slightly restricted diet. I do not feel quite sure, however, that the arrest of the sugar excretion can be entirely attributed to the drug in these cases. In the last two cases I treated with heroin, the drug produced severe vomiting, and I have not used it since. Probably the vomiting was due to some impurity or decomposition of the drug.

Sodium salicylate is the drug from which I have obtained the best result in diabetes. It was recommended strongly by Prof. Ebstein long ago. Recently I have given it in 23 consecutive cases, and the results in 20 of these cases I have published elsewhere.*

In a number of mild cases, in which the sugar excretion has persisted in spite of a diet slightly restricted for some months, I have kept the diet exactly the same, and given sodium salicylate, with the result that the sugar excretion has diminished down to a small amount, or the slightest trace.

In a case of mild diabetes (or chronic persistent glycosuria) of ten years' duration, I have made observations on the sugar excretion for three months in the Ancoats Hospital, then for many months as an out-patient, and again for ten weeks as an in-patient. In this case I think I have demonstrated clearly, by repeated trials, that sodium salicylate has a marked action in decreasing the sugar excretion apart from any restriction of diet. In the last series of observations, when the drug was given, the sugar excretion diminished from over 1,500 grains to 48 grains daily; then the drug was discontinued (other conditions being kept the same) and chloroform water given five minims *t.d.s.* In six days the sugar excretion rose from 48 to 1,152 grains daily. Then sodium salicylate was given again, and in six days the sugar excretion had fallen to 39 grains for the 24 hours. By continuing the salicylate the sugar diminished to the slightest trace—much less than one grain to the ounce. This case I have recorded in detail elsewhere.†

I do not regard sodium salicylate as a specific for diabetes. It does not usually produce any marked diminution of the sugar excretion in the severe forms of the disease; also it has little

---

* *British Medical Journal*, March 30th, 1901.
† *Ibid.*

influence in some of the mild cases. But in certain mild cases of diabetes (or persistent glycosuria), as in the one to which I have just referred, it has a decided action in very markedly diminishing the sugar excretion quite apart from restriction of diet; also in such cases the occurrence of complications and spontaneous variations of the sugar excretion can be excluded.

The drug is not suitable for all cases of diabetes; and it is not advisable to give it if serious complications be present, or if the patient appears to be losing ground rapidly.

The drug requires to be very carefully watched, and fairly large doses are usually necessary to produce decided results. As some patients are very susceptible to its action, it is best to commence with 10 grains three times, then four times a day, and to increase slowly up to 15 grains four or five times a day, watching carefully for toxic symptoms, and discontinuing the drug if these should occur. I have usually given it in peppermint water or in equal quantities of peppermint water and ordinary drinking water. The natural sodium salicylate is more reliable than the common artificial preparation. In the more severe forms of diabetes, though sodium salicylate does not usually cause much change in the sugar excretion, still the patients sometimes gain weight and improve in general condition while taking the drug.

Recently I have employed the new compound known as aspirin, in several cases, with good results. I have been able to show that quite apart from dietetic treatment, etc., aspirin has a decided influence, in mild forms of diabetes, in diminishing the sugar excretion. I have not yet used the drug sufficiently long to form a definite opinion as to whether it is more useful than sodium salicylate; but I think that there are cases in which it may be preferable. In a case of mild diabetes, which I am now treating with aspirin, the daily sugar excretion diminished from 2,160 grains down to 448 under the action of the drug, *apart from the influence of diet*. On discontinuing the aspirin the sugar excretion at once rose, and in seven days it had reached 1,672 grains. On again giving the aspirin the sugar excretion fell to 540 grains in three days; and in seven days it was only 418 grains.

In Germany good results were obtained by Schmitz, many years ago, by the use of bismuth salicylate in the mild forms of diabetes. A few years ago I tried the drug in several cases, but found that it produced constipation, and did not give it a prolonged trial on that account. Striking results have occasionally been obtained by the use of salol; such have been recorded by Nicolaier and others.

In the *most severe* forms of the disease, when the urine gives

the brownish-red coloration with perchloride of iron, I have obtained benefit in many cases from the use of sodium bicarbonate in large doses (as recommended so strongly by Naunyn).

I have given very large doses, 200 to 400 grains daily, and when coma is commencing I have given 900 grains (about two ounces) of sodium bicarbonate in the 24 hours. It is remarkable how well such large quantities of sodium bicarbonate can be taken by diabetic patients. I have usually given it in large quantities of ordinary drinking water, or in soda-water, or in milk. The solution is taken in small quantities at frequent intervals during the 24 hours. This alkaline treatment, of course, does not have much influence on the sugar excretion; but it often improves the general condition, and appears to have a decided action in preventing diabetic coma.

In these severe forms it is very important to keep the bowels regular by the use of Hunyadi water, effervescent Carlsbad salts, or some mild purgative, since constipation appears to predispose to diabetic coma.

Strychnine may be of some slight service in these severe cases, and, if the pulse is very feeble, small doses of digitalis are indicated.

Limited space does not permit an account of the various other drugs which have been employed in diabetes, but which I have not found of much service.

In the severe forms coma is especially liable to develop; hence everything which is known to have any influence in exciting this complication should be avoided if possible (as for example long railway journeys, sudden change of diet, a very rigid diet, constipation, mental anxiety and worry). The onset of coma is indicated by rapidly increasing weakness and loss of flesh, by a rapid pulse, by the sudden appearance of a very large number of granular or hyaline casts in the urine, by nausea and epigastric pain, by deep breathing ("air-hunger") and by drowsiness.

In three cases I have seen these early comatose symptoms subside after I have given very large doses of sodium bicarbonate. In one of these cases the patient died four or five weeks later of phthisis; in the second case death occurred three months later, and in the third after ten weeks. In three other cases of diabetic coma I have seen decided temporary improvement under this treatment. But in the latter three cases, after the temporary improvement, comatose symptoms soon returned and death occurred. I believe it is important in all cases of commencing coma to give large doses of sodium-bicarbonate—two ounces in the 24 hours. The sodium bicarbonate should be given

at frequent intervals dissolved in water or soda-water. If this alkaline treatment be commenced early, occasionally the progress of the comatose symptoms can be arrested.

It is advisable in these cases of commencing coma to give brandy and small doses of digitalis. If the bowels are constipated (and this is usually the case), a mild purgative, or an enema should be given. A rigid diet should be discontinued. Milk and cream are the most useful articles of diet. I have not tried oxygen inhalation, but from reports published it appears to be occasionally of some slight temporary service.

When the patient becomes quite comatose, transfusion of alkaline fluids occasionally succeeds in causing him to regain consciousness temporarily, and if the patient has not seen his friends for some time, then transfusion may be worth performing. But often transfusion only produces a slight improvement in the pulse, and the benefit is only temporary at the best. In nearly every case recorded the patient has soon relapsed into coma.—*Medical Chronicle.*

A CLINICAL REPORT ON GUDE'S PEPTO-MANGAN.

By Samuel Wolfe, A.M., M.D., Philadelphia, Pa.
Physician to Philadelphia Hospital, Neurologist to Samaritan Hospital.

There may still be some doubt whether manganese is a normal constant constituent of the human blood or of any of the tissues of the body. It may not have been positively determined whether iron, when given in an inorganic compound or in pure metallic form, is absorbed by the mucous membrane of the stomach or intestinal canal, or whether it accomplishes its curative work by some occult process of stimulation of that membrane, by virtue of which it takes up with greater readiness the nutritive portions of food substances which are presented to it at the same time; or whether it plays a chemical role in changing the contents of the alimentary canal, so that what eventually passes into the circulation is more fitted to maintain high standards of nutrition or will prove less deleterious to the processes of life.

Even when we have combinations which, whether obtained synthetically or analytically, resemble the forms in which this metal is found in the blood, our assurance is by no means perfect that they can pass the portals of the circulation, the absorbent organs of the alimentary tract, without great risk of change from their original forms, in their contact with the substances and tissues to which they are exposed.

All these are still questions on some of which the evidence is sufficiently positive to leave but little doubt, while on others there are so many theories that we are left to choose what may best suit the results of our own observations, if not, indeed, our caprice or fancy.

To the chemist and therapeutist these are certainly interesting and practical questions. Before the physiologist and pathologist still others of equal importance loom up. What are the different steps in the process by which an atom of iron, in either a food or drug, becomes ultimately an ingredient of the hemoglobin of a corpuscle, and what have been the dynamic processes with which it has associated itself up to this point? Again, what is its final destination and disposal? With what materials has it been combined, and what forces has it generated and modified by the time it has finished its course? What accounts for its disappearance under certain abnormal conditions, and why does the train of symptoms which we witness arise under these circumstances?

Again, these are facts, theories, hypotheses and speculations which we are bound to consider, and, in the light of our own reason and judgment, to determine.

But while we are thankful for all the light that can be shed on these problems, and, as members of a cultured profession, are impelled to continue their investigation, yet to the clinician their solution is not essential. Whether his path be flooded with the brightness of midday or shrouded in Egyptian darkness, he must still walk on in it. When, in the records of professional literature or in the acquirements of his own personal experience, certain means have associated themselves with consequent legitimate ends, it is his plain duty to adapt the one to the other. And, again, where the means have been to a degree inadequate, on the introduction of what appeals to his reason as of a higher probable power, he must determine the claim. The clinician must not allow himself to be diverted too far into the by-paths of knowledge, lest he become timorous and undecided. The locomotive engineer, who knows the management of his engine in such a way as to start it, regulate its speed and stop it, so that he will constantly carry his train to its destination on time and without accident, and with the accomplishment of all that is expected of him at the termini and at the way-stations, is but little the better for a complete knowledge of the country through which he travels; of the industries of the towns at which he stops; of the mechanical and physical forces which rule the movements of his engine; or of the mathematical rules which govern the construction of the road.

My observations with Pepto-Mangan, introduced to the profession by Dr. Gude, chemist, of Leipsig, are such as can be easily confirmed by any physician, since they were all made in private practice, and rest on bedside and office notes. I have used the preparation to a considerable extent ever since it was first brought to my notice, which I think was about two years ago. Owing to some specially good results obtained, I was led to the series of recorded observations on which this paper is based. They extend over four months of time, and embrace about fifty cases.

As a rule, I followed the directions issued by the manufacturers in its administration, giving to an adult a tablespoonful dose and to younger subjects a proportionate amount. Milk seemed to be the best vehicle, and immediately before or after meals a convenient time. In its relation to food, however, I do not think we need exercise any special care as to its administration. There were but few cases in which I found any disturbance of the digestive functions by these doses. but in several there was considerable constipation induced, and in one or two some diarrhea, as the apparent result of the drug. While my experiments in this direction have not gone far enough to beget firm convictions, I am of the opinion that in the main equally good results could be achieved by a smaller average dose, and in this way the small number of untoward results might probably be still further diminished.

In one series of twenty-three cases the patients were all married women, ranging from the ages of twenty-two to seventy, who were more or less anemic from various causes. In all but five the results were decidedly satisfactory, and of these one failed to report the second time, so that the result is not known. The other four were cases of advanced organic disease, in which no therapeutic procedure could have given decided results. In nine of the twenty-three cases the results might be classed as brilliant. In all of the others I am convinced that no other preparation of iron could have done more. The condensed details of a few illustrative cases from this series follow.

A woman of 65, during several years, had occasionally applied for relief from vertigo, frequent attacks of palpitation and general weakness and nervousness. She also had frequent long-continued attacks of diarrhea and some gouty manifestations in the joints. In November I found her very decidedly prostrated and anemic. She took the Pepto-Mangan in connection with a carefully regulated diet (chiefly albuminous) for six weeks, and gained steadily in strength and weight. At the end of that time her symptoms had disappeared, and she claimed to

be in better condition than at any time during the previous two years.

A woman of 25, of highly nervous temperament, cultured and refined, had passed through her first confinement in May, the labor being a very difficult one, and resulting in a still-birth. She grieved very much, and, though fighting bravely against her depression of spirits, by autumn she became very neurasthenic and anemic. She had morbid fears, frequent flushes, and some menorrhagia. She was put to bed and given Pepto-Mangan and strychnia sulphat in gr. 1-30 doses b. i. d., and recovered rapidly. She again became pregnant, and is perfectly well.

A mother of three children, aged 32, the youngest ten years of age, who has during the last year had some three or four attacks of menorrhagia, had gradually reached a quite profound state of anemia in spite of plentiful administration of other forms of iron in the interval of the menses. She is obstinately persistent in refusing a uterine examination, and was therefore treated symptomatically only. My recent prescription of Pepto-Mangan has rapidly dissipated her pallor and improved her general health.

A primapara, aged 22, was pale during pregnancy, and at the end of her lying-in, though she had not lost blood at all profusely, and claimed to feel well, was very pallid. After using the Pepto-Mangan for two weeks her color had been fully restored.

Two young married women, both of whom had passed through a confinement within a year, were anemic, and frequent sufferers from headaches, and considerably debilitated. They both recovered promptly on the Pepto-Mangan.

Another series of nine cases consists of children from infancy to the age of twelve. In all marked results were obtained.

A little girl of 4, for two successive summers had frequent malarial attacks of an irregular character and resulting in anemia and debility. She had been treated with arsenic, quinine, various preparations of iron, and, though responding to the drugs, was still inclined to fall always a ready victim to fresh onsets of the disease. On Pepto-Mangan she made steady and rapid progress toward robust health, and now is a perfect specimen of a vigorous child.

An infant of seven months passed through a siege of infantile remittent with a great deal of bowel disturbance, which yielded to quinine in the course of two weeks. Within a month the same train of symptoms developed, and quinine was again given, and followed by Pepto-Mangan, and since then the child's health has remained good, although several months have elapsed.

A girl of 7, who had for a long time been pale, took diphtheria. After recovery from the disease, the anemia, as might be expected, was still more grave. She was put on Pepto-Mangan and soon became rosy and strong.

Another girl of the same age, also habitually pallid, had wry neck for two weeks, which disappeared under iodide of potassium, but the anemia had increased. Her restoration in color and to robust health was secured by the use of Pepto-Mangan for a month.

A little boy of 4 had measles, from which he made a good recovery. Two months later he was very anemic and listless, with poor appetite and slight feverishness. He at once improved on the Pepto-Mangan, and continued until fully restored.

A baby, six months old, one of a pair of twins, had developed a quite marked degree of hydrocephalus. Large, thin, blue veins stood in relief all over the scalp. The anemia was very pronounced. She was put on Pepto-Mangan, and her appearance now is much better, with strong indications of the arrest of progress in the disease.

Another series of five cases includes girls approaching, or slightly beyond, puberty, all anemic, and all responding to the use of Pepto-Mangan.

Of this class, a girl of 17, who has always been pale, thin and puny, has only come under treatment within a month. She has never menstruated, and shows but little tendency to don the usual physical habiliments of the maiden. She is under size, but has since her early girlhood always had an aged look. Her appetite is very meagre and somewhat capricious. She suffers from pains in the legs, more especially the joints, and has a distinct systolic murmur. Under the Pepto-Mangan she seems disposed to gain in color and appetite, and the pains in the legs have somewhat diminished. I shall watch the outcome of this case with great interest.

In submitting this report, I wish to summarize these conclusions :

That Pepto-Mangan is a highly available preparation of iron, on account of its liquid form, pleasant taste, non-corrosive action on the teeth and unirritating effect on the digestive organs, admitting thus of easy gradation of dose, easy administration to children and avoidance of unpleasant effects in all classes of patients.

That it is an efficient and rapid restorer of the normal quality and quantity of the blood, in all conditions where the state of the organism admits of this result by the administration of a chalybeate.