

DOMINION MEDICAL MONTHLY

AND' ONTARIO MEDICAL JOURNAL

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Original Articles

VOMITING OF PREGNANCY.

BY WALTER MCKEOWN, B.A., M.D., M.R.C.S. (ENG.), TORONTO.
Surgeon to St. Michael's Hospital.

Vomiting in pregnancy may be physiological, exaggerated or pernicious. The first is regarded as of little consequence, the second a disagreeable accompaniment; but the third forms a most distressing and frequently fatal complication. Pernicious vomiting is such an exaggeration of the physiological nausea that the stomach refuses almost absolutely to retain any food. The retching is constant, and everything put into the stomach is almost immediately ejected. Even when no food is taken, mucus and bile are vomited from time to time. Emaciation and loss of strength is rapid. The cause commonly ascribed to this condition is reflex irritation of the stomach, from irritation of the sympathetic nerve ending in the uterus, caused by this organ's growth and stretching of the uterine walls. In support of this it is pointed out that it is more common in primipara, in twin pregnancies, and in hydramnios; also in chronically thickened and inelastic cervixes, and in hypesthetic conditions of the nervous system. Dirmoser, in the *Vienna Medical Weekly*, in 1896, first suggested the possibility of auto-intoxication as a cause of this condition, and while reflex action may be common, I believe that severe vomiting is much more frequently toxic than is generally recognized.

The development of the fetus must throw into the maternal circulation products not present at any other time. Some product

so produced so effects the mother as to diminish or abolish the nauseating after-effects of chloroform. The ease with which this anesthetic may be administered to a pregnant woman, even at a very early period of her pregnancy, and the rarity of nausea following its administration, are familiar to everyone. That some antidote to the nauseating effect of chloroform is present would seem the most reasonable explanation of this phenomenon. Again, there can be no doubt but that renal insufficiency is not enough to account for the conditions met with in eclampsia. Some specific toxin is present in the maternal blood as a result of fetal metabolism. From this it is no great stretch to believe that in the severe and dangerous forms of vomiting met with, and to which the term pernicious is applied, some toxin is present provocative of the symptoms, and in support of this I offer the following case :

Mrs. K—, aged 26. She miscarried at three months in her first pregnancy, during which time she suffered from severe, but not alarming vomiting. Her second pregnancy was uneventful. She was delivered at full term of a healthy child. She became pregnant a third time, and almost immediately suffered from severe nausea. This became more marked during the first two months, and at the end of this period the vomiting was so persistent as to lead her to consult me for its relief. She was a strong, well-nourished woman, not at all neurotic, and exceedingly anxious to carry her child to full term. I prescribed in turn the usual remedies—bismuth bromides, oxalate of cerium, ipecac, etc.—with apparently no effect, with the exception that for a day or two, upon different occasions, she obtained considerable relief following the application of a blister to the spine in the region of the seventh cervical vertebra. About the middle of the third month her vomiting became persistent. Everything taken into the stomach was ejected, the retching being constant, even when this organ was empty and she was being fed per rectum. Her temperature became subnormal, her skin blotchy, as if from degeneration of the blood corpuscles, and exhaustion extreme. These symptoms increased gradually, and were most marked during the second two weeks of the third month, and everything pointed to a fatal issue if she were left unrelieved. She was strongly opposed to any operative interference, and I shared her objection ; but as I thought that dilatation of the cervix might give relief, and not necessarily produce abortion, I determined to have recourse to this procedure. When I pulled down the cervix I was surprised to see oozing from the os—although she had previously not had the slightest discharge either of blood or pus—a thick, purulent discharge, the appearance of which left no doubt in my mind that the fetus was dead and decomposition going on. I dilated the cervix, passed in a curette, and scraped out a lot of broken-down placental tissue. With it came a fetus about the size of one's little finger,

the arms and legs digested off, and having the appearance of having been dead for at least two weeks. The point I wish to make is this: the fetus was dead for say at least two weeks, during which time there was certainly no increase in the size of the uterus. If the vomiting were reflex, some improvement should have been noted following the diminished tension upon the uterine muscular fibres, and through them upon the nerve ending; but, as a matter of fact, her symptoms became worse. Her vomiting increased, and her general condition became rapidly alarming after the death of the fetus and its commencing decomposition.

Reports of Societies

TORONTO CLINICAL SOCIETY.

On account of the regular meeting night falling on the night of New Year's, the January meeting was held on the evening of the third day. Dr. J. F. W. Ross, the president, occupied the chair, and the following Fellows were present: King, Rudolf, Wishart, Ross, Hamilton, Meyers, Elliott, Trow, Silverthorn, Peters, Fotheringham, Chambers. Visitor: Dr. McGillivray, Whitby.

Dr. Hamilton moved, seconded by Dr. King, that the sum of \$25.00 be donated to the Ontario Medical Library Association. Carried.

LOOSE CARTILAGES FROM THE KNEE-JOINT.

Dr. George A. Peters showed these specimens, and reported one case. The patient was a young man twenty-two years of age, with a good family history. Nine years ago, while playing hockey, he was struck on the knee. He complained of weakness in the joint for two years. He was serving on a training-ship, and was then incapacitated. The condition was accompanied by considerable pain. The foreign body could be felt quite readily, though it would disappear under the patella. This had existed now for seven years. It was removed under cocaine anesthesia. The incision was made at the upper aspect of the joint, about one inch and a half above the upper border of the patella, cutting through the quadriceps extensor. The little body obtained was cartilaginous on one surface, but the opposite aspect bony.

CASE OF FOREIGN BODY IN THE ESOPHAGUS.

Dr. Peters presented the patient, a young man of about thirty, and the foreign body, a dental plate containing one tooth which

had become dislodged and swallowed while in the act of drinking a cup of tea. Dr. Peters also showed a somewhat larger plate, which had been removed from the esophagus by the late Dr. MacFarlane, the two cases being the only two instances of the kind in the Toronto Hospitals. In the present case the foreign body had lodged just below the level of the cricoid cartilage, and gave the patient great pain at the time and afterwards. Attempts to extract the plate through the mouth failed, so it was decided to employ the X-ray to locate it. With this the plate could be seen, but not the tooth, as the porcelain was permeable to the rays. Operation was then undertaken, assisted by Drs. Baines and Wishart. An incision about three inches long was made on the left side of the middle line corresponding to the anterior margin of the sterno-mastoid muscle. When the finger was passed into the esophagus and in an upward direction the foreign body was found imbedded in the esophageal wall. The wound healed kindly.

DILATATION OF THE ESOPHAGUS.

Dr. Peters then reported this case, and showed the specimen. It occurred in a young farmer thirty-five years of age. He had been a healthy, hardy man until thirty years of age. At that time he noticed regurgitation of food and liquids after meals. There had been no difficulty in swallowing before that time. He noticed that the food came back sweet and not sour. During the last year and a half he had lost fifty to sixty pounds. He was placed under the care of Dr. Howitt, of Guelph, who did a gastrostomy. After this he improved for a time, to the extent of gaining fifty-three pounds. He began to go down hill again, and he then came under the care of Dr. Peters. Dr. Peters operated and made an incision on the left side parallel to the margins of the costal cartilages. With his fingers in the wound, and a tube passed down the esophagus he could not feel the tube at all. The stomach was opened, and after putting finger in and searching a great deal, he found the esophageal opening. It was to the right of the middle line. The man died very promptly after the operation.

Dr. Peters then gave his method of cutting calculi by means of a horseshoe and plaster-of-Paris, and exhibited a calculus removed by the suprapubic operation, weighing six ounces.

A CASE OF PERIPHERAL NEURITIS SIMULATING TABES DORSALIS.

This was reported by Dr. D. Campbell Meyers, who believed that cases of this nature are often diagnosed as cases of tabes dorsalis. The patient's previous history showed that he had always been healthy, and had never had any venereal disease.

The present illness began in July, 1899, with depression of spirits, headache, and failure of sight. There was impaired sensation from the feet to the knees, which he compared to that present in a limb which had been asleep. Under treatment in the hospital he did not make very rapid recovery at first for a long time, and Dr. Meyers began to fear he had made an error in diagnosis. However, a return of his natural condition set in, and he was soon able to leave the hospital, and in September he was able to do everything in connection with his work.

Physicians' Library

Elements of Practical Medicine. By ALFRED H. CARTER, M.D., M.Sc., Fellow of the Royal College of Physicians, London; Professor of Medicine, University of Birmingham; Senior Physician to Queen's Hospital, Birmingham; Emeritus Professor of Physiology, Queen's College, Birmingham; Consulting Physician to the Corbett Hospital, Stourbridge; the Broomsgrove Hospital and the Smallwood Hospital, Redditch, etc. Eighth edition. London: H. K. Lewis, 136 Gower Street, W.C. 1901.

The fact that this book has reached the eighth edition may be taken as positive evidence of the usefulness of the work. The present edition has been thoroughly revised and considerable new matter added, making the book an up-to-date treatise on medicine.

We would particularly recommend the work to undergraduates, as we believe that every student should have a small treatise on medicine in order that he may be able to study all diseases which are brought before him in the clinics.

Saunders' Question Compend—“Essentials of Histology.” By LOUIS LEROY, B.A., M.D., Professor of Histology and Pathology in Vanderbilt University, Medical and Dental Departments; City Bacteriologist to Nashville, Tenn.; Bacteriologist to the State of Tennessee, etc. Arranged with questions following each other. 72 illustrations. Philadelphia: W. B. Saunders & Company, 161 Strand, London, W.C. 1900. Canadian Agents: J. A. Carveth & Co., Toronto. Price, \$1.00.

The writer of this little work on histology does not assume that it is a complete treatise on this subject. He assures us that his intention in writing it has been to collect within a small space,

and in a readable form, the essential facts of histology. The subject is discussed in eighteen chapters and is well illustrated.

The work will no doubt find a field of usefulness among graduates as well as undergraduates. By reading the work, a general practitioner will be able in a short time to obtain a fair knowledge of the general principles of modern histology, and the student will find it a convenient substitute for notes.

Essentials of Physical Diagnosis of the Thorax. By ARTHUR M. CORWIN, A.M., M.D., Instructor in Physical Diagnosis in Rush Medical College; Attending Physician to the Central Free Dispensary, Department of Rhinology, Laryngology, and Diseases of the Chest. Third edition, revised and enlarged. Philadelphia: W. B. Saunders. Canadian Agents: J. A. Carveth & Co. Price, \$1.25 net.

The first edition of this work was published for the immediate wants of the author's classes. Its field of usefulness ever extended, and the author was compelled to bring out a second edition, which he has thoroughly revised.

The author presents the subject in a form which, we think, will prove satisfactory to any one studying the important subject of physical diagnosis of the thorax.

A Text-Book of Physiological Chemistry. For Students of Medicine and Physicians. By CHARLES E. SIMON, M.D., of Baltimore, author of "Simon's Clinical Diagnosis," etc. In one octavo volume of 452 pages. Cloth, \$3.25 net. Philadelphia and New York: Lea Brothers & Co.

The many admirers of Dr. Charles E. Simon's Clinical Diagnosis will welcome from his pen this, the first systematic American work on Physiological Chemistry. Scientific accuracy is the order of the day in medicine, and will still more characterize the future. A few years ago such a work as Cushny's Pharmacology, for instance, would have interested only a fraction of the readers who so speedily brought it to a new edition. There is an eager desire to know the exact mode of action of drugs and there is the same demand for accuracy and certainty in determining disease. Simon's Clinical Diagnosis answers this latter demand, and promptly passed through several editions, thus forecasting the future of his new work on Physiological Chemistry. The three volumes are on a par in their respective lines.

Dr. Simon is an admirably clear writer and teacher, and has

adapted his book not only to the needs of students, but also to those of the practitioners who may have been unable to devote to the subject the study which it merits. The volume will also serve as a guide in collegiate or private laboratories.

The first section gives a general survey of the origin and chemical nature of the three great classes of foods, and of the products of their decomposition. In the second edition are treated the processes of digestion, resorption, and exertion. The third is devoted to the chemical study of the tissues and various organs of the body, the products of their action, and their relation to physiological function.

NEW BOOKS RECEIVED.

Outlines of Physiology. JONES. Published by P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia, Pa.

The Medical News Pocket Formulary, New (4th) Edition. By E. QUIN THORNTON, M.D., Jefferson Medical College, Philadelphia. In one wallet-shaped volume, strongly bound in leather, with pocket and pencil. Price, \$1.50 net. Philadelphia and New York: Lea Brothers & Co. 1902.

A Brief Manual of Prescription Writing in Latin or English, for the use of Physicians, Pharmacists, and Medical and Pharmaceutical Students. By M. L. NEFF, A.M., M.D., Cedar Rapids, Ia. Pages v-152. Size, 8 by 5 3-4 inches. Extra Cloth, 75 cents net, delivered. Philadelphia: F. A. Davis Co., 1914-16 Cherry Street.

Clinical Hematology. A Practical Guide to the Examination of the Blood with reference to Diagnosis. By JOHN C. DACOSTA, Jr., M.D., Jefferson Medical College, Philadelphia. Containing 8 full-page colored plates, 3 charts, and 48 other illustrations. Octavo, 450 pages. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price, \$5.00 net.

Progressive Medicine, Vol. IV., 1901. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 400 pages, 13 illustrations. Per annum, in four cloth-bound volumes, \$10.00. Philadelphia and New York: Lea Brothers & Co.

Essentials of Physiology. Prepared especially for Students of Medicine; and arranged with questions following each chapter. By SIDNEY P. BUDGETT, M.D., Professor of Physiology, Medical Department of Washington University, St. Louis. 16mo volume of 233 pages, finely illustrated with many full-page half-tones. Philadelphia and London: W. B. Saunders & Company, 1901. Cloth, \$1.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

Studies in the Psychology of Sex—Sexual Inversion. By HAVELOCK ELLIS, L.S.A. (England). The "Studies in the Psychology of Sex" will probably be completed in five volumes. "Sexual Inversion" is second volume in the series. Pages xi-272. Size, 8 5-8 by 5 3-4 inches. Extra Cloth, \$2.00 net, delivered. Sold only to physicians, lawyers, advanced teachers, and scientists. Philadelphia: F. A. Davis Co., 1914-16 Cherry Street.

The Four Epochs of Woman's Life. A Study in Hygiene. By ANNA M. GALBRAITH, M.D., Author of "Hygiene and Physical Culture for Women"; Fellow of the New York Academy of Medicine, etc. With an Introductory Note by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania. 12mo volume of 200 pages. Philadelphia and London: W. B. Saunders & Company, 1901. Cloth, \$1.25 net. Canadian Agents: J. A. Carveth & Co., Toronto.

PSORIASIS.

Gerstle (*Dermat. Centralbl.*) believes psoriasis to be of neuropathic origin. He has seen psoriasis coincident with gout and diabetes a number of times. In Joseph's clinic, 151 out of 975 patients were cabinetmakers. He has found chrysarobin very effectual as a curative. The flakes are first thoroughly removed with soap and hot water, so that the chrysarobin can come in contact with the diseased tissue. A 10 per cent. solution in traumaticin is applied twice a week and rubbed in with a stiff brush. The dermatitis which occasionally followed this treatment was easily cured by boricized vaseline. A peculiar coincidence was that these cases were cured of the psoriasis more speedily than those in which there was no dermatitis. For the treatment of lesions on the head and face a milder salve is used, so as to protect the conjunctivæ and to avoid staining of the skin.—*Medical Standard.*

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PROFESSIONAL DEGENERACY.

We are progressing! Two medical men, supposedly in good standing in the profession, have joined with a number of laymen in establishing a long-felt want in our midst, an institution for the certain and speedy cure of consumption. The long-sought-for remedy which will be used in the institution has been discovered, and, according to the advertisements of the promoters, patented by a certain "celebrated" Dr. Ramage. When or how this gentleman obtained his celebrity we are not informed, except that he is a chemist for a large corporation in the United States. For all we know he may be in line with the "celebrated Professor Smith," phrenologist, and the "celebrated" Madam Jones, seventh daughter of a seventh daughter, types of celebrities commonly met with in newspaper advertisements. The announcement of this great discovery has been made with large headings in the lay press. We take it to be an advertisement paid for at so much a line, although inserted as reading matter, because we can scarcely believe that a newspaper of the standing of the *Toronto Globe* would, without investigation, endorse the claims of Dr. Ramage, who, no matter how great his reputation in Cleveland, which is set down as his home, is an entirely unknown personage in this backwoods district. Even with the *imprimatur* of Dr. Walker and Dr. J. H. Cotton, two local physicians, we do not think the *Globe* should take the idea at once to bosom as the solution of a problem in which many previously loud-heralded solutions have subsequently proved fallacious. The process adopted by the company which have acquired the patents (the patenting of the treatment is not mentioned by the *Globe*, but by another Toronto

daily) consists in the use of "Electrified oxygen" for inhalation. This "electrified oxygen," or ozone, is not of the liquified variety with which we have become familiar through the advertising columns of the press, nor yet of the variety which is supposed to be present in the air by the seashore, for this is free to anyone who can get there. It is an ozone mixed with oil, the latter component lubricating the throat, so to speak, and preventing the irritation which would otherwise be produced. Strange to relate, however, the effect of this ozone inhalation, according to the report in the *Globe*, is such that a patient treated by it requires five times the nourishment necessary under ordinary conditions; this, together with the royalty which we suppose Dr. Ramage will demand, and the small profit which Drs. Walker and Cotton may reasonably expect in return for their shrewdness in acquiring such a valuable remedy, will no doubt make the treatment expensive. Patients entering Dr. Walker's private hospital, knowing beforehand that they will eat five times as much as in their last boarding-house would not have the heart to refuse five times the price. Should they not be able to accomplish this gastronomic feat it will not do the house any harm. The food would be willingly supplied and the management is not responsible for a patient's obstinacy.

The impression sought to be conveyed by the advertisement is that the treatment is an infallible remedy for consumption. If this statement is not true, it is an outrage and a crime against a class already sufficiently harrassed and abused, who, in many cases, must starve their stomachs if they are to hand out money for treatment. If, on the other hand, the statements published are even in a degree true, why should its benefits be confined to the patrons of Drs. Walker and Cotton? Dr. Ramage is said to have made the great discovery stimulated by an effort to save the life of one of his own children sick with tubercular disease. The child recovered. Surely, in gratitude for the life thus saved, Dr. Ramage should have given his discovery to the world. If he has discovered a certain cure for tuberculosis he will be acclaimed as the greatest benefactor of his race. Is this not reward enough without claiming money from those who may subsequently avail themselves of his method; or, if not satisfied with the honor of his achievement, does Dr. Ramage doubt that every civilized nation would hasten to recompense such a benefactor?

One statement made by the local sponsors of the treatment is sufficient to cast the gravest doubt upon the whole business. Drs. Walker and Cotton state that in two years, using this process not then perfected, they have cured fifteen patients suffering from consumption. We do not believe it. The report of the Gravenhurst Sanatorium published in our last issue can only show the same number of cures for the past year. If Drs. Walker and Cotton have had such marvellous results and seek to influence the

public by the statement of them, we have a right to ask that they produce the proofs. Where and who are these fifteen patients? If cured they can be produced and will doubtless give evidence of the fact, and in doing so help to give Drs. Walker and Cotton a better professional standing than they at present enjoy.

The introduction of commercialism into our profession is rather a new departure in Canada, and for this reason we have referred to the present instance at such length. We have yet to learn of any discovery in medicine of real or permanent value which has been withheld by its discoverer for the purpose of private gain. There are some things too sacred in which to traffic, and one of these is human life.

FEEES FOR ATTENDANCE ON HOSPITAL PATIENTS.

Several surgeons have recently brought suit in the Toronto Division Court against patients whom they have attended in hospitals, demanding fees for the services rendered. Most of these suits have failed; but they have served a useful purpose in pointing out the legal relations between physicians and surgeons and patients treated by them in the public wards of an hospital. It is surprising that such an important point should so long have remained unsettled. The general impression held by the profession was that patients whose circumstances allowed the payment of a fee should not expect treatment for nothing in an hospital any more than in a private house; but the fact that an hospital is a public institution, supported to some extent by public funds, seems to make a difference in the eye of the law, and it has been held that without evidence of a specific contract or understanding between physician and patient that a fee would be expected, that the patient cannot be held liable for any account subsequently presented to him. In this connection we can not but regret that criticism has been directed, not towards the law, but towards the Judge's interpretation of it. The gentleman before whom these cases were tried is himself the son of a physician, and, needless to say, animated by the kindest feelings for our profession. We believe that he fully appreciates the conditions, and realizes that hospital physicians and surgeons have to earn a livelihood the same as other people in the community. But the Judge cannot be guided by sentiment; he must interpret the law as he finds it, and we have not the slightest reason to doubt but that his interpretation is correct.

Year by year a large proportion of the sick, not only the sick poor, but all classes, seek hospital treatment. Many in possession of more of this world's goods than the physician or surgeon who attends them may ever accumulate, go into the public wards,

paying for food, nursing, medicine and dressings the munificent sum of forty cents a day. That such patients should, in addition, ask for free treatment is nothing short of scandalous, and an imposition on our good nature and proverbial lack of business ability. No fee can be charged them, however, unless a definite understanding is arrived at upon their admission. The course which should be pursued is obvious. Inquiry should be made concerning the circumstances of every patient seeking hospital aid, and such patients as are able to pay should be given to understand by the secretary of the hospital, or when first seen by their medical attendant, that a fee would be expected and demanded. There is no danger that any abuse would follow this course. No sharp line would be drawn, and where doubt existed we feel sure that the patient would always get the benefit of it. Patients might appreciate in a higher degree the services which they now seem to demand as a right, and it would also soon dissipate the prevalent idea that in some mysterious manner, perhaps out of the forty cents a day, hospital physicians and surgeons are enjoying a very fat income.

ON BEHALF OF THE INEBRIATE.

The following is self-explanatory :

To the Editor of DOMINION MEDICAL MONTHLY :

Dear Sir,—In an editorial in the February number of the DOMINION MEDICAL MONTHLY of last year (page 92), you say, *inter alia*, that "imprisonment has proved utterly useless from either a deterrent or a corrective standpoint," and you further say that, "It is to be hoped that the present session (of the Legislature) will see the inauguration of more humane and more scientific treatment of inebriates." You will remember that about two years ago a bill was drafted conjointly by the Prisoners' Aid Association and the Public Health Committee of the Ontario Medical Association. This bill has been under the consideration of the Government ever since that time. The principle on which the bill is based, has been endorsed by the Canadian Medical Association, the Ontario Medical Association, the Toronto Medical Society, and by a majority of the medical members of the Legislature. It has also been endorsed by the Canadian Conference of Charities and Correction, as well as by a number of other charity organizations, including the Ontario W. C. T. U. Notwithstanding this, up to the present time nothing has been done by the Government regarding this bill; and, moreover, I regret to be obliged to report that in an interview with the Provincial Secretary recently, we were informed that no action could be taken by the Government at present, i.e., the bill could not be introduced.

until after the elections. The deputation then stated that if there were good and sufficient reasons why the proposed bill could not be introduced this session they held that it was not too much to ask that a small appropriation should be made, say, \$3,000, to admit of a beginning being made in the meantime, for the purpose of encouraging the treatment of inebriates, either in cottage hospitals or in the wards of public hospitals, where satisfactory arrangements can be made to that end. The deputation called attention to the fact that a small beginning had been made in this direction during the last year by giving medical treatment to sixty-one cases of inebriety in connection with the Working Men's Home, Toronto, with satisfactory results, and the Association asked that they be reimbursed for the money spent in this effort, namely \$500. These requests seemed to strike the Secretary as being but reasonable under the circumstances, and he intimated that he would report favorably of the matter to his colleagues. The reply of the Provincial Secretary with regard to the non-introduction of the bill this session was of course most disappointing, but, on the other hand, if the money grant be made in accordance with the petition of the deputation, a beginning at least will be made, and the experience gained during the year will be of undoubted value in legislating for the unfortunate class for whose benefit the bill is intended. We will be thankful for the potent influence of the profession in bringing this about.

Yours truly,

Confederation Life Building, Toronto, A. M. ROSEBRUGH.
February 14th, 1902.

It is to be regretted that Dr. Rosebrugh and the gentlemen associated with him have not been more successful in their laudable and unselfish efforts. It should be evident that if treatment of the inebriate can be successfully introduced, it is demanded not only from a humanitarian but also from an economic standpoint. The money spent in the treatment of confirmed drunkards, even if it were necessary to establish a special institution for this purpose, would be saved many times over by diminishing the jail and prison population, and turning useless and expensive burdens into useful members of society. Unfortunately the inebriate vote is not organized; nor, if it were, would it be sufficiently intelligent to be cast in self-defence. Some day it will be recognized that drunkenness is a disease, and treated as such; but when such a day comes there will also be in every cabinet a minister of hygiene, and more energy will be devoted by governments to the health and well-being of the people within their jurisdiction, than to the extension of railroads, the production of butter and cheese—all very necessary in their way—or even to the fattening and prevention of disease in cattle.

Editorial Notes

DR. JESSOP'S BILL IN THE ONTARIO LEGISLATURE.

An Act to amend The Ontario Medical Act.

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

Rev. Stat.,
c. 176, s. 5,
amended.

1. Section 5 of *The Ontario Medical Act* is amended by substituting for the word "appointed" in the second line thereof the word "elected."

Rev. Stat.,
c. 176, s. 6,
repealed.

2. Section 6 of the said Act is repealed and the following section substituted therefor:

6. (1) The council shall consist of seventeen members to be elected in the manner hereinafter provided from amongst and by the registered members of the profession;

Council, how
constituted.

(2) Every member so elected shall be a resident of the territorial division for which he is elected, and any member, who, during the term for which he was elected ceases to reside in the division for which he was elected, shall thereby vacate his office as such member.

(3) One member shall be so elected from each of the territorial divisions mentioned in Schedule A to this Act by the resident practitioners of medicine registered in such division, and the manner of holding such election shall with respect to the time thereof and the taking of votes therefor be determined by a by-law to be passed by the council, and in default of such by-law being made, then the Lieutenant-Governor shall prescribe the time and manner of holding such election.

Rev. Stat.,
c. 176, s. 7,
repealed.

3. Section 7 of the said Act is repealed and the following section substituted therefor:

Term of office,
vacancies how
filled.

7. (1) The members of the council shall be elected for a period of four years, but any member may resign at any time by letter addressed to the president or registrar of the council, and upon the death or resignation of any member of the council, or by his becoming disqualified owing to his having ceased to reside in the territorial or electoral division for which he was elected, or in case a new election is requisite on account of the decision of a judge upon a contested election, the registrar shall forthwith

cause a new election to be held in such territorial or electoral division, and the election shall be conducted in accordance with the by-laws and regulations of the council, but it shall be lawful for the council during such vacancy to exercise the powers hereinafter mentioned.

(2) The registrar shall, not more than sixty or less than forty days before the time for receiving nominations for any election under this Act notify by letter or post card every registered medical practitioner in the province of the date of receiving such nominations.

4. Section 9 of the said Act is repealed.

Rev. Stat.,
c. 176, s. 9,
repealed.

5. Section 20 of the said Act is hereby amended by striking out the words "referred to in section 6 of this Act" in the fourth and fifth lines thereof, and substituting therefor the following words, "authorized to give instruction in medicine and surgery in the Province of Ontario."

Rev. Stat.,
c. 176, s. 20,
amended.

6. Section 28 of the said Act is repealed and the following section substituted therefor:

Rev. Stat.,
c. 176, s. 28,
repealed.

28. The board of examiners elected under the preceding section shall be composed as follows: One member to be chosen from each of the following named teaching bodies, namely, the University of Toronto, the Queen's University and College, of Kingston, the University of Trinity College, and the Western University, and one each from every other university college or teaching body in the Province of Ontario which may be hereafter organized to teach and be empowered by law to grant medical or surgical diplomas in the said Province, and which establishes and maintains to the satisfaction of the College of Physicians and Surgeons of Ontario a medical faculty in connection therewith, and a number, not less than six members, one of whom shall be a homeopathic practitioner, to be chosen from those members of the College of Physicians and Surgeons of Ontario who are unconnected with any of the teaching bodies above mentioned or referred to.

Board of
Examiners.

7. Section 29 of the said Act is amended by striking out all the words following the first word in the seventh line thereof, and substituting these words: "A Homeopathic Examiner."

Rev. Stat.,
c. 176, s. 29,
amended.

MEMORIAL TO DR. LESSLIE M. SWEETNAM.

The Ontario Medical Library gains by the fact that Dr. Howard Kelly and the late Dr. Lesslie Sweetnam were bosom friends. Shortly after the death of Dr. Sweetnam, Dr. Kelly communicated with Dr. N. A. Powell, the curator of the Ontario Medical Library, requesting that he look through the library of Dr. Sweetnam and make such selections as he deemed proper for the Ontario Library. Some 275 volumes were chosen and the valuation placed upon these by a local medical book expert reached nearly \$1,200. These have been presented to the Library by Dr. Kelly, with the understanding that they constitute the Sweetnam Memorial Section. The Ontario profession will not fail to appreciate this graceful act of Dr. Kelly.

 MEDICAL ACTS (EXTENSION) BILL.

General Laurie has introduced again in the House of Commons his Bill bearing this title. Its general purpose is to extend the benefits of registration in this country to qualified medical practitioners in the colonies. The honorable and gallant member was prompted to introduce the measure in the first instance by the refusal of the War Office to accept the services of Canadian surgeons for other troops in South Africa than those sent from the Dominion. The Bill has never been discussed in the House and the prospect of its being discussed during the present session is but slight.—*The Lancet*.

 THE SOUTH-WESTERN MANITOBA MEDICAL ASSOCIATION.

DEAR DOCTOR,—We, the undersigned, members of the South-western Medical Association of Manitoba, have been authorized, at a meeting of the Association held at Morden on the 9th inst., to write you, explaining the objects of our Association, and pointing out why it is advisable for such an organization to be formed that will include the whole Province.

We realize that as yet our profession is but in its infancy in this Province, and that we must take active measures to establish ourselves on a sure and permanent foundation, in order that we may safeguard our interests and those of other members of the profession who may decide to locate in this Province in the future.

Our object may be defined as the above, and the means which we have adopted to procure this object are as follows:

I. We have an Association, including all the medical men in South-western Manitoba, *i.e.*, who are located on the railway lines south of the main line of the C.P.R. Out of 70 available

men 67 have already joined, and the others, we have reason to believe, intend to join.

2. We have decided to establish a new tariff for insurance companies and lodge work, which is as follows: (a) Examination for admittance to lodges without insurance, \$2.00; (b) Examination for admittance to lodges with insurance, \$3.00; (c) Examination for admittance to level premium insurance companies, \$5.00. All members of this Association have signed a pledge binding them to this tariff from January 1st, 1902.

3. We have also arranged a provincial tariff of fees to which we are to adhere as closely as possible.

4. We have decided that members of our profession would be acting in their best interests by rendering at least quarterly statements of their accounts.

The meeting definitely expressed the opinion that contract work in relation to lodge practice should be discouraged.

Thus briefly we give you a resume of the aims of the Association, and we ask that you join with us in our endeavor to organize the whole Province into an Association.

A meeting will be held shortly at Brandon to secure this object, and you will be notified later of the date. We urge upon you to attend this meeting and to see that as many as possible of the physicians in your district are present. An excellent programme has been arranged. The aims of the Association will be more fully explained and papers of general interest to the profession will be read and discussed.

Finally, the Secretary will be pleased to give any further information you may desire.

Yours fraternally,

B. J. McCONNELL, *President.*

W. R. RIDDELL, *Pres. of Exec.*

T. J. LAMONT, *Secretary,*

Morden, Man., January 30th, 1902.

Treherne, Man.

News Items

WINNIPEG vital statistics for January: Births, 55 males and 42 females; deaths, 30 males and 13 females; marriages, 54.

THE Dominion Shorthorn Breeders' Association have placed themselves on record as being opposed to the tuberculin test.

DR. HAMILTON, of Cornwall, Ont., the local Medical Health Officer, has contracted smallpox in the discharge of his duties.

MONTREAL is likely to have a consulting board of four physicians and a practical plumber to advise the local board of health of the city.

DR. J. R. LANCASTER, Toronto, '95, who has been practising at Tilsonburg, Ont., has been appointed house surgeon at Grace Hospital, Toronto.

A LABORATORY FOR HAMILTON.—Dr. Langrill, Medical Health Officer for Hamilton, is urging upon the members of the Board of Health the advisability of equipping a laboratory in connection with the Health Department of the city.

THE question of the medical inspection of schools for Montreal was discussed at the last meeting of the Medico-Chirurgical Society of that city. Dr. Ruttan, Dr. Tait McKenzie and Dr. Charles H. Church read papers on the subject. The question will be up again for discussion at the next meeting.

DR. J. A. FIFE, for many years a practitioner of Peterboro', died on the morning of the 12th of February. He was a native of Peterboro' County, having been born there in 1838. He was a graduate of Toronto and Victoria Universities, and had taken a post-graduate at Bellevue, N.Y. He served for two years in the Northern navy during the American Civil War.

SMALLPOX IN THE PROVINCE OF QUEBEC.—Dr. Elzear Pelletier, Secretary of the Provincial Board of Health of the Province of Quebec, has compiled a statement showing that during the past year there were 5,069 cases of smallpox in that Province. These occurred in 276 localities in fifty-five of the seventy-three counties in the Province.

THE efficacy of vaccination has been most effectively illustrated in Montreal. According to Dr. J. E. Laberge, there have been in the Civic Hospital of that city, since May last, 240 cases of smallpox, and in no instance had any patient been vaccinated. A staff of eighteen persons—doctors and nurses—have been in attendance upon these patients almost daily, and even hourly, but not one of them has ever contracted the disease.

TORONTO HOSPITAL NOTES.—Grace Hospital has just about completed a fine new operating theatre at a cost of \$10,000, the gift of Lieutenant-Colonel Pellatt. Toronto General Hospital has more patients at the present time than at any other time in its

history. St. Michael's Hospital has been refusing to take any more patients for some weeks. The Western Hospital has erected a large tent on its lawns for the accommodation of fifteen consumptive patients.

NEW HOSPITAL FOR ST. STEPHEN'S, NEW BRUNSWICK.—On the afternoon of the 4th of February, a fine new hospital was opened at St. Stephen's by the Hon. L. J. Tweedie, Premier of the Province. The Hospital is situated on the banks of the St. Croix River, a short distance below the town, and is said to be a very fine location. The grounds and buildings were formerly the Chipman homestead, and have been presented to the town of St. Stephen's by Lady Tilley and other heirs of the Chipman Estate.

THE report of the Inspector of Lunatic Asylums for the Province of Ontario shows that on the 30th of September, 1901, there were 4,604 patients in these institutions, as compared with 3,318 in 1890. Toronto Asylum has 724; London, 1,034; Kingston, 509; Hamilton, 1,029; Mimico, 605; and Brockville, 613. While the provincial population has increased from 1,396,091 to 2,182,942, or 56 per cent. in the last forty years, the official insane and idiotic population has increased from 1,631 to 5,880, or 260 per cent.

AN INTERESTING MEDICO-LEGAL CASE IN MONTREAL.—A short time ago a clergyman died intestate in the city of Montreal, worth \$95,000, which he had inherited from his first wife. A short time after his death his widow gave birth to a son, who died about six hours after its birth. Upon the viability of the child born during the past few months depends the dispensation of the estate. Other heirs claim that the child was not born viable; and physicians will be called in to give evidence upon the viability accordingly.

THE following appointments have recently been made to the staff of the Royal Victoria Hospital, Montreal: Dr. A. G. Nichols, Assistant Pathologist; Dr. G. P. Girdwood, Director of the Medical-Electrical Department of the Hospital; Drs. H. B. Cushing and F. M. Fry, Clinical Assistants in Medicine; Drs. A. Shirres and A. A. Robertson, Clinical Assistants in Neurology; Dr. E. A. Archibald, Clinical Assistant in Surgery; Dr. F. W. Harvey, Clinical Assistant in Ophthalmology; Dr. W. H. Jamieson, Clinical Assistant in Laryngology; Dr. H. B. Yates, Clinical Assistant in Bacteriology; Dr. A. A. Bruere, Director of the Clinical Laboratory; Dr. H. B. Cushing, Medical Registrar; Dr. F. B. Jones, Clinical Assistant in the Clinical Laboratory.

THE annual report of the Royal Victoria Hospital, Montreal, for 1901, shows that during the past year 2,579 patients were admitted to that hospital. On the first of January, 1901, there were 194 patients in residence, and during the year 2,600 have been discharged, of which number 1,583 were well, 792 improved, 59 unimproved, 51 not treated, 115 died; and 173 remained in the institution till December 31st, 1901. The death-rate has been 4.42 per cent., or, if those dying within forty-eight hours after admission be deducted, 3.54 per cent. In the out-door departments there were 3,601 patients treated. The income for the year amounted to \$130,738.40, and the expenditure to \$112,280.20. An extension will shortly be erected, with provision for an operating theatre, for the gynecological department, and another theatre for special cases.

THE American Medico-Psychological Association will hold its fifth-eighth annual meeting in Montreal on the 17th, 18th, 19th and 20th of June, the headquarters of the Association to be the Windsor Hotel. The annual address will be delivered by Dr. Wyatt Johnston, Lecturer on Medical Jurisprudence, McGill University Law Faculty, and the subject will be, "The Medico-Legal Appreciation of Trauma in its Relations to Abnormal Mental Conditions." Amongst other Canadians who have promised papers are: Dr. Daniel Clark, Toronto; Dr. R. M. Bucke, London; Dr. James Russell, Hamilton; Dr. George L. Sinclair, Halifax; Dr. James V. Anglin, Montreal; Dr. A. Vallee, Quebec, and Dr. George Villeneuve, Longue Pointe, Que. The Committee of Arrangements is in charge of Dr. T. J. W. Burgess, Superintendent of the Protestant Hospital for the Insane, Montreal.

Selected Abstracts

THE INTESTINAL ORIGIN OF SEVERE ANEMIAS.

The writer (Grawitz, E., *Berlin klin. Wochenschr*) commences by a reference to Hunter's theory of pernicious anemia as a disease dependent on the chronic infection of the alimentary tract, which, commencing in the mouth, subsequently extends to the stomach and intestine. He admits that the great majority of cases of pernicious anemia that have come under his care have at one time or another presented marked stomatitis, but expresses himself as strongly of opinion that the stomatitis and hemorrhage from the gums are the result of the cachexia accompanying the blood disease, and are not of a casual character.

Whilst some observers have attributed the disease to the glandular atrophy of the stomach and intestine, with actually deficient absorption of food material, others have looked for the cause in abnormal metabolism of nitrogenous ingesta with production of poisonous products. Much doubt, however, has been thrown on the significance of the atrophic changes in the stomach and intestine, it being contended that these are mainly *post-mortem* effects, and further, the most recent observations, those of Strauss, go to show that the normal processes of proteid and fat absorption are in no way interfered with, nor can any excess of toxic material be detected, as a rule, in the urine. It has, indeed, been recognized, ever since the earliest description of cases of pernicious anemia, that the general bodily nutrition is but little affected, but with regard to the presence of toxic material in the urine, the writer objects to the data upon which the conclusions have been built, in so far as they refer to a patient in whom the disease is already established, and whose diet is carefully arranged so as to be readily assimilable. To be conclusive, similar observations should be made upon patients in whom the disease is in course of development, and upon the same diet on which he has been ordinarily subsisting. The history of many of these cases of severe anemia frequently reveals long-standing gastric disturbance, and especially chronic constipation. In the writer's own experience many cases exhibit excess of indican in the urine on first coming under treatment, the subsequent disappearance of which may be taken to be indicative of a diminution of the putrefactive changes in the alimentary canal as the result of careful dieting and medicinal treatment. He admits that he is at a loss to explain satisfactorily why the blood destruction should remain so extreme in spite of the improved condition of the stomach and intestine.

The most probable of the explanations which he offers is that the deterioration of the blood brings about degenerative changes in the bone marrow itself, as it admittedly does in many other tissues, and that consequently the regeneration of the blood is seriously hampered.

The writer is further of opinion that, since toxemia from chronic gastro-intestinal disturbance is by no means uncommon, whilst pernicious anemia is a rare disease, it can only be in certain persons that there is a special disposition to the production thereby of severe blood changes. He finds an exact parallel in the case of bothriocephalus infection. In many districts infection with this worm is by no means uncommon, yet only a small proportion of those affected present serious blood dyscrasia.

With regard to the atrophy of the gastric and intestinal

glands with deficient absorption of nutriment, whilst the writer cannot admit that this alone is sufficient to account for the onset of severe anemia, he thinks that it may play a certain part in the process. If, for example, a deterioration of blood occurs from absorption of toxic material, glandular atrophy may follow, either as the result of the anemia or from the local effects of the poison, and consequently the absorption of food will be seriously interfered with, a vicious circle being thereby set up which tends to produce more and more marked general malnutrition.

The writer insists very strongly on the importance of bearing in mind the intestinal origin of the anemia in considering the treatment. In addition to the administration of arsenic he advocates the washing out of stomach and intestine and the use of antiseptic drugs, with special care in the employment of a readily digestible dietary. He considers that it is the failure to continue the careful regulation of the gastro-intestinal functions after the patient leaves hospital that accounts for so many cases of recurrence of the disease after apparent cure. Of the nineteen cases that have been under his care in recent years, one has remained well for eight years, three others have, to the writer's knowledge, kept well for four years, while four others have remained sound and able to work for shorter periods. Three have died, and the other eight have been lost sight of.—*Medical Chronicle*.

THE TREATMENT OF PUERPERAL INFECTION.

M. Budin (*L'Obstetrique*) describes the treatment of cases of puerperal infection as carried out under his instructions in the Clinique Tarnier in Paris.

In the great majority of cases of infection, the cavity of the uterus is invaded by pathogenic organisms, and M. Budin maintains that in the early stages of the disease the uterine cavity may be rendered free from bacteria by thorough cleansing. If the case is only seen at a late stage it may still be possible, by careful treatment of the uterine mucosa, to avoid further spread of the infection; the patient will then only have to resist the generalised infection already existing, and in this she is often successful. Budin lays great stress on the importance of an early diagnosis, and calls attention to the significance of abnormal permeability of the internal os in cases of intrauterine infection. Normally, the internal os rapidly closes after delivery, so that the finger only penetrates through it with some difficulty. If, however, the uterine mucosa is infected, involution is delayed, and the internal os remains widely open. If, then, in a doubtful case of pyrexia, the

os is found to be closed, it is almost certain that the cavity of the uterus is not infected.

If infection has occurred, the cavity of the uterus should be carefully explored by the finger, under strict aseptic precautions. If clots are present, with or without evidence of decomposition, and if the wall of the uterus is smooth except over the placental side, and if over this area the tissue is firm and resistant, it is sufficient to remove the clots and douche out the uterine cavity. This is often followed by a rapid fall of temperature and complete disappearance of all symptoms.

If, on the other hand, the finger, penetrating easily into the cavity of the uterus, discovers the presence of placental fragments or membranes, and if the mucosa is softened and friable, it may be assumed that the cavity of the uterus is infected. In these cases M. Budin removes loose fragments by the finger, and follows this by "ecouvillonnage." For this purpose anesthesia is required. The patient is placed in the lithotomy position. Two fingers are introduced into the uterus, and with the other hand the fundus is pushed down from above. All loose portions of tissue can be removed in this way without any risk of perforation. This procedure is succeeded by "ecouvillonnage," which consists essentially in cleansing all debris from the uterine cavity by means of elongated brushes, resembling those used for cleaning glass bottles.

This method of treatment was first introduced by M. Doleris, in 1885, who used brushes made of hair. These, however, have not sufficient firmness. Budin, therefore, has constructed brushes made of feather quills, attached to a strong flexible wire stem. The technique is briefly as follows: The cervix uteri is fixed with volsella, and the brush, suitably curved, is passed into the uterine cavity. The whole of the interior of the uterus is now systematically brushed over, a rotatory movement also being adopted. In this way, all shreds and debris are completely removed, and the cavity remains quite smooth. A finger may be introduced to ascertain that the uterus is empty. Another brush, soaked in a solution of glycerine and creosote, is now used to swab out the cavity. It is also well to pack lightly with iodoform gauze to prevent hemorrhage.

In some cases a rigor, with sudden rise of temperature, follows this procedure. More commonly there is a gradual fall of temperature to normal. The gauze packing is removed in twelve to eighteen hours, and a uterine douche may again be given for two or three days. Usually the internal os rapidly closes, and then vaginal douches only are required.

It is essential that this operation should be carried out at an

early stage of the disease. If this is done, a rapid fall of temperature occurs, and the patient usually makes a rapid recovery. If it is performed at a later stage, the fall of temperature is only gradual. In rare cases, if the pyrexia still continues, it may be necessary to repeat the process.

M. Budin claims this operation can be carried out without danger, and that in the great majority of cases of infection a good result will be obtained. In rare cases, if interference is delayed until late, or if the infection is of a grave type, it will fail, and the patient succumb.

He also recommends the same treatment in all cases of incomplete abortion, with the object of preventing infection.

The results obtained by this treatment are given in an analytical table at the end of the paper. They may be briefly summarized as follows:

1. In six months (November, 1900, to June, 1901) 33 women were admitted who were previously infected. Four recovered after simple digital exploration and uterine douches; in 13 cases prophylactic cleansing of the uterus was carried out; in 16 cases digital exploration was followed by "ecouvillonnage." All of these cases recovered with one exception, a patient admitted on the eighth day after delivery suffering from a severe type of the disease.

2. During the same period, 59 cases of infection arose in the hospital out of 1,137 deliveries. These were all conveyed to the "isolation block." In 5 cases uterine injections alone were sufficient. In 54 cases the uterus was explored with the finger, followed by "ecouvillonnage." All of these recovered, so that there is no death from infection in this series.—*Medical Chronicle*.

MEDICAL TREATMENT OF PERITYPHLITIS.

Bourget (*Therapeutische Monatshefte*, July, 1901) considers that much can be done by medicinal means to combat an acute attack of perityphlitis, and deplors the hasty use of the knife in this condition. The treatment generally adopted by surgeons, which consists in the application of an ice-bag to the right iliac region and the internal administration of opium, does more harm than good. Lauder Brunton has shown by experiment that the application of cold to the surface raises the temperature of the deeper structures in the abdomen, which is in direct opposition to the effect desired. The administration of opium to place the intestines at rest in order to favor adhesion is equally bad, for if the majority of cases is caused by fecal accumulations in the cecum, it is illogical to further increase the

further constipation by opium. The prophylaxis of perityphlitis is important, and consists in the observance of a mixed diet in which the quantity of meat is reduced to a minimum, while the greens, well-cooked fruits and farinaceous foods are increased. The author does not think that the fear of swallowing seeds of fruits is justified, for by maceration in the intestinal secretions mucin is formed, which is useful in lubricating the intestinal walls and aiding propulsion of alimentary or fecal masses. Gastric hyperacidity should be corrected; the bowels should be regulated by the aid of saline purgatives taken in the morning on an empty stomach; it is still better to employ large amounts of cooked fruits, or if this fails, to take in addition 1-2 to 1 dram of castor oil after meals. If an acute attack begins, the patient is placed on a liquid diet, and given 2 to 5 drams of castor oil daily, in which is dissolved 15 grains of salacetol. If gastric symptoms predominate, lavage of the stomach is performed with water containing 1 per cent. of sodium bicarbonate. Intestinal lavage with antiseptic liquids is considered very beneficial by the author, as by this means toxic material may be removed. The introduction of several quarts of water under pressure is considered dangerous. The author employs 1 quart of water, introduced high in the bowel by means of a soft stomach-tube, so that some of the liquid will enter the cecum. The liquid should have a temperature of 100 degrees, and contain a soluble, nontoxic antiseptic. Ichthyol is used exclusively by the author, in the proportion of 4 parts to 1,000. At the same time 3 to 6 ounces of olive oil, containing 1 per cent. of menthol, or thymol, or methyl salicylate, is injected into the bowel. The mechanical and emollient effect of the oil also gives very good results in the treatment of constipation, and in appendicular crises it calms the pains very rapidly. In the interval of lavage a flaxseed poultice is placed over the right iliac fossa, or better, 5 or 6 leeches, if the swelling is considerable or very resistant. On the second or third day of treatment the castor oil is replaced by saline purgatives, as follows:

Sodium bicarbonate (pure)	}	of each, 75 grains.
Sodium phosphate (anhydrous)		
Sodium sulphate (anhydrous)		
Water.....		1 quart.

Dose, 5 ounces 3 or 4 times a day.

In Bourget's experience, intestinal lavage has a rapid and remarkable effect on the pain of perityphlitis. The colic and pain on pressure diminish progressively, and the swelling diminishes in size and consistency. The symptoms of general intoxi-

cation cease gradually, in the majority of cases within the first 25 hours. The temperature often falls from 102 degrees or 104 degrees to 98 or 100.4 degrees after the first lavage, and remains at normal after the third or fourth. The duration of the treatment by lavage is from 2 to 10 days, usually they are unnecessary after the fifth or sixth day, and are replaced by mild purgatives, such as castor oil or the saline formula given above. The author has seen many cases definitely cured by this mode of treatment, and considers it preferable in many cases to immediate operation. —*American Medicine.*

DECAPSULATION OF THE KIDNEY FOR CHRONIC BRIGHT'S DISEASE.

If the operation which has lately been employed by Dr. Edebohls for chronic Bright's disease, shall prove as effective as its inventor apparently hopes and believes, it will be one of the most beneficent surgical procedures introduced since the advent of appendicectomy. An exhaustive article appears in the *Medical Record* of December 21, giving the result of the operator's experience in a number of cases.

It goes without saying that chronic Bright's disease, whatever its variety, is one of the most hopeless of human maladies; and any procedure which will appreciably reduce the mortality in this affection will be welcomed as a valuable addition to medical science.

Edebohls reports a series of 18 cases operated upon, all having chronic Bright's disease. Some of the earlier of these had movable kidney, and simply underwent an operation for nephropexy: the latter cases were without movable kidney, and underwent the operation solely with a view of curing or improving the diseased kidney condition. In the later cases complete renal decapsulation was performed. Nine of the eighteen patients have been operated upon more than a year, and hence some intelligent opinion can be formed as to the value of the procedure. It is asserted that of the nine cases operated upon, eight made a complete recovery from the chronic Bright's disease. It is claimed that the variety of the nephritic, whether it be parenchymatous, interstitial or diffuse, is immaterial. In the successful cases it appears that some 10 or 15 days must elapse after the operation before there is any appreciable change in the quantity or quality of the urine; then there begins a gradual return to the normal, which, however, in some cases is not completed for a number of months.

The theory advanced to account for the favorable change is that by the formation of adhesions between the kidney substance

and the adjacent tissues, many new blood-vessels are soon added whose blood is directed to the kidney tissue, and thus hyperemization of the organ results. In support of the claim that hyperemization leads to rehabilitation in parenchymatous nephritis, Ziegler is quoted as follows: "When a portion of the renal epithelium has been destroyed by a morbid process which spares the interstitial structures, the loss is in general soon made good by regenerative proliferation of the remainder, and if the circulation is adequately maintained the new epithelium presently becomes capable of carrying on the secretory function."

In the case, however, of chronic interstitial nephritis, or in a mixture of parenchymatous and interstitial, a different explanation must be sought for. It is conceivable that hyperemization of the kidney structure would lead to gradual absorption of inflammatory and intertubular deposits, which have as yet not become organized; but when the process is chronic, organization has certainly advanced to a greater or less extent, much secreting structure and many tubules are certainly destroyed, and it is inconceivable that any degree of renal hyperemia, however prolonged, could replace the connective tissue with the original secreting structure.

The theory of rehabilitation and restitution, however, while of great moment to the pathologist, is not the chief desideratum of the surgeon. Results are what he seeks, and the histologic changes necessary to bring about a happy result are of secondary importance.

The results of this operation thus far are certainly sufficient to warrant the careful consideration of the profession. In the hands of the whole profession the general beneficent results may fall far below the success attained by the skilful originator, and it yet remain a justifiable and life-saving surgical procedure.—*American Medicine.*

TREATMENT OF CHRONIC GASTRIC CATARRH.

As stated by Ewald (*International Medical Magazine*, Vol. x., No. 12, 1901) two conditions require treatment: (1) Diminution in the production of hydrochloric acid and pepsin, and (2) weakening of the motor function of the gastric musculature. For the first, dilute hydrochloric acid must be given in as large doses as the patient can bear—that is, without having too sour a taste in the mouth. Ewald gives it three times after each meal, at intervals of ten minutes, in half a tumblerful of water. To bring the percentage of acid in the stomach up to the normal, 300 cc. of a 0.2 per cent. solution of hydrochloric acid must be introduced

directly into the stomach twice a day after each of the two larger meals. In ordinary cases the internal method answers every purpose. No pepsin is prescribed, as the secretion of pepsin does not suffer in the same measure as that of hydrochloric acid. The pure gastric juice of dogs may also be administered. Among the carminatives, an infusion of condurango bark is recommended; to it may be added the hydrochloric acid and tincture of nux vomica, which is the sovereign internal remedy to increase motility of the gastric musculature. This, the second therapeutic indication, calls for massage and electricity. The former, when skilfully performed—an indispensable condition—not only forces the contents of the stomach into the intestine in a purely mechanic manner, but at the same time stimulates intestinal peristalsis and relieves constipation. The intragastric method of applying electricity is the most effective. The faradic current is preferred when a stimulating effect is desired. The galvanic current has a quieting influence; in using this the anode is introduced into the stomach. A current strength of about five milliamperes is used, the duration of each sitting being from three to five minutes. To remove fermenting masses, the stomach is washed out by any one of the methods in common use with a 2 per cent. solution of boric or salicylic acid or a 1 per cent. solution of lysol. To restrict the fermentations actually in progress, an object partly accomplished, large internal antiseptics should be administered. The following powder is recommended :

Resorcin (resublimed)	5.0
Bismuth salicylate	10.0
Sodium bicarbonate	15.0
White sugar	15.0

A small teaspoonful every two hours.

In regard to diet, patients with catarrh of the stomach should never end until completely satisfied, but ease at the first sensation of fulness. They should have sufficiently long and regular intervals between meals. Strong alcoholic and carbonated drinks should be prohibited. The directions in regard to the choice of foods follow the usual lines. Eggs, even raw, are more often badly tolerated than is believed; greasy preparations of eggs and hard-boiled eggs are, of course, forbidden. Rich cheeses are also difficult to digest; of soups, only clear bouillon from chicken or veal is allowed. The gelatinous soups and jellies from calf's feet, calf's head, oxtail, etc., are recommended. Peptone preparations, nuttose, somatose, and those prepared from milk, as ulactol, santogen, etc., can be used with advantage. Products containing carbo-hydrates, whether pure starch preparations or containing

also nitrogenous substances, vegetables, fruits and legumens, should be easily digested under the given conditions, because in catarrh the hydrochloric acid, which is the means of converting starch into dextrin, is lacking. Vegetables of the cabbage family are to be avoided because of their tendency to undergo fermentation and decomposition. For the same reason peas and beans, even in pure form, are not well tolerated. Milk, if relied on exclusively, would have to be given in the quantity of about 4,600 cc. (10 pints) a day, which is more than most persons can manage. By adding so-called milk-powder, which is milk evaporated and pulverized, and of which 100 grams correspond to about one litre of milk, the nutritive value can be increased. Quite as important as the diet itself is the timely return to the usual diet. There are nervous people who, by following out a restricted diet too long, have been so weakened that their original gastritis has at last developed into a nervous dyspepsia, or a state of universal debility that can be corrected only by a radical change of regimen.—*American Medicine.*

THE TREATMENT OF INOPERABLE CANCER.

Professor Czerny (Heidelberg) read a paper at the recent meeting of the German Surgical Congress on the treatment of inoperable cancers. He estimated that about seventy-five per cent. of known cases of cancer were inoperable, and that in Germany nearly 40,000 patients died yearly of this terrible disease. The treatment of inoperative cancer was, therefore, a most important question, and one which had not received sufficient attention. It was to be regretted that at the present day many surgeons lost interest in a case of incurable cancer, so that as there was no radical remedy nor operation for it, the patients were allowed to fall into the hands of quacks. Cases in which ulceration had occurred called in particular for skilled treatment. By careful bandaging and by keeping the ulcers clean much might be done to relieve the patients. The application to such surfaces of zinc chloride, by the use of gauze bandages dipped in solutions varying in concentration from 10 per cent. to saturation, had a very good effect, and in some such cases recovery even took place under this treatment. Of course this was very exceptional, but in nearly all cases the patients were considerably relieved. In suitable cases the use of zinc chloride in solution or paste should be preceded by cauterization or scraping. For cauterization he preferred the actual cautery. The pain produced by the corroding action of zinc chloride did not last long, and could easily be kept within moderate limits by morphine. Subcutaneous injec-

tions of solutions of formalin were too painful. Sometimes arsenic had a remarkable effect upon these cases; it could be given internally, as by subcutaneous injection, or used as a paste or ointment. Potassium iodide was of value for the verification of the diagnosis. After mentioning different applications, ointments and lotions which had proved themselves of value as palliatives, Professor Czerny stated that organotherapy had not given him satisfactory results, but he considered the treatment by the toxins of erysipelas was worthy of careful study in order that a definite opinion on its value might be formed. The mortality due to cancer was increasing, especially in the densely populated towns, as that produced by tuberculosis was diminishing. In conclusion, Professor Czerny suggested the erection of a German cancer hospital after the example of the English cancer hospital, of which he gave a brief description. The discussion was not productive of any novel views, but it was pointed out that the corroding effects of zinc chloride were sometimes attended by the danger of destroying the walls of a blood-vessel, with consequent serious bleeding.—*British Medical Journal*.

THE OPERATIVE TREATMENT OF PUS ACCUMULATIONS IN THE UTERINE
APPENDAGES.

The different operations which the writers (L. Maude and O. Burger, *Archiv. f. Gynakol*, 1901) have employed in the treatment of accumulations of pus in the uterine appendages, are as follows :

- I. Removal of the appendages by laparotomy.
- II. Removal of the uterus and appendages by laparotomy.
- III. Opening and draining of pus cavities by the abdominal wall.
- IV. Removal of uterus and appendages by the vagina.
- V. Removal of diseased appendages from one side by vagina.
- VI. Opening and drainage of pus cavities by vagina.

Their large and prolonged experience of these operative methods has led them to the following conclusions as the relative value of, and indications for, the different lines of treatment named.

1. Every operation for pus in the appendages should be, other things being equal, undertaken by the vaginal route.
2. Double salpingo-oophorectomy for bilateral suppurative disease of the appendages should no longer be performed. It has the disadvantage of laparotomy, without securing an equivalent in permanent favourable results.

3. The removal by laparotomy of one of the appendages for pus should only be undertaken when the appendages of the other side are perfectly healthy, and when the progress of the disease on the affected side is fully arrested. It must be made clear by prolonged waiting, and by the use of the probe, that the pus has lost its virulence.

4. The radical abdominal operation should be adopted in those cases in which it is impossible, on technical grounds, to remove the diseased organs by the vaginal route.

5. The radical vaginal operation is the proper one, both in bilateral cases of suppuration in the adnexa, and also in unilateral conditions, in which the appendages of the opposite side are affected by chronic atrophic changes. This operation has given the authors the best immediate and remote results.

6. The vaginal extirpation of the appendages of one side, retaining the uterus and opposite appendages (like 3), should only be done when the opposite appendages are healthy, and when the pus has been carefully shown to have lost its virulence.

7. Vaginal incision with drainage of pus collections should only be done in a few cases in which it is definitely indicated by circumstances. In general use it can never compete with the above operations.

8. Abdominal incision occupies a similar position, and should be done only in a few cases in which, owing to the position of the pus collection, an opening in the abdominal wall is the easiest method of treatment.—*Medical Chronicle*.

A BACTERIOLOGIC STUDY OF ACUTE ARTICULAR RHEUMATISM.

The author (V. E. Predtetchensky, *Vratch.*, 1901, No. 24, p. 761; *Le Presse Medicale*, Nov. 16, 1901) made a careful search for the bacillus of Achalme in five typical cases of acute articular rheumatism. The best conditions of growth for this micro-organism were obtained by him by means of the following procedure: 0.5 to 1 c.c. of blood obtained by pricking the end of a sterilized finger was mixed with a slightly acid bouillon containing 1-2 per cent. lactose, to which was added (one-third by volume) sterilized milk, according to the method of Lavtchenko. The air was driven out of the tubes and hydrogen gas used as a replacement.

At the same time this worker looked for the coccus described by Wassermann as causative of acute articular rheumatism, employing for this purpose a strongly alkaline bouillon, which Wassermann claims is the best medium for growing this coccus.

The bacillus of Achalme was not observed in a single instance

in these five cases. In three cases the cultures remained absolutely sterile (these cases being studied bacteriologically before the administration of sodium salicylate). In the two remaining cases the writer found a special micrococcus. At the end of twenty-four hours the milk in the tube prepared for study of the bacillus of Achalme coagulated, the clot being perfectly formed at the end of forty-eight hours. This showed a micrococcus in pure culture, disposed in elements of two, three and four organisms, facultative, aerobic, and anaerobic. On solid media these micrococci grew out in short chains; on liquid media, in elongated chains.

Subcutaneous inoculation of these organisms into guinea-pigs produced a condition closely akin to acute articular rheumatism in man; the animals showed signs of great discomfort, presented febrile symptoms and swelling of the large articulations, with death eventually. At autopsy there was found the changes of inflammatory periarticular trouble, with a serous condition in the joints. A localized endocarditis on the semi-lunar segments of the aortic valve was found in one guinea-pig. The organism was recovered in pure culture from the heart's blood and from the serous effusion in the joints.

The author contends that this micrococcus is the casual agent of acute articular rheumatism. He will not state that this is the same organism as that described by Wassermann, nor does he maintain that all cases of acute articular rheumatism are caused by the same organism.—*Interstate Medical Journal*.

PROLONGATION OF PREGNANCY.

Many years ago (1816) Sir Charles Clark, when giving evidence before the House of Commons, said that he had never yet seen a single instance in which the laws of nature had been changed, believing the law of nature to be that parturition should take place forty weeks after conception; but Dame Nature frequently avails herself of a feminine prerogative and becomes at times fickle and erratic. Many physiologic functions, such as dentition, puberty, or menstruation vary as to the time of occurrence. We have recently seen a case in the practice of a Philadelphia physician in which a child was born with two well-developed teeth in the lower jaw. Louis XIV., le Grand Monarque, was accredited with having the same number at his birth, and Haller has collected nineteen cases of children born with teeth. So many times Nature delights in surprising us with the curious and anomalous. Prolonged pregnancies are interesting from the medico-legal, as well as the scientific, standpoint. Although the normal

duration of pregnancy is about 275 days from the cessation of the last menstrual period, yet reliable observers have reported instances in which the time was prolonged much beyond this. Taussig (*Amer. Jour. Obstet.*, October, 1901) has collected 61 cases of partus serotinus which are well authenticated, and he quotes from Issmer some interesting conclusions in regard to the influences which tend to prolong gestation. Issmer finds that the duration of pregnancy increases with each child until the ninth, and then there is again a decrease. The age of the mother is also an important factor, as every pregnancy up to the thirty-fifth year of the mother's life is four or five days longer than the previous one. The social condition plays a part, as it has been found by Penard that of 1,000 pregnancies among working women, 51 per cent. were concluded before 280 days had elapsed, whereas of 1,000 women without active occupation, only 34 per cent. were delivered before 280 days. These figures show the influence of rest upon the lengthening of pregnancy. Women who have been vaginally examined are on an average confined 5.2 days sooner than those not examined. Issmer has also found that the average duration of pregnancy in 912 strong women was 278.6 days; in 288 weak ones, 276.8 days. In Taussig's patient, labor began 323 days after the beginning of her last menstruation. The longest pregnancy recited by him was reported by Puppe, the child being encephalic, and the estimated duration being 348 days. From the medico-legal standpoint, very contradictory evidence has been given by distinguished obstetricians. In the United States, authorities have generally upheld the view that gestation may be prolonged, and it has been judicially decided that it may last 317 days. The period of gestation is frequently a matter of judicial inquiry, particularly in bastardy proceedings, and in controversy among heirs affecting legitimacy; but as Baker, in a presentation of this subject from a legal standpoint has said, "The light of the courts in this matter is reflected light, and physicians must determine the matter; and if the space between the maximum and minimum periods hitherto allowed is shown to be too long or too short, the courts will readily follow the truth as it is made manifest." The civil code of France provides that 300 days shall constitute the longest period of the legitimacy of an infant; the Scottish law 300 days; the Prussian 301 days. However apocryphal some of the cases reported may be, yet it is probably true that in about 6 per cent. of pregnant women, the duration of pregnancy is over 300 days; and Von Winckel's statistics show that prolongation occurs in 11 per cent. from 302 to 322 days. In view of the fact that the worst instances of dystocia occur in such cases, it is probably a good rule never to permit

pregnancy to continue more than two weeks beyond the normal limit, as the careful induction of labor will be less dangerous than a further continuance of the state of pregnancy.—*American Medicine*.

DIAGNOSIS OF FRONTAL TUMORS.

Honiger (*Munchen. med. Wchschr.*) remarks that, although for a long time past it has been known that new growths of the frontal lobes are associated with disturbances of the higher mental functions, it is only within the last ten years that it has been possible to recognize a certain series of symptoms as the result of such affection. It is certain that disturbances of the higher mental functions accompany tumor of other parts of the brain, but there is an especially large number of cases in which a well-marked physical disturbance formed either the first symptom, or the most important symptom of a later stage, of frontal tumor. The writer contributes three cases. In the first case paresis of the left side of the face was the first symptom of cerebral mischief. Soon afterwards the patient fell into coma, and on recovery showed a swaying uncertain gait. Thereafter the most striking symptom was the occasional tendency to make merry and to joke about her condition (*Witzelsucht*), this alternating with periods of apathy. The writer suggests that this is due to irritation of the motor-speech centres. The second case began with pains in the left forehead and vomiting, and some difficulty in finding words occasionally. This last feature became more marked, and was troublesome both in speaking and in writing. The patient sometimes made merry over her condition (*Witzelsucht*). Right-sided paresis led up to death with right-sided convulsions. Of the third case a leading symptom was the peculiar gait which has been shown to result from weakness of the trunk muscles, whether through disease or, in animals, through operation. The disease began with occasional epileptiform convulsions, pains in the loins, and girdle pains. Patient became reserved and forgetful, with occasional bursts of anger without apparent cause. At the first examination by Dr. Honiger, at the time when, after two years, the fits were becoming more frequent, the patient had full control of all his limbs as he lay on his back, but could neither raise himself to a sitting posture, nor get up from the bed. He walked a little bent forward. Both optic discs were congested. These features, taken with the absence of hemiparesis and hemianopsia, led to the diagnosis—frontal tumor. Fits then became more frequent. They began with a cry and turning of the head and eyes to the left, the spasms progressing over the left side of the mouth,

left upper and left lower extremity, and thence to the right side. Frequent fits were followed by paresis of the left side, the face being unaffected, and tenderness over the right forehead. The diagnosis was now tumor of the frontal lobe, probably in the second convolution, possibly in the first. Before operation had been decided on, the fits became more and more frequent, the temperature rose to 106.87 F., and the patient sank from cardiac failure and edema of the lungs. The autopsy confirmed the diagnosis. An endothelioma, growing from the inner side of the dura mater, had pushed aside the substance of the right frontal lobe, it was attached by a broad base to the dura, was 9 cm. in length by 5.5 cm. in width, was sharply bounded toward the brain substance, and occupied the position of the first and second frontal convolutions, beginning 2 m.m. in front of the anterior central convolutions.

The writer concludes with some remarks on diagnosis. We are justified in thinking of tumor of the frontal lobe, when a cerebral tumor begins with physical symptoms, or when such symptoms supervene. The diagnosis only becomes certain when frontal ataxy (the peculiar gait), or spasms of trunk muscles, or disturbances of speech appear as focal symptoms, and, as associated symptoms, either affections of the motor region or, in case the tumor grows toward the base, affections of the nerves at the base.—*Medical Chronicle*.

CONGENITAL HEPATIC CIRRHOSIS WITH OBLITERATION OF THE BILE-DUCTS.

Three cases are reported (G. Parker, *The Lancet*). The first infant lived to be six months old. During the first three weeks of life he appeared to be in perfect health. The initial symptom was severe vomiting, after which the stools became white. He was weaned, and gained weight for a time on artificial feeding. When first seen by the essayist the infant exhibited jaundice and white stools, but otherwise he was free from symptoms. At a later period, enlargement of the liver and spleen was made out by palpation. Ascites soon developed. Despite his condition, the patient retained his vigor and appetite, and his death occurred suddenly. The ante-partum history threw no light on the origin of the condition. There were no evidences of congenital syphilis. Autopsy showed a liver of double the natural size (11 oz.). There were no biliary concretions. The common duct was impermeable for half its extent, and the cirrhosis was evidently secondary to this obstruction.

In the second case the baby was born jaundiced, and the mother had previously borne six children with the same anomaly.

lous condition, none of whom had lived beyond a few weeks. The present patient, however, survived for seven months. Autopsy seemed to show that the bile-ducts had been replaced by connective tissue. In this case cirrhosis had apparently not developed.

The third infant was also born jaundiced, and lived five weeks. The common duct appeared to be absent, and the liver was much enlarged. Hepatic cirrhosis was well marked and newly-formed bile-ducts were numerous.

About sixty cases are upon record. The extreme narrowness of the gall-ducts at birth shows how readily their obstruction might be brought about by inflammatory changes, due in turn to bacterial infection. The nature of the active agency in this process is as yet unknown.—*Archives of Pediatrics*.

MENTALLY DEFICIENT CHILDREN.

Cases of mental defect (W. A. Potts, *Birmingham Medical Review*, Vol. I., No. 278) may be classified into congenital, non-congenital, and developmental, where "the actual lesion supervenes upon a brain originally imperfect in development." Among the congenital types are microcephalus, hydrocephalus, and cretinism. In the developmental group are eclamptic, epileptic, syphilitic, and some post-febrile cases, which first demonstrate their weakness at one of the crises of development, such as dentition or puberty. The non-congenital cases may be divided into traumatic (very few) and post-febrile. Frequently a given case cannot be assigned to any characteristic type. The diagnosis is then made by the detection of several associated abnormalities, as: Size, shape, asymmetry of the head, a bi-temporal diameter, narrower than the bi-parietal, together with a highly-vaulted palate and an external auditory meatus directed backwards, are undoubted signs of mental deficiency; the tongue may be large or transversely furrowed; the ear may be set too far back, with absent lobules, defects in the helix, or misshapen pinnæ; the teeth are often irregular; the skin is often coarse, with an excessive development of hair; strabismus, hernia, talipes, are common in the mentally deficient. Later the growth is often stunted, with height and weight below the average.

It is important that the diagnosis be made as soon as possible after birth; and in many cases it must be based largely upon observing how the child progresses. As regards prognosis, with the exception of cretins, a backward child seldom develops to the same extent as a healthy one. With careful training, commenced early, much may be done; any defect of the senses makes the outlook much more hopeless.

The weak mental faculties should be stimulated from the first, and later the child should be placed in a proper institution or taught at home by a specially qualified teacher. Constant attention to the general health is necessary. A course of thyroid extract benefits many cases. Puberty often occurs early, and requires the most careful supervision, which should be continued as long as possible.—*Archives of Pediatrics*.

ANGIOMATA.

Angiomata, according to William Osler (*Bulletin of the Johns Hopkins Hospital*, November, 1901), are very peculiar and remarkable structures. Apart from the big nevi and angiomata with surgical relations there are:

1. The pin-point, punctiform, capillary angioma, of which few skins lack examples. They may be numerous, but they are rarely disfiguring. They appear and disappear. For ten years Osler had one the size of a pin's head on a finger.

2. The solid, nodular nevus, ranging from one to four or five millimeters in diameter, forming a definite little tumor, either sessile or pedunculated, and very common on the back.

3. The spider angioma, formed by (a) three or four dilated veins, which converge to and join a central vessel; or (b) which unites at a central bright red nodule projecting a little beyond the skin. They are very common, and doctors are often consulted about their presence on the face.

As examples may be found on the skin of nearly everybody, these three varieties may be regarded as almost normal structures.

When the punctiform or spider angiomata increase greatly in number they are greatly disfiguring. Angiomata have a curious relationship with affections of the liver. In cirrhosis, in cancer, in chronic jaundice from gall-stones, spider angiomata may appear on the face and other parts. They may be of the ordinary stellate variety, like the stars of Verheyen on the surface of the kidney, or the entire area of the star may become diffusely vascularized, so that there is a circular or ovoid territory of skin looking pink or purple, owing to the small dilated venules. A dozen or more of these may appear on the trunk, or even large ones may appear. And lastly, in a few cases of disease of the liver Osler has seen large, mat-like telangiectases or angiomata involving an inch or two of skin, and looking like a very light birth-mark, but which had appeared during the illness. The skin was not uniformly occupied with the blood-vessels, but they were abundant enough on the deeper layers apparently to give a deep change in color, and to form very striking objects. The dilated

venules on the nose, and the chaplet of dilated veins along the attachment of the diaphragm, are not infrequently accompaniments of the spider angiomata in cases of disease of the liver. The writer says that recently he has seen the spider angiomata appear in the face in a case of catarrhal jaundice.—*Medical Age*.

TREATMENT OF HEMIPLEGIA.

L. G. Guthrie (*The Lancet*) states that in many instances hemiplegia is not treated at all, or if so, only with iodide of potassium and strychnine. This is due to the too prevalent view that paralysis is a condition which is permanent. In severe cases of hemiplegia, the patient's arm and leg are quite useless, the joints become fixed in whatever normal position they are allowed to rest, the muscles waste and shorten. The methods at our disposal for overcoming these conditions are passive movements, massage, and electricity, re-education of movements by passive and active exercises, and mechanical therapeutics. Neglect and want of treatment aggravate severe and retard recovery of mild cases.

Articular adhesions are most common in the shoulder, though any joint may be affected. A limb which might have recovered is often useless, owing to their presence. Some regard the adhesions as atrophic, others as rheumatic, and in some cases it is difficult to distinguish between such adhesions and ordinary rheumatoid arthritis. Whatever the cause, in most cases the adhesions may be prevented. The fear that movement of the limbs will predispose to another hemorrhage is unwarranted. The passive movement should begin early, as the adhesions form very soon after the stroke.

Spasticity, or early rigidity, which leads to structural shortening of the muscles, is practically incurable, when it is once established. The early treatment of this condition is as important as that for the articular adhesions. Faulty positions, even while the patient is confined to the bed, should be corrected. Adduction of the shoulder may be prevented by placing a sand-bag in the axilla; the elbow should be kept extended. The leg should be rotated outward and abducted, and the foot flexed on the dorsum and everted. Contraction of the hamstrings should be remedied by raising the heel. Sand-bags may be used to insure a favorable position of the legs. When the patient leaves the bed, similar precautions should be taken against malposition. He should never be allowed to carry the arm in a sling, or sit with the knees and toes drawn in.

Muscular atrophy occurs sooner or later in hemiplegia, and is mostly due to disuse. It is probable that when a cerebral lesion

is healed recovery from hemiplegia may not take place, owing to the functional affection of the lower neurons, produced by disuse of the limbs. This wasting is due to the absence of normal stimuli, and something must be devised to take their place. These include passive movements, massage, and electricity. With these aids are often preserved the nutrition of the muscles and the peripheral neurons.

As regards re-education of movements recovery is not to be looked for, but it is well to remember that organic lesions appear to be more extensive than they are. Even in the worst cases a certain amount of improvement may be expected. Spasticity and wasting is an index of the gravity of the condition, being much more significant than motor paralysis. Patients should be told the order in which the movements return, and it is frequently a great encouragement to them to observe the gradual restoration of power in the leg, while the arm is still useless. It is this principle that is applied in re-education, which leads to a gradual amplification of movement. Weights, pulleys, and elastics are of some value, but only in strengthening muscles which have already gained a certain amount of power.—*Medicine*.

TUBERCULOSIS OF THE PERITONEUM.

W. Neff (*American Journal of Surgery and Gynecology*, November, 1901) says that tubercular peritonitis is a surgical disease, and should be treated surgically and not medically, for the simple reason that when treated medically patients die, but when treated surgically a cure is effected in a large proportion of cases, and a marked improvement follows in all. The proper treatment is abdominal section rapidly and carefully performed; the danger from the operation is very slight, the mortality being less than 3 per cent. Of many theories advanced to account for the cure of these cases, the antitoxin theory of Gatti seems to be the most rational. It is not unlikely, however, that the good results attained are due to a combination of several of the causes assigned. Sepsis is not apt to occur on account of the pathological changes that have taken place in the peritonitis. Antiseptics are useless, and drainage should not be employed, for it is apt to leave a permanent fistula. Most of the deaths after the operation have been due to the general tuberculosis, or tuberculosis of some other organ. The writer says that the successful treatment of this disease depends upon the diagnostic ability, good judgment, technique, and skill of the man behind the knife.—*Medical Age*.

Special Selections

OBSERVATIONS ON THE SURGICAL TREATMENT OF OBSTRUCTIVE JAUNDICE FROM AN EXPERIENCE OF OVER 200 CASES.*

By A. W. MAYO ROBSON, F.R.C.S.

Senior Surgeon to the General Infirmary at Leeds; Emeritus Professor of Surgery in the Yorkshire College of the Victoria University.

My recent operative experience in cases of chronic obstructive jaundice, especially in those associated with gall stones and with chronic pancreatitis, has led me to take a more hopeful attitude in considering the treatment of deeply jaundiced patients from a surgical standpoint; and it is with a view to the expression of my views that I have ventured to respond to the kind invitation of the Council of the Medical Society by giving this paper to-night.

In expressing an opinion that the surgeon has as a rule no business with these cases until the symptoms are well marked, I think it should also be distinctly recognized, not only that no patient should be allowed to die of obstructive jaundice without the question of surgical interference being considered, but also that the question of surgical treatment should be raised at a time when operation may be undertaken, if called for, with a reasonable probability of success.

It has been my unfortunate experience to have to give an opinion on a very large number of such cases at a time when any active interference was out of the question, and when the only interest in the case was the question of diagnosis; and this must have been the experience of many of my surgical brethren.

DIAGNOSIS.

In all chronic jaundice cases the first and often the most difficult question is that of diagnosis, for if we can come to a definite conclusion regarding the cause of the obstruction, the proper treatment to adopt can usually be readily decided upon.

The following causes must be taken into consideration:

1. Common duct cholelithiasis.
2. Chronic pancreatitis.
3. Simple stricture of the common bile-duct.
4. Inflammatory adhesions causing pressure on or stenosis of the hepatic or the common bile-ducts.

* Read before the Medical Society of London, January 13th, 1902.

5. Hydatid disease of the liver pressing on or discharging into the bile-ducts.
6. Gummata implicating the ducts.
7. Chronic catarrh of the bile-ducts.
8. Cancer of the common bile-duct.
9. Cancer of the head of the pancreas.
10. Cancer of the liver associated with jaundice, either due to catarrh or pressure.
11. Cirrhosis of liver.
12. Other rare causes, such as aneurism of the hepatic artery or of the aorta, and other tumors of the liver, gall bladder, pylorus, kidney, or intestine pressing on or occluding the common bile-duct.

It will be at once seen that surgery holds out a good prospect of cure in the first five causes enumerated; that medical treatment alone is advisable for causes 6 and 7, and that in the remainder, with certain exceptions, relief can only be hoped for either from medical or surgical treatment.

Although one could easily spend an hour or more in discussing the diagnosis of the various causes, I think it will be more advantageous if I simply mention one or two points that I have found useful in guiding me to a conclusion as to whether the case is suitable for an exploratory operation or not.

A painless onset of chronic jaundice must always give rise to the suspicion either of chronic catarrh dependent on cancer of the liver, or of occlusion of the hepatic or common bile-duct by growth, and, if this be associated with distension of the gall bladder and rapid loss of weight and strength, cancer of the head of the pancreas will probably be found.

On the other hand, the history of an attack of pain in the upper abdomen, followed within twenty-four or thirty-six hours by jaundice, and preceded by so-called "spasms," either recently or at some remote period, is strongly suggestive of cholelithiasis. In the latter case, the jaundice will probably be less intense than in the former, and an intermittent fever with chills and sweats will probably either be present or have been noticed at some stage of the illness.

Enlargement of the liver is much more common in obstruction due to cancer than in that from gall stones, though it may be present in either; in cancer, however, nodules or irregular bosses may be discovered, and in gall stones an elongation of the right lobe of the liver, which is apt to be mistaken for a distended gall-bladder, can often be felt.

The presence of ascites is suggestive of malignant disease, but in one case on which I operated, although there was a fair amount

of fluid in the abdomen, I could find no sign of cancer, though there was cirrhosis of the liver due to biliary stagnation from the presence of a gall stone in the common duct for three years. I therefore persevered with the operation, and, after removing the obstruction, stitched up the omentum to the parietes in order to establish a collateral circulation. The patient, a man of 56, is now well. This is, however, an exceptional case, and as a rule the presence of ascites negatives any radical operation on the bile-ducts.

In the early stages, difficulties will arise that time will clear up; for instance, the jaundice of gall stones is rarely continuously the same, but increases or diminishes from time to time, whereas the jaundice of obstruction due to growth steadily increases or tends to become absolute, especially in cancer of the bile-duct or the head of the pancreas.

The element of time alone is of importance in diagnosis, for jaundice with malignant disease runs a very short course, whereas jaundice from gall stones or some simple cause may go on for several years.

It must not be forgotten that gall stones and cancer frequently coexist, and in the case of cancer of the gall bladder gall stones are nearly always present, and the combined disease may form a tumor before the onset of jaundice, though some degree of jaundice usually supervenes early in the disease.

Fat in the motions and glycosuria, with very rapid wasting, are suggestive of pancreatic trouble.

Ague-like symptoms more frequently accompany gall stones in the common duct than malignant disease of the ducts or of the head of the pancreas, but several cases that have come under my notice show that this rule is subject to exceptions.

After the abdomen is opened, the discovery of adhesions in the neighborhood of the gall bladder, and a contracted gall bladder, are strongly suggestive of gall stones, though I have found ulcer of the pylorus producing adhesions to the gall bladder, and at the same time setting up pancreatitis, and then, by pressure of the swollen pancreas on the common duct, setting up jaundice.

If no gall stones be found, but the head of the pancreas be swollen and harder than normal, the surgeon should not too hastily condemn the patient as the subject of cancer of the head of the pancreas, for the swelling may be a chronic pancreatitis, and may be curable by cholecystotomy, as I have proved in a considerable number of cases. Nor does the presence of enlarged glands warrant a gloomy prognosis, for it is quite common to find discreet glands in common-duct cholelithiasis and in chronic pancreatitis,

though if the glands be fused together and infiltrating the neighboring tissues, the outlook is far from good.

A rigid right rectus abdominus, and tenderness one inch above and to the right of the umbilicus, is as suggestive of gall stone trouble as is McBurney's tender point of appendicitis.

The appearance and feel of a tumor composed of matted omentum and the viscera adjacent to an inflamed gall bladder are often very deceptive, and in two at least of my earlier cases, after exploring such a mass with a hollow needle, I closed the abdomen and gave a gloomy prognosis, which was proved to be wrong by the patient's steadily improving and completely recovering. Before seriously interfering with the adhesions, and thus being committed to the following cut of a dangerous and futile operation, it is desirable to raise the abdominal wall and carefully examine the liver and adjoining parts so as to be assured of the absence of secondary nodules of cancer.

If in doubt, it is better carefully to detach the omentum covering the gall bladder itself, when it may fortunately turn out that the viscus is full of gall stones and pus, as in cases LVI. and LVII. to be mentioned later, in both of which inoperable cancer had been diagnosed and a gloomy prognosis given, but in which cure by operation was effected, and the patients are now well; or even if, as often happens in this region, cancer be discovered and proves to be local, a radical operation may be undertaken with good prospect of success, as in a case where, three years ago, I removed from a middle-aged gentleman a wedge of liver and the gall bladder affected with carcinoma, and he remains in excellent health to-day; and in another case, where in a woman aged 56, I excised the gall bladder, the pylorus, and a portion of the liver, the patient being now well on in the second year after operation, in good health.

If, however, secondary nodules be seen or felt in the liver or omentum, the diagnosis of irremovable disease will be at once arrived at, and the abdomen closed without delay.

A hemorrhagic condition is common in cases of chronic jaundice, especially if due to cancer of the head of the pancreas or to interstitial pancreatitis. If not excessive, this can be corrected by chloride of calcium, or possibly suprarenal extract or gelatine; but, if severe, it will undoubtedly seriously add to the risks of operation.

If a patient at or past middle age has heart disease or albuminuria, operation should not be lightly entertained, and such cases have, as a rule, to be content with the relief that can be given by medical treatment.

TREATMENT.

The second question, as to treatment, depends on the diagnosis :

1. If the diagnosis be doubtful, an exploratory operation is advisable, providing the general condition of the patient renders it probable that such a procedure *per se* apart from what is to follow, will not hasten death.

2. If malignant disease be positively diagnosed, operation can, with some few exceptions where it is possible to completely remove it, do little good, or at the best can probably only prolong life for a short time.

3. If gall stones, or, in fact, any of the first five enumerated causes be diagnosed, operation is decidedly advisable if the patient be at all in a condition to bear it.

1. *When the Diagnosis is Doubtful.*

It will be convenient to consider these three conditions *seriatim*, and first of all the question of operating for the purpose of clearing up the diagnosis, with a view to at once closing the abdomen if unfavorable conditions be found, or, if advisable, performing whatever operation may be necessary at the time in order to bring about relief or attempt a cure.

The uncertainty as to the cause of the obstruction in many cases of jaundice is what makes this class of cases of such extreme interest both to the physician and surgeon; and although ripe experience will frequently enable a diagnosis to be arrived at by instinct, as it were, yet mistakes will be made at times and patients condemned when prolongation of life or subsequent cure by operation proves that the most skilful diagnostician may err.

The following brief abstract of cases condemned as hopeless, but afterwards operated on, demonstrates my meaning better than a multiplicity of words. The numbers, where present, refer to the order of the cases in my note-book :

No. 56.—Woman, aged 50, residing at Burnley. Jaundiced nine months; great loss of weight; pain not a prominent symptom, but present. Pronounced to be cancer by an eminent Manchester physician, and operation not advised. Operation, September 29th, 1892. Gall stones found in gall bladder, and common duct. Cholecystotomy and cholelithotripsy performed. Good recovery. Quite well when heard of a year later.

No. 57.—Woman, aged 50. Jaundiced ten months. Pain, with ague-like attacks. Pronounced malignant by a distinguished physician in Sheffield, and operation deprecated. Operation, October 4th, 1892. Gall stones found in gall bladder and common duct. Good recovery; well in 1893.

No. 66.—Woman, aged 54. Sent to me for tumor in gall bladder region, associated with pain and jaundice. Gall stones diagnosed, but on opening the abdomen a hard nodular tumor discovered, yielding only blood to exploring syringe. Thought to be malignant, and abdomen closed. Complete and perfect recovery, and when seen some months later all trace of tumor had disappeared.

No. 213.—Man, aged 45. Painful epigastric attacks for twelve months, with vomiting. Deep jaundice for three months, with ague-like attacks. Loss of 2 1-2 stones in weight. Distended gall bladder. Operation, March 29th, 1898. No gall stones. Tumor of head of pancreas discovered with thickening of common duct, thought to be cancer. Drainage of gall bladder for ten days. Complete recovery. Quite well at present. Case, chronic pancreatitis.

No. 233.—Man, aged 39. Gall stones, seizures for five years, and discovery of concretions in motions. Operation, September 22nd, 1898. Gall bladder and liver infiltrated with what appeared to be cancer, though nodules not large enough to be felt through abdominal walls. Some gall stones felt deeply in bile passages. Thought to be useless to attempt complete operation. Patient recovered, lost his jaundice, gained weight, had no further recurrence of pain, and was reported to be quite well May 24th, 1899. This case I cannot explain, as there was every appearance of cancer of the liver.

No. — Man, aged 51, said by eminent London physicians to be suffering from cancer of liver and to be incurable. Jaundice intense for nine months; great loss of flesh; very little pain and no ague-like attacks. The only suggestive symptoms were the history of intermittent pains in the upper abdomen some years previously, and a tender point at the usual spot one inch above and to the right of the umbilicus, which enabled me to diagnose gall stones in the common duct, and to advise operation. Operation, September 21st, 1901. Six large gall stones removed from common duct by choledochotomy. Good recovery. A letter in November stated that he had gained 1 stone 11 pounds, that he had completely lost his jaundice, and was quite well.

All these cases go to support the first proposition, that if the diagnosis be doubtful and the patient be at all in a condition to bear operation, exploratory laparotomy should be performed, for not only may a removable cause of the jaundice be discovered, but it may fortunately happen that even if the disease appear to be incurable on exposure, the operation *per se* may have some hitherto unexplained influence leading to recovery, as in two of the cases I have mentioned and in others that I have seen.

Were it necessary, I could very considerably amplify this list of operations in doubtful cases leading to a complete and perfect cure of patients pronounced by experienced and careful observers as hopeless, and in many of the cases the patients had been especially warned by their advisers on no account to consult a surgeon, lest he should be tempted to interfere.

The class of cases which I described before the London Polyclinic as chronic pancreatitis demonstrates how unwise it is to give a too gloomy prognosis even in cases apparently malignant, for it is to be borne in mind that the hardness of the head of the pancreas in chronic pancreatitis may resemble in touch that of cancer, and it is only by the subsequent course of events after the operation for jaundice that the true nature of the disease is made manifest by the complete recovery of the patient. Moreover, even in some tumors of the gall bladder, inflammatory may closely resemble malignant growth in almost every particular save the one, that after operation the inflammatory swelling tends to disappear, and the malignant to increase.

2. In Malignant Disease.

The second proposition, as to operating in the presence of a positive diagnosis of malignant disease, so far as such a diagnosis can be positive. There are clearly in my mind two classes of cases in which operation can do no good:

(1) Primary cancer of the liver, characterized by irregular enlargement of the organ, with the usual general signs of malignant disease; and

(2) Cancer of the head of the pancreas after middle life, characterized by the entire absence of pain at the onset of jaundice, an absence of the history of gall stone attacks, an extremely rapid loss of weight and strength, and the presence of an enlargement of the gall bladder, and usually some enlargement of the liver.

In the former disease the growth is too diffuse for removal, and in the latter my experience is that the disease is absolutely irremovable, and that drainage of the gall bladder, even if successfully accomplished, does not prolong life materially; and this is borne out by Dr. Hale White's observations, published in *Guy's Hospital Reports*, and in the series of operations collected by Dr. Takayasu, of Osaka. In younger patients the question of operation should, however, always be seriously considered, as malignant disease of the pancreas is not common until middle age or later, and chronic pancreatitis may be the cause of the jaundice, and is curable by drainage of the gall bladder.

The following cases show that in forms of cancer other than

those mentioned, relief or even apparent cure may result from operation.

No. 201.—Woman, aged 52. Pain over gall bladder region for a year; tumor noticed a month. Jaundice. Operation, November 27th, 1897. Cancer of gall bladder and adjoining part of right lobe of liver, which was elongated, removed by elastic ligature. Recovery and out of doors in six weeks. Recurrence of disease following year.

No. 271.—Man, aged 46. Seven years gall stone attacks. Infective cholangitis. Loss of four stone in weight. Jaundice. Operation, June 26th, 1899. Tumor of liver adjoining gall bladder excised by wedge-shaped incision. Fundus of gall bladder removed. Cholelithotripsy and cholecystenterostomy. Complete and perfect recovery. Patient in excellent health at present time, two and a half years after operation. Microscope showed disease removed to be cancer.

No. —.—Lady, aged 63. History of pain and tumor, associated with jaundice. Great loss of flesh and strength. Operation August 10th, 1900. Mass of growth discovered in liver, gall bladder, and pylorus. Cholecystectomy, pylorotomy, and partial hepatectomy performed. Good recovery. Patient well, and in good health now.

3. *In Gall Stones, etc.*

As regards the third proposition—that if gall stones or any of the first five causes of jaundice enumerated in the opening of my paper be diagnosed, operation is urgently demanded, if the patient be in a fit condition to withstand any operative interference.

I find that I have operated on 212 patients suffering from obstructive jaundice dependent on one or other of the causes mentioned; of these, 183 recovered, showing a mortality of 13.6 per cent.; 60 were the subjects of malignant disease, either of the liver bile-ducts, or pancreas, and of these 46 recovered from operation and lived for various periods, some of them being well at the present time, thus showing a mortality of 23.3 per cent. In support of the third proposition, 152 out of the 212 cases were operated on for obstruction, dependent on gall stones in the common duct on other non-malignant causes, with 135 recoveries. Many of these patients were extremely ill at the time, and operation was only undertaken as a *dernier ressort*; but none of these almost moribund cases have been left out of the list, which shows a mortality of 9.8 per cent., an experience which will, I trust, justify my assertion that these cases may be operated on with a very reasonable prospect of success, and that as a rule they demand surgical treatment, and at an earlier stage than has hitherto

been granted; for it must be borne in mind that nearly every recovery is a life saved, since in the greater number of cases of obstructive jaundice, whether arising from gall stones, hydatid disease, chronic pancreatitis, or stricture or adhesions obliterating the lumen of the bile ducts, death after more or less prolonged suffering is the usual termination.

To give even a brief abstract of every case is quite impracticable in the limited time at my disposal; but many of my cases can be found in my work on "Diseases of the Gall Bladder and Bile Ducts" (second edition), and others on chronic pancreatitis have been published in the *British Medical Journal* and the *Lancet*. I must, therefore, content myself by giving an abstract of a few of my cases, promising that a record of the whole shall ultimately be furnished:

CASE —.—Lady, aged 54; resided in India for eighteen years. Characteristic gall-stone seizures with jaundice for two years. Loss of flesh and invalidism. Operation, August 22nd, 1900. Choledochotomy and removal of five stones from common duct. Complete recovery, and patient now well.

CASE —.—Lady, aged 57. Several attacks of gall-stone colic in course of years; jaundice a month. Painful and tender tumor. Operation, June 8th, 1901. Choledochotomy, with removal of an oval concretion from common duct, and cholecystectomy for removal of calcified gall bladder containing one stone. Complete recovery, patient now well.

CASE —.—Lady, aged 45. Jaundice and dilated stomach, associated with vomiting and painful indigestion. Operation, May 5th, 1901. Gall stones found in common duct and removed by choledochotomy. Pylorus stenosed and treated at same time by pyloroplasty. Complete recovery; loss of all abdominal symptoms. Quite well at present time.

CASE —.—Man, aged 60. Great loss of flesh for four years, and painful indigestion. Painless onset of jaundice six months previously. Great loss of flesh. Some enlargement of liver, but none of gall bladder; no nodules to be felt. Exploratory operation advised, but declined. Two years later he saw me again, and was then reduced to an extreme degree of atrophy and feebleness. Liver enlarged, but not nodular. Deep jaundice, varying in degree. Slight ascites. Operation, October 21st, 1901. Cirrhosis of liver, with ascites, and one gall stone found in common duct. Choledochotomy, and at the same time fixation of omentum to abdominal wall. Good recovery, loss of jaundice; gain in weight and strength; now well.

CASE —.—Woman, aged 36. Painful attacks for fifteen months, associated with jaundice, which had been continuous for

some months. Operation, March 29th, 1900. Cholecystotomy and removal of several concretions from gall bladder and cystic duct. Large stone in common duct crushed between finger and thumb, and removed by gall-stone scoop. Complete recovery. Patient now well.

Other cases could be given of cure by cholecystotomy and manipulating the stones backward into cystic duct and gall bladder, and thence removing them; of duodeno-choledochotomy, or opening the duct through the duodenum; of adhesions binding down the common duct; of stricture of the common duct treated by cholecyst-enterostomy; of chronic pancreatitis treated by cholecystotomy, and of hydatid disease discharging into the bile ducts and treated by cholecystotomy and hepatotomy, but I will only give examples of three conditions.

No. 161.—Man, aged 44. Six years' history of swelling over liver, one year's history of attacks resembling gall stones with infective cholangitis and jaundice. Operation, January 1st, 1897. Hydatid disease of liver discharging into bile ducts. Hepatotomy and cholecystotomy. Good recovery, and ultimately complete restoration to health.

No. 261.—Woman, aged 42. Jaundice for three months; attacks resembling gall-stone colic for two years; no tumor; ague-like attacks. Operation, May 8th, 1899. Dense adhesions between pylorus; gall bladder and liver broken down; gall bladder shrunken and common duct found strictured by adhesions which were all detached. No gall stones found. Good recovery. Jaundice disappeared before patient returned home. Complete recovery.

No. 286.—Woman, aged 51. Attacks resembling gall stones for three years. Jaundice continuous for fourteen weeks. Great loss of flesh. Slight albuminuria. Operation, October 23rd, 1899. Fifteen gall stones removed from gall bladder; large mass, hard and nodular, in head of pancreas. Cholecyst-enterostomy. Complete recovery, and patient now in good health. The tumour of the pancreas was a chronic pancreatitis.

It would be tedious to give further cases, but these will serve as examples of operation for the various causes of obstructive jaundice not dependent on malignant disease.

A careful study of the causes of mortality in the whole series of cases shows the two greatest dangers to be hemorrhage and shock, and the two next serious causes exhaustion and sepsis, the accidental causes of death, heart disease, syncope, kidney disease, apoplexy, and other accidents being such as may follow any operation in patients so extremely ill, as all cases of obstructive jaundice must be.

The study of the non-successful cases is perhaps the most instructive, and from them we can derive lessons that will, I feel sure, tend to diminish the mortality very considerably. This is already occurring materially in my own practice, for the statistics of the cases up to December, 1899, show the mortality as 16.4 per cent., whereas those since January 1st, 1900, though equally serious, have only had a mortality of 14.2 per cent., but in the choledochotomies the difference is as 14.5 to 7.4 per cent. To what is this difference due?

First, I think, to increased experience; and, as a consequence, a greater accuracy in diagnosis and a better selection of cases.

Secondly, to knowing where to stop in a case where, after exploration, it is manifest that neither cure nor even material relief can result from operation.

Thirdly, to improved technique in operating, and in the preliminary and subsequent treatment of cases operated on; and

Fourthly, to increased practice enabling the operations to be accomplished in little over half the time they once required.

In the heroic employment of calcium chloride we have a very efficient means of modifying the coagulating power of the blood, but to be efficient it must be administered for at least two days before operation, and along with nutrient enemata for three or four days, or longer if necessary afterwards. Adhesions should be ligatured where possible, and all bleeding points both in the parietes and inside the abdomen should be clamped and ligatured; or if that be impracticable owing to general oozing, pressure by means of sterilized gauze affords a useful and safe means of hemostasis.

In preventing shock, the envelopment of the patient in a suit of cotton wool, operating on a heated table, administering 10 minims of liq. strychnine *B.P.* before beginning the operation, and giving a large normal saline enema with or without brandy half an hour before operating and immediately after, and repeating it if necessary, we have very efficient means of treatment. But quite as important as any of these measures, or perhaps even of greater importance, is the cultivation of the habit of operating expeditiously, for it stands to reason that, in any patient so ill as chronic jaundice cases always are, every minute's prolongation of manipulations in the abdomen and of anesthetization is adding to the risk, and I know that it is often possible to perform even a choledochotomy in half to three-quarters of an hour. Even in the most complicated cases the operation ought not to occupy much longer than an hour, though I have heard of these operations occupying three or four hours. A simple exploratory operation should

occupy only ten to fifteen minutes, and should involve little risk of shock.

Exhaustion and heart failure are best combated by rectal alimentation, by judicious mouth feeding as soon as the anesthetic sickness has ceased, and by the use of small doses of strychnine administered subcutaneously, when called for by nervous depression or heart failure. A rigid all round asepsis, the employment of gauze drainage when necessary, and the careful removal of the infected bile as it flows from the ducts, give one security from asepsis.

I have purposely said nothing of the operative technique of choledochotomy, as the subject is already a sufficiently large one for discussion, and I thought more profit would result from a limitation of my paper to the question of surgical treatment of obstructive jaundice as a whole.—*The British Medical Journal*.

EXCESS OF SALT IN THE DIET A PROBABLE FACTOR IN THE CAUSATION OF CANCER.*

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The nineteenth century, great and fertile as it was in scientific discoveries, could not read the riddle of the cause of cancer, and has handed the question down to us still unsolved. The essay, of which this paper is a brief abstract, is an attempt to answer this question by finding some factor common to all cases and circumstances of the disease. Such a factor must exist unless the causes of cancer are multiple. In order to be brief I will at once give the theory which I have formed, and afterwards explain and support it by evidence. It is this: (1) That excess of salt in the diet is one of four factors which originate the disease. This is the essential factor, but it is inoperative without at least one, and probably two, of the others. Excess of salt may arise from individual taste, or from much salt meat, or from too much ordinary meat, which of course involves much salt. The other factors are these: (2) An over-nourished condition of body from more food, and especially more meat, than is required. This condition is rarely met with amongst out-of-door manual workers. (3)

* Abstract of a paper read before the Leeds and West Riding Medico-Chirurgical Society on Nov. 1st, 1901.

An impure condition of body owing to non-use and non-oxidation of the food which has been taken. The amount may have been moderate, or even small. The cells of the body in this condition are loaded with effete material. It obtains in old age; in persons who lead indolent, easy, and indoor lives; and locally in organs the active functions of which have ceased. (4) A fourth factor is some local irritant or stimulant, such as friction from the stem of a pipe or irritation from some micro-organism of which no one is actually specific, or ovarian stimulation in the case of the breast. Of these the first must always be present, and probably in some form the fourth, and also in all either the second or the third, but not both of them. These factors being in existence, the disease may be started in perhaps one epithelial cell or in a mass of cells which grow individually larger and change the nature of their protoplasm, for a cancer cell will not stain with congo red, whilst an epithelial cell takes the stain deeply. The cell becomes a different being with often more than one nucleus. It is itself the parasite, living and growing at the expense of the tissues around it, and contributing nothing to the common good.

This idea was originated in the mind of the writer by his noticing that cancer of the uterus was seldom or never met with amongst the numerous Jewesses attending the gynecological out-patient department of the Leeds General Infirmary (only one case in ten years). The experience of the London Hospital, where there is a special Hebrew department, is the same (only one case in five years, against 178 amongst Gentile women). Dr. Abraham Cohen, physician for Jewish out-patients at the Metropolitan Hospital, writes that his experience is the same; and Dr. A. C. Tunstall, medical officer until recently to the Jewish Hospital for Incurables, writes that he has never seen a case of cancer amongst the Jews. If this comparative immunity is correct the only explanations possible are: (1) difference of race, and (2) difference in diet. The latter is far more probable than the former, although there may be something in race.

Another curious fact, which may be compared with this is that in the vomit of cancer of the stomach there is no hydrochloric acid, whereas in all other forms of vomit the acid is present. On this point Mr. D'Arcy Power writes: "Your point about the diminution of salt is a good one, but it must not be held to prove too much, for it only shows that a rapid multiplication of cells is taking place in the body. Does not the same diminution take place in pneumonia?" There is a curious observation by Moraczewski in Virchow's *Archiv** that the blood of persons suffering

* *Virchow's Archiv*, Vol. cxxxix., p. 385.

from cancerous anemia contains a relative increase in chlorides and a diminution in phosphates. This contradicts Mr. Power's explanation of the absence of hydrochloric acid in the vomit of cancer of the stomach.

The difference in diet between Jews and Gentiles consists mainly in the absence of bacon and ham from the diet of the Jews; and as, according to Professor J. McFadyean, Principal of the Royal Veterinary College, the pig is the only domestic animal in which no case of cancer has been met with, it must be the salt and not the flesh of the animal which is to blame; but the Jews also eat less butcher's meat and more fowl and fish than we do. These points all tend to the conclusion that salt is the active factor, but they are not advanced as scientific proofs of the truth of the theory. There is some doubt about the accuracy of the observation about Jewesses, as Mr. M. Umanski, of Leeds, tells me that he has met with many cases; but if Mr. Umanski is correct, why do we not see them at the Leeds General Infirmary, where Jewesses in my time (1885 to 1899) attended in large numbers, or at the London Hospital, or at the Metropolitan Hospital, or at the Jewish Hospital for Incurables?

There can be no doubt that salt is a powerful stimulant to cell metabolism. Vort* published an article on this subject in 1862, showing that it increases capillary circulation and the oxidation of albumin, and through this the quantity of urea excreted. Breeders of cattle and of horses are well aware of the effect of salt. If it is given to sheep suffering from disease such as sheep-rot, it will give vigor and help the tissues to resist the effect of wet. It is absolutely necessary to the growth of minute animal organisms, such as infusoria, which will not grow in distilled water, but will grow if half a grain of salt to the pint is added to the water. What, however, may be good in moderation, may be bad if taken in excess or if continued too long.

The idea that salt is the essential factor may be arrived at in another way. There is marked in Mr. A. Haviland's cancer map of England, the extensive "cancer field" of Malton and Pickering. I have been to Marishes Road, the worst spot in this field, to examine the conditions there, and came to the conclusion that the only explanations possible are: (1) the regular flooding of the land every winter; (2) the possibility that the thin layer of mud deposited may contain some bacterium, for it is said that if cattle eat the herbage before the mud is washed off by rain they are killed by it; and (3) the very large amount of meat and bacon eaten by the people, viz., three heavy meals a day. Compare

* *British and Foreign Medico-Chirurgical Review*, Vol. ii., 1862, p. 235.

this "cancer field" with that of Wetherby, where there are no floods and where the land is high and dry and principally limestone. From this it is evident that the explanation of the Pickering mortality cannot be the flooding of the land or the deposit of mud. The only thing common to the two districts is the diet, which at Wetherby is good, being meat and bacon two or three times a day amongst the farming class and good living amongst the wealthy residential class, and of course much meat means much salt. Dr. J. A. Hargreaves, the medical officer of health, believes that the poorer classes are comparatively exempt, and that cancer is a disease of class. He is working at this point, as illustrated by his own district.

Nothing can be clearer about cancer than the fact that its incidence is connected with diet; and if our various pieces of knowledge bearing upon diet are compared it will be found that the only constantly-present thing is salt. It does not matter what the rest of the food may be, salt must be present, and in excess, considering the patient's occupation and mode of life. If salt is absent, cancer is absent. Savages, as far as is known, are exempt from cancer,* and they get no salt. All domestic animals except the pig are subject to cancer, and salt is given to sheep, to cows, and to horses, but never to pigs. Sarcoma has been known to occur in the pig, in the testis, but no true case of cancer. Professor McFadyean has never met with a case. Wild carnivora, with, of course, a pure meat diet, are exempt. No authenticated case has ever been met with amongst them.† Of course, they get no salt except in rare instances, as in the case of the buffaloes' "salt licks." On the other hand, when confined in zoological gardens, they are given salt and they become subject to cancer. An African hippopotamus has recently died from cancer at the Zoological Gardens in London, and salt had been given to it. I can find no instance of true cancer in any animal which has not had access to salt, but Mr. Roger Williams mentions two cases of sarcoma, one in a plover and the other in a marsupial. Sarcoma, however, is a different disease to true cancer. It might be supposed that the rice-eating natives of India would be exempt from the disease, but they are not. "All natives of India are keen on salt," writes Dr. Andrew Duncan of the School of Tropical Medicine. The rice-eaters are not quite strict vegetarians, as they take fish when they can get it. They eat much food of the pea tribe which contains much nitrogen. Sailors may live for weeks on salt junk and breathe a salt-laden atmosphere, but it does them no great harm because conditions

*W. Roger Williams, *The Lancet*, Nov. 4th, 1899, p. 1258.

†Ibid.

(2) and (3) are absent, *i.e.*, they work hard in the open air. Their mortality from cancer is, however, very high, viz., 44.5 per 100,000, contrasting with that of miners (14.5) and of iron-workers (12.2). The mortality from cancer in London is extremely high in the whole of a district west of a line drawn from Newington Green through London Bridge to Sydenham. This embraces the parts inhabited by the wealthy, who take much meat and, of course, with it a corresponding amount of salt. On the other hand, the poor parts, such as Bermondsey, Rotherhithe, the Isle of Dogs, Old Ford, Bow, and Bethnal Green, have a low mortality. It may be replied to this that the average age of the population in the wealthy parts is higher, but the Registrar-General has published tables for the principal English counties corrected for age and sex, and it is found that the relative mortality from cancer is by this not impugned but only altered a little.

Cancer houses are probably merely houses where there is accommodation to keep a pig and where the diet consists of a good deal of bacon, or where a good deal of butchers' meat is consumed, and with it, of course, salt; or where the inhabitants are old but their appetites are still good; or where they are women and live well, but lead indoor lives, so that the food is not oxidized. An instance of this was given in which three successive deaths had occurred. The great increase in cancer recently is chiefly amongst men, and it is in the stomach and abdominal organs. If there has been a great increase in the consumption of salt, as I believe there has, in consequence of and with a great increase in the consumption of meat, this would explain it, or might do so.

Lyon* publishes the result of a research into the distribution and statistics of cancer in Buffalo for the period of 1880-1899. The material analyzed consisted of the mortality records of the City Board of Health, and in estimating the distribution, the patients in 2,005 cases whose residence was known, were assigned to their proper quarters. A marked concentration was found in the German wards, and no other relation than that of race could be determined to exist between this area of concentration and local conditions. Tables constructed to show racial prevalence demonstrated that cancer was much more frequent among the foreign-born population—and particularly the Germans—than among the native-born inhabitants. A low cancer-rate was found in the Italian quarter, and a correspondingly low position was occupied by the Italians in the race table. The Germans and

* *American Journal of the Medical Sciences*, June, 1901.

Poles exhibited two other peculiarities in that the rate among males closely approximated the rates among females, whereas among other classes the females were almost double the males. These two nationalities were also distinguished by the very large number of cases of cancer of the stomach and the comparatively small number of cases of cancer of the uterus and breast. Lyon considers that the figures support the idea that the peculiar diet of the Germans is responsible for the high rate amongst them. The statistics show a general increase in the cancer-rate of from 32 to 52 per 100,000 of population. What the peculiar diet of the Germans is is not stated, but we may pretty correctly guess it. This theory is not opposed to the idea that a micro-organism is an exciting cause of cancer; in fact, it requires or presupposes some local irritant. But for this purpose one organism would do as well as another, and none would be actually specific.

The interesting discoveries of Plimmer carry conviction to my mind that a parasite is present in the active growing cells of most cancerous tumors. Mr. H. G. Plimmer found these parasites in 1,130 cases out of 1,220. There were reasons why they were not found in 90 cases, and 58 cases remain in which they could not be found. These parasites, however, may follow the commencing stage of the tumor instead of preceding it. If they precede it, which they must do if they cause it, they ought to be found apart from the disease. Moreover, micro-organisms as the sole cause of cancer do not harmonize with most of the facts about the disease. They would not account for the comparative immunity of Jewesses or for the undoubted fact that prosperity and high living increase the tendency to the disease. These ought to act the other way. If it were a parasite surely the damp, water-logged Isle of Dogs should be a paradise for it, whereas that district is comparatively healthy; while Hampstead, which lies high and dry and is covered with excellent houses standing in their own grounds, has a high mortality.

In conclusion, I do not assert that I have produced absolutely conclusive proof of the truth of the theory advanced. I consider that in its present stage the theory is more a suggestion than anything else—merely a new idea for consideration. At the same time I would ask, Has not nature, and have not some observers, made scientific experiments for us? Have not the good people of Malton and Pickering kindly fed themselves with beef and bacon three times a day for our instruction? and have we not the result before us? This is as scientific an experiment as can be made, and the same applies to most of the other facts. Whilst writing this old woman, aged 42 years, has applied for advice with cancer of the breast. She has bacon for breakfast and

bacon for dinner. She lives in an ancient toll-bar house on an unfrequented road, she seldom goes out, and she can get no other food. Has not this woman, in a certain sense, made herself the subject of a scientific experiment? If this theory should turn out to be true its use would be chiefly in prevention, for it is not likely that deprivation of salt would cure an already established disease, although it might check its advance. It may, however, be tried, and also tried along with any other mode of treatment, as with a view to prevent recurrence after surgical operations, or with oophorectomy and thyroid in cancer of the breast, as has been so ably advocated by Dr. G. T. Beatson and Mr. G. E. Herman, to whom, and especially to Mr. Roger Williams and Mr. Haviland, I tender my thanks for the many interesting papers from which I have taken most of my facts.—*The Lancet*.

SYPHILITIC JOINT INFLAMMATIONS.

The diagnosis of this condition is difficult, because the signs of the disease often disappear under treatment. Dr. Borchard (*Deut. Zeitsch. f. Chir.*, Sept., 1901) draws the following conclusions from his observations: Acute syphilitic joint inflammation, with water and swelling of the capsule, consists in nothing but the evidence it gives of the share the joint proper is having in the general acute infection of the disease. Such may naturally arise whenever the poison has manifested itself with very active secondary symptom everywhere in the body; (2) on the other hand, the more permanent syphilitic diseases of the joints, such as appear in the third period of the disease, must necessarily be of the order of gumma or of chronic productive inflammation; (3) these products have their situation in the synovium, the sub-synovial tissues and in the cartilages. The increase in the number of cells is not a consequence of a chronic hydrops or of a fibrinous deposit on the synovium, but is due to the growth of small miliary gummata. These gummata are really the cause of those thickenings of the joints which may often be seen in life. He further believes that an acute hydrops in this disease can, without further cause, become chronic. The cause of it seems to be in such a case always the growth of miliary gummata. Every hydrop in the third stage and in the congenital forms of disease is probably due to the same state of affairs, viz., the growth of gummata in the synovium, the parasynovial tissue, and in the cartilage.—*Medical News*.

DECISION REVERSED.

(Continued from page xviii.)

healthy child. In regard to his previous evidence, witness stated that he wished to qualify his evidence at previous inquiry. The coroner here read witness' previous evidence, also deposition presented to the court when the order was asked for to quash the verdict of the previous inquiry. Witness said he believed tetanus cause of death. Would not express an opinion as to the period of incubation for tetanus. The coroner called his attention to his affidavit presented before Judge McLeod, when he stated that the period of incubation had passed. The witness replied that his affidavit was based on modern science. Was tetanus due to impure vaccine? Was death due to imperfect vaccination? These questions witness said he could not answer. He considered the sore an unhealthy one when he first saw it. Was not good practice to put shield on and leave it there for two weeks without looking at the sore. To jurors—Did not suggest to the mother the disease to be spinal meningitis. Witness recited some of the symptoms of spinal meningitis. Had seen probably altogether eight or nine cases of tetanus. To Hon. Mr. McKeown—Was at first inquiry misinformed as to date of vaccination of the child. Science places period of incubation at greatest from fourteen to eighteen days. The irritation of the scab by a person's finger nails might produce tetanus if the person had been about a stable, or even handling or playing with carpets, etc. The germ is, and is not a common one. In his practice did not know of a case of tetanus occasioned by vaccine. Did not believe that in this case tetanus was caused

by vaccine. To the coroner witness said he would not admit that the death of the child was due to impure lymph. He could not say. Daniel Mullen, K.C., stated at this point that he appeared in the interest of Mr. Hawker. To Mr. Mullen, witness said he did not approve of a shield, as he did not like the compression occasioned thereby.

Dr. G. A. B. Addy, provincial bacteriologist, sworn, testified that he visited the deceased on November 19th, the evening before she died. On first seeing the child, she was about entering upon a convulsion. Was resting on heels and back of head. Spasm seemed to be more pronounced on infected or vaccinated side. Witness and Dr. Baxter approved of the prescriptions, but added opium. Had no idea as to the source of infection. Coroner here read witness' evidence at the previous inquiry, and the deposition which was read before Judge McLeod. Witness said the majority of authorities agree that the incubation period of tetanus is from four to fifteen days. One authority, however, says it is an open question. According to this one authority, it might possibly be over fifteen days. Even if this one authority was right, he would not say it was caused by the vaccine any more than by any other of many causes. Believed the child died of tetanus. To the jury the witness said the tetanus germ was generally spread. Would consider it absolutely impossible to determine the cause of infection without a thorough bacteriological investigation. Then it would not show the source of the germ.

To Mr. McKeown—Have used Mulford's vaccine in 90 per cent. of cases during the present epidemic because of having received better results than from others used in the past.