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Original Articles

NOTES ON GASTROPTOSIS, WITH REPORTS OF CASES.*

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Gastroptosis, or falling of the stomach, is a fairly common disease, and is generally associated with ptosis of one or more other abdominal organs. The most frequent combination is gastroptosis with movable right kidney. The name gastroptosis would appear to imply a falling of the entire stomach, but such is not the case as the cardiac end is attached to the esophagus and cannot alter its position. However, the pylorus and both the greater and lesser curvatures may be lowered, and it is to this displacement of the stomach to which the name gastroptosis is applied. The causes of gastroptosis are very variable. Heredity plays an important part. General muscle and nerve weakness, narrow chests, tight lacing, emaciation, are important factors in the development of the disease; but according to the writer's experience diminished intra-abdominal tension is the most active causative agent. The stomach is held in position by its ligaments, and by the pressure exerted by the elasticity of the abdominal muscles. The ligamentous attachments are probably of sufficient strength to hold the stomach with an ordinary load in its normal position. But the intra-abdominal tension protects the ligaments themselves by giving support to their vessels, and if the load of the stomach should become abnormally large, either by excessive eating or drinking, or by retention of food, then it will, by means of a cushion of intestines, prevent an undue weight from being put upon these suspensory bands. This, then, is what I believe

* Read before Toronto Medical Society.

to be the condition in a normal abdomen. Let us now consider the condition of the stomach when the intra-abdominal tension is diminished. This tension is maintained by the tone of the abdominal muscles, and by the presence of viscera, fat, etc., within the abdominal cavity. It is quite evident, therefore, that it may be reduced by many circumstances, such as rapid emaciation, childbirth, removal of abdominal tumors, severe acute diseases. In such conditions the abdominal wall no longer supports the intestines, and as a result the latter descend and form a pendulous abdomen. The stomach, now held in position only by the poorly nourished and probably hereditary weak ligaments, gradually descends, and the pathological condition under discussion is produced.

As stated above, gastroptosis is a common disease. It occurs in both sexes, but the great majority of the patients whom I have examined have been women who have borne one or more children. The sequence of events which led to the displacement of the stomach is readily understood.

The symptoms of this disease depend more upon the associated condition—hyperacidity, atony, gastritis, etc.—than upon the gastroptosis itself. Thus the symptoms of gastroptosis with hyperacidity would be quite different from those of the same disease with gastritis. Flatulency, belching, heartburn, pain or uneasiness in the epigastrium are common symptoms. The bowels are usually constipated. The patient is usually more or less emaciated and is frequently weak and neurasthenic. In many cases the appetite is good, but patients do not eat on account of the distress which follows.

The functional signs are variable. There may be normal acidity, hyperacidity or subacidity. I have found hyperacidity to be present in the great majority of cases. The gastric contents are expressed with difficulty on account of the atony of the stomach. The subjective symptoms and functional signs are usually insufficient to make a diagnosis, but the objective symptoms are more distinctive. The epigastrium is depressed, and the lower part of the abdomen full and flabby. When the stomach contains a liquid the splashing sound may be produced by striking the abdominal wall over the region of the stomach. The splashing sound may be used to determine the positions of the curvatures of the stomach. Ptoses of other abdominal organs may be present. Of these movable right kidney is most frequently made out. On inflation of the stomach with air the lesser curvature may be seen running across the abdomen below the liver, and the greater curvature will be found below the umbilicus, and even as low as the symphysis pubis. The treatment is, as a rule, very satisfactory. Prophylaxis is very important, and it should be remembered that gastroptosis is a common disease, particularly in women, and one

should be always on the lookout for it even when symptoms of indigestion are not present. During convalescence from childbirth the abdominal wall should be supported if very flabby.

The objects sought for in the treatment are: (1) to increase the intra-abdominal tension; (2) to correct any error of secretion or motility.

I frequently commence treatment by applying strips of adhesive plaster across the lower part of the abdomen. This always gives the patients relief until they are able to obtain an abdominal bandage. Particular care should be exercised in fitting the bandage so that it may press firmly upon the hypogastrium. As a rule the support need not be worn during the night. Before applying it in the morning the intestines should be forced up towards the epigastrium and the bandage laced from below upwards. The strength and tone of the abdominal muscles may be further increased by massage, electricity and physical exercise. Any movement of the body, such as deep breathing, which develops the nutrition of the abdominal muscle, is indicated.

The medicinal and dietetic treatment of gastroptosis will vary with complications. In cases associated with hyperacidity, acids, bitters, alcoholic liquors, spices, fruits, pickles, coarse foods should be strictly prohibited. The diet should be of a very nutritious and easily digested character. A liberal quantity of food should be given at least four times a day. Bread, milk, butter, eggs, gruel, well-cooked rice, oysters, scraped and tender meats are indicated. In severe cases a more restricted diet may be necessary. The drugs which I have found most useful in gastroptosis with hyperacidity, are those which are sedative to the stomach, assist the digestion of starch, correct the excessive acidity and relieve constipation. Irritating cathartics, such as aloes, colocynth, etc., should not be given. I have found preparations of cascara sagrada and pills rhei, etc., most useful laxatives. A mixture of bismuth carbonate, arom. fluid extract of cascara sagrada, and tinct. belladonna given before meals, and two teaspoonfuls of calcined magnesia, given three quarters of an hour after meals, will give good results in many cases. In some cases taka-diastase has a decidedly good effect. The replacement of the stomach tends to relieve the hyperacidity, as the increased activity of the gastric glands is, no doubt, partly due to the stagnation of food, which again is the result of atony and ptosis of the stomach. Atony is a common complication of gastroptosis, and this fact must be kept in mind when directing the treatment of this disease. When gastritis, subacidity, etc., are complications, somewhat different methods of treatment must be adopted. It would require too great a space to describe the treatment of each complication, and I shall therefore conclude by reporting a few cases, illustrative of this disease.

CASE 1.—E. M., aged 63; female, mother of eight children. Patient had good health until she was fifty-two years of age; since that date has suffered from dyspepsia from time to time. The present attack of indigestion has lasted for four months. She has lost ten pounds in weight, and complains of heaviness and soreness in the epigastrium, constipation, belching of gas, weakness and sleeplessness; appetite is fairly good. The patient was given a test-breakfast, and gastric contents analyzed with the following result: Free HCl + total free HCl, 22; total acidity, 72; both pepsin and rennin active. On examining the abdomen it was found to be flabby, and the right kidney was easily palpated. The stomach was distended with air, and by the lowered positions of the curvatures the ptosis of stomach was easily made out.

Diagnosis—gastroptosis with hyperchlorhydria.

Treatment—abdominal bandage to be worn during the day; a diet of easily digested foods, such as chicken, eggs, scraped meat, rice, bread, butter and milk. She was directed not to eat fruits, pickles, tough meats and coarse vegetables. A mixture of bismuth carbonate, tincture belladonna and aromatic fluid extract of cascara sagrada was given before meals, and a teaspoonful of baking soda in half a glassful of water one hour after meals. Under this treatment the patient rapidly improved, and at the end of four weeks was able to eat an ordinary meal without discomfort.

CASE 2.—S. M., aged 54; mother of six children. About twenty-five years ago, after the birth of one of her children she suffered from indigestion and weakness for nearly a year. She recovered from this attack and enjoyed fairly good health until the month of June, 1899. During that month she received a fright and as a result was confined to her bed for three weeks. During that time she complained of numbness in both legs and arms, and became thin and very weak. She recovered from the numbness, but shortly afterwards began to suffer from indigestion. Belching, heartburn, uneasiness in the stomach, palpitation of the heart, constipation and weakness were her principal symptoms. She consulted me on the 26th February, 1900, and then complained of the above symptoms and was so weak that she was unable to leave her bedroom. She stated that she had lost eighteen pounds in weight during the previous six months. On examining the abdomen I found the lower part very flabby and somewhat pendulous while the epigastrium was depressed. On striking the abdominal wall the splashing sound could be made out over a large area and three or four inches below the umbilicus. By palpation a thickening which was probably the head of the pancreas could be felt, and both the right and left kidneys were found to be freely movable. I inflated the stomach with air and found both the lesser and greater curvatures lower than normal. The former passed obliquely across the abdomen about an inch

above the umbilicus, while the latter reached within three inches of the symphysis pubis.

Analysis of the gastric contents, after an Ewald test-breakfast, gave the following result: Quantity 7 oz.; mucus slightly increased; free HCl + total free HCl, 58; total acidity, 100.

The treatment of this case was about the same as that outlined above for gastroptosis with hyperacidity. She began to improve immediately, and in three weeks was able to be about her house, and at the end of three months had regained all the flesh that she had lost during her illness.

January 3rd, 1901—The patient continues to have fairly good health, and the flabby condition of the abdomen has completely disappeared.

CASE 3.—A. C., aged 22; mother of two children. The elder is sixteen months old, the younger four months. After her last confinement she had good health for six weeks, and had plenty of milk for her child. She began to lose flesh and to become weak. On standing for some time she would feel as if bruised about the waist, and as if a weight were attached to it. The secretion of her breasts diminished until she was forced to wean her child. She complained of palpitation of the heart; could feel something pulsating in the pit of the stomach. On examining the patient one month after she had taken ill, I found her right kidney movable and abdomen very flabby. The splashing sound could be easily made out. Digestion of food was fairly good. Her stomach was inflated with CO₂ gas and found to be displaced slightly downwards.

Treatment—abdominal bandage, light diet. The patient improved rapidly and gained in weight; and at the present time—two months afterwards—she is strong and healthy.

CASE 4.—E. R., male; aged 42. Indigestion for ten years, but symptoms much worse of late. Complains of weakness, headache, flatulency, belching, nausea, dizziness, constipation, vomiting. Appetite fair. Always tired in the morning; physical examination demonstrated the presence of gastroptosis. Analysis of gastric contents gave the following result: Free HCl absent; total acidity, 24; mucus slightly increased; lactic acid absent.

Diagnosis—gastroptosis with atony and gastritis.

Treatment—abdominal bandage, and a diet and drugs suitable for a case of atony with gastritis.

26 Gerrard St. East.

DOUBLE CONICAL STUMP FOLLOWING AMPUTATION OF BOTH ARMS IN UTERO.

BY WALTER MCKEOWN, B.A., M.D., M.R.C.S. (ENG.), TORONTO.

Johnny M. was brought to me by his mother, complaining of pain at the ends of two little wing-like appendages, which he called his arms. He was then sixteen years of age, and a boy of more than ordinary intelligence. The head and trunk were normal, but all four limbs were extraordinary. Both arms had apparently been amputated near the shoulder; the right leg was normal, as was the left as high as the knee-joint, but the femur was greatly shortened, so much so that it felt like a round ball. The left femur was longer, but still short, and when the boy stood in the position usually assumed by him when standing or walking, the long axis of the bone was horizontal rather than vertical. This position was adopted to some extent to equalize the length of the two limbs, but in the right leg also the thigh was held at a right angle to the trunk. The thigh muscles, on account of the increased strain constantly put upon them to maintain the weight of the body, were enormously developed.

The pain in the "arms" was caused by the protrusion of the humerus through the skin and the consequent irritation and ulceration. It was really a case of double conical stump, the bone having grown more rapidly than the soft parts and pushed its way through. I sent him to St. Michael's Hospital, where I removed about an inch and a half from the bone on each side. Considering his age it is unlikely to recur.

I am not a believer in maternal impressions, but this boy's history was interesting, even if only as an example of coincidence. His mother told me that sometime before his birth when she was three months pregnant, she was going across the Bathurst St. bridge here, as was her daily custom, with her husband's dinner, when her attention was attracted to the tracks below by the shouts of some workmen. She ran to the side of the bridge, and looking over saw a man lying at the side of the track who had a moment before been knocked down by an engine and both legs cut off. She was so horrified that she immediately fainted, and remembered nothing more until she awakened at her own house. She had been carried home and a doctor sent for.

The physician was Dr. Moorhouse. He attended her in her confinement, and he tells me he has a distinct recollection of the facts. At the time he first saw her there was nothing specially noted, but when the woman was confined the child born was without arms. Dr. Moorhouse was surprised when I informed him

that conical stump had developed, as he says that at birth there was nothing to indicate that there were stumps except a couple of little tit-like prominences, one on each shoulder. There was nothing expelled which would lead him to think that the arms might have been amputated *in utero*, although carefully looked for. Dr. Moorhouse tells me he remembers the history given at the



NORMAL POSITION.

time he first saw the woman, and it agrees substantially with that given by her to me.

Why the child should have been born without arms when the impression fixed upon the mother's mind was the amputation of both legs, I am not able to explain. He can use his toes almost as well as most people can their fingers, and tells me he can catch a ball, that he can beat all the boys at marbles, and he would apparently be quite happy, but that he cannot spin a top.

Reports of Societies

TORONTO CLINICAL SOCIETY.

Stated meeting, January 2nd, 1901. The president, Dr. W. H. B. Aikins, occupied the chair.

AMPUTATION AT SHOULDER JOINT.

Dr. A. Primrose presented this patient and recited the history of the case. A man of thirty-five years last fall, while crossing Queen Street, was run down by a street car, but the motorman was not aware that there was any object under the car until he noticed that something obstructed the wheels. While searching for the obstruction, an arm was brought from the curb, and then the man was found between the front wheels. The arm had been taken off above the insertion of the deltoid, and the tissues were completely cut through. The wheel of the motor had served as an excellent angiotribe, because he had not lost a teaspoonful of blood. When seen by Dr. Primrose at the Emergency Hospital, the arm, or rather stump, was a mass of pulpified tissue, the humerus being broken into three pieces. The upper fragment was fractured into the shoulder joint. The condition of the skin was interesting. There had evidently been an evulsive force, a tubular portion of the skin being found in the arm completely separated from the soft tissues. The axillary artery was tied high up, and having done that, the nerves were cut as high as possible, and then the upper fragment of the humerus was dissected out from the shoulder joint. The patient made a good recovery. There was a small drainage tube in for a few days.

EXOPHTHALMIC GOITRE, WITH REPORT OF TWO CASES.

Dr. W. B. Thistle reviewed the causes of this disease, and then reported two cases. The first occurred in a man aged thirty-four years, and the second in a woman aged thirty-four years. The woman consulted him for weakness and nervousness; had for some time slight enlargement of the neck, which had recently increased. She was a tall thin woman, married, having two children. Temperature was slightly elevated; pulse in the neighborhood of 120; prominent eye-balls. For some time had noticed palpitation, and had experienced fear and a sense of nervousness. The gland was punctured and a dark-brown fluid drawn off. A solution of perchloride of iron was injected. Recovery was complete in this case. The second case gave a history of having had Grave's disease some six years ago. Recovery was complete at

that time. When admitted to the hospital this time the patient showed every symptom of the disease. He had lost 40 lbs. Temperature elevated slightly. Pulse varied from 130 to 160; no murmurs. Had several attacks of syncope; also troubled with attacks of diarrhœa. The treatment was rest in bed with iodide of potash and belladonna. There was very little general improvement. The tumor which was present in this case was operated on by Dr. Peters, who removed it as well as a portion of the gland. The patient is now quite well.

Drs. Ryerson, Anderson, Primrose, Bruce, and Rudolf discussed the paper and the cases reported.

FOREIGN BODY IN THE EYE WITH SKIAGRAPH.

Dr. G. Sterling Ryerson reported this case and exhibited the skiagraph. It is very seldom that we have a foreign body in the eye that it is necessary to take a skiagraph of. This was the case of a man doing work, and it was supposed that a portion of the chisel broke off and struck the eye. It was not certain that the portion of steel was in the eye or not, and it was a very important question to decide whether the eye should be removed or not. The injury of the eye was not visible through the ophthalmoscope. The skiagraph was entirely successful, and showed where the body was, and also showed its comparative size and shape to some degree. Immediately after the skiagraph was taken the eye was removed, and it was found that a large portion of steel was firmly embedded in the eye and lying somewhat to the inner side of the optic nerve.

Drs. Orr, Small, and Primrose discussed the case.

Special Selections

THE ANNUS MEDICUS 1900.*

MEDICINE AND THERAPEUTICS.

Amongst the many diseases which have been particularly studied during the past year, two stand out more prominently than the others owing to the number of observers who have been at work in investigating their origin, mode of spread, and possible prophylaxis—these two maladies are malaria and plague.

Malaria.—Nearly six years ago Dr. Patrick Manson brought forward the theory that a certain species of mosquito is the carrier of the malarial parasite. This suggestion has passed the stage of surmise and it may now be considered as a fact. The investigations of Dr. Patrick Manson, Professor Celli, Professor Grassi, Professor Koch, Professor Bastianelli, Professor Bignami, Major R. Koss, I.M.S., and others have proved beyond doubt that malaria is conveyed and spread by means of certain species of mosquito, and that the essential link in the life-cycle of the parasite—the means by which its existence is assured from year to year, in Italy at least—is malarial man. The period of the year at which malaria is most prevalent corresponds to the times at which the mosquitoes are most numerous. Older observers had noted that malaria was most likely to be contracted about sunset and at night. The anopheles lies hidden by day and pursues its search for food at night. Again, the old observers were aware that the “miasm” was often very limited and did not extend to any great elevation. Naturalists know that the mosquito does not fly far from its birth-place or mount high in the air. The various forms of the malaria parasite have been demonstrated in the bodies of the anopheles. An experimental proof of this theory was established by Mr. P. Thurburn Manson, who submitted himself to be bitten by some mosquitoes of this species which had been forwarded to England, with the result that he became infected with an attack of tertian fever. Experiments equally important were carried out by Dr. L. Sambon and Dr. G. C. Low, Signor Terzi, and two Italian servants in the Roman Campagna at a spot known to be intensely malarial. By taking every precaution against the bite of the mosquitoes they remained entirely free from infection, in marked contrast to their neighbors, who were either ill with fever or had suffered malarial attacks. Most of the investigations hitherto carried out have been confined to the malarious districts of Italy.

* Special Selection from Editorial columns of *The Lancet*.

Whether the same results will be obtained in other parts of the world remains to be seen. In many regions in which malaria is prevalent it is probable that equally satisfactory results will be arrived at. It has been shown that if due precautions are taken a great degree of protection can be obtained. The importance of such knowledge can scarcely be overrated. It is possible, however, that in some districts we have to do with a different disease to the "malaria" that is found in Italy, and that we must seek some other means of its spread than in the anopheles. Interesting experiences have also been related by Professor Angelo Celli as the results of experiments carried out in Latium.

Plague.—Plague has appeared in many parts of the world during the year, and thus additional importance was attached to the report of the Indian Plague Commission, especially with that part which deals with the value of Mr. Haffkine's system of preventive inoculation. The conclusions at which the Commissioners arrived are briefly that inoculation sensibly diminishes the incidence of attacks and the case-mortality in those persons who have been inoculated. The inoculation, however, does not appear to confer any great degree of protection within the first few days after the operation has been performed, though it ultimately confers protection which lasts for a number of weeks—possibly for months. The varying strength of the vaccine employed apparently had no great effects upon the results hitherto obtained, and the true value of Mr. Haffkine's method will probably not be thoroughly tested until after an accurate method of standardisation has been devised. In the report of the Commissioners the method of preparing the vaccine was fully discussed, but it is obvious that much yet remains to be done before the practice of inoculation with a fluid of this nature will fulfil all the conditions which sound scientific reasoning rightly demands of it. For the present—and this in itself is no small achievement—the method may justly claim to be a practical success and very nearly, if not quite, to attain to the high ideal of a certain and safe prophylaxis against one of the most deadly of all diseases. Time will doubtless remedy existing defects, and it is regrettable that the members of the Commission contented themselves with merely pointing out the imperfections and the necessity for overcoming them, and did not, with some minor exceptions, make any definite suggestions or recommendations as to the manner in which they should be overcome. On August 27th and 28th general currency was given to a disquieting report that cases of suspected plague had occurred in Glasgow. The confirmation of the clinical diagnosis was soon forthcoming, and the country was then made aware of the unwelcome fact that after an absence of more than 200 years plague had once more obtained a certain amount of foothold in Great Britain. The original cases of imported plague could not be traced, but as

soon as the diagnosis was established the whole forces of resistance at the disposal of the municipality of a great city, organized by one of the best public health departments which we possess, were at once brought into action. The procedure adopted—prompt hospital isolation, medical house-to-house visitation, formation of "cleansing areas," search (with the aid of bacteriology) for cases bearing suspicious similarity to plague, observation of "contacts," along with other administrative measures—soon had a marked effect, and the outbreak was speedily brought under control. A more extensive outbreak of the disease occurred in Sydney, Australia. The first case appeared on January 27th, and up to July 28th there had been 302 cases and 102 deaths. During the whole of July, however, only six cases were reported, and for the week ending July 28th no fresh cases were notified, although one of the patients in the hospital died. The occurrence of the above outbreaks lent additional interest to the Harben Lectures delivered at the Royal Institute of Public Health by Professor A. Calmette, Director of the Pasteur Institute at Lille. In the course of these instructive lectures Professor Calmette remarked that it was now impossible to deny that the use of anti-plague serum as a preventive measure had been proved to be an excellent means of preventing propagation of plague in an affected centre, as by its means persons exposed to the contagion would be rendered absolutely and immediately immune. Unfortunately the immunity thus obtained was of short duration, and it was therefore necessary during an epidemic to repeat the injection every week. The differences in the results thus obtained by Professor Calmette and those produced by Mr. Haffkine's method are remarkable. Professor Calmette, indeed, alluded to the latter, but remarked that "this method was, however, open to some objection."

Anti-typhoid Inoculations.—The success of anti-typhoid inoculations is unfortunately by no means insured, and we must await the official returns from South Africa before arriving at any conclusion on the subject. In the early part of the year Professor A. E. Wright, of the Army Medical School, Netley, published a paper on the results which have been obtained by the anti-typhoid inoculations. His statistics, however, did not include a large number of cases, and although the results might be characterized as encouraging, yet a far larger number of cases will have to be analyzed before any decision is arrived at. The experience of our troops in South Africa has been the severest possible test of the value of the inoculations, and the opinions of the medical officers who have had only too many opportunities of observing how far the inoculations protect men from attacks of typhoid fever, are universally awaited with the greatest interest and anxiety.

Epidemic Diarrhea.—The subject of epidemic diarrhea has been brought prominently before the medical profession during

the past year. Dr. F. J. Waldo chose it for his Milroy lectures. Epidemic diarrhea—to choose one of its many synonyms—is one of the chief causes of the vast infantile mortality which has hitherto eluded the control of the public health reformer. Its etiology has not been definitely established. Dr. Waldo, from the analysis of a vast array of statistics, arrived at the conclusion that diarrheal diseases are first and foremost the result of strictly local conditions; another suggestive feature in the history of the malady is the fact of its vastly greater incidence upon hand-fed as compared with breast-fed infants. Dr. Waldo suggests that epidemic diarrhea is probably due in no small measure to the pollution of street-dust by horse-dung. This theory would account for the disease being more prevalent in towns and amongst hand-fed children, since milk, which forms the staple article of infantile diet, is freely exposed to invasion by town dust, both in the shop of the retailer and in the larder or cupboard of the consumer. In connection with this same subject the Home Counties Branch of the Incorporated Society of Medical Officers of Health made a sound request when they asked the Royal College of Physicians of London to appoint a committee to deal with the question of nomenclature in connection with the certification and classification of “diarrhea deaths.” This request was acceded to and there it now an official name for the disease.¹

The Open-air Treatment of Tuberculosis.—Many observers have reported on the treatment of pulmonary tuberculosis by the “open-air” method. This therapeutical measure seems to meet with increasing favor, and numerous sanatoria for the reception of phthisical patients are being built in different parts of the country that offer satisfactory sites in reference to exposure and soil.

Yellow Fever.—An interesting report on yellow fever was issued by Dr. Wasdin and Dr. H. D. Giddings, of the Marine Hospital Service, Washington. They were deputed to study the etiology of yellow fever with special reference to Professor Sanarelli's claim to the discovery of the specific bacillus of that disease. They came to the conclusion that there can be no doubt that the bacillus *icteroides* is the causal agent of yellow fever, and they also are of opinion that infection takes place by the respiratory tract and not, as has generally been held, by the alimentary canal. Other experiments of the Commission proved that the bacillus *icteroides* is very susceptible to the action of bactericidal agents.

The Purity of Glycerinated Vaccine Lymphs.—During the year we published a report of a special commission which we appointed to investigate the purity of various glycerinated calf vaccine lymphs at present in use. The general result of the inquiry, which was based on the application of the bacteriological test employed

1. See *Annus Medicus*, Royal College of Physicians of London, p. 1906.

on several occasions and to different samples of the various commercial "lymphs," was the gratifying one that as regards their purity—*i.e.*, freedom from harmful bacteria—very many of these samples were good. About half the samples were above the standard of the lymph supplied by the Local Government Board.

Rabies.—Professor J. Rose Bradford in delivering two lectures on rabies brought forward many valuable facts in relation to that disease, referring especially to its nature, symptoms and diagnosis. His remarks on incubation, though brief, were full of interest. He observed that most authorities are agreed that in man the incubation period lies between twenty days as a minimum and sixty days as a maximum, and that it is rare after three months and very rare, if not unknown, after six months. In cases which have been recorded after as long a period as eighteen months the time has probably been reckoned on an erroneous basis.

"*The Fourth Disease.*"—In publishing a paper under the title of "On the Confusion of Two Different Diseases under the name of Rubella (Rose Rash)" Dr. Clement Dukes has done good service to the profession, and indirectly to the public. To the mind of many observers Dr. Dukes has shown conclusively that there exists a disease which so nearly resembles scarlet fever as to have been frequently mistaken for it even when the opportunity has occurred of observing a multiplicity of cases. Whether this affection is specifically distinct, and not a form of German measles as is currently believed, is a point concerning which for the present judgment must be suspended. It is sufficient to say that Dr. Dukes made out a strong case for his theory. Future observations should determine the truth.

The Bacteriology of Scarlet Fever.—Further investigations have been made as to the bacteriology of scarlet fever by Dr. Glass; and although it cannot be said to be proved absolutely that the diplococcus discovered by that observer is the specific germ of scarlet fever, much evidence points in this direction. The streptococcus recently described by Professor Adolf Baginsky and Professor Paul Sommerfeld as constantly present in the throat secretions and blood of patients suffering from scarlet fever, may possibly be the same microbe as that discovered by Dr. Glass, but the latter named has pushed his investigations much further than have the German observers.

Scurvy.—Contributions on scurvy expressing rather conflicting views have been published by Mr. F. G. Jackson and Dr. Vaughan Harley, Staff Surgeon W. E. Home, R.N., and Professor Wright, of Netley, the latter maintaining that scurvy is a condition of acid intoxication very similar to the acid intoxication which can be experimentally produced in herbivora by the injection of a surplus of mineral acids.

Diabetes.—Useful and interesting work has been accomplished

by Dr. F. W. Pavy and Dr. R. Saundby on diabetes. Dr. Pavy dealt more particularly with the disease in its varied manifestations under the heading "Differentiation in Diabetes," in a paper read at the Thirteenth International Medical Congress held in Paris on fundamental points connected with the pathology of diabetes mellitus. Dr. Saundby, in a paper read before the Gloucestershire Branch of the British Medical Association at Cheltenham, referred more especially to the treatment of the disease, laying stress on the necessity of frequent examination of the urine in order to obtain information as to the quantity of carbo-hydrate food that the patient might advantageously take.

The Hygienic Treatment of Tuberculous Diseases.—In reviewing treatment during the year 1900 attention may justly be directed, first, to the development of those means which claimed our chief attention in the preceding year. The hygienic treatment of tuberculous disease in its various forms has passed from the phase of controversy and ardent partisanship to that of definite trial on our own soil, and important conclusions have already been arrived at, both as to the best means of carrying out the method and as to the particular types of case which may be expected to respond satisfactorily or otherwise. Whatever may be finally settled by a comparison of results in regard to the relative value of different climatic conditions, it has been pretty well established that the essentials of open-air treatment are at hand in most districts of Great Britain and Ireland. The physical conditions which offer the greatest difficulties to the practical therapist and are the most prejudicial in recent experience to the patients are heat and wind, and these are not more prevalent here than in most parts of the continent. Among the types of case regarded as unfavorable for a somewhat rigorous course of treatment, in which exposure and over-eating constitute the most prominent factors, are chronic forms and those complicated with catarrh of the bronchial or gastric mucous membrane. Besides these, acute cases and such as are attended with complications do better by postponing the course of hygienic treatment till the more active manifestations have subsided. It has been found that many forms of tuberculous disease other than phthisis, particularly those affecting the skin, bones, joints and serous membranes, may be beneficially influenced by open-air treatment, and the same may be said of many general diseases such as anemia, cachexia of various kinds, and even the acute fevers and functional nervous disorders; the feeling of well-being, increased appetite, and improved sleep resulting from systematic exposure reacting favorably on all these conditions. There is no doubt that a well-organized institution under a firm and judicious chief affords many of the advantages of foreign travel and residence without the vicissitudes, defective dietary, fatigue, absence of good continuous medical advice and supervision, and

separation from friends which detract so much from this manner of treating invalids. The apprehension of the sick lest they should be ill, or perhaps die, far from home which has deterred many from trying the effect of a sea-voyage or foreign residence is removed by the institution of sanatoria at home.

The use of Gelatin Solution to Increase the Coagulability of the Blood.—Gelatin solution injected into the subcutaneous tissue or administered by the mouth or rectum has been recommended as increasing the coagulability of the blood. The preparation employed consists of 1.5 per cent. gelatin in 0.7 per cent. solution of sodium chloride, of which as much as 250 grammes may be employed at one time, the injection being repeated at intervals of a week in cases of aneurysm for from twelve to eighteen weeks. Pinsuti of Rome prefers a 30 per cent. solution with 2 or 3 per cent. of carbolic acid injected deeply in three-gramme doses, as being less painful. Lancereaux and Paulesco report favorably of the method in some cases of aneurysm, but owing to the difficulty of determining whether these are sacculated or diffuse before applying the remedy, great difference of opinion has been expressed as to its value. In some instances it has proved ineffectual, or actually injurious by extension or displacement of the clot. This objection has not been raised against its use in cases of spontaneous hemorrhage such as occur in various blood diseases, nor in those instances in which it has been employed for internal hemorrhage from ruptured vessels out of the reach of surgical interference. As a topical remedy also in cases of epistaxis, gastric ulcer, and uterine hemorrhage gelatin solution has been employed with greater efficacy and less risk. The solution, of course, needs to be carefully sterilized and judiciously applied, but there is a wide field in which such an agent might prove of great value and even the only available resource, besides rendering possible by its preliminary adoption operations which could not otherwise be undertaken, as in cases of hemophilia.

Operative Measures in Medical Cases.—In the development of operative interference in medical cases the value of laparotomy in tuberculous peritonitis has been established. Recoveries have been recorded both in instances of doubtful diagnosis and after exploratory incisions, where the tuberculous nodules have been recognized and the patients have subsequently recovered, not merely from the operation, but from the constitutional disease. Following upon these a number of cases have been intentionally explored with advantage statistically as compared with those treated on simple medical lines. The ascitic form is that which derives the greatest benefit, but the dry adhesive and the ulcerative suppurating forms also do well. The dry ulcerative and the miliary forms of tuberculous peritonitis do not lend themselves to treatment by laparotomy, and absolute contra-indications to the opera-

tion are found in advanced pulmonary tuberculosis, intestinal tuberculosis, and pronounced cachexia. On the other hand, absolute indications in favor of operation are intestinal obstruction or perforation suppuration. As a less severe measure in the same direction M. Baylac at the International Congress of Medicine proposed lavage of the peritoneal cavity with sterilized water at 45°C. Eight cases so treated resulted in five recoveries, while in three others there was only temporary improvement, these having been previously operated upon. In acquired hydrocephalus following meningitis Dr. Grosz² punctured the lateral ventricles through the anterior fontanelle, removing 40 cubic centimetres of fluid from the right and 70 cubic centimetres from the left with recovery of the patient and subsidence of the symptoms.

Drugs.—Among old drugs which have been applied in new directions or in modified forms may be mentioned Dr. Bourgeon's employment of calomel in daily amounts of from three to six grains as a diuretic in heart disease irrespectively of the presence of dropsy and when there is no albuminuria or diarrhea. Croton oil in doses of from one-eighth to one-sixth of a minim in a pill with liquorice makes an effective purgative, rarely rejected even in irritable conditions of the stomach, and promoting both peristalsis and secretion, thereby softening and loosening masses which in the pouches of the colon may be retained for weeks undisturbed by the ordinary hydragogue purgatives. This remedy acts efficiently in dilatation and atony of the stomach where other remedies are not absorbed, and proves of great service in stercoræmia, which is at the root of many obstinate functional conditions, such as asthma, migraine, epilepsy, dyspepsia, and the effects of high arterial tension. Atropine in doses of from one-seventieth to one-fourteenth of a grain has been employed successfully by Dr. Batsch of Grossenhain in cases of intestinal obstruction where the symptoms were subacute or where there was necessity to temporize. In some cases a single injection sufficed to produce an evacuation, followed by recovery. In others, the injection resulted only in the escape of flatus and a small quantity of feces, definite relief only following a second injection on the next day. Aspirin, the salicylate of acetyl, has been used successfully as a substitute for salicylate of soda. The new compound decomposes in the presence of alkali, so that under ordinary circumstances the stomach is unaffected, and it is claimed in consequence that the disagreeable by-effects such as nausea and tinnitus are avoided in similar doses, while the anodyne and anti-rheumatic effects are the same. Quinic acid, found by Weiss to possess the power of restraining the formation of uric acid in the system, has been combined with piperazine which exerts a solvent action. Experiments with quinate of piperazine showed

that the diminution in uric acid when from five to eight grammes were administered daily, amounted to from 40 to 50 per cent., its place being taken by hippuric acid. The new drug exerts a great influence over gout and the uric acid diathesis. It is readily soluble and is given in five-gramme doses in two parts daily (30 to 40 grains twice a day). Among the new derivatives or opium alkaloids heroin and dionin have both proved of value as sedatives, especially in cough. Of the former one twenty-fifth-grain tabloids are effective, while the latter is given in doses of one-quarter of a grain. The products of coal-tar have furnished kryofin, possessing similar proportions to phenacetine. The dose required is from one-half to three grammes (7-45 gr.) daily in divided doses, and its influence is chiefly in reducing temperature and as an anodyne. Pyramidon, dimethyl-amido-antipyrin, like antipyrin, reduces temperature but is thrice as active. The dose is from two to ten grains. It also relieves headache. The use of suprarenal gland has been extended with benefit to rickets and also to exophthalmic goitre. Vicarious action has been proved as regards metabolism between the ovary and thymus, which is further confirmed by the improvement obtained in chlorosis, exophthalmic goitre, and congenital debility by the administration of thymus gland in daily doses of from 15 to 30 grains.

SURGERY.

Surgery of the Alimentary Canal.—The surgery of the alimentary canal has probably attracted more attention during the present year than any other branch of the subject, and this is to be attributed chiefly to the fact that this portion of the body calls more frequently for surgical aid than does any other part of the organ. In March Professor Mayo Robson delivered at the Royal College of Surgeons of England three lectures on the surgery of the stomach, and a very good account was given of the present state of our knowledge on this subject. One of the most important questions raised by the progress of surgery in this organ is, Should any surgical treatment be applied to ulcers of the stomach when no perforation has occurred? At present the answer seems to be that an ulcer of the stomach does not need surgical interference until medical treatment has been thoroughly tried, but that if it should prove not amenable to medical treatment then surgical treatment is desirable. There are, however, two complications of ulcer of the stomach that require the intervention of the surgeon at an earlier stage. These are perforation and hemorrhage. The operation for a perforated gastric ulcer has undergone no material change lately, but it is becoming distinctly rarer for the peritoneal cavity to be washed out by a large quantity of water, as was formerly the rule, and it is now more usual for the surgeon to content himself with wiping out so much of the effused material as can be reached.

The results are certainly more satisfactory. The treatment of hemorrhage from an ulcer of the stomach is as yet in a more unsettled state. Though laparotomy has been performed in many instances for an acute hemorrhage from an ulcer of the stomach, yet it is doubtful if the results of this procedure are at the very least more favorable than those attainable by medical means. When, however, the hemorrhage is chronic and persistent in spite of the regular employment of suitable medical treatment, then an operation is perfectly justifiable. What operation should be performed it is not so easy to say, but on the whole gastro-enterostomy seems to be the most likely to be of service. The cases of total extirpation of the stomach continue slowly to increase in number. Dr. Vieira de Carvalho has described in our columns one such case. It is difficult to believe that the necessity for such operation can frequently arise, and it is not probable that the operation will ever become anything but very rare. The most satisfactory operation for obstructive dilatation of the stomach is not yet fully determined. Pyloroplasty, or the Heineke-Mickulicz operation, does not occupy quite so high a position in the opinion of surgeons as formerly, and its place has been taken in great part by one or other form of gastro-enterostomy. Mr. L. A. Bidwell described sixteen of these cases, for six of which gastro-enterostomy was performed, in three pyloroplasty, and in three pylorotomy. Only one patient died, and that death occurred two months after the operation. Appendicitis still receives much attention and has been the subject of numerous papers during the year. Mr. C. B. Keetley has described a method which he is in the habit of employing for operating in appendicitis. He makes an incision through the anterior abdominal wall above the anterior superior iliac spine and above and parallel to the outer part of Poupart's ligament, dividing everything except the peritoneum, which is carefully raised from the iliac fascia so that the surgeon approaches the deep surfaces of the appendix. Mr. Keetley claims that this method may be employed at any stage of an attack. Dr. A. A. Warden advocates the method of removal of the appendix which was introduced by Dr. Doyen. It consists in crushing the base of the appendix, then ligaturing it at the line where it has been crushed removing the appendix with the thermo-cautery, and then inclosing the end of the stump by means of a double purse stitch. We have published notes of several cases in which a persistent Meckel's diverticulum has given rise to obstruction of the bowels. This form of obstruction is by no means rare and is commonly met with in patients under forty years of age. The majority of the patients recover if laparotomy be performed sufficiently early. Both observation and experiment have demonstrated that removal of a large portion of the intestine is incompatible with life, but it is difficult to lay down any very hard-and-fast line as to how much may be removed with safety. Professor

Carl Schlatter of Zurich in 1898 removed about six feet of small intestine from a young man, and the patient has survived the operation two years, and an elaborate series of observations have been made as to the digestive powers of the patient. It was found that if care were exercised in the choice of food, digestion was carried on without trouble and nutrition was well maintained, but that if the diet was unsuitable, then digestion was very imperfect and the general nutrition failed. There have been several successful cases of laparotomy for perforation of the intestine in the course of typhoid fever, and it is now generally agreed that the surgical treatment of this complication offers by far the best chance of successful issue. In twenty-one cases in which it was done during the years 1895-1900 three recovered completely, and one other patient recovered from the operation but subsequently died from intestinal hemorrhage.

Surgery of the Liver.—Although ptosis of the liver was described by Cantani so long ago as 1865, yet it has not been fully recognized until comparatively recently and surgical treatment was not employed until 1891, when hepatopey was first performed. The operation in one form or another is now a well-recognized procedure, and the present aspect of the subject is well set forth in a clinical lecture by Mr. Frederick Treves which appeared in the columns of *The Lancet*. The danger from an extensive rupture of the liver is exceedingly great, for its tissue is very vascular and the hemorrhage is always severe. Slight lacerations which end in spontaneous recovery and cases in which an encysted effusion may form are not rare, but there have been very few cases in which a successful attempt has been made to treat surgically a laceration of the liver. Mr. Thomas Carwardine has reported such a case, and he has been able to find only three others in which the patient has recovered.

Fractures and Dislocations.—The best treatment of fractures of bones is still a *questio vexata*, especially with some surgeons. A large number of surgeons, perhaps the majority, are quite satisfied with what may be called the ordinary method of treatment of simple fractures. But there are others who claim that with the methods in ordinary use the affected limb is incapable of being used naturally in nearly every case for a long period, while in many others the disability is permanent. There is much to be said on both sides, and the subject was discussed at the annual meeting of the British Medical Association. It appears to be certain that the fixation treatment of fractures is sometimes carried to excess, and that an earlier recourse to movement and to massage would be followed by a diminution in the stiffness which is so liable to follow the prolonged incarceration of a limb between rigid splints. Mr. W. H. Bennett contributed a valuable paper on the subject. There are, however, others who claim that in a large proportion of the

cases of fracture of the long bones it is quite impossible by manipulation to replace the fragments in their original positions, and that this should be done by laying open the fracture by an incision, and after replacing the fragments wiring or screwing the broken bone so as to keep the fragments in position. The chief advocate of this practice is Mr. Arbuthnot Lane. It is true that it is frequently impossible by manipulation to replace exactly the displaced fragments of the bone, but it is also true that in most cases the amount of the deformity is very slight, so slight as generally not to interfere in any way with the efficient use of the limb. There are, however, certain cases in which it is quite impossible to put the fragments into a satisfactory position, and in such cases the surgeon is fully justified in wiring. At the present time if the surgeon has any doubt as to the position of the fragments after putting up the limb, he should obtain skiagrams of the limb from two points of view, and this may be done without disturbing the splints. Dislocation of the shoulder-joint from muscular action is a somewhat rare accident. A case recorded by Dr. J. Grimmond Smith occurred in a man forty-six years of age, who was a congenital imbecile. The fracture of the os calcis by the sudden contraction of the calf muscles is also very unusual. Dr. R. Thomson has described a case of this accident, and the fracture resulted from a sudden and forcible flexion of the left ankle, and a portion of the os calcis of the size of a walnut was pulled away by the tendo Achillis, and a space of about five inches separated the two fragments. Under an anesthetic it was easy to bring the two fragments into apposition and they were wired, and the patient recovered. Dr. J. D. Rice had a case of fracture of the femur in a new-born child, which he treated by flexing the injured limb on the abdomen so that the foot was over the shoulder of the same side. The bone united well without shortening. Two rare cases of separation of epiphysis were recorded; in one a skiagram showed that the epiphysis of a metacarpal bone had separated, and in the other the epiphyseal head of the femur had separated in a girl fifteen years old.

The Lengthening of Tendons.—The operation for lengthening a tendon is still by no means a common one, though it is now many years since it was first performed. Dr. R. A. Hibbs has described an ingenious method of obtaining more increase of length than was possible by the usual method, and he has employed it successfully in five cases of talipes equino-varus the result of infantile paralysis. A case of great interest was described by Mr. Herbert W. Page who had under his care a little boy suffering from Volkmann's ischemic paralysis, the result of the application of sp.nts for a fracture of the lower end of the humerus, or separation of the lower epiphysis on the humerus. The range of movement was so slight that Mr. Page decided to lengthen all the flexor tendons. This was done and a very marked improvement in the power of movement resulted.

Tetanus.—Tetanus as a complication of a surgical operation is now very rare, at least in this country, and therefore a case recorded in which it followed nephropexy for floating kidney is of much interest. As great care seems to have been taken in guarding against sepsis it is just possible that it was not due to the operation, but was the result of an accidental inoculation.

Bullet Wounds.—It was only natural that the subject of bullet wounds should have received a large share of attention during the past year, since a war has been in progress. The character of the wounds inflicted by the Mauser bullet excited no small measure of surprise amongst those surgeons who, like Sir William MacCormac, remembered the effects of the needle-gun and the Chassepot. The Mauser bullet wounds were characterized by a rapid recovery in those cases in which no bone or important vessel had been struck. Often when a bone has been hit the bullet has drilled a clean hole through it without splintering. In other cases a bullet has traversed the abdomen and has, apparently, perforated the stomach or intestine, and yet no symptoms have appeared. It is true that in some cases the bone that has been struck by the bullet has been much comminuted, but even then complete consolidation may follow, in spite of the compound nature of the fracture.

GYNECOLOGY AND OBSTETRICS.

During the past year there has been no diminution in the output of gynecological and obstetrical literature. A great deal of good work has been done and many accepted views have undergone criticism, rejection or confirmation.

In a paper upon the Anatomy of the Uterus in Infancy and Childhood, V. Mandach reports that amongst eighty cases the Wolffian duct was present in thirty-two and remains of the duct in fourteen. The cervical mucous membrane is well developed at an early age, but in the body of the uterus very few glands are present before puberty. The limit between the squamous and the cylindrical epithelium is sometimes very definite, at other times the one gradually passes into the other. He found polypi at the internal os in no less than thirty-five cases.

Amongst gynecologists fibroid tumors have, as usual, excited a great deal of discussion. Their natural history has been considered by Dr. F. H. Champneys and Mr. Alban Doran. The former, in a paper¹ read before the North London Medico-Chirurgical Society, which was based upon the statistics of St. Bartholomew's Hospital, contends that the frequency of fibroid tumors is 0.01 per cent. in a population of 959,217 and that the mortality, apart from operations, is 0.000138 per cent. The views of Dr. Champneys met with a good deal of criticism, and although,

1. The Lancet, January 20th, 1900, p. 147.

no doubt, the mortality from fibroid tumors is very low, yet his method of determining the percentage mortality by dividing the number of fatal cases seen in the *post-mortem* room into the number of female out-patients during a given period, appears liable to fallacy. Mr. Doran opened an interesting discussion upon fibroids at the meeting of the British Medical Association, at Ipswich, and showed how little we really know of the laws governing the development and growth of these tumors. Papers have appeared in *The Lancet* by Dr. William Duncan and Dr. W. J. Gow, which illustrate how low the mortality from operations for fibroids may be at the present day. The former has operated upon sixty-eight consecutive cases, with four deaths, and the latter upon forty-seven cases, with only one death. With regard to the technique of such operations Professor Howard Kelly has published an important paper, illustrating his method of dealing with very difficult cases, such as large adherent tumors or intra-ligamentary fibroids. He describes three ways of treating such cases: (1) median sagittal bisection of the tumor; (2) coronal bisection of the uterus; and (3) bisection of the tumor alone.

The treatment of cancer of the uterus was the subject of discussion in the Gynecological Section at the International Medical Congress at Paris. Dr. Richelot, in his report, advocated vaginal hysterectomy very strongly. His mortality was only six per cent., and he could point to eighteen patients who had benefited by the operation. He regarded the scope of abdominal hysterectomy as being very limited, and did not believe in the practice of "removing everything." The comparison with the removal of the breast and clearing out the axilla was entirely misleading. Professor Dmitri de Ott also reported on the surgical side of the question. He thought surgical treatment the sole means of combating cancer of the uterus. It was possible to effect a complete cure by operation. He had observed a radical cure—viz., freedom from recurrence for six years—in 10 per cent. of his cases. Dr. Cullen, in his report, described Werder's method of performing abdominal hysterectomy. In this operation the uterus is freed on all sides, the vagina is dissected free from the bladder and rectum, and the uterus is removed from the vagina after the pelvic and abdominal cavities have been closed. There is, therefore, no danger of the operator coming in contact with the carcinomatous cervix. Dr. A. H. N. Lewers read a paper before the Royal Medical and Chirurgical Society upon the After-results in Forty Consecutive Vaginal Hysterectomies for Cancer of the Uterus. In twelve cases there had been no recurrence, in eighteen there had been recurrence, while four patients had died. Eleven patients had remained well for from two to seven years. The condition of patients who have an inoperable cancer of the uterus is so distressing that any method which holds out a prospect of improving

the means of dealing with such cases is to be welcomed. Grusdew thinks that the use of carbide of calcium, first introduced by Guinard, in 1896, is a method of practical value. It depends for its action on the decomposition of the calcium carbide into acetylene gas and unslaked lime. It can be used in the out-patient department. The ulcerated surface is cleansed with wool, and one or two pieces of calcium carbide are applied and kept *in situ* with a tampon. They are removed in a day or two with the dead tissue and are re-applied if necessary.

Last year Catherine von Tussenbroek described a case of internal ovarian pregnancy occurring in one of the Graafian follicles. From her observations she concluded that the occurrence of ovarian pregnancy could no longer be contested and that the case showed a normal development of syncytium, which she regarded as a new proof that the syncytium is developed from the fetal ectoblast. The validity of this case has been criticised a good deal during the past year and, as Mr. Bland-Sutton has pointed out, there is no evidence of the presence of chorionic villi in the description or drawings, and he is, therefore, disinclined to accept it as a proved instance of ovarian pregnancy.

A very interesting case of prolonged gestation was reported in *The Lancet* of January 13th (p. 94), by Dr. John Phillips, in which delivery occurred 311 days after a single intercourse. This same question came up in a case before the courts and was noticed by us at the time. In this instance the jury evidently took the view that the pregnancy had not lasted 311 days, as it was sought to prove, but, no doubt, they were influenced by other extraneous evidence upon this point. Dr. Phillips' case is, of course, also open to question, since it is always difficult to prove coitus on one single occasion.

Evidence is accumulating as to the safety and dangers of medullary narcosis. Marx reports six cases of labor treated in this way. Ten minims of cocaine, containing one-sixth of a grain, were injected into the spinal canal between the third and fourth lumbar vertebræ. In four of the cases the child was born without the patient knowing it. In one of the cases the cervix was dilated painlessly, while another case was a failure owing to the inertness of the cocaine solution. All the patients complained of tingling in the legs and headache. The record is a very interesting one, but this method of treatment is hardly likely to come into general adoption.

An important paper was contributed by Professor Whitridge Williams to the June number of the *American Journal of Obstetrics* upon placental infarcts. He agrees with Eden and other observers that this condition is usually the result of endarteritis of the vessels of the chorionic villi. Moderate degrees of infarct formation have no pathological significance, but when the infarcts

are numerous and large they are often associated with death and mal-development of the child. They occur frequently in association with albuminuria, but the relationship of the conditions is unknown.

In his address in Obstetrics at Ipswich Dr. W. J. Smyly² gave a review of the question of maternal mortality in childbirth during the present century. From the statistics of the Rotunda Hospital he found that during the period (1870-1876) 8,092 women were delivered in the hospital, of whom 169 died, or one in 45.5; during a second period (from 1890-1896) 9,085 were delivered, with fifty deaths, or one in 181.7, a saving of about 200 maternal lives in 10,000 deliveries. It was certain that, in hospital practice at any rate, a marked improvement had taken place during the last quarter of the century amongst all the three classes of fatal cases met with in childbirth—viz., puerperal fever, accidents of labor and other causes. In view of the fact that where there was no "handling" there was no septic infection, he advocated very strongly indeed the avoidance, as far as possible, of vaginal examination and the practice of abdominal palpation. The important question of the notification of puerperal fever was discussed in the Obstetrical and Gynecological Section at the same meeting. In spite of the difficulties that lay in the way of carrying out complete notification, most of the speakers were in favor of its being done. Dr. Berry Hart, who opened the discussion, was strongly in favor of notification. He thought, however, that more than this was necessary, and that municipalities must provide skilled nursing where necessary, removal to a properly equipped hospital when desired, supervision of nurses and midwives when solely associated with the management of a case, and supervision of their proper disinfection before they took up fresh work. It was of great importance that the matter should not begin and end in mere registration. Dr. R. Boxall drew attention to the fact that while during the ten years, 1881-1891, the death-rate from puerperal fever in London was 21.5 and in the provinces 25.6 per 10,000 confinements, during the last seven years, 1892-1898, it was 19.2 and 24.1 respectively, figures which showed that there had been practically very little change in the rate of mortality from this disease. After considerable discussion, in which it was stated by several speakers that compulsory notification would be very prejudicial to medical men, the following motion was adopted:

That in the opinion of this meeting it was desirable that notification of puerperal fever (septicemia) should be adopted generally.

The second obstetrical subject for consideration before the meeting was the treatment of *post-partum* hemorrhages. The discussion was opened by Professor Byers, who declared himself in

2. The Lancet, August 11th, p. 385.

favor of gauze-plugging of the uterus rather than bimanual compression of the uterus in severe cases where the hot douche and other means had failed to excite uterine contractions.

Two important papers were read before the Obstetrical Society of London upon Incarceration of the Retroverted Gravid Uterus by Dr. J. Sinclair and Dr. Munro Kerr. The latter reported, amongst others, the case of incarceration of the retroverted gravid uterus, with hemorrhage into the bladder after catheterization, operated upon by Mr. Murdoch Cameron. He performed abdominal section, opened and emptied the bladder, and replaced the uterus. Dr. Sinclair in his paper protested against the performance of unnecessary operations in these cases. He recommended the introduction of a hard ring pessary, a method which usually resulted in speedy replacement of the uterus. In cases where sloughing of the bladder wall was imminent he would open the bladder by vaginal cystotomy, and he thought the same plan of treatment would answer quite well if hemorrhages occurred into the bladder. In the discussion upon these papers most of the speakers said that reposition, with or without an anesthetic, was all that was required in the great majority of instances.

An interesting paper was read before the same Society by Dr. Thomas Wilson on Organic Affections of the Heart occurring in connection with Fibro-myomata of the Uterus. The important question of the best mode of treating cases of rupture of the uterus was considered by Dr. Herbert Spencer. He concluded that abdominal section was rarely required and almost solely in cases where the fetus had passed completely, or in part, into the peritoneal cavity. It was best done under local anesthesia. Abdominal hysterectomy was hardly ever necessary, vaginal hysterectomy, where the broad ligaments were very much damaged, being a preferable operation. All incomplete tears, implicating the broad ligament and most complete tears, should be treated by packing the rupture per vaginam with iodoform gauze, after removing clots and fluid blood. Dr. Amand Routh made a very valuable contribution upon Porro-Cæsarean Hysterectomy. He considered it to be a point worthy of discussion whether supra-vaginal amputation of the uterus (Porro's operation), with retro-peritoneal treatment of the stump, was not safer for a patient in skilled hands than a Säger Cæsarean section with sterilization, in all cases of permanent obstruction to labor requiring abdominal section, except, perhaps, those due to cancer of the supra-vaginal portion of the cervix.

In the section of obstetrics at the International Medical Congress, at Paris, a discussion was held on the Etiology and Nature of Puerperal Fever. Reports were presented by MM. Doléris, Menge, Krönig and Pestalozza. The bacteriological aspect of the question was the one that was mainly considered;

and in view of the special knowledge of the authors their conclusions are of great value. The interesting question of the possibility of the occurrence of autogenetic infection was fully considered. M. Doléris said that from the clinical point of view they were bound to admit the reviviscence *in situ* of pathogenic germs pre-existing in the cervix uteri and Fallopian tubes and the possibility of such an infection becoming generalized after confinement without any fresh importation of pathogenic microbes from without. By autogenetic puerperal infection Dr. Menge and Dr. Krönig understood an infection, produced by pathogenic bacteria, that have lived in the condition of saprophytes, before labor, on the integuments of the external genitalia or in the genital canal of the woman, and which, during her confinement or immediately after it, had invaded the organism through the puerperal wound and set up disease. Taking clinical facts as a guide the authors regarded as rare and favorable the autogenetic puerperal infection produced by such saprophytic organisms. An autogenetic infection, produced by bacteria, that had lived as saprophytes in the cervical canal, or in the cavity of the uterus, or in the tubes, could be absolutely rejected, for these organs never contained bacteria in the condition of saprophytes. The primary infective focus was most commonly situated in the endometrium, more rarely in the cervix, and most rarely in the vagina or perineum. Dr. Pestalozza reported the results of his studies as to the channels by which the different pathogenic agents could penetrate into the tissues of a genital canal of a lying-in woman. The results of his researches had led him to the following conclusions: the aseptic course of events following delivery depended upon the rigorous disinfection of the external genitalia and of the hands and instruments of the obstetrician. Disinfection of the vagina and the use of douches before and after labor were useless and dangerous. If infectious symptoms arose it was of the greatest importance to determine the point of entry of the infection. He had only found the staphylococcus in the case of multiple abscesses in the wall of the uterus and the bacillus coli communis in the case of fever arising from decomposition of the liquor amnii. The other obstetrical subject discussed was asphyxia neonatorum. Reports were presented by Dr. Ribemont-Dessaignes, Dr. Champneys, and Professor Schultze.

The disinfection of the hands in view of the large number of cases of puerperal infection in which the contagion is caused by them is a matter of much importance. The best means of accomplishing this has been considered by a large number of observers during the past twelve months. It seems certain that absolute sterilization of the hands is not possible. Varnier says: "Brushing of the hands in hot soap-and-water for five minutes does not secure asepsis, consecutive immersions in alcohol and in a 1 in 1,000

solution of perchloride of mercury or a 1 in 2,000 solution of biniodide of mercury does not sterilize the hands, but practice has shown that although a few microbes can still be found after such treatment, yet the sterilization is sufficient from the point of view of prophylaxis. The germs may not be destroyed but their activity is impaired." The use of thin rubber gloves which can be sterilized is a precaution of great value to the surgeon or gynecologist who is compelled to handle infected material.

Publications.—Among the more important books that have been published are Varnier's "Obstétrique Journalière," the completion of the German Encyclopedia of Midwifery and Gynecology, edited by Säger and Von Herff, and a very interesting book on "Cancer of the Uterus," by Dr. Cullen, of Baltimore.

OPHTHALMOLOGY.

Lacrymal Obstruction.—Amongst the more interesting events that have taken place during the past year in Ophthalmology is the discussion on the treatment of lacrymal obstruction at the Ipswich meeting of the British Medical Association, which was opened by Mr. George Berry, from whose conclusion that as a rule there is a tendency to do too much, few of those who have seen many cases will be inclined to dissent. In the course of the discussion which followed the reading of the paper, it appeared that there was not any very general consensus of opinion in regard to the treatment to be adopted even in the more simple forms of disease, and much less consequently in the more severe forms—some using small and others large probes; some slitting up the canaliculus and inserting straight silver or gold styles; others moulding flexible lead ones to the form of the duct and copying the form in gold. One speaker used a rose-headed drill or burr worked by the ordinary dental engine; another was content with syringing at first and slitting up the canaliculus if this plan were ineffective, or even laying open the sac and either removing it or applying the actual cautery. It is curious that no one suggested that the teeth were sometimes at fault, and that the extraction of the second bicuspid or first molar tooth is sometimes sufficient to effect a permanent cure. Mr. Donald Gunn noted the frequency of lacrymal obstruction in infants, and believes it to be associated with congenital obstruction at the lower end of the nasal duct. At the same meeting Dr. W. A. Brailey in his introductory address dwelt on the various forms of ocular disturbances that may occasion headache and indicated the means of relief. He considered that muscular efforts either of the intrinsic or extrinsic muscles are by far the most common, especially those concerned in the effort to correct hypermetropia and astigmatism; and Mr. Richardson Cross, of Clifton, took for the text of his discourse the treatment of chronic glaucoma. He advocated the early performance of

sclerotomy, and adduced cases in which the field of vision had improved when the tension was relieved. Other speakers preferred the postponement of the operation to a late date, combating the symptoms with myotics. An interesting case throwing some light on the trophic influence of the fifth pair of nerves on the cornea has been recorded by Dr. Veasey, of Philadelphia, in which, after removal of the lacrymal gland for obstruction of the lacrymal duct, anesthesia and subsequently inflammation of the cornea occurred, notwithstanding that the eye was carefully protected. It would seem, therefore, that this case supports the views of those who maintain that the cause of such an affection is not of a mechanical nature and due to exposure of an insensitive cornea, but that it is the result of some disturbance of the trophic nerves. The case under judicious treatment made a complete recovery.

The Value of Enucleation.—The relative value of enucleation as compared with the various proceedings by which that operation can be replaced, was well discussed at the International Medical Congress which met at Paris, and also by Dr. Demaria, of Buenos Ayres. As Professor Pflüger, of Berne, remarked, enucleation has the advantage of being a simple operation capable of rapid execution, but it has the disadvantage of leaving a small stump which allows of but little movement in an artificial eye adapted to it. Various methods have been adopted to remedy this evil. Dr. Mules eviscerates the contents of the globe and inserts an aseptic glass or metallic ball, uniting the edges of the sclerotic and rendering the wound subcutaneous by drawing the conjunctiva over it; Mr. W. A. Frost and Mr. W. Lang propose to inclose the glass bulb in the capsule of Tenon; whilst Dr. Schmidt recommends attaching the recti muscles to the conjunctiva. Lethal meningitis has been observed in cases of enucleation of the eye affected with acute inflammation and suppuration, but it has also been observed in similar cases when no operation was performed. None of these proceedings is a complete safeguard against the occurrence of sympathetic ophthalmia, nor does neurectomy constitute a complete and permanent protection against it. Dr. de Schweinitz considers that enucleation is indicated in cases of recent and severe injury, whilst Mules's operation should be performed in cases of staphylococcal corneæ, of absolute glaucoma, and of non-traumatic iridocyclitis. Dr. H. R. Swanzy, of Dublin, practises Mules's operation in all cases of enucleation, excepting those of malignant tumor or cases where sympathetic tumor is to be dreaded. M. de La Personne prefers the actual cautery, as recommended by M. Panas, in which a large thermo-cautery at a white heat is applied to the interior of the globe. The débris of the membranes are removed and the wound is cleansed with cyanide or chloride of mercury. No bleeding occurs; no sutures are needed and pain is abolished.

Retraction Movements of the Eyeball.—Dr. Julius Wolff, of New

York, has described cases of retraction movements of the eyeball, a condition which has attracted but little attention. It appears to be associated with a congenital defect in the motility of the retracted eye and the retraction invariably takes place during attempted inward rotation, a forward movement of the globe occurring together with widening of the palpebral fissure on efforts to evert being made. He agrees with Tuerk in attributing it to paralysis of the external rectus, which is converted into an unyielding strand of connective tissue.

Electric Light and Blindness.—That the employment of electricity is not quite free from danger to the eye is shown by a case under the care of Dr. Uhthoff in which the rays proceeding from an arc light fell suddenly upon the left eye, the other being closed, with the result that a central scotoma was observed in the eye extending about 10° from the point of fixation. On ophthalmoscopic examination a number of yellowish-red points were found scattered about the macular region. Dr. Dunbar Roy, of Atlanta, reports three cases where temporary blindness followed exposure to the flash of light due to the accidental crossing of two electric wires carrying a voltage of 500.

Color-blindness.—Dr. W. Thomson, of Philadelphia, has devised an instrument for diagnosing color-blindness. It is composed of colored glasses set in the periphery of a disc capable of revolving in front of a light. The glasses of this disc can be covered by a set of glasses set in a second disc of which one is white ground glass, one deep London smoke, one pink, one green, and one cobalt glass, and in addition one disc is perforated by holes of different size to moderate or to intensify the light. This instrument with Dr. Thomson's color-stick constitutes the means of examination for the color sense practised on the Pennsylvania Railway and on 150,000 miles of railroad in America. Dr. Charles Williams, of Boston, has also brought before the American Ophthalmological Society a lantern for testing color perception. Dr. Ward Holden and Mr. K. Bosse, of New York, have made a series of experiments on children in regard to color vision, and find that under two years of age infants are chiefly attracted by reds. Then follow some years of comparative indifference to color, but at the age of five or six blue is almost universally preferred.

The Mechanism of Accommodation.—The explanation of the act of accommodation advanced by von Helmholtz and given upon his authority in most text-books, was some years ago impugned by Dr. Tscherning, a Russian ophthalmologist of great ability. Briefly stated, the view of von Helmholtz is that in repose the lens is flattened by traction exerted by the zonule, whilst in accommodating for near objects the ciliary muscle contracts, and as its anterior margin is considered to be fixed it draws the choroid forwards, relaxes the zonule, and the lens becomes more convex

anteriorly owing to its elasticity. Dr. Tscherning contended that the contraction of the ciliary muscle in accommodation rendered the zonule tense instead of relaxing it, and the pressure on traction exerted on the lens produced a kind of lenticonus or increased curvature anteriorly. Dr. W. N. Suter, of Washington, as the result of a series of experiments, pronounces in favor of von Helmholtz's theory, maintaining that the increased prominence of the anterior surface of the lens in accommodation does, indeed, occur, but only in old animals—that is to say, precisely at a time when the accommodation faculty is failing or is lost, and is then due to the bulging of the hard nucleus when the lens is flattened as a consequence of the relaxation of the zonule when the ciliary muscle contracts.

The Visual Area.—Dr. Joseph Shaw Bolton has made an important contribution to Ophthalmology by his research on the exact histological localization of the visual area of the human cerebral cortex, derived from a study of lesions causing blindness, and of the histological examination of the occipital cortex. The area chiefly occupies the body of the calcarine fissure, but extends to some adjoining parts. The portion of this area to which afferent visual impressions primarily pass is the region of the cortically situated line of Gennari, and it constitutes the cortical projection of the corresponding halves of both retinae. The part above the calcarine fissure represents the upper corresponding quadrants and the part below the lower corresponding quadrants of both retinae. It is sometimes of importance to see with the ophthalmoscope as far forwards as the tips of the ciliary processes. Dr. Trantas, of Constantinople, has suggested a means by which this may in most instances be accomplished—namely, by pressing with the finger on that region whilst the patient is under examination. As a rule, even when examined most obliquely the parts in front of a circle drawn at a distance of one-third of an inch from the sclero-junction are invisible. By pressure one-eighth, or even one-sixth, of an inch more may be brought into view. The anatomical seat of the lesions which are supposed with some show of reason to result from the toxic influence of alcohol and to lead to impairment of vision, has been investigated by Dr. Basil Siegfrist. It may be, seeing that complete recovery is often the result of appropriate treatment, that, as Mr. Priestley Smith suggests, in many instances there are no lesions, but a certain pallor of the discs is of common occurrence, and if indulgence in alcohol is carried to excess atrophy of the optic nerve may ensue. By some this is attributed to interstitial inflammation of the connective tissue forming the trabeculae, the proliferation and contraction of this material destroying the nervous tissue. Others hold that the nerve tissue is primarily attacked and its functions are impaired, the increase of the connective tissue being secondary. Dr. Siegfrist supports the former view.

The Treatment of Entropion.—The treatment of entropion was the subject of two papers and a discussion in the American Ophthalmological Society. The extreme irritation and discomfort of this condition as well as the danger of rendering the cornea opaque and causing loss of vision and the difficulty of effecting a cure have led to the adoption of many operative procedures, some of them of great antiquity. Where many operations have been proposed for a particular disease it may be taken for granted that no single one is always appropriate and successful. Some slight cases may be cured by the simple expedient of applying elastic collodion to the outside of the lid, others by the removal of a narrow horizontal strip of skin, others by horizontal incision of the conjunctiva and the insertion of a strip of skin taken from some other part of the body, as of the skin from behind the ear; others have applied electrolysis to the skin, and others have made an eschar with caustic potash. Dr. Ewing, of St. Louis, makes a conjunctival flap, then a horizontal incision through the tarsus but not through the muscle, and everts the free edge over a small roll of lint by two or three sutures. The posterior flap of the divided conjunctiva is finally stitched into the angle of the wound. Dr. Weeks, of New York, makes a cut along the whole length of the lid between the cilia and the Meibomian follicles and another one three millimetres below through the skin; he then removes a wedge-shaped strip of the tarsus and inserts a piece of mucous membrane into the wound.

Treatment of Magnetic Foreign Bodies.—Dr. Coppez, of Brussels, and Isodore Gunzburg have written an interesting article on the diagnosis and treatment of iron fragments that have penetrated the globe of the eye. Their observations, which are numerous, show that the chances of recovery with useful vision, though always doubtful, are far greater when the position of the fragment is in the anterior than in the posterior region of the globe. The means of diagnosis they employed was the magnetorium of Gérard, which they found to be simple, effective, and capable of easy manipulation. Dr. Lippincott, of Pittsburg, Pa., employs for the purpose of diagnosing the presence of particles of iron in the eye a magnet weighing nine pounds and capable of lifting a weight of fifty pounds. Its application is facilitated by supporting it with a cord passing over a pulley and terminating in an equipoise.

Literature.—Dr. W. Nicolaew and Professor J. Dogiel describe in Pflüger's *Archiv* the mode in which they have obtained photographs of the inverted image of the fundus of the eye, and give two photographs. The *Optician* issued weekly and intended primarily for the trade is a very well-conducted journal, and contains much useful information on optical subjects. It has published during the past year Pereira on Refraction, and Dr. Brewster's Optics considerably enlarged and brought up to date. The fourth volume of

Dr. W. F. Norris and Dr. C. A. Oliver's valuable System of Diseases of the Eye, by various authors, has been published, containing an account of the motor apparatus of the eye, of the cornea and lens, and of the refraction of the eye. There is also a chapter on Medical Ophthalmology. Dr. Charles May, of Columbia University, New York, has published a good manual of the Diseases of the Eye. The Refraction of the Eye, including a complete treatise on Ophthalmometry, has been written by Dr. A. Edward Davis, and constitutes a very sound guide to the student and practitioner. Professor O. Haab has published a third and enlarged edition of his useful Ophthalmoscopy, which represents in chromo-lithography many of the diseases of the fundus.

Miscellaneous.—The careful observations of Dr. A. Pichler during the year have demonstrated what previously was only believed to occur, that a partial decussation of the optic-nerve fibres takes place in the chiasma. The non-decussating portion occupies chiefly the lateral and dorso-lateral portions of the chiasma. In the optic tract they are situated in the dorsal two-thirds. The decussating fibres are situated mesially, and some of the fibres form short loops passing from one optic nerve to the other. Cases continued during the year to be reported of high, or of rapidly increasing, myopia in which the lens has been removed with satisfactory results, Dr. Kollock, of Charleston, S.C., for example, giving a case where after removal of the lens, the vision with a low convex glass and astigmatic correction was such that the smallest print was easily read by the patient. As Iodoform is often freely dusted over the wound left after enucleation it is perhaps expedient to notice that various cases have been recorded in recent ophthalmological journals of impairment of vision, due to the poisonous effects of iodoform. The symptoms observed have been attributed to the development of a toxin by micro-organisms in the eschar produced by the drug.

ANATOMY AND PHYSIOLOGY.

Although no very remarkable advance can be chronicled in regard to the progress of physiology during the past year, yet, like the ripples of the rising tide, a constant accession of facts may be observed which serve to eliminate former errors, to strengthen and establish the truths which may even yet be in need of support, and to open up new paths of research. It is pursued with singular perseverance and ability in Germany, and so numerous are the articles that have been published in that country that it has become impossible even for those who have devoted themselves to its study to read more than a small proportion of them. Pflüger's *Archiv fur Physiologie*, which is only one amongst several journals devoted to physiology, forms four large volumes of 640 pages each, and contains upwards of

one hundred articles, many of them running to a length of thirty or forty pages, for the present year alone. In taking a general survey of this field of science it may be noted that a considerable number of the papers read before societies and contained in journals are devoted to the chemical side of physiology. Taking at random, for example, one or two of the parts of the journal we have just mentioned (Pflüger's *Archiv*), we find articles on the quantitative determination of glycogen, on the proportion of urea in human milk, the position of the purin or xanthin bodies in general metabolism, on the presence of proteolytic and amylolytic ferments in the colon, and on the absorption of fat without previous saponification. So, too, in Reichert's *Archiv* we find essays on ferments, on the absorption of food, on the preliminary stages of glycogen in the body, and on the coloring matters of the blood; and in the *Journal of Physiology* we have contributions to the physiological effects of peptone when injected into the circulation, the pressure filtration of proteids, the metabolism of phosphorus, and on the separation of a pure albumin from white of egg. If progress be made on these lines, it is clear that our knowledge of the processes by which the dead protoplasm of plants and animals becomes converted into the protoplasm of the living being will be presently fully and correctly ascertained.

The students attending the courses of instruction on the different branches of medical science at the University of Cambridge are becoming year by year more numerous, and an increase in the accommodation is absolutely necessary. New buildings are about to be constructed, the total cost of which is estimated at £40,000. New laboratories have been completed at King's College, London, at great expense, and were formally opened by Lord Lister. An extremely liberal offer was made to the University of St. Andrews by the late Lord Bute who proposed to found a chair of anatomy in that University, and to endow it with the sum of £20,000. The offer, it need hardly be said, was accepted, and hearty thanks were tendered to the Marquis of Bute for his liberality.

The Harveian Oration was delivered before the Royal College of Physicians of London, by Dr. Clifford Allbutt, who took for the subject of his discourse, *Physiological Darkness* before the time of Harvey, and gave a masterly sketch of the course of mingled truth and error in long bygone times.

If the estimate of the quantity of blood in the body given by Dr. John Haldane and Dr. Lorrain Smith is to be trusted, the statement that is to be found in most modern text-books that it equals one-twelfth or one-thirteenth of the weight of the body must be regarded as too high. These observers drew their conclusions from the rate at which the hemoglobin of the blood becomes saturated with carbonic oxide when a given small percentage of

this gas is continuously breathed, and their estimate is that the quantity is only about $\frac{1}{30.5}$ of the body-weight, or about seven or eight pounds for a man weighing 150 pounds, with extremes of one-thirtieth and one-sixteenth. This estimate, whilst it is in accordance with the very marked effects produced in these days by the abstraction of a few ounces of blood, is difficult to reconcile with the estimates of Haller and Wrisberg, both careful observers, who formed their opinion from the quantity of blood collected from the body in the case of decapitated criminals, and placed it, the former at about from twenty-eight to thirty pounds, and the latter at twenty-four pounds. Can our better and more varied dietary have led to the production of blood smaller in quantity but of better quality and more adapted to the needs of the economy than the more abundant but less diversified diet of our forefathers?

An interesting lecture on "Some of the Mechanisms of the Heart and Its Valves," was delivered at the meeting of the Chelsea Clinical Society, by Dr. William Ewart. He dwelt upon the presence of a supra-papillary, and of a retro-mitral space in the ventricle, showed that during contraction the posterior mitral flap is thrown into pleats, admits a powerful ventricular aspiration, and holds with those who accept a muscular and a valvular element in the first sound. By an ingenious arrangement of reflectors and lenses, W. Engelmann has been able to exhibit magnified thirty-five times, the action of the living heart of a frog upon a screen. J. A. MacWilliam has continued his researches on the physiology of the mammalian heart and discusses the influence of chloroform upon the rate of the heart-beat. Mr. W. H. Thompson has studied the effects of the intravascular injection of peptone and albumose, and shows that the vessels of the kidneys and limbs are but slightly affected, whilst those of the spleen undergo moderate, and those of the liver considerable, dilatation coincidently with the fall of blood-pressure. Professor Schäfer and Mr. S. Vincent find that in the extract of the hypophysis cerebri there is a substance soluble in saline solution, but insoluble in alcohol and ether, which when injected into the veins increases blood-pressure, and another substance soluble in alcohol and ether as well as in saline solution which depresses the blood-pressure. The hypophysis cerebri has received attention from other quarters, V. Kupfer having studied its development, and H. C. Benda having read before the Pathological Society of Berlin, a paper on "Its Normal Structure and Pathological Condition." The researches of E. V. Cyon appear to show that it may supply a deficit of iodothylin, and act as a supplementary organ to the thyroid body. An important research has been carried out by Dr. J. L. Bunch, on the innervation of the muscular coat and the vessels of the intestines. His investigations show that these parts are supplied by the splanchnic nerves, which contain both constrictor and dilator fibres derived primarily from the

spinal cord, and that in dogs they leave the spinal cord by the anterior roots of the second to the sixteenth post-cervical nerves, the higher roots containing a larger proportion of dilator fibres, the lower roots of constrictor fibres. Professor Starling has shown that in the cat as well as in the dog excitation at any one spot of the intestine produces excitation above and inhibition below the excited spot. Dr. F. W. Pavy has followed up his investigations on the sugars in the blood and upon the effects of intravenous injection of various forms of sugar. It is well known that many animals can store up glycogen in the liver when they are restricted to a purely proteid diet. Professor J. Seegen, experimenting with liver extract, has found reason to believe that the proteids undergo a disintegration in the liver, leading to the detachment of a molecule of a sugar-like substance containing nitrogen, which, by the action of a liver ferment undergoes further change, terminating in the production of glycogen. Similar conclusions have been arrived at by Dr. Berkhard Schöndorff. On the other hand, two French observers, M. C. Bouchard and M. A. Desgrez, have satisfied themselves that muscle glycogen can be formed in the body from incompletely oxidised fats. The experiments of R. Cohn render it probable that glycogen can be derived from leucin, and Dr. Martin Jacoby points out that there are probably many ferments in the liver. He has himself carefully followed out the characters of a ferment which is capable of oxidising salicylaldehyde and has given it the name of "aldehydase." An article written by Mr. H. F. Bellamy, and lately contributed to our columns, dealt with the function of the spleen. It was found long ago by Professor Schiff that after ligature of the splenic vessels at the hilum or after removal of the spleen as a whole trypsin fails to appear in any considerable quantity in the pancreatic juice or in an infusion of the gland during that stage of digestion in which, in the intact animal, it is normally present—that is, from four to seven hours after feeding. Hence Professor Schiff thought during the congestion of the spleen a substance is produced within the spleen which, carried away by the blood, gives to the pancreas what it requires to form its peptonising ferment. The discovery of the precursor of trypsin, trypsinogen, in the cells of the pancreas by Heidenhain, led Professor Schiff to repeat his former experiments in conjunction with Dr. Herzen, and the general conclusion arrived at is that in addition to other functions the spleen furnishes a recrementitious product which causes in the pancreas the transformation of its inert zymogen into active trypsin.

The effects of sudden release from increased atmospheric pressure, such as is experienced by those working at the foundation of bridges, are well known to be serious, and have been attributed to disturbance of the circulatory and respiratory systems. Dr. Leonard Hill has placed animals under these conditions, and finds

that with cats and dogs exposed to rapid increase of pressure amounting to two atmospheres and rapid diminution to the ordinary pressure, no effects beyond slight increase of the respiratory oscillation and slightly diminished frequency of the pulse occur. The mechanical congestion theory of caisson disease is regarded by Dr. Leonard Hill as untenable. It would be pertinent to ask how Dr. Hill explains the hemorrhage from nose and ears that has been observed when the pressure is too suddenly released.

The Croonian Lectures were delivered before the Royal College of Physicians of London, by Dr. Frederick Mott, who took for his subject the "Degeneration of the Neuron," and expressed himself in favor of the view that the terminal arborization of the axis-cylinder process of one neuron does not anatomically fuse with the cell body and dendrons of another and that trophically and genetically the two are independent, yet that there is a physiological connection between adjacent neurons. He also pointed out that the integrity of the sensory moiety of a reflex is almost as important as that of the motor segment; in other words, that sensation must be acute and perfect if the corresponding muscular movements are to retain their delicacy and precision. The second Hughlings Jackson Lecture was delivered before the Neurological Society by Professor Hitzig, of Halle; and the lecturer, after bestowing a well-merited eulogium on the work of the physician after whom the lecture is named, proceeded to discuss the subject of the localization of functions in definite areas of the cortex of the brain. He advocated the view that such centres exist, and further contended that in regard to the motor centres two sets might be distinguished, a lower subcortical or reflex set called into play by impressions of hearing, vision, or other special sense, and a higher or cortical set concerned with conscious arbitrary motion.

Dr. A. Gurwitsch has shown that the sheath of Schwann of a medullated nerve is genetically an exogenous and quite foreign mesodermal formation. It does not, in the first instance, closely embrace the medullary sheath, but the space between the two is gradually filled up by the growth in girth of the axis-cylinder and of the medullary sheath. Dr. W. H. Gaskell, from a comparison of the cranial nerves in mammals with the nervous system in arthropods, finds additional support to his theory of mammalian descent through the arthropods.

Dr. Barbieri finds that all mixed nerves have more sensory than motor nerves. The ganglia on the dorsal roots belong to the sympathetic system, and in the rabbit there are about five hundred cells in each ganglion and about three thousand fibres as it traverses the ganglion.

(To be Continued.)

MONTHLY REPORT.

Issued by the Provincial Board of Health of Ontario for November, 1900. Showing the deaths from all causes and from Contagious Diseases in the Province, as reported to the Registrar-General by the Division Registrars throughout the Province.

Issued Dec. 20th, 1900.
F. H. BRAY, M.A., M.D., Secretary.

YEAR.	MONTH.	Total population of province.	Total number of municipalities reporting.	Total deaths reported from all causes.	Rate per 1,000 from all causes.	Scarlatina.	Diphtheria.	Rate per 1,000.	Malaria.	Rate per 1,000.	Whooping cough.	Rate per 1,000.	Typhoid.	Rate per 1,000.	Tuberculosis (Consumption).	Rate per 1,000.
1900....	November	2,283,182	740 95%	1,984	11.3	11	50	0.06	3	0.01	20	0.1	141	0.8	161	0.9
1900....	October	2,214,150	716 92%	2,056	11.1	8	44	0.04	2	0.01	10	0.05	120	0.6	169	0.9
1900....	Sept.....	2,270,150	715 92%	2,400	13.1	3	42	0.01	2	0.01	20	0.1	53	0.3	172	0.9

YEAR.	MONTH.	Total population reported.	Total number of municipalities reporting.	Total deaths reported.	Rate per 1,000 from all causes.	Scarlatina.	Diphtheria.	Rate per 1,000.	Malaria.	Rate per 1,000.	Whooping cough.	Rate per 1,000.	Typhoid.	Rate per 1,000.	Tuberculosis.	Rate per 1,000.
1899....	November	2,125,864	640 82%	1,501	9.0	12	40	0.07	6	0.0	8	0.04	40	0.2	146	0.8
1899....	October	2,276,000	740 95%	1,940	10.2	8	34	0.04	4	0.02	7	0.04	83	0.5	194	1.0
1899....	Sept.....	2,265,308	738 95%	1,967	10.3	10	21	0.05	0	0.0	8	0.04	55	0.3	190	1.0

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No. 1.

STATE CONTROL OF TUBERCULOSIS.

How to limit the ravages of that infinitesimal micro-mortal, the tubercle bacillus, is the predominating question of the day and generation. An entity, powerful, insidious, overwhelmingly destructive, is to-day commanding universal attention, despite the fact that its very existence is microscopic, and that its corporeal longitudinal dimension is about equivalent to the diameter of a red blood corpuscle. What terrific odds! Countless cerebral cells marshalled into a solid phalanx by that mighty general "Scientific Mind" against the determined onslaughts and stupendous machinations of one distinct germ and its collaborators. Yet, withal, the chances are still in favor of the latter's victory. Happy and contented in its environment, unmindful of all danger, heretofore it has pursued its evenly destructive course, aided and abetted by the friends of its victims. Lax, in regard to its progressive malignity in the past, the profession of medicine has unanimously awakened to a realization and a true conception of the microbe's malevolence; whilst the public generally has been brought to the *qui vive* of expectation for an antidote or "cure" for the dreaded malady tuberculosis, in its varied forms due to the appearance of this micro-organism in some of the tissues of the body.

The incidence of tuberculosis in any organ or tissue of the body is due to the presence of a working tubercle bacillus in that organ or tissue; because the consensus of the present-day professional opinion holds to the dictum, "No tubercle bacillus, no tuberculosis."

It is a fight then for supremacy between living macro-beings and living micro-beings: and whose is the duty to begin and command the attack?

All properly-constituted states or nations recognize their right and duty to protect their subjects from the attacks of foreign foes ; and is not here a foreign foe to the subject of any and all nations, whose armies have slain their thousands upon thousands, quietly but surely, steadily yet unremittingly, all the time receiving a calm, tacit connivance from friends, traitors in the ranks, from friends, traitors in command ?

The dawn of the twentieth century, however, sees an upheaval in professional and, to some extent, public life ; and there is apparent a determination on all sides and in all quarters to restrict the awful decimation of the ranks of humankind by its arch enemy.

When we consider that of the 75,000,000 people now populating the States of the American Union, and that something like 10,000,000 are destined to die of tuberculosis, to fall into the clutches of this hideous little demon, how can governments and legislatures stay their hand one single hour in organizing a plan of campaign looking towards the protection of so many million lives ?

Legislators are but a small fraction of the people. The people through them, their agents, make and enact laws for the good of the community.

What does that mean ?

It means that both the people and the legislators must be educated to a strict sense of their duty and responsibility respectively.

This education must be contemporaneous. Whilst the legislators are educated to make laws regarding the control of tuberculosis, the people must be educated to receive the legislation in a proper way.

What would you have the legislators do in this respect ?

1. They should have a care for those already the victims of the disease.

2. They should endeavor to prevent the appearance of the disease in other subjects.

Would the people's legislators have any moral right to enact legislation looking towards the establishment of sanatoria on a limited scale, which could only accommodate a portion of their subjects, who are victims of the disease, and not immediately accommodate others equally in need of treatment, who would have the same right to immediate admission to these sanatoria ? Manifestly, sanatoria, presuming that they are desirable and necessary for the treatment of tuberculosis, would have to be maintained indirectly through the pockets of the taxpayer ; and as all are more or less taxpayers, either direct or indirectly, it would not be justice to establish sanatoria first on a limited scale, providing for the treatment of some, whilst their less fortunates would have to take their chances until other sanatoria could be erected for their reception. This of course means multiplication of sanatoria, a multiplication of

taxes and burdens upon the people, which an educative campaign will scarcely ever be able to bring about. Nor does the establishment of a limited number of sanatoria in the neighborhood of large cities appear to be just, at the expense of the general public in rural districts as well as in civic quarters. Any system which cannot treat all alike at the same time is assuredly neither equitable nor just. Should legislation be enacted authorizing or compelling municipalities or groups of municipalities or counties to establish and maintain sanatoria? Unhesitatingly, no. Because no people in limited areas as in townships or counties would continue to bear the burdens imposed upon them by the maintenance of these institutions, when it began to be generally understood that all that was required for the proper treatment of tuberculosis was plenty of fresh air, and properly regulated and supervised modes of life. This is practically all that the sanatoria have accomplished so far. They have demonstrated to the satisfaction of the profession of medicine that, given a case of tuberculosis of the lungs, that case will tend towards recovery, with the concomitants of fresh air and a mode of life properly regulated and supervised. The question naturally follows then, why multiply the sanatoria in order to still further demonstrate a fact admittedly proven to be correct? Nature has given one great, vast, magnificent sanatorium, all the world over; why not take advantage of it in all quarters, with the knowledge now obtained that all that is required is a regular and properly supervised mode of life and unlimited fresh air?

If we come to the conclusion that the sanatorium has proven the treatment of tuberculosis of the lungs, and that sanatoria are not required except as an educative factor in a limited degree any longer, there remains much, however, for the state to perform. It should exercise a care over those already afflicted, to the extent of educating them as to the manner of their life and the disposal of their sputum. The State must further look after the welfare of the unattacked, to prevent the spread of the disease; and in this respect compulsory education and legislation should be enacted. It should become a part of the general education in the common schools of our country, the prophylaxis of consumption. Instructions in a printed form should be given to all teachers in public and high schools as to the habit and dangers of spitting. This should be a part of the school curriculum, constantly brought to the attention of the pupils. It should become a law of the people, of all social life, that the habit of coughing up phlegm or expectorating into public streets or on public highways or in any public place whatsoever is no more justifiable than the bestowal of the other discharges from the body before public gaze in public places. More, it should be thoroughly taught and inculcated that the practice is both deadly and murderous, that an individual, the subject of tuberculosis of the lungs, who hawks up and casts into the streets, the poisonous

offal of his tuberculous lungs, is as a murderer lying in ambush awaiting his victim, just as sure of victims though void the malice aforethought. Continuous education of the young will inculcate the principle, and through them it will be sure to reach into every household and thus will the people become alive to the importance of a cession of the filthy habit. As a safeguard, it will be better for the State to enact legislation, making criminal and punishable any untoward act of this character whether it be done by the consumptive or by others.

If, then, people are not to spit, what are they to do with their sputum? A proper disposal of the sputum seems to be the key to the whole eradication of the disease, as it seems fair to assume that when the supply or the source of the supply of the tubercle bacillus, as the sputum undoubtedly is, is cut off, when a length of time has elapsed in which no sputum has been cast forth to supply the atmosphere any increment, it seems fair to assume that there will be a dearth of tubercle bacilli in the land, and a greatly decreased incidence of tuberculosis in consequence. It will be necessary then, that any Act which shall prohibit the act of expectoration shall at the same time provide for the proper and effective disposal of that expectoration, in a manner which shall be at once pleasant and easy of execution. It is such an easy matter for any one afflicted or not afflicted with pulmonary complaints to expectorate upon the streets or ground in any place and think no more of the extraneous matter, that it becomes difficult to provide a convenient and easy method for sputum disposal. It cannot be dealt with in the same manner as the other two main discharges from the body are, for the simple reason that the sputum may require attention many times per minute, whereas the others occupy a few minutes of the twenty-four hours at the well-known stated intervals. This is the problem which will have to be solved in a satisfactory way before any such compulsory legislation is enacted as indicated. Those who have had experience in sanatoria appreciate the fact that the most disgusting part of the well-organized routine of those institutions is the manipulation of the spit-cup. And those who advocate the placing of cuspidors and stationary spit-cups in public places for the reception of sputum require only a short experience of the innovation to convince them that the suggestion is an abominable one. Take, for instance, the suggestion to place cuspidors in all street cars. Would the advocates of these unsightly implements have the consumptive arise from his seat in the car, proceed it may be to the other end of the car, and then deposit his mouthful before a privileged few, most of whom might probably be ladies? There would probably be a good deal of seat-space around where the article was located. Providing it were considered good principle to establish these public spittoons, would it be good principle to adopt to have these implements

cleansed by others. So far as possible, every individual should attend to his own refuse, no matter what form it takes, and it is an established principle of social life that everyone attends to himself in these respects.

The spit-cup should be legislated out of existence. It is abominable, filthy, repugnant to all refined senses. Its invention has brought no honor to its inventor. Unwieldy, bulky, and clumsy when in pocket, that is, if it is necessary to carry one, inelegant and nauseating to all beholders, it should be ground into powder and cast into the sea. Then there should be a total prohibition of its manufacture on pain of dire and condign punishment. Any individual who has reached the stage where a spit-cup is necessary should be restricted in his movements and not be allowed to mingle with the common community. He has advanced to the stage of the disease where recovery is absolutely hopeless. His presence in public places, expectorating promiscuously, is a menace to society, and should be restricted just the same as, and more so than, an irresponsible lunatic; because whilst the lunatic may cause the death of one or at most a few individuals, the consumptive in this far-advanced stage may be the slayer of thousands.

What, then, is the easiest, the most serviceable and at the same time the most elegant method of the disposal of sputum? The employment of the rubber "sanitary" pocket as a receptacle for paper or cotton handkerchiefs. It should be so formed as to fit easily into the inside breast pocket of a man's coat, and modified to adapt itself to the pocket of a woman's dress or jacket. In the centre of its face side is a button, which could be passed through a button-hole in the lining wall of the pocket in the coat; the flap buttons over this. Thus will be ensured retention of the "sanitary" pocket in the pocket of the garment alluded to above. The "sanitary" pocket should be carried and employed by everyone who has expectoration that cannot be swallowed and which should not be thrown into public places or on public ground. This should be made compulsory by the State. Handkerchiefs of any light material, whether of paper or cotton, should be large enough that when grasped in the hand, they conceal the act, and in this way the act of expectoration is rendered as easy and as elegant as the deposit of nasal secretions in the same receptacle. Of course the individual would have to carry a supply of these handkerchiefs for a half or for a whole day, according to his convenience and habits of business. In some cases, one handkerchief might be sufficient, as if the individual was not making much expectoration, requisition of the handkerchief might not be required very often, and it may have had time to become thoroughly dried before being required for another act. At night the "sanitary" pocket should be withdrawn and cleansed by its possessor in a disinfecting solution, dried, and then be ready for use the next morning. The handkerchiefs if of cheap

material could be burned. This plan is elegant and at the same time cleanly. It would attract no more attention than employing the handkerchief for blowing the nose ; it certainly is far superior to carrying a bulky, unwieldy and unsightly spit-cup the whole day perhaps for months in one's pocket. The nauseating withdrawal of a spit-cup from the pocket in a public conveyance and expectorating into it before the ladies and gentlemen alike is done away with, and the simpler method, which is rational and has every advantage to commend it, ought surely to receive recognition and be adopted into universal favor.

Thus will State control of tuberculosis become an easy matter, requiring no very radical laws and very little legislative machinery for their enforcement. Thus will the central power now controlling all education confer upon the educational councils or departments in all States and counties the right to incorporate the teaching of rules and regulations in regard to the prevention of tuberculosis, having special regard to the disposal of the sputum of the afflicted ones, in all the common and public and high schools in the land ; then prohibitory measures in regard to the disposal of sputum from whatever source, best on the lines laid down in using the "sanitary" pocket ; and in a few short years, the results accruing will contribute very materially towards the eradication of this destroying angel which has passed over innumerable houses in all lands, sparing neither Jew nor Gentile, bond nor free, firstborn nor lastborn.

THE MEDICAL ALLIANCE OF AMERICA.

The Medical Alliance has reached the city of Toronto, and its agents are now busily engaged exploiting the profession. A little over a year ago when this institution was seeking incorporation at the hands of the Dominion Parliament, a searching criticism of its methods and purports was made in the editorial columns of our esteemed contemporary, *The Montreal Medical Journal*, which scarcely left the Alliance a leg to stand upon. For the past six weeks, their agents have been overrunning the profession here ; and we are afraid that some of the physicians of Toronto, without due inquiry and examination of their prospectus, have become members of the organization. Whether or not these physicians have been inveigled into joining the Alliance through false representation, is not known in every case, but it would seem that everything was not just what it was represented to be. The third paragraph of the prospectus is the interesting and all-important one ; and it is to this clause that the physician should direct his closest scrutiny. On careful perusal it will be noticed that the

clause neither promises nor guarantees anything to the physician ; and in order that our readers may have the full benefit of it we here reproduce it *in toto* : " In the first place, all medical and surgical practitioners of good standing can become identified with the Alliance, and in return are entitled to share in the fund made up of a small weekly subscription from each subscriber, which is collected and paid out through the medium of the Alliance. This fund is calculated to provide as nearly as may be, \$1.00 for every office call and \$1.50 for each house visit paid. The fund will be distributed monthly among all practitioners connected with the Alliance in proportion to the amount of work done by each, but not in amounts exceeding the above fees. Any balance after payments made at the above rates will be carried forward to the next month, and any surplus outstanding at the end of the year will be entirely distributed among the practitioners."

" As above stated, this fund will be made up of minimum weekly subscriptions collected by the Alliance from all subscribers. . . . "

A workingman with a family can join this Alliance at the rate of ten cents per week for each member of his family ; and the fund spoken of in the above quotation is made up from these collections and is called the " Medical Expense Fund," in the contract or appointment bestowed upon the physician by the Company ; *i.e.*, twelve cents per month are taken from the subscriptions of each subscriber, or \$1.44 per year for the purpose of paying the physician, and the balance of the \$5.20 collected from each during the year goes into the coffers of the Alliance. In the paragraph above alluded to, it will at once be noticed that the Alliance does not guarantee that the physician shall receive " not less than \$1.00 per office visit," but that he shall receive " not more than \$1.00," which, to say the least of it, is a very specious way of putting the tariff for the physician. We are led further to understand that at the end of ten years, when these subscribers have paid in \$52.00 to the Alliance, that the full amount will be handed back to them, so that in all that time they have had the services of the physician for nothing. After deducting \$14.40 for ten years for the Medical Expense Fund, it will be seen that \$37.60 is left for the Alliance to work upon, and to recompense their subscribers at the end of the ten years with \$52.00 each. The strong claim of the Alliance is that those people who are in the habit of jumping physicians' accounts, will have those accounts paid for them by the Alliance ; but we fail to see the advantage to them from their own standpoint in joining the Alliance when they now practically get their doctors' bills for nothing. We have seen a copy of the physicians' contract or appointment, and we would urge that these be placed in hand before any of our confreres submit to becoming members of the Alliance. Whether or not the physician signs that contract, we

are told, is immaterial to the Alliance ; but if he accepts one from them it might just be possible that it would be found quite binding upon him. Remember that forewarned is forearmed. It might be considered advisable for some of our medical societies to issue an authoritative pronouncement upon the whole subject of the Alliance and its methods.

ARSENIC IN BEER.

Some of our Canadian beer-drinkers have been somewhat exercised over the reports from Manchester, Salford and other places in England, in regard to the epidemic of peripheral neuritis and subsequent deaths through arsenic in beer ; and there have been not a few inquiries as to whether such could occur in partaking of our own Canadian-brewed article. This anxiety can, however, be allayed, as the Canadian product is not at all liable to produce anything of the kind. Some twenty years ago legislation was introduced into the British Parliament, by the late Mr. Gladstone, which on subsequently becoming law, permitted the substitution of invert sugar for malt in the manufacture of malt for brewing purposes. This change in procedure was known as the "Free-Mash-Tun" principle, and was adopted in the United States as well as in England ; but the two other great beer-producing countries, Germany and Canada, stood by the old malt system. Of the invert sugars, there are a number, which are sold to brewers under the names of saccharine, glucose maltose, etc. ; and in order that these can be employed in the preparation of the malt, an acid must be employed, principally sulphuric. This acid was obtained from pyrites from Spain, which contained a certain proportion of arsenic, this fully accounting for the presence of the arsenic in the beer. Of course, if pure sulphuric had been employed, there would have been no likelihood of anything of the kind occurring. The people of Canada are safeguarded in this respect by the Excise law, as that law provides that there shall be no substitute whatever for malt ; then the duty is levied on that exclusively, there being no further duty imposed on the article manufactured. In Canada, all beer is manufactured exclusively from malt and hops, and there shall be no substitution therefor, under heavy penalties. Then as Canada produces the finest barley grown on this continent, from which the malt, the germinated barley, kiln-dried, comes, there is another guarantee of purity, which is absent to a certain degree in other countries. We have then two solid guarantees of purity, as has been explained : (1) That no substitute for malt is permitted ; (2) That because of the high duty on malt, only that made from the choicest barley may be employed with economy. Beer may be

a palatable article to some ; but that largely depends on the care used and employed in the selection of the grain and the hops. Besides there is a certain amount of skill in manipulating the malt in the finer and more delicate processes of brewing. We have no doubt that there will be a great sigh of relief when it comes to be thoroughly understood, that there is absolutely no danger of arsenical poisoning, peripheral neuritis, or death therefrom, through partaking too freely of Canadian beer.

News Items.

CHARGES of maltreatment of female patients have been made against the Brandon (Manitoba) Asylum.

SURGEON-MAJOR WORTHINGTON will be tendered a banquet in recognition of his good work in South Africa.

A MOVEMENT has been started to induce the War Office to create places for a certain number of Canadian nurses.

SCARLET fever still continues prevalent in Montreal. In the last week of December there were fifteen deaths from this cause. During the week of January 14th twelve were recorded.

Dr. CLARKE, Superintendent of Rockwood Asylum, has been appointed a Commissioner to report on the working of the New Westminster (B.C.) Asylum.

Dr. CHARLES W. PURDY, Chicago, the eminent authority on urinary diagnosis, is dead, at the age of fifty-four years. He was a distinguished graduate of Queen's, Kingston.

THERE were 7,351 deaths in the city of Montreal last year. This was the largest number since 1885, when there were 7,825 recorded. Of the total deaths, 4,627 were children, and of these 3,316 were five years and under.

THE DOMINION MEDICAL MONTHLY is pained to have to announce the deaths of Dr. Shaw, Tweed ; Dr. Fenwick, Kingston; Dr. Farrell, Halifax, and the wife of the distinguished gynecologist of Montreal, Dr. Laphorn Smith.

MISS GEORGINA POPE, sister of the private secretary of the late Sir John A. Macdonald, has returned from South Africa to Ottawa. Being interviewed on the hospital question she stated that affairs in connection therewith had been greatly exaggerated.

THE French-Canadian medical men of the province of Quebec will hold a medical conference some time next summer: French doctors from Louisiana and the South will be present. There are said to be about five hundred French practitioners in the United States, and something over one thousand in Quebec.

THE Medical Association of St. Francis District of the Province of Quebec, is a progressive institution, and is setting the pace for other medical bodies. In connection with this association a Medical Defence Union has recently been formed, and they are now approaching Dr. Roddick, looking for a Dominion charter.

BROCKVILLE General Hospital has recently been in receipt of a cheque from a generous patient for \$1,000. A Philadelphian thus shows his appreciation of treatment received there during the past summer. The money will be used for the establishment of a nurses' home and a children's ward in connection with the hospital.

THE Executive Council of the Board of Governors of the Victorian Order of Nurses met in Ottawa on the 11th inst. During the month of December the nurses in all Canada connected with this Order paid 2,220 visits, having spent sixty-eight nights on duty; \$400 was collected in fees. At the present time there are thirty-eight nurses in the Order. Fourteen of these are on probation.

EARLY in February it is proposed to call a national Conference on tuberculosis in the city of Ottawa, when a Dominion Association, with branches, will be formed. All the provincial governments will be asked to send representatives, and the mayors of the large cities, and the secretaries of the provincial Boards of Health will be summoned. Representative medical men from all over the Dominion will also be present.

ON the 11th January the Medical Association of St. Francis District, in the Province of Quebec, held their regular meeting under the presidency of Dr. Brown, Richmond. The "lodge doctor" question was fully discussed. The Sherbrooke doctors present decided to call a meeting of the practitioners of that city at an early date to have them enter into an agreement not to accept any regular appointment as lodge doctor other than examining physician. A good many thought it would be more profitable for the lodges to allow their members to call in any doctor whom they chose when ill, the lodge to pay the doctor's bill, and not as at present; a yearly salary to the lodge physician.

Physicians' Library.

Post-mortem Examinations. By JOHN CAVEN, B.A., M.D. (Toronto), L.R.C.P. (London), formerly Professor of Pathology, University of Toronto Medical Faculty. Illustrated. Price \$1.00. Toronto: J. A. Carveth & Company.

To the many students, both of Toronto and Trinity, who have passed through the hands of Professor Caven at the *post-mortems* held chiefly at the Toronto General Hospital, and who are now practising in almost every quarter of the globe, this practical volume will be received with unbounded delight, enthusiasm and satisfaction. The methods and technique of this careful operator in this particular field are readily recognized throughout the text, which is clearly illustrated by diagrammatic drawings, adding greatly to the value of the book. The profession throughout Canada, within the sphere of this journal's influence, is so familiar with the name of Dr. John Caven and his work that it scarcely seems necessary to add anything by way of commendation. From his pen we would expect something good, and we have got it; and we do not think that there is any practitioner throughout the whole Dominion of Canada who can afford to be without this book. The publishers are also to be congratulated upon the whole appearance and finish of the work.

Progressive Medicine, Vol. IV., 1900. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson College of Philadelphia. Octavo, handsomely bound in cloth, 428 pages, 69 illustrations. Per annum in four cloth-bound volumes, \$10.00. Philadelphia and New York: Lea Brothers & Co.

Each succeeding volume of this quarterly emphasizes the increasing success with which its editor and contributors are realizing their novel aim in producing in a narrative form the record of the year's medical advance. The issue for December more than fulfils expectations and will well repay careful reading. But little more

than a cursory analysis of its contents is possible. The first article, by Einhorn, deals with diseases of the stomach and allied organs. Considerable space is very profitably devoted to the latest methods of medicating the stomach. The rest of the article contains many valuable hints on diagnosis and treatment. The portion on "Floating Liver" is of importance and should prove interesting to all. In discussing fractures about the elbow-joint, tuberculosis of the bones and joints and coxa vara, Bloodgood has written a most instructive article. He has also devoted some ten pages to the important subject of gonorrhoeal arthritis. The illustrations throughout the volume are clear and aid materially the descriptions. This is especially true of those illustrations to be found in the sections on fractures and coxa vara. The therapeutic referendum has greatly expanded since last year, not only in size but in scope and value. In its hundred pages will be found excellent accounts of all that has been accomplished with the newer remedies and additional light thrown on the better known drugs. Dr. Belfield contributes a compendious and authoritative article on genito-urinary diseases. The important subject of diseases of the kidney is ably handled by John Rose Bradford; while physiology by Albert P. Brubaker is of interest more particularly to specialists in that branch, but may be read with profit by all. Under the subject of hygiene, Dr. Henry B. Baker deals in a practical manner with the causation of diseases due to toxins, their modes of communication and methods of control. No more helpful enterprise than "Progressive Medicine" has ever been presented to the medical profession. It contains the core of everything new and valuable in the progress of medicine.

The Care of the Child in Health. By NATHAN OPPENHEIMER, A.B., M.D., Attending Physician to the Children's Department of Mt. Sinai Hospital Dispensary; Author of "The Development of the Child," and "The Medical Diseases of Childhood." New York: The Macmillan Company. For sale at Tyrrell's Book Shop, 8 King St. West, Toronto.

In this valuable little hand-book the author deals in a clear and concise manner with the subjects of the pregnant woman, the baby's outfit and nursery, feeding, bathing, sleep, exercise, clothing

from the time of infancy, habits, relation of parents to children, education, defective children and common diseases. To the budding practitioner we believe the work will prove invaluable as possessing knowledge on subjects which text-books, being too full of other material to impart, seldom touch upon, and as qualifying him to teach and inculcate practical and essential duties in this important part of the individual's existence. It will also be safe to recommend it to intelligent mothers, who will appreciate in no small degree, the clear and studied effort of the writer to bring about betterment in the personal hygiene of childhood days.

General and Local Anesthesia. By AIMÉ PAUL HEINECK, M.D., Clinical Instructor in Genito-Urinary Diseases, College of Physicians and Surgeons, Chicago; Clinical Instructor in Gynecology, Chicago Clinical School; Clinical Instructor in Surgery, Northwestern University, Woman's Medical College. 124 pages, \$1.00. Chicago: G. P. Engelhard & Co., Publishers, 358-362 Dearborn St.

The topics include the uses of chloroform and ether; the use of anesthetics in childbirth; anesthetics for diagnostic and therapeutic purposes; anesthetics in surgery; selection of the anesthetic as governed by the nature of the operation; posture and preparation of the patient; rules for administration of chloroform and ether; precautions before and after; what to do in cases of accidents; methods of applying local anesthetics; the use of cocaine in nose and throat; in genito-urinary surgery; precautions for cocaine anesthesia; infiltration anesthesia and its technique. We have had much pleasure and profit in examining this little but worthy book very thoroughly, and can recommend it to our readers.

Gynecology. A Manual for Students and Practitioners. By MONTGOMERY A. CROCKETT, M.D., Adjunct Professor of Obstetrics and Clinical Gynecology, Medical Department of the University of Buffalo; Attending Gynecologist to the Buffalo General and Erie County Hospital. Illustrated with 107 engravings. Philadelphia and New York: Lea Brothers & Company.

This compact, yet thorough gynecology, one of Lea's series of pocket text-books, which are edited by Bern. B. Gallaudet, M.D.,

who is demonstrator of anatomy and instructor in surgery, College of Physicians and Surgeons, Columbia University, New York, and visiting surgeon, Bellevue Hospital, New York, we consider to be one of the best of the series. For examination purposes we believe it will be found by the student to possess qualifications which will readily recommend the work to him. In this particular field it will take rank as one of the best aids before the student. As a means of assuring a universal and intelligent view of the entire subject at one time, the practitioner will find that a review of its pages will help wonderfully in furbishing up knowledge which had, perhaps, become rusty through lack of use. We bespeak for the pocket text-book on gynecology a steady and universal demand.

Physician's Visiting List, 1901. Fiftieth year. Philadelphia: P. Blakiston's Son & Company.

A neat handy book with pencil and side pocket, which continues to hold first place amongst similar productions. The price of \$1.00 for such a valuable assistant in everyday practice will readily repay everyone for the investment. It is a labor-saving business production.