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EDITORIAL

AN EFFORT TO REGULATE THE IMPORTATION AND EXPORTATION OF OPIUM AND COCAINE.

Following the adoption of a resolution, Mr. Rowell introduced in the House, on 17th October, a bill to license import and export of cocaine, opium and their preparations. The bill continues in effect Orders-in-Council passed in May last under the War Measures Act. In recent years, Mr. Rowell said, quantities of opium and cocaine imported into Canada had shown a marked increase. In view of that situation and in order to exercise greater control, the Orders-in-Council were passed. The increase in importation, however, did not necessarily mean an increase in consumption in Canada. The object of importation into Canada had been largely to get the drug smuggled across the international border into the United States.

Mr. Rowell read a series of figures showing the effect of the Orders-in-Council. During the year ending March 31, 1919, there were 12,333 ounces of cocaine imported into Canada. During the three months of 1919 under license, July, August and September, cocaine imported amounted to 1,544 ounces. Morphine imported during the year ending March 31, 1919, totalled 30,087 ounces. During the three months under license importations were 2,695 ounces, approximately 10,000 ounces per year, instead of 30,000.

Crude opium during the year ending March 31, 1919, was imported to the extent of 34,263 pounds. During the three months under license, importations were 1,110 pounds, or 4,400 pounds per year, as compared with 34,000 pounds before licensing was put into effect.

Very stringent steps should be adopted with the object of controlling the sale of habit forming drugs. It has been definitely stated that there are at least 1,000,000 dope fiends in the United States, and, as many from the United States come to this country, they may bring the habit with them. The problem cannot be trifled with. Strong measures are required.

THE CONTROL OF VENEREAL DISEASES.

The Dominion Council of Health, as authorized under the Act establishing the Federal Department of Health, held a session on 8th October in the City of Ottawa, and will continue in session to-morrow.

Up to the present the control of venereal diseases has occupied almost entirely the attention of the council. A complete unanimity of opinion has been expressed by the representatives of all the provinces as to the proper measures to be adopted. The council has decided that out of the appropriation set apart by the Federal Government for division among the provinces for the combatting of disease, the sum of $10,000 shall be given direct to the National Council for the same purpose in their nation-wide campaign of information and propaganda and measures of treatment, and a further sum of $1,000 to be expended by the Federal Department of Health.

The balance of the grant, namely $180,000, will be proportionately assigned to the provinces and the representatives of the provinces, assuring the Department of Health that equivalent amounts of Provincial funds will be set apart for the same purpose.

The Act provides for the constitution of this council, consisting of the Deputy Minister of the Federal Department of Health, the chief executive officer of each province, and five other members appointed by the Governor-in-Council, and, in accordance with the above, the present meeting consists of: Dr. J. A. Amyot, Deputy Minister, chairman; Dr. J. W. S. McCullough, Ontario; Dr. Elzear Pelletier, Quebec; Dr. W. H. Hattie, Nova Scotia; Hon. W. F. Roberts, New Brunswick; Dr. H. E. Young, British Columbia; Dr. Gordon Bell, Manitoba; Dr. W. C. Laidlaw, Alberta; Dr. M. M. Seymour, Saskatchewan; Prof. J. G. Fitzgerald, Professor of Hygiene, University of Toronto; W. F. Stephenson, secretary Canadian Ayrshire Breeders' Association; Tom Moore, president Trades and Labor Congress, representing Walter Rollo, Hamilton, the Labor representative; Miss Helen R. Y. Reid, convenor of auxiliaries, Canadian Patriotic Fund, Montreal; Mrs. H. E. Todd, president Canadian Women's Institute.

The late Sir William Gowers once said that there were at least 500,000 in London suffering from an active form of syphilis. We have our quota in Canada. The secret of success is stop the polluting stream

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ABUSES AT ORPINGTON HOSPITAL.

"An amazing story of the abuse of political patronage is told by Dr. R. H. Arthur of Sudbury, who served with the Canadian forces overseas for more than three years. As a medical man he was in position

to know the real conditions in Orpington Hospital in England, and he states that it was 'a fine place for Cabinet Ministers to place their relatives so that they might win the war from a safe distance."

"Orpington Hospital, which cost about half a million dollars, was contributed by the people of the Province of Ontario, and they had a right to expect that it would be put to the best use for the soldiers who went overseas. Instead of carrying out its obligations to the soldiers and to the Province the Government seems to have used it as a dumping-ground for those who had a "pull." Dr. Arthur states that in several cases nurses who had never taken a course of training were placed in responsible positions in Orpington Hospital because they were near relatives of Cabinet Ministers. He also stated that one of the Ministers wanted to make a position for his sister-in-law, and as she had never been a nurse he had her appointed private secretary to the matron of the hospital.

"The people of Ontario did not contribute this hospital for the use of relatives and friends of Ministers, either Federal or Provincial, and will resent any neglect of injured and sick soldiers by incompetent nurses forced on the institution by patronage and nepotism."

A report such as the foregoing should not be allowed to rest. There should be a prompt and thorough investigation by an independent and competent committee; and the finding of the same should be given to the public with the least possible delay. A state of suspicion or doubt should be removed with all speed.

DR. NASMITH'S WORK AND WORTH.

In the resignation of Dr. George G. Nasmith Toronto loses a civic servant of high professional standing, lovable personal qualities, and splendid public spirit. When a Provincial official he was a pioneer in the application of chlorine to water as a purifying agent. Later, as head of Toronto's civic laboratories, he carried that branch of the Health Department through the dufficult organization stages and put it upon a basis of efficient service. Overseas he was of incalculable service to the Canadian and allied forces. It is no secret that he had much to do with the removal from Salisbury Plains. His presence at St. Julien, his quick recognition of chlorine gas, and the preventive methods which he devised for dealing with that menace are matters of history. His work as a sanitarian was recognized not only in the Canadian forces, but throughout the British and French armies, and his jurisdiction included British as well as Canadian troops. Since his return he has published two excellent war books; for all his technical knowledge he has the faculty of writing for the public in simple, understandable, vigorous English.

But a great many people at the City Hall will prefer to remember him for his warm human personality and his unpretentious friendliness, rather than for his scientific and literary achievements. Toronto has a fine lot of officials. She is losing one of the finest in Dr. George G. Nasmith.

How many lives Dr. Nasmith saved by his sanitary work in the army no one can tell. It was true in this war as it was in Homer's time, that the healing of wounds and the prevention of sickness was more than armies to the nations weal. Dr. Nasmith's work at the Front was of the sort that counts, and he won for himself true recognition.

MEDICAL SCIENCE IN THE WAR.

At the dinner given at the King Edward Hotel recently by the Fellows of the Academy of Medicine in honor of those Fellows who had served in the Army. A very interesting statement was made by Major-General Fotheringham setting forth what the medical profession had accomplished. Among other things he said:

"The admissions to Canadian Military hospitals had been 750,000, or more than the total populations of Toronto and Ottawa. The death rate had been only 2.59 per cent. Exclusive of the South African war, he said, in all previous wars out of every 100 men who died, 80 had died from disease and 20 from wounds. In the European war just ended, the records of the Canadian Medical Corps showed that out of every 100 deaths, five only had died from disease and and 95 from wounds. This remarkable record, he attributed mainly to two reasons, firstly, preventative innoculation, including the co-operation in this which had been given the medical officers by all officers commanding units, and secondly, to the internal combustion engine, which had made possible the rapid transit of supplies and of wounded and sick men.

"He stated that the work of the Canadian Army Medical Corps had been such that it does not need to apologize to any country, and so ably has it been conducted since the cessation of hostilities that he predicted the conclusion of the Canadian Expeditionary Force Hospital work before the end of the year."

Sir Robert Falconer, Col. J. A. Roberts, Col. W. McKeown, Col. C. L. Starr, Col. H. A. Bruce, and Col. Bickford also emphasized the splendid record of the Canadian Medical services in the army; and as Sir Robert Falconer said—"This service was fully appreciated by the people."

AID FOR ARMY DOCTORS.

Before the Committee of the House of Commons Dr. E. E. King, of Toronto, put up a strong plea for a grant of $500, and hospital fees to enable doctors who had served overseas to take a period of post-graduate study to enable them to bring themselves up to date in medical practice. Dr. King took the position that service at the front put a man out of touch with the latest advances in practice. He said:—

"As guardians of the public to see that these men are able to handle diseases we feel that a man who went to France before he had practised two years has had no experience, and is in need of a post-graduate course, but if a man who has had five years' pre-war practice, if he can show that he cananot afford to take a post-grauduate course and feels he needs it to cope with scientific improvements, he should be assisted by the State, so that he may return to civil life skilled to give the best possible service to the public."

Dr. King spoke in behalf of those young doctors who had abandoned their practises and gone into the army, where they received very little medical experience, and lost their practices at home. Dr. King was supported by Drs. Emmerson and Wilberforce Aikens. We think the contention is sound, and that these doctors should get some assistance.

THE ONTARIO MEDICAL ASSOCIATION.

We publish in another page a statement regarding the Ontario Medical Association. We would recommend its perusal to our readers. No matter what happens, the profession should stand loyal to this grand medical organiaztion. It has had its ups and downs, but it has done much for the betterment of the medical profession in this province.

At the meeting of the Ontario Medical Association last spring, a report was adopted that condemned in most uncalled for terms the medical journals of this province. These journals have faithfully supported the Association and deserved praise and not censure. The *Canada Lancet* resented the attack and fully exposed it at the time. Having done this and having put the critics of the medical journals where they belong, our word is "Onward Ontario Medical Association!"

ORIGINAL CONTRIBUTIONS

CHRONIC INTESTINAL STASIS.

By Dr. D. T. Smith, Ottawa

IN discussing the subject of Chronic Intestinal Statis only the most important phases can be touched upon in a short paper for purposes of discussion, therefore, we shall accept Dr. Lane's premises.

The definition of C.I.S. is somewhat confusing with Chronic constipation. The definition of constipation which has formerly been accepted as adequate does not describe what we know now as C.I.S.

Constipation is usually considered to involve the large bowel particularly in its lower portion, results as a rule from improper diet, insufficient fluid intake, lack of exercise, general atonic condition of the body tissues or a combination of two or more of these faculties. The condition may and often supervene even in marked degree when the lumen of the bowel is entirely free from angulation, kinks, and other obstruction abnormalities. Furthermore constipation may exist to a very pronounced degree even in the intraceable form known as obstipation, and yet the patient may suffer very little from the effects of absorption of the retaining material and its toxins.

In C.I.S. on the other hand while the factors which produce constipation may be operative others involved are definitely demonstrable by diagnostic means at our command. In the first place according to Lane's theory the evolution of man from the all-fours posture of his progenitors of field and forest result in a general tendency to viceroptosis. The dropping of the abdominal organs gives rise to stress and strain upon the messentery and its attachments. Nature attempts to offset this strain by the formation of practically bloodless evolutionary bands. These evolutionary bands develop with unequal strength in different parts and the result is unequal support. The bowel is held up firmly at some points while it is allowed to sag at others. Anguation or kinking at the point of support folows this abdominal fixation at a given point in the length of the intestine while a dropping of the tube on either side narrows the lumen of the gut to a greater or lesser degree according to circumstances and to that degree interferes with the passage of its contents. The immediate result of this alteration in the drainage scheme is such a slowing in the passage of the food along the alimentary canal that an excess of toxic matter is formed especially in the small intestine; in other words the condition of stasis supervenes. Inasmuch as the factors which lead to this are not transitory but permanent unless corrected, the condition becomes chronic and hence we have C.I.S.

The blood stream in such a case surcharged with the toxin takes up from the retained or residual fecal contents of the intestine conveys to the transforming and excetory organs larger quantities of these poisons than they can eliminate. All the tissues of the body then become supplied with blood ladened with toxins, they are improperly nourished, as a consequence they deteriorate and are soon unable to offer the accustomed and proper resistance to infection and disease. The pros and cons of the matter are being thoroughly threshed in the wheels of experience and controversy. Pathologists, radiologists, gastroentrologists, and surgeons are taking part in the discussion of this important and seemingly far reaching of C.I.S. and its treatment. If we thoughtfully consider this disease we must accept Sir Arbuthnot Lane's views and contentions; as we know Lane contends that C.I.S. is the ground work upon which the superstructure of many diseases is placed, although we find the seventeen symptoms and nine diseases unumerated by him have been pronounced by Dr. Adami to be a horrible jumble. Perhaps so, yet there is undoubtedly enough in Lane's contentions along this line to warrant serious attention rather than sneering and jocular comment.

In the light of latter day finding it is unwise to reject any serious suggestions from a conscientious, scientific worker who has said for example to have been the first to resect a rib for empyema, the first to introduce saline solution into human blood vessels, the first to tie off the internal jugular vein for sinus thrombosis, the first to plate bone, the first to operate on cleft plate and hair lip at the same time, and the first to study C.I.S. as an entity, to short circuit and remove the colon for correction of the condition; therefore, we must take Lane's theory for purposes of discussion and also that of Alfred C. Jordan, of London, who has been associated with Lane in fluorscopic and X-ray work.

What then are the clinical symptoms of the C.I.S. They may be enumerated roughly in the following order: 1. Pain or discomfort usually referred to the region of the duodenum and stomach, but also to portions of he large intestine; 2. Gastric discomfort, nausea, and occasional vomiting resulting from obstruction to the outlet of the stomach in consequence of ulcer or sicatrization of the pylorus or duodenum, of constructing bands about the duodenem in the neighborhood of the pylorus. These symptoms may be classified under the ordinary category of indigestion. 3. Various symptoms which may be catalogued under the term of Intoxication, which Lane has described as flooding the liver with a quantity of toxic material picked up from the stomach, duodenum and small intestine. In excess of what the liver, kidneys and skin are able to deal with, these symptoms vary according to the susceptability of the individual. Under this head may be groupel a set of individual symptoms and physical signs such as

the blotched appearance of the skin which is cold and clammy, especially over the extremities, cold perspiration of an offensive odour, the loss of fat, and a lumpy condition of the breasts. Thyroidism in some cases, tenderness over the ilium and mental torpor. In fact the entire symptomotology usually described under auto-intoxication; head-ache, melancholia, inability to sleep, unpleasant dreams, and occasionaly persistent diarrhœa, also come under this general classification of symptoms.

The patients who present a sufficient number of these signs and symptoms briefly catalogued above warrant a tentative diagonsis of C.I.S. and should be safely guarded in every way. Wasserman's test should be given where there is a probability of syphilis. When the clinical examination points definitely to stasis, then X-ray examination and the abdomen should be opened. The treatment should be considered under three general rules. First group being cases in which by preventative measures definite condition of stasis may be obviated. Mid-group are mild cases in which by preventative measures and by modern surgical procedures such as cutting bands, replacing hollow organ, changing angles and the severe degrees of stasis are forestalled and the necessity of more radical surgical remedies may be prevented. The end group are advanced cases in which despite preventative treatment or because of insufficient treatment the condtion progresses to the degree of stasis which requires a more radical surgical procedure, such as short circuiting, ileocolostomy with colectomy. The surgeon who is called upon to explore the abdomen in every case such as this approaches more or less of a mystery. However, careful the examination may be the diagnosis is somewhat uncertain until the abdomen is opened and it is important therefore that the operator bear in mind that rare conditions may be found where commonplaces are expected and that he be able to cope with whatever state of affairs may be encountered.

The Results of Auto-intoxication on the Tissues.

I will now pass on to consider the consequences which result from absorption chiefly from the stomach and small intestines, and of the product of bacteria or chemical changes which exist in abnormal quantity in the material from which the food supply of the individual is obtained. The infection of food supply is consequent on the damming back of the material in the small intestines and stomach. It would appear that very little poisonous material in the small intestine is absorbed, unless by a super-added infection of its mucous membrane. This is demonstrated very clearly by the study of the congential dilatation of the colon. Whatever the material is that is absorbed into the circulation in simple stasis very little known, but if it is presented in the quantity in excess of what can be dealt with by the liver, kidneys, skin certain very defined symptoms

arise which are clearly due to the presence of some abnormal poison or deleterious matter in the blood.

Professor Arthur Keith has done a great deal of original work on the functions of the large bowel, the following quotation from a lecture delivered at the Royal College of Surgeons and published in the British Medical Journal, Dec. 7, 1912, has an important bearing here. The title of the paper is The Functional Nature of the Caecum and the Appendix. "Every year the opinion gains ground that the great bowel from the appendix to the rectum so far as man is concerned is a useless and dangerous structure. Exactly ten years ago, October 1906, Dr. Barker Smith of Cambridge, gave a clear expression of this new conception. Dr. James McKenzie has recognized and described the heart changes consequent on auto-intoxication so thoroughly in his work on the subject reclaiming the normal degree of blood pressure is soon restored to the patient when the large bowel is excluded by operation. His original work has produced such remarkable changes in medicine of the present day, eight or nine years ago at which he had not yet come to the conclusions that he now has that the condition he called 'ex-disease' and C.I.S. are identical. He employed the term 'ex-disease' for the reason that he did not know the nature of the complaint; but one thing he did realize from cultivation of ileal-chyme obtained during life from the subject of constipation almost invariably revealed the presence of numerous micro organisms and that the living bacteria presented in one cubic centimetre of cecal contents are many thousand fold more numerous than those in a cubic centimetre of ileal-chyme in the intestinal tube. The organisms most commonly found are bacillus coli, streptococi, often alive, other organisms are sometimes found staphylococcus citreus, e.g., in Still's disease and bacillus aminophilus.

We will now consider the conditions or so-called diseases which arise in the individual because of the lowered vitality of the tissues by the presence of toxins or poison in the blood. In toxic people the organisms which exist normally in the mouth are able to secure a foothold in the indivdual between the teeth and gums and manfest their presence as infective or inflammatory process. As a quantity of organisms is grown in these nurseries the absorption of the product into the circulation of the gastro intestinal tract and respiratory apparatus assists in the general process of depreciation, many observers are inclined to regard these secondary foci as primary, but a little consideration will show that removal of the teeth has not relieved the symptoms of intestinal stasis, which was the primary factor. However bad the condition of infection of the gums may be at the time of short circuiting, an immediate and extraordinary improvement in this disease follows on the clearing up of the small in-

testine. To put the matters briefly, the upper alimentary tract is specialised for aseptic absorption of food and the colon for bacterial destruction of the residue. The indirect changes are those that result from the lower resisting power of the tissue to the invasion of organisms produced by auto-intoxication and can hardly be separated abruptly from all those condtions described as being caused directly by it.

First.—The most obvious are pyorrhœa alveolaris, second tubular infection when not produced by direct inoculation, third rheumatoid arthrithis. This like tubercle can not develop in the presence of effective drainage of the gastro intestinal tract. Fourth, infection of the ganito-urinary tract, either directly or indirectly through the blood streams, by organisms other than tubercle producing nephritis, cystitis, pyelitis, endometritis and salphingitis. Fifth, development of changes in the thyroid gland whether an adenomotous tumors or general enlargement of the thyroid gland or exophthlimic goitre. Sixth, Still's disease. Seventh, infection of the skin of a pustular nature. Eighth, infection of the large intestine by organisms which produces several varieties of mucous and ulcerative colitis. Ninth, ulcerative endocarditis.

I have chosen them merely a few obvious typical indirect results of the auto-intoxication of C.I.S., the point of practical interest in conclusion with these indirect results of stasis in that the resisting power of the tissue of the body is such that they can destroy the organism or the poison which produced the condition if not too advanced or if cancer has not developed.

In regard to radiographic finding I wish to refer to an article published by Dr. James T. Casem, Battle Creek, Mich., where he claims with symptoms formerly attributed to prolapsus we are now finding more tanglibe lesions such as Chronic appendicitic disease constricting membrenous bands along the ascending colon, veils about the hepatic flexure, adhesions attending gall baldder disease, torsion and twisting of the transverse colon, due to omental adhesions and especially spaticity and adhesions in the iliac and pelvic colon may be revealed by the X-ray examination.

It is important to repeat here an expression by Dr. Alfred C. Jordan, a noted authority on X-ray work, he distinctly emphasizes the fact that at the bottom of the case generally disease can always be revealed by a complete radiological investigation of the alimentary system and it is just this contention which should stimulate radiologists to make careful and painstaking investigations along the lines laid down by Lane.

To Dr. Bainbridge I am greatly indebted, for he has given me a clear view of the essential facts of C.I.S. When in New York last those cases he presented and operated on were most convincing. I saw many cases,

each day, some of them before operation at the time of surgical treatment, witnessed his masterly technique, noted the history of the convalescent period, talked with staff and nurses and patients, and from this limited experience I believe C.I.S. deserves our most serious consideration.

I wish to present a few lantern slides showing conditions as found during surgical treatment.

Medical treatment:—Aside from tonics and other supportive measures little medification is necessary; in some cases, however, it may be necessary to have recourse to laxatives and exercise in order to stimulate the peristalsis. From the surgeon's point the treatment consists of facilitating the passage of material through the several portions of the gastro intestinal tract ,in the vast majority of cases the use of liquid paraffine, the application of some spring support to the lower abdomen, massage, andn the avoidance of such proteid foods as poison the tissue. When these methods fail, resort must be made to the operative interference. The essential object of such operative treatment is to facilitate the effluent from the ileum and so to remove at once from the drainage scheme the stagnating material from which toxins are chiefly supplied.

I have tried to bring forward enough evidence to make the subject clear and I trust also to convince you that C.I.S. is a subject that merits your careful and thoughtful study.

List of Lantern Slides.

No. 1. A strong band causing kinking of the bowel about the pelvic brim and rectum.

No. 2. Bands causing kinking of pelvic colon, catching up and inveloping the left ovary.
(b) Ovary; (c) Fundus uteri.

Fig. 3. (a) Ileo pelvic band;
(b) Appendix adherent to under surface of messentery and ileum,
(c) Distended and rotative caput coli, and,
(d) Bands.

Fig. 4. Broad ileo pelvic Lane's band,
(b) Pelvic brim, and
(c) Ileum held up out of cul-de-sac.

Fig. 5. Ileo pelvic brim,
(5) Attachment, of appendix to under surface of messentery and to ileum.
(c) Cecum,
(d) Ileum greatly narrowed in caliber when large bowel is pulled up toward diaphragm, because of fixed point A.

Fig. 6. (a) Omemtum attached to ascending colon.
(b) Attachment of omentum to abdominal wall, across ascending colon, causing considerable constriction.
(c) Attachment of omentum to ovary and tube.
(d) Attachments of omentum to bladder and fundus uteri.
(e) Appendix angulated and adherent to under surface of mesentery.

Fig. 7. (a) Appendix, forming a cavity in which was situated an abscess.
(b) Inflammatory adhesions.
(c) Bands of fixation of cecum.

Fig. 8. (a) Mobile cecum, with band from great omentum over head of colon,
(b) Same band constricting terminal ileum.
(c) Thickened band from omentum over to ascending meso-colon.
(d) Greater curvature of stomach, which when patient was in upright position, caused a pull on the head of colon.

Fig. 9. (a) Distended gall-bladder,
(b) Dilated duodenum,
(c) Constricting band.

Fig. 10. (a) Attachment of great omentum to cecum.
(b) Attachment of great omentum to pelvic wall.

Fig. 11. (a) Great omentum lifted up, adhesions out and tied off
(b) Raw surfaces on ascending colon covered over by suture.
(c) Illeopelvic (Lane's) band.
(d) Greatly distended ileum.

Fig. 12. (a) Prolapsed transverse colon.
(b) Pericolic membrane (Jackson's membrane).
(c) Patent ileocecal valve.

Fig. 13. (a) Thickened edge of omentum, adherent to abdominal wall, extracted to show scar on liver (c) where irritation by this band caused changes.
(b) Retractor holding back omentum to show scar on liver.
(c) Scar on liver.

Fig. 14. (a) Malignant strictures of transverse colon.
(b) Band of thickened omentum from greater curvature to sigmoid.
(c) Dilated ileum.

Fig. 15. (a) Thickened gall-bladder.
(c) Beginning cancer of liver.
(d) Fundus of gall-bladder before opened.

A REVIEW OF THE COMPLICATIONS OF INFLUENZA

By John Henderson, M.D., Ch.B., F.R.F.P.S.G.,

Visiting Physician to Glasgow Royal Infirmary, &c.

DURING recent months much has been written on the subject of the influenza pandemic in its various phases. In these writings bacteriology has had a prominent place, as was most natural; but the findings even up to the present have shown considerable variations. Now, with a better understanding of the various organisms present and active in such cases, and with improved culture technique, there seems to be a gradual convergence towards agreement, at least in essentials. From the clinic side, also, a great deal has been said, though the numerous complications have not been collectively presented. During last summer and autumn in France we had considerable opportunity for observing them in the course of our duties as charge physician and bacteriologist at a large base hospital. About five thousand influenzal cases passed through our hands, and, though we were at all times so short-handed, medically, that close research was impossile, a general survey of the complications met with, and their bacteriology, based simply on routine work, may prove a useful addition to what has already been recorded on the subject. Our experience resolves itself largely into two parts, the first during June, July, and August, and the second from the end of September to December. In the former the infection was in large measure a mild one, with four or five days fever, few respiratory symptoms, little in the way of serious complications, and a low mortality-rate. Later we were visited by a much more severe type with serious respiratory disturbances, largely pneumonic, and a high mortality-rate.

I.—Respiratory Complications.

Respiratory Complications bulk most largely in the records. Catarrh of the upper respiratory tract was general, the nasopharynx, larynx, and trachea all participating. The latter were often so severely affected as to rank as serious complications of themselves. *Epistaxis,* of varying degree, was present in about 70 per cent. of all cases. In some it was persistent and severe, though largely beneficial, in so far that it relieved congestion and headache. Rarely did it call for special treatment, and in only one case had plugging of the posterior nares to be resorted to for its control.

The common finding in severe cases was a generalized *bronchitis,* of varying degree, which was present from the outset. Even without evidence of definite consolidation of lung, but only an acute basal congestion, cyanosis, with persistent and troublesome cough, accompanied by

the spitting of frothy mucus, pink-tinged, or showing blood in quantity, and cardiac embarrassment, were the outstanding features. The condition might clear up at that stage, or cardiac failure occur with increasing cyanosis and death, or a definite broncho-pneumonia supervene.

Post-mortem records bear out these stages. When death occurred early, marked congestion and œdema at the bases were found in every case without definite consolidation. The condition might best be described as that of "wet" or "sodden" lung, and one soon became familiar with its appearance. In later stages a varying degree of broncho-pneumonia was found, at times so diffuse as almost to appear lobar in character, both clinically and at *post-mortem*. A limited *pleurisy* was common, with frequently a small amount of blood-stained exudate. *Empyema* was uncommon in the fulminating type, but was found more often in these cases whose course was more prolonged.

A frankly *lobar pneumonia* was a rare finding.

The type of *broncho-pneumonia* which prevailed was somewhat peculiar. Some cases ran a very short course, with fever for 3 to 5 days, ending often by crisis. More often the course was more prolonged, the fever passing through an intermittent stage with a daily swing of several degrees, and gradually subsiding to normal. In such the duration was very variable, depending on the spread of the pulmonary lesion. The pulse was rarely rapid in proportion to the respiratory distress, running commonly about 90, even where the respiratory embarrassment and cyanosis were marked. The sputum in the early stages consisted simply of pinkish, frothy mucus, but later showed a considerable amount of blood, and even a free hæmoptysis in some cases. At all stages cardiac failure was an ever-present source of danger. A very acute, almost fulminating type of broncho-pneumonia was experienced in the early autumn, with a fatal issue in two or three days. In a few cases *gangrene of the lung* occurred, with its characteristic spit and odour, and was confirmed *post-mortem*. In one case *abscess of the lung* supervened, and this case is worthy of special mention because of the sequence of events, and his ultimate recovery.

The patient was admitted with an apparently simple influenza, without much toxæmia, but in a few days developed a diffuse broncho-pneumonia, and was critically ill, with marked cyanosis, respiratory distress, and delirium. He was freely stimulated both by mouth and subcutaneously, and had oxygen administered at frequent intervals. His pulse remained good, though unusually rapid. The pyrexia continued high, and began to show a marked daily swing, the spit became more profuse, very purulent, and had a distinctly fœtid odour. Abscess was suspected, but could not be localized for a few days when a small area of

dullness was discovered under the right nipple with signs of cavity formation. The bases of the lungs at this stage were clear to percussion, though obviously very congested and oœdematous. The spit increased in quantity, and was associated with severe bouts of coughing, during or after which he would put up an ounce or two or stinking pus, blood-tinged. Rapid loss of flesh was manifest, he became markedly hectic in appearance, and had a quiet, muttering delirium almost continuously. By this time a vaccine had been prepared from his sputum, and after two doses he appeared to be improved. The spit lessened, there was diminished pyrexia, and delirium. On examination, however, a band of dulness, about 2 inches in depth, was discovered at the right base. This was explored, and was found to be due to pus in the pleural sac. The abscess had apparently burst into the pleura, thus relieving the cough and spit for the time being. About 5 oz. of pus were removed by operation, and the sac was washed out and drained. From that point recovery began, the temperature gradually subsided, cough lessened, and spit almost ceased. Thereafter his general condition rapidly improved, though convalescence was protracted. He was later evacuated to England and made a good recovery.

II.—Circulatory.

Serious *cardiac* complications were few. Cosidering the place occupied by influenza in the etiology of malignant endocarditis, and the virulence of the infection in many cases, it was surprising that, during the epidemic, I did not meet with a single case of malignant endocarditis clinically or at *post-mortem*. Systolic murmurs were frequent over the apex region, but these were regarded as due in large measure to dilatation of the heart, and disappeared completely on recovery. In a few cases a mitral systolic murmur prsisted after recovery, without any associated symptoms. As these were evacuated for convalescence they could not be followed up.

Three cases of *pericarditis* occurred under observation, in two of which there was a moderate effusion. All of these recovered. No case of pyopericardium was met with throughout. Myocardial affections were commonly found. A marked degree of bradycardia was a feature of many cases during the stage of exhaustion following the subsidence of pyrexia. In one case—a lad of 19 years—the pulse, over a period of one week, never rose above 40 per minute, and at most counts was 32 to 36 per minute. Even at the end of three weeks' tonic treatment the pulse was rarely above 56 per minute, and still showed occasional periods under 50. He was a very phlegmatic youth, and never made any complaint save of general weakness. The badycardia in this case followed bronchopneumonia.

III.—Renal.

The urine showed traces of albumen in nearly every case during the febrile period, and in a high percentage of severe cases there was definite evidence of *nephritis*. Granular and hyaline casts were commonly seen in these cases, more rarely blood and epithelial varieties. Uræmic symptoms were rare, unless where there was a history of previous nephritis, which had apparently been reawakened by the influenzal infection. In such the complication proved very fatal. When there was no history of previous renal trouble, the nephritis of influenza usually proved to be a transitory one, and cleared up completely, though a few cases were evacuated to England still showing urinary evidences of kidney lesion.

A peculiar urinary condition was met with on several occasions during the late autumn. The urine showed a considerable deposit, which to the naked eye resembled pus, but microscopically was found to consist practically of streptococci with very few pus cells. In only two of these cases were any clinical symptoms pointing to pyelitis observed, while irritability of the bladder was not pronounced, and pain on micturition was uncommon. The condition of the urine pointed rather to a simple excretion of cocci than to a pyelitis, cystitis, or definite lesion of the urinary tract.

IV.—Cerebral.

Under this heading may rightly be included those cases with grave degree of toxæmia, often apparently out of all proportion to the severity of the symptoms. Many of these have, of course, pulmonary lesions, but usually the experience is that the essential gravity of the case arises from the toxæmia and not from the actual extent of lesion in the lung. Such cases frequently came under observation in a state of collapse following their journey to hospital. As they revived, this was soon replaced by reaction, commonly with hyperpyrexia. Some showed *hyperpyrexia* throughout their illness.

In a number of cases *meningitis* was present, as proved by lumbar puncture; but in others, though the symptoms pointed strongly in that direction, the condition was one of *meningism*, with headache, vomiting, muscular rigidity, &c. Lumbar puncture in several of these cases resulted only in a few drops of clear fluid being obtained, and not under pressure. Three cases may be specially referred to in this connection.

Case 1 was admitted in an unconscious condition, with eyes wide open and staring, eyeballs jerky, pupils equal and medium in size, and no strabismus. Neck muscles were rather rigid, but there was no head retraction. There was a marked rigidity of the upper limbs, which were

held close to the body, with the elbows tightly flexed and the hands clenched. The arms could be extended under pressure, and the fingers extended, but gradually again they returned to the rigid position described. Kernig's sign was negative, as also was lumbar puncture. The patient had a quiet broncho-pneumonia, with little respiratory distress. He never regained consciousness, and died in twenty-four hours. *Post-mortem.*—No brain lesion was discovered.

Case 2 was admitted to hospital on account of a small and quite superficial leg wound, which gave no trouble. He contracted influenza, and a few days later pulmonary symptoms appeared. It was then obvious that he had a limited broncho-pneumonia. Suddenly he was seized with what, to the eye of the experienced sister in charge, was an epileptic convulsion. When seen shortly thereafter he was quite unconscious, with little muscular rigidity, and equal but rather small pupils. Lumbar puncture gave a negative result. He was catheterised, and the urine was found to contain considerable albumen, and a few granular casts were seen in the deposit. On the ground that his seizure might be uræmic in character, he was packed, and free perspiration resulted. He improved temporarily, and regained consciousness to some extent, but relapsed, and died thirty-six hours later, having had no further convulsion. *Post-mortem.*—A very limited broncho-pneumonia was found, and a moderate degree of parenchymatous nephritis, but no evidence of brain lesion beyond a general hyperæmia.

Case 3 was admitted with influenzal broncho-pneumonia. He complained of severe and persistent headache, which seemed to ease under one dose of aspirin (gr. x.). It recurred markedly three days later, this time with associated symptoms, viz., muscular rigidity, head retraction, and Kernig's sign. Lumbar puncture gave purulent fluid under pressure. *Post-mortem.*—A most extensive meningitis was found, both cerebral and spinal in distribution. The lungs showed a limited broncho-pneumonia.

Apart from the usual headache of influenza, a number of patients complained of severe pain over the frontal region, intensified by pressure over the frontal sinuses. In some of these the pain gradually subsided under local applications as blisters or iodine, but in others it persisted to the end. In this connection one case was especially noteworthy. He had a severe broncho-pneumonia, but his chief complaint throughout was of severe frontal pain, which kept him very restless and wakeful. On this occasion *frontal sinusitis* was dignosed. He died from his lung lesion, and at *post-mortem* I had his frontal sinuses opened, and discovered a purulent exudate in both.

especially, of course, in those with pulmonary lesions, offering great difficulty in the choice of a suitable remedy, and resisting ordinary treatment *vide* remarks or treatment).

V.—Gastro-intestinal.

That an abdominal type of influenza exists has long been recognised, but the resultant sickness and|or diarrhœa may prove so intractable as to become a complication, and a very troublesome one. In some such cases the stools resemble closely those of enteric fever. Commonly these cases begin with sore throat, which is followed by the gastro-intestinal disturbance. The throat may be of the ordinary follicular type, or a membranous tonsilitis. In some cases the abdominal signs and sympatoms are such as strongly to suggest an acute appendicitis, and quite a number of cases have been operated upon on this diagnosis. On the other hand, during the latter part of the epidemic, numbers of cases were sent into hospital with a provisional diagnosis of influenza of the abdominal type, in which the condition was actually one of acute appendicitis. In one week we had three such cases in which operation was necessary. One does not regard influenza in an ordinary sense as a cause of appendicitis, but it can readily be understood that, with such a catarrhal condition of the bowel as is often met with in abdominal influenzas, an acute appendix inflammation may readily be set up.

Jaundice was met with in a number of cases of the abdominal type, and at times it was very persistent.

VI.—Skin.

There is, of course, no rash which is peculiar to influenza, though accidental cutaneous rashes may be found. In quite a number of cases associated with constipation the usual rash arising from intestinal absorption was met with. *Urticaria* was present in a few cases, and in two of these was of a most violent type. *Herpes* was very constantly met with, chiefly on the face, circumoral and nasal.

Purpura hoemorrhagica was seen in quite a number of cases, in varying degree, usually of the ordinary petechial type, such as is met with in acute infections with high fever. In three cases large ecchymotic patches were observed on the abdominal wall, mostly over the recti muscles. (I have seen one such example, in very marked degree, since my return home). In all these there was very violent coughing or vomiting, which accounted to some extent for the site of the hæmorrhages. In two cases a peculiar and rare condition was found, when there was hæmorrhage into the sheaths of the recti muscles, such as occurs at times in severe enteric fever.

In the first of these the man complained of pain in the abdomen below the umbilical level, well within the position of the classical point of M'Burney. He protested that he felt something give way in that region while coughing. On examination a globular swelling, tense and elastic, was made out to the right of the middle line. It was very tender on pressure, and, though it felt too superficial to be intra-abdominal, I called for the opinion of my surgical colleague. On his advice the bladder was emptied by catheter, but only 4 oz. of urine were obtained. The man was desperately ill, having a diffuse broncho-pneumonia, and in addition an old-standing nephritis, which had been awakened by his influenzal attack; thus no operation could be entertained. A further similar swelling, though smaller, appeared on the left side, at or about the same level. He died, and at *post-mortem* there was found to be extensive hæmorrhage into the rectal sheaths.

On the second occasion on which I met this condition, it was readily recognised in the light of the former experience. This case also came to *post-mortem*, and the observation was confirmed. In connection with skin lesions, one case with a very puzzling eruption is worthy of mention.

The man was admitted in the ordinary routine as a case of influenza. He complained of headache, backache, general soreness, and fever, and had had vomiting just before admission. Under ordinary treatment the fever subsided, with general easing of the pains, on the third day. On that evening a rash was observed on the face, forehead, and scalp, dull red and papular in character, and distinctly shotty to the feel, particularly so on the forehead. Next day a few similar papules were observed on the wrists. The fever recurred with the appearance of eruption, and the pains in head and back were more pronounced. The association of the initial fever with its accompanying symptoms, and the secondary fever as described, strongly suggested small-pox. The question was raised with the authorities, but no case of variola was known to exist, or to have occurred, in the neighbourhood from whence he came. The further progress of the case in isolation continued the resemblance, as the rash spread to the arms and trunk, and lastly to the lower limbs, though in this region it was much lesss marked. The buccal mucous membrane was, however, not obviously affected. The papules became vesicular, and later pustular, with severe oscillating pyrexia. Thereafter the eruption dried, with formation of scabs and desquamation. As the scabs separated there was practically no pitting left. The temperature fell by lysis, and he made a good though slow recovery. He was seen at various times by the consulting physician for the area, and by the skin specialist, as well as by others interested, though no authoritative finding was arrived at which could explain the condition. The case was regarded

by the skin specialist as one of infected seborrheic eczema. Thereafter the Wassermann reaction was tested, and was found strongly positive. In view of this he was put on mercurial treatment. The condition was probably a pustular syphilide with unusually severe constitutional disturbance.

VII.—Various.

Neuritis was observed in a number of cases, particularly sciatic and intercostal in distribution. In one case of the latter type there was an associated herpes along part of the nerve course.

Neuralgia was a frequent accompaniment, but was particularly severe in three cass, with trigeminal distribution, in all of which it was unilateral.

Joint pains.—Pains specially referred to, or localised in, joints were noted in an unexpectedly large number of cases, though never associated with effusion.

Otitis media was also frequently met with where there was no history of previous ear trouble.

Hypothermia has been advanced as a complication, or at least a dangerous symptom in influenza.[1]

In a number of cases where pyrexia was severe there was a consequent period of subnormal temperatures, but this is common to all diseases in which fever has been severe or prolonged, and rarely calls for special notice, save perhaps as an indication for continued care or stimulation.

VIII.—Treatment.

In this connection a few remarks based on experience may be helpful. The day of specific treatment for influenza, as for many other diseases, has not yet dawned, or is only just breaking. Routine treatment is impossible, as the cases are so variable, though it naturally follows that, in treating large numbers of cases of any one disease, certain general principles are evolved leading to certain general lines of treatment. Aerotherapy is of primary importance, and to this end the room or ward should be airy, with free ventilation. As in other fevers, the room temperature should be kept at or near 60° F., and dieting should be on lines suitable for any febrile case. As there is no drug which has a specific, curative action in influenza, naturally many drugs have been tried, and each has its advocates. With such large numbers of cases to deal with simultaneously, abundant opportunity was afforded to test the relative value of drugs in relieving the symptoms. Antipyretic drugs, as aspirin, phenacetin, quinine, sodium salicylate, and salicin, were all tried separately, and in various combinations, and after a time it seemed to emerge

that a combination of the first three gave most general relief. The drugs were employed in the dosage of six, four, and two grains respectively, and the combination was given four times daily at the outset, in most cases thereafter. The further treatment is expectant or symptomatic, but much may be done to relieve the troublesome symptoms and to combat the complications.

The distressing and troublesome cough always offers a serious problem for the physician. As this commonly arises from catarrh of the whole of the upper respiratory tract, local measures are often beneficial, and undoubtedly the application of antiphlogistine, or the homely poultice of linseed, alone or with mustard, to the upper chest or throat gives great relief in many cases. This, combined with the use of a spray of chloretone and menthol (of each 2 per cent.) in liquid paraffin, to the pharynx, was very successful. This spray proved much more beneficial than the well-known combination of menthol, eucalyptus, and benzoin.

Vomiting may call for special treatment, and, indeed, may be so severe as to call for absolute rest to the stomach, and rectal feeding. Tincture of iodine (1 minim in 1 ounce of water) given every hour for six hours proved successful in some cases, but not in others. The combination of bismuth, soda, and dilute hydrocyanic acid (2 minim doses) was often useful. Blistering over the epigastrium was resorted to in some cases, but at times all these measures failed, and only ice by the mouth, with rectal salines, or rectal alimentation was employed for a short period.

Sleeplessness is always difficult to deal with in febrile diseases, but in influenza it is particularly so. Ordinary general measures fail, and drugs are required to secure sleep, more especially in those cases with pulmonary complications. As most of the drugs at our disposal for such a purpose are depressant and prejudicial to the heart, a selection is difficult. In the earlier stages, even where pulmonary complications appear imminent, a small dose of morphia may often be tried without grave danger, but it should never be employed unless in the early stages. The members of the trional group are all too depressant, and hyoscine seems to give such variable results as to render it unreliable.. Paraldehyde in drachm doses, repeated if necessary, is always useful, though unpleasant, but, as a standby in all cases, even in those with pulmonary complications, I used the ordinary combination of chloralhydrate (gr. xx) with ammonium bromide (gr. xxx). It certainly is less dangerous, can be repeated, if necessary, and on the whole proved most reliable.

Hyperpyrexia, when present, calls for prompt and efficient action. In this condition, antipyretic or febrifuge drugs should be avoided, and some form of hydrotherapy should be employed. Fortunately, thorough and systematic tepid sponding in many cases gives relief, but recourse to

cold sponging, or even to cold pack, may be necessary. Cardiac failure is a special danger in such cases, and should be met by free stimulation (*vide* pulmonary complications).

In those cases with *pulmonary complications* we made it a routine to raise the patient's head and shoulders a little by an extra pillow from the outset, to give greater freedom in respiration. A fitted gamgee jacket was applied in all cases—a very useful adjunct, as by its aid one can keep patients in a free current of air without fear of chill. Local measures, as poulticing, are only valuable in the early stages, or for the relief of cough and pain. As a rule, owing to the prostrating effect of the original influenza infection, the physician finds himself face to face with an immediate call for stimulation. Cardiac failure threatens, and may occur very early, with but little warning. Any depressant drug must therefore be avoided. Stimulant expectorants may be useful, such as ammonium carbonate, but its value is doubtful, as it does not control the cough, and is, indeed, apt to be irritating in any but small doses. Combined thus with squills and senega it often does good, and, if considered necessary, digitalis and nux vomica (one or both) may be included. One soon found, in dealing with large numbers of cases, that the call for alcoholic stimulation was urgent, and that small doses of brandy or whisky, given at regular intervals from the outset of pulmonary symptoms, were beneficial. These doses may be increased as occasion demands. For further degrees of heart failure hypodermic stimulation must be employed. The use of strychnine (gr. 1-60 to 1-30) and digitalin (gr. 1-1000) thus every four hours in valuable, and can still further be supplemented by the injection intramuscularly of camphor in oil (3 gr. in 15 minims) four-hourly. These injections can be made to alternate, so that something is given every two hours, and this was the course adopted in all severe cases throughout the second part of the epidemic. The cyanosis, which is in many cases such a marked feature, can be combated with oxygen, administered intermittently. This is best carried out by Haldane's apparatus, when it is obtainable, as the current can be easily and satisfactorily regulated, and considerable economy is secured where oxygen is being given over prolonged periods. The oxygen is warmed by passage through hot water or alcohol. By means of this apparatus, with the requisite number of tubes and masks, I have had as many as four cases in a broncho-pneumonia ward receiving oxygen from one cylinder simultaneously. Where cyanosis is marked, with obvious labouring of the right heart, great benefit may often follow from venesection to 12 or 20 oz.

It should be borne in mind that regular evacuation of the bowels should be secured in such cases. To accomplish this efficiently by drugs

necessitates a great tax on the patient's already waning strength, and, further, is a matter of difficulty, as the bowel in most cases is in a state of paresis with atonic distension. For these reasons it is better to employ enemata every twenty-four or thirty-six hours, and so secure through evacuation of the bowel, with the minimum loss of strength to the patient. By this means the bowel is regularly freed of toxic materials. Small enemata should be employed. It is surprising how much relief an efficient enema can give to a patient with urgent dyspnœa or orthopnœa.

In cases with *meningeal symptoms* I have tried the administration of urotropine in 15-gr. doses four times daily on account of its qualities as a blood antiseptic. As is well known, formaldehyde is readily and rapidly set free, and can be demonstrated in the cerebro-spinal fluid within half an hour of its administration. I have found this drug of considerable service in meningitis cases in the past, but in the cases of this series there was little success to record. It may be of interest to add that, even in dosage as above, I have only on one occasion met with any irritant symptoms arising from the use of this drug.

The *nephritis* did not call for any special treatment unless in the presence of uræmia, and only in a few cases did convulsions occur. In such the most effective procedure is to perform venesection to 15 to 20 ounces under chloroform. The amount of blood withdrawn can be replaced forthwith by a pint of normal saline solution, if considered advisable. Hot packs may be employed, and the most convenient and easy method is to use the guaiacol pack. This is done by painting a mixture of equal parts of guaiacol and olive oil over an area of skin 2 inches square in one or both axillary regions. This area is then covered by oiled silk or jacconet, and the patient is rolled in hot blankets. In the great majority of cases free sweating occurs within a short time. Where the lungs are free from moisture, this may be advantageously supplemented by the hypodemric administration of pilocarpine (gr. 1-6 to 1-3). It should be added that guaiacol is said to be dangerously depressant in its action, but I have used this method of packing regularly over a period of six years, and have never seen any more depressant effects result than may arise from the use of the ordinary hot wet pack. Its advantages over the latter in convenience and ease of administration render it very useful in private practice.

Specific treatment.—In only one case was an autogenous vaccine employed, and to it reference has already been made. In a few cases, early in the epidemic, a stock pneumonic vaccine was tried, but with no appreciable success. This was not surprising when one considers the mixed infection with which one had to deal.

—*From Glasgow Medical Journal.*

CURRENT MEDICAL LITERATURE

THE FASTING TREATMENT OF DIABETES COMPLICATING PULMONARY TUBERCULOSIS.

Landis, Funk and Montgomery, of Philadelphia, report the results obtained after treating by the Allen fasting method twelve diabetics who were at the same time suffering from tuberculosis. They found no evidence that the dietary restriction exercised an unfavorable influence on the tuberculosis. They found that it is possible for patients with tuberculosis and diabetes to partake of a considerably restricted diet over a period of some weeks and still show an increase in weight and strength, a fall in temperature and a lessening of respiratory symptoms. Other things being equal, they feel that prompt treatment of the diabetes according to the method of Allen, offers the tuberculosis patient the best chance in the ultimate effort to control the tuberculosis. They include a number of detailed case histories and diet, temperature and hemorrhage charts of one patient. The treatment is applicable in the presence of recurring hemophysis, and in every case of tuberculosis of the lungs unless the patient is obviously hopelessly ill with the pulmonary lesion, in which case the institution of the autodiabetic treatment would add only further discomfort.—*Am. Rev. Tuberculosis.*

RECENT EPIDEMICS.

In his President's address before the Congress of American Physicians and Surgeons, June 16, Simon Flexner, New York (Journal A.M. A., Sept. 27, 1919) called attention to the epidemics which have caused world wide affliction since the last triennial session. Three epidemics—poliomyelitis, streptococcus pneumonia and influenza—have been especially destructive in the western world, hence it seemed fitting to review our knowledge of these disorders and thus form a judgment of the efficacy of their treatment in the last three years and arrive at new points of view from which to launch a more decisive attack. Streptococcus pneumonia presents a phenomenon almost if not quite, new among epidemic diseases. It appears that the greatest number of fatalities occurred in the United States in the military encampments, but that the disease first prevailed as a secondary pneumonia following measles and that later, cases of primary streptococcus pneumonia appeared. The nature of the organism is revealed in the name. The difficulties experienced were more in distinguishing the responsible streptococci from the ordinary pathogenic ones. The facts obtained from many sources showed it to be

the *S. hemolyticus*. Because of the widespread occurrence of the epidemic it came to be found in normal throats and as a secondary invading organism in ordinary lobar pneumonia. In general, epidemic diseases are assumed to be introduced from without, but no such importation of the inciting streptococcus needs to be assumed in this streptococcus pneumonia. It is probable, and practically certain, that an excessively virulent strain was developed by its transfer from person to person. The mechanism or its mode of infection may be said to be clearly understood. As regards poliomyelitis, we have the essential data as to the exciting organism and no foundation for assuming that it is conveyed by persons other than by those who harbor it. As regards influenza, wide divergences of opinion still prevail. While other epidemics proceed from bad to worse, the influenza seemed to strike wide stretches of terirtory at once in full force. Its sudden wide onset seemed to be absolutely independent of personal communication. Neverthleless accurate observations in the past and present show that it follows the usual course of epidemics. Early cases are apt to be mild, and the free and unrestricted commingling of sick and well, and doubtless healthy carriers of the still uncertainly known agents, may account for the sudden apparently simultaneous severe outbreaks. There are very good reasons for believing that influenza by itself it not a serious disease, but its sinister character is due to the remarkable frequency with which under special circumstancesfi it is followed by a pneumonic infection with high mortality. If we note the conditions in the cantonments in 1917-18, we see at once that severe effects and high fatalities arose from germs commonly resident in the nose and throat in health. "Whatever we may have to learn of the micro-organism inducing measles, still undiscovered, and of influenza, still under dispute and their mode of invasion of the body, no one would question that the bacteria inducing pneumonia are personally borne." Discussing the efficiency of public health measures, Flexner says respiratory infections such as caused these epidemics are the most difficult to prevent by hygienic regulations. We know the essential facts as regards poliomyelitis, but we can hardly claim to have made it manageable as yet. The difficulties of diagnosis in its atypical and aborted forms, and the wide dessemination of the inciting micro-organism before its epidemic character is recognized and preventive measures instituted, are good reasons why our efforts have not been more successful. The epidemic pneumonias, on the other hand, represent theoretically two diseases which should respond to means of control. In streptococcus and influential pneumonia, the microbes concerned are only intensified strains of almost omnipresent species in the nasopharynx. The lesson to be learned from experience is that influenza and measles patients are not to be assembled

in large groups, but should be isolated as far as possible, where they and their attendants can be preserved from sputum droplet contamination. Flexner suggests the eradication of the diseases in their endemic foci. There are excellent reasons for believing that an endemic focus of poliomyelitis has been established in north-western Europe from which the recent epidemic waves have emanated. Similarly, there are excellent reasons for regarding the endemic home of influenza to be eastern Europe and the borders of Turkestan. A continuous effort at control of these diseases in the regions might be a possible method of attacking the seedbeds of epidemics. Our knowledge is as yet too imperfect, however, for immediate effective action, but Flexner thinks that it is possibly a not unrealizable hope in view of our rapidly advancing knowledge of these diseases. The expense and labor of this world problem cannot be ignored, but the recent epidemic of influenza cost more victims in all probability than did the late war.

THE INSECT PESTS AND THE WAR.

During the recent War, the insect pests constituted a danger as great as the enemy himself, and a danger against which the most vigilance was required. Only by scientific work of the most advanced kind could that danger be met. The scientist was every whit as important to the army as its discipline, its munitions of war, or its commissariat. Of the insects which proved a great menace in the war, may be mentioned the mosquito, the house fly, the flea, the tsetse fly and the louse.

It was urged by both military and civil authorities that the domestic fly was a public danger of the first magnitude, not only to the armies in the field, but also to the people at home. The Army medical authorities took early action and instituted a course of instruction in fly prevention for all medical officers whose duty it then was to act as centres of information and instruction for the men. The medical officers were taught that the chief hope of controlling this insect pest lay in abolishing its breeding places, in other words in strict cleanliness about camps and billets, in the destruction of refuse in incinerators, the burying deeply of refuse which could not be burnt and the treatment of all danger spots so as to insure that the young flies should not be able to reach the surface of the ground. These measures were carried out with the greatest care and energy and there can be no doubt that their adoption was an inestimable boon to the troops on the Western front and in the Eastern theatres.

Much more deadly and dangerous than the fly was the mosquito. The part that mosquitoes played in the War was evident from the severe outbreak of Malaria on the Salonika front in the year 1916. But this

bad beginning was destined to be the prelude to a very remarkable campaign in preventive medicine—a campaign the sucess of which seemed problematical at the outside but which nevertheless achieved a notable triumph. The Army Medical Corps made a great effort to clean the malaria-infested country; it reduced the breeding places of the Anopheles in a most remarkable way; carried out valuable schemes of sanitation and brought down the high incidence of Malaria among the troops to a figure which was certainly not anticipated in earlier days.

Not less menacing than the mosquitoes to the success of the allied armies were the rat-fleas. Bubonic plague had for centuries been the chief enemy of armies, as the history of older wars clearly proves. Its infectious character rendered it not only deadly but demoralizing. As it is well known the method of preventing plague lay either in destroying rats or in destrying the fleas. The latter course was not possible, for the rat-flea is at no period of its existence easily attacked on a great scale. Fleas like flies pass through a larval stage, but the grub is deposited in dry earth or other suitable location and cannot be got at. The only method, then, of attacking plague was to control the migration of rats, to destroy as many of these as possible and to segregate all persons affected with the disease. The medical authorities in India, at the European ports, and in control of the health of the armies, cooperated to act as a detective force against this most deadly enemy. The utmost care was taken to ensure that no case of plague was shipped. Inspectors were charged with the duty of looking out for signs of infection among rats and efforts were made to kill rats where ever possible. The areas visited by the disease were rapidly placed under surveillance. When the immense difficulties of the early years of war are taken into consideration it will be evident that this silent warfare against rat-flea and plague constitutes a great triumph of medical and sanitary science.

Next comes the tsetse fly which proved a great menace to the armies in the East African campaigns. The disease caused by the bite of this fly, though not a menace to human life, constituted in a true sense a threat to the soldier and a pest of war by reason of its effects upon transport animals and animals employed to draw guns and other weapons. Like the flea, the tsetse fly breeds here and there, and its breeding places could not be dealt with on any considerable scale to combat the disease it causes. Investigations were therefore begun into the state of the large fauna of the "fly" districts. These investigations rapidly showed that the big game was in fact infected by the trypanosomes of tsetse fly disease and that it acted as a reservoir of these germs. So campaign against the big games in the area infected with the disease and indirectly against the tsetse fly was begun.

Lice which abounded luxuriously in trenches and dugouts in this war was responsible to a new disease called trench fever, which is familiar to our readers. As in the case of malaria and plague, then, the essential links in the chain of trench fever were discovered. They consisted of the human reservoirs of the disease, the lice, which became infected from these reservoirs, and the excrta of th lice, capable of being blown about by the wind and of finding lodgments in garments, bedding and other material. The difficulty of dealing with the excreta of lice was also great, though means were being sought for to obviate this. The real battle was with lice. To destroy lice, however, in the middle of a great campaign, was admittedly no easy operation, as the attention of all was fully occupied with the military situation. In these circumstances some more immediate method of handling the situation seemed to be called for. A hint in this direction that possibly offered hope was furnished by the Hampstead researches. If the men could be prevented from scratching the skin, and so inoculating themselves with the poisonous and ubiquitous lice excreta, a sensible diminution in the number of cases of trench fever might be expected. In this great war, efficient bathing facilities and disinfection of infected clothes were sufficiently provided and all these tended to the banshing of lice and so to the lightening of the threat of louse-born epidemics.

THE ANTISEPTIC.

THE EUGENIC MARRIAGE.

The new Norwegian law came into force on January 1st, 1919. It may not represent the unadulterated eugenic ideal, but it is so great a step towards it as to be almost revolutionary. It contains eighty-one sections, but the following are some of the salient points: A man under 20 and a woman under 18 may not marry without the consent of the authorities. Birth and baptism certificates must be produced before the banns are published. Under certain conditions, one or both of the contracting parties may be required to show that they have not been insane. Both must declare in writing that they are not suffering from epilepsy, leprosy, syphilis or other venereal disease in an infectious form. In the other alternative the subject of any of these diseases must prove that the other party to the marriage contract is cognizant of the fact, and that both parties have been instructed by a doctor as to the dangers of the disease in question. The doctor concerned is not to be tied by professional secrecy and is bound to interfere if he knows that any one of these diseases is being concealed by either side. A written declaration must also be given by the candidates for marriage as to previous marriages and to children born to them out of wedlock. The

marriage may be nullified if it is subsequently proved that insanity or any of the above diseases have been concealed, or if an incurable morbid condition, incompatible with married life, exists. Dissolution of the marriage may also be claimed if false declarations have been made or obstacles concealed. Again, if the woman has become pregnant by another man, or if the man has rendered another woman pregnant and this has not been revealed, dissolution of the marriage may be claimed, whether the child of this irregular union be born before or after the marriage; such a claim must be made within six months of the facts becoming known to the claimant. No woman may marry again till ten months after the termination of her previous marriage if she is pregnant at this period. Many other causes are defined as valid for the dissolution of marriage, and it is evident that henceforth in Norway it will often be difficult to marry in haste, and that the facilities for escaping from a hasty, ill-judged marriage will prove to be numerous and varied.—*British Medical Journal.*

RHEUMATISM.

℞ Olei Gaultheriae ..... ℥j
Acidi Salicylici ..... gr. lxxx
Sodii Boratis ..... ℥j
Syr. Picis Liquidae, Aquae Anisi ..... aa ℥ij
℥. Sig.: A dessertspoonful every two hours.

℞ Potassii Iodidi ..... ℥ij
Vini Cochici Sem., Syr. Simplicis ..... aa ℥iv
Aquae Menthae Pip ..... ℥v
℥. Sig.: Tablespoonful every four hours.

℞ Acidi Salicylici ..... ℥ij
Ferri Pyrophosphat ..... ℥j
Sodii Phosphatis ..... ℥v
Aquae Fervent ..... ℥vj
℥. Sig.: A tablespoonful every two hours.

℞ Sodii Salicylatis ..... ℥ss
Tinct. Lavand. Co ..... ℥iij
Glycerini ..... ℥v
Aguae ..... qs. ad. ℥vj
℥. Sig.: A tablespoonful every three hours well diluted.

℞ Sodii Carbonat ..... ℥vj
Tinct. Opii ..... ℥j
Glycerini ..... ℥ij
Aquae ..... ℥ix
℥. Sig.: Locally on hot cloths to the affected joints.

THE TREATMENT OF BURNS.

In a recent number of *The New York Medical Journal* (March 9, 1918), there is a very interesting symposium upon the treatment of burns. Both Dr. Louis Neuwelt and Dr. Louis Frischman speak in the highest terms of the method of treatment with paraffin preparations. The main advantages of this method of treatment are epitomized by Frischman as follows:

1. Burns heal rapidly.
2. Constitutional symptoms are minimized.
3. Pain is lessened.
3. Scarring is reduced to a minimum.
5. The necessity for grafting is lessened.
6. Sepsis is rare.

The favorable effects of this method of treatment may be attributed entirely to mechanical factors. The burn is mechanically protected from the air and the immobilization from the hardening of the wax and protection of granulation tissue are the factors responsible for the success of the treatment. The increased vascularization incident to the application of the warm paraffin undoubtedly facilitates the healing process. The epithelium proliferates and the burnt area heals either by granulation or by extension of epithelium from the edges. The paraffin dressing affords the much needed protection to the delicate and newly formed epithelial cells.

Doctor Frischman says that the results obtained by this method of burn therapy have entirely justified the tremendous reputation which it has achieved. The method of application is described by Neuwelt as follows:

"The burned area is gently cleaned, removing the dead skin and discharges, and the blebs are pricked near their bases, but the cover is not removed. The surrounding skin is thoroughly cleaned with alcohol, and the part is allowed to dry. Drying may be hastened by a warm-air blower, by gauze overlaying, or by fanning. The paraffin is melted in a hot-water bath, and is then painted quickly and gently with a one and one-half inch camel's hair brush over the burn and for about two inches over the surrounding healthy skin. The paraffin dries quickly in a thin, smooth film. A very thin layer of cotton slightly larger than the burn is laid over the paraffin film, and a second layer of paraffin is painted quickly over all. Near joints a splint is applied to immobilize and prevent the film from cracking. A bandage is then applied. This dressing is at first changed every day, but later as the secretion decreases, every other day."

We suggest one or two slight modifications of this method. For instance, bear in mind that most burns are infected, and usually when seen there is more or less profuse foul-smelling secretion, and the indications are clear for irrigation with a non-toxic germicidal solution. Chlorazene best meets these indications. The wound should be flooded with a solution of Chlorazene, after which it may be dried with an electric drier, gauze or fan, as indicated by Neuwelt. Then the part should be sprayed with Dichloramine-T in oil solution, in order to maintain the part in aseptic condition, after which the hot wax should be sprayed over it with a suitable atomizer, one of the simplest and most inexpensive being supplied by The Abbott Laboratories.

A complete outfit for the treatment of burns is:
Chlorazene tablets—100.
Dichloramine-T—1 ounce.
Chlorcosane (solvent for Dichloramine-T)—16 ounces.
Parresine—1 pound.
1 Dichloramine-T-Chlorcosane atomizer.
1 Electric Hot-Air Drier.
I Parresine Atomizer.

While all of this apparatus is not essential, every physician treating many burns, and every hospital, should secure the full equipment. The Abbott Laboratories provides it.

SULPHATE OF COPPER THERAPY.

Dr. Alfred Herain (*The Presse Medicale*) recommends the following as a standard ointment of copper sulphate:

Cupri sulphatis ..... 20 grams;
Zinci oxidi ..... 150 grams;
Adipis lanæ hydrosi..... 100 grams;
Petrolati.....q. s. ad 1,000 grams.
Fiat unguentum.

The copper salt is first dissolved, then incorporated in the wool fat. In the author's weak copper sulphate ointment only two grams of the salt are used per kilogram. As powders he uses mixtures of twenty or two grams of copper sulphate—previously dissolved—in 1,000 grams of talc. As solutions he employs a saturated or one in twenty solution, a 0.25 gram to the litre solution, and a 0.1 gram to the litre solution. Ampoules of five mils of a one in 200 solution in distilled water are employed for intravenous injections of copper sulphate. Internally, the salt is given in cachets each containing 0.03 gram of copper sulphate and 0.25 gram of prepared chalk, two or three times a day in the middle of the meals;

or, preferably, in glutenized pills of 0.05 gram each. The stronger ointment proved very useful in favus and ringworm, papillomas, seborrheic eczema, ecthyma, furuncle and carbuncle, infected wounds and ulcers, and soft chancres and buboes. This ointment is temporarily diluted one-half if at first badly borne. The weak ointment proved effective in acne rosacea, sycosis, impetigo, eczema, burns and sloughs, uninfected ulcers, infected scabies, herpes zoster, and operative wounds. The stronger powder is used in soft chancres and incised buboes, and in operative wounds; the weaker powder, over uninfected but weeping surfaces such as burns, surface injuries, and eczema, as well as over cuts. At times intravenous copper sulphate injections are combined with the local treatment. Furunculosis is promptly and surely arrested by a series of daily intravenous injected repeated for one week. The solutions are used particularly in eczema and in infected scabies.—Therapeutic Review.

THE CONTROL OF CANCER.

The axioms on which the work of the Society is based are to be found in the established conclusions (a) that cancer is at first a local disease, (b) that with early recognition and prompt treatment the patient's life can often be saved, and (c) that through ignorance of the facts and delay in seeking treatment thousands of lives are needlessly sacrificed so that (d) the general mortality from malignant disease is very high and apparently increasing.

In general, therefore, local committees should take advantage of all proper and available means to bring home to the public the truth of the text that "in the early recognition and treatment of cancer lies the hope of cure." The essential facts about cancer and its prevention and cure should be set before the public truthfully, but carefully and without causing unnecessary alarm. The danger of starting "carcinophobia" and causing much needless apprehension and morbid fear is frequently urged as a criticism of this movement. The possibility must be recognized and the danger minimized or avoided so far as possible, but without paralyzing efforts to present the exact facts. In the last analysis it is better that some should be needlessly worried than that lives should be sacrificed to ignorance.

It is important to plan for the special instruction of selected professional or semi-professional groups, such as nurses, midwives, social workers, etc. More concrete and detailed instruction can properly be imparted to such workers than directly to the public, and through the channels of advice to the individual thus opened an educational force

of great scope and magnitude can be brought to bear upon elements of the population which it is often difficult to reach in any other way.

TREATMENT OF MERCURIC CHLORIDE POISONING.

A most intresting paper upon the treatment of mercuric chloride poisoning was read by Dr. Bernard Fantus at the last meeting of the Illinois State Medical Society. The paper is published in the *Illinois Medical Journal* for September, 1918.

Doctor Fantus has conducted an exhaustive series of experiments with virtually all suggested antidotes for this poison. He has come to the conclusion that the best of these is that suggested by Dr. Thomas A. Carter, first reported in *The American Journal of Clinical Medicine* for April, 1914. This consists of a combination of sodium phosphite, 10 parts, with sodium acetate, 6.6 parts. The sodium phosphite (note carefully this is not sodium phosphate/ alone is of no value, and a large excess of the sodium acetate seems to destroy the antidotal value of the phosphite.

If the amount of poison is known, ten times as much of the phosphite should be given as poison taken, and the dose should be repeated every four to eight hours for several days, in order to reduce to calomel any mercury which may still remain in the stomach. In addition, lavage with a dilute solution of the antidote is advised.

In addition, to neutralize as far as possible the swelling and subsequent destruction of the kidney cells, Doctor Fantus advises the intravenous use of Fischer's alkaline solution (sodium carbonate, 10 grams, sodium chloride, 1 gram, to 1000 milliliters of water). Of this 1000 to 1500 mils are administered, according to the condition of the heart, the endeavor being through this method to make the patient void large quantities of urine and to keep the urine alkaline.

A NEW INCISION FOR APPENDECTOMY.

Leigh F. Watson, M.D., Chicago, in the *Annals of Surgery* for October, 1918, recommends the following:

The number of incisions that have been brought forward for appendectomy from time to time, show that no one incision is adapted to all cases. Many writers have noted that in the cadaver the base of the appendix is found at McBurney's point, while in the living subject it is below this point, usually on a level with the center of Poupart's ligament. A number of operators have called attention to the ease with which the appendix can be removed when operating for right inguinal hernia. Since 1910, I have used a new incision, with its center over the base of

the appendix, and believe that in many cases it is an improvement over those in general use.

Incision: A point one and one-half inches from the right anterior superior spine, on a level with a line connecting the two superior spines, is selected for the beginning of a vertical incision which extends directly downward for two to three inches to a point just above, and to the inner side of the internal abdominal ring.

Advantages: Traction to expose the appendix is avoided, because this incision, in the external oblique and its aponeurosis, the most resistant structures, is directly over the base of the appendix. It can be enlarged without weakening the abdominal wall. The ilio-hypogastric and ilio-inguinal nerves are not injured because the incision lies between them. Because this incision is made over the cecum, the small intestines do not crowd into the wound as they do when the McBurney and lateral rectus incisions are used.

DIFFERENTIATION OF EARLY TUBERCULOSIS FROM HYPERTHYROIDISM BY THE ADRENALIN TEST.

For three years Goetsch, of the Surgical Clinic of the Johns Hopkins Hospital, has been practising the subcutaneous injection of 7.5 minims of a 1-1000 solution of adrenalin chloride in patients who present masked symptoms of hyperthyroidism but in whom no positive diagnosis can be made by ordinary methods of examination. If the patient, following the adrenalin injection, reacts with manifest symptoms of hyperthyroidism, Goetsch believes that a positive diagnosis of the condition is justified. At the Trudeau Sanatorium, Nicholson and Goetsch tested 40 patients by this method. Of 18 patients, whose diagnosis was "clinical tuberculosis, questionable," 10 reacted positively and 8 negatively; of 16 with a diagnosis of "clinical tuberculosis, inactive," 9 reacted positively and 7 negatively; and of 6 with active clinical tuberculosis, none reacted positively. The authors conclude that the test is a valuable aid in determining whether the disease from which patients are suffering is purely a tuberculosis, a tuberculosis complicated by hyperthyroidism, or a pure hyperthyroidism. Hyperthyroidism, whether or not associated with tuberculosis, will give a positive reaction to adrenaline. Tuberculosis, uncomplicated by hyperthyroidism, does not react positively to adrenalin. They feel that in a considerable number of border-line cases presenting symptoms more or less characteristic of both ocnditions, they can now pick out those suffering with hyperthyroidism.—Am. Rev. Tuberculosis.

RESOLUTION RE INFLUENZA.

WHEREAS, the present influenza epidemic caused approximately 500,000 deaths in the United States, and

WHEREAS, a large proportion of these deaths were produced by pneumonia and other complications, and

WHEREAS, influenza, pneumonia, and allied diseases now cause approximately one-tenth of all the deaths in the United States, and

WHEREAS, medical science is not yet in possession of complete data as to the cause, modes of transmission, prevention, and cure of this disease and its complications, and

WHEREAS, the possession of this knowledge is of grave social and economic concern to the nation:

THEREFORE BE IT RESOLVED that it is the sense of the members of the section of Industrial Medicine and Surgery of the American Medical Association, here assembled to discuss influenza, that Congress should and is hereby urged to appropriate not less than $1,500,000 to be used under the direction of the United States Public Health Service for the investigation of the causes, modes of transmission prevention and cure of influenza, pneumonia, and allied diseases, this sum to be made available to July 1, 1922.

PERSONAL AND NEWS ITEMS

The Dominion Council of Health, which held its first meeting in Ottawa recently settled the division to each Province of the Federal grant for combatting venereal diseases on a basis of population. The various Provinces will therefore receive the following amounts: Ontario, $57,473; Quebec, 47,388; New Brunswick, $7,517; Nova Scotia, $10,573; Prince Edward Island, $1,915; Manitoba, $12,611; Saskatchewan, $15,361; Alberta, $11,979; British Columbia, $14,628. These amounts total approximately $180,000. The remaining $20,000 it was decided to divide between the Advisory Council and the Department of Health for fighting the disease; the Provinces receiving the Federal grant undertaking to furnish a like amount.

Hon. Dr. A. E. Ross was elected by acclamation for Kingston. He spent several years overseas, and recently entered the Ontario Cabinet. He rose to the rank of Brig.-General for his distinguished services.

For several years past the late Mr. W. P. Gundy generously maintained two cots at the Queen Mary Hospital for Consumptive Children. The hospital is now in recepit of a cheque for $5,000 from the Executors of Mr. Gundy's estate, which amount he had provided for the permanent endowment of these bedsfi which are known as the Susan C. Gundy and Mary R. Gundy cots.

We regret exceedingly to record the death of Mrs. Primrose, wife of

Dr. A. Primrose, M.B., C.B., which occurred at her home 50 Forest Hill Road, on 2nd October.

Col. Dr. George G. Nasmith, who has been director of the civic laboratories since the reorganization of the Health Department in 1910, announced recently that he proposed to relinquish his position at the end of the present year. Dr. Nasmith proposed to embark upon a commercial career, and has accepted an appointment as consulting scientist with a large firm of sanitary engineers. Dr. Nasmith rendered very valuable services during the early years of the war as a sanitary expert, and in discovering means of coping with the German gas methods of warfare.

To comply with the requirements of the new amendment of the Proprietary or Patent Medicines Act, an order-in-Council has just been passed, on the advice of the Deputy Minister of Health, appointing the following members of the Proprietary Medicine Board: Dr. Alexander Blackader, Professor of Pharmacology, McGill University, Montreal, Que.; Dr. R. D. Rudolph, Professor of Therapeutics, University of Toronto, Toronto, Ont.; Dr. A. McGill, Chief Analyst, Food and Drug Laboratories, Department of Health, Ottawa; Dr. B. W., J. H. W. Lecours, Professor of Pharmacy, and vice-president of the Laval School of Pharmacy, Montreal, Que.; Dr. Chas. F. Heebner, Dean of the College of Pharmacy, Toronto.

Messrs. Steven and Lee, of Toronto and Boston, specialists in hospital architecture, will draft the plans for the proposed new Ottawa Civic Hospital. The agreement between the city and Messrs. Stevens and Lee was approved by unanimous vote by the City Council. Under the terms of the agreement, Stevens and Lee will be paid seven per cent. of $1,400,000 in instalments as the work progresses.

The Children's Aid Society of Hamilton, has raised $25,000 for the purpose of enlarging the shelter and the Hamilton Council voted a grant of $5,000.

The trustees of the Toronto General Hospital has chosen Mr. C. J. Decker as Superintendent of the Institution in place of Dr. H. L. Brittain, who resigned. For the past two years Mr. Decker has been acting as assistant superintendent.

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Announcement has been made made that complete cures of leprosy are being made at the Kalihi territorial hospital in Honolulu and that within the past few months twenty patients have been paroled without one recurrence of the disease. Blood tests of the discharged patients have revealed no trace of the leprosy germ. Chaulmoogra oil, obtained

from the seels of the taraxogenes kurzii, was the only medicine used in effecting the cures, the oil having been perfected by a refining process discovered by Dr. A. L. Dean, professor of chemistry, of Hawaii University.

The Hamilton Hospital governors have decided to purchase a new X-ray machine. A permanent operator will be appointed, and the charge of $25 reduced to $10, to permit of poor citizens receiving treatment. Last month there were 69 free operations and 82 free X-ray examinations at the hospital. Dr. W. Warren was appointed to the anaesthetic staff. He but recently returned from overseas. At the General Hospital in August the average number of patients in residence was 260, and the total receipts were $9,001. At Mount Hamilton Hospital the number of patients in residence was 49 and the receipts $2,208.

At a recent meeting of the City Council, for Galt, a letter was receved from the Public School Board, asking the Council to make arrangements with Dr. Radford, M.O.H., so that he will do medical inspection of school children. It is proposed to have the medical inspector and the school nurse co-operate in their work of looking after the health of the pupils.

A gift of $20,000,000 from John D. Rockefeller for the improvement of medical education in the United States was announced to-day by the General Education Board. The official announcement of the gift says the income of the $20,000,000 is to be currently used and the entire principal is to be distributed within 50 years.

Dr. George Smith announces that he is limiting his practicse to the diseases of children and disease due to protein sensitization.

Dr. J. C. Calhoun announces the reopening of his practice in the diseases of Eye, Ear, Nose and Throat. Telephone, North 7461.

Dr. W. T. Williams begs to announce that on and after October 16th, his address will be 544 Palmerstone Boulevard.

The fellows of the Academy of Medicine, Toronto, who were not overseas, gave a Welcome Home Dinner on 1st October, at the King Edward Hotel, to the fellows who had served overseas during the war. It was one of the largest gatherings of Toronto medical men in the history of the city. The event was a unique success.

OBITUARY

J. D. R. WILLIAMS, M.D.

Dr. Williams died at his home in Cardinal, Ontario, at the age of eighty-seven. He had practised in Cardinal for over forty years. In

his earlier years of professional work, he took a keen interest in public affairs, and was engaged in the fight for Confederation. He was twice married, and his second wife and nine children survive him.

M. C. McGANNON, M.D.

Word was received in Brockville on 10th October, of the sudden death in Nashville, Tenn., of Brig.-General M. C. McGannon, M.D.C.M., Professor of Surgery in the Vanderbilt University there, Surgeon-General for the State of Tennessee, and one of the leading surgeons of the Southern States. Deceased was born in the Township of Edwardsburg, in Granville County, in 1859, and after classical courses at the University of Ottawa, graduated from McGill University in medicine. After practising in Brockville for a few years, he went to the United States, where he had since resided. Last summer he was appointed by President Wilson to be Surgeon-General of the State of Tennessee, with rank of brigadier-general, as a tribute to his long and meritorious career as a surgeon. He is survived by his wife and one son.

BOOK REVIEWS

CANCER.

What we know about Cancer. A handbook for the Medical Profession, prepared by a special committee of the American Society for the Control of Cancer, consisting of Dr. D. B. Greenough, Director, Harvard Cancer Commission, Boston, Mass.; Dr. James Ewing, Director of the Cancer Research Memorial Hospital, New York, and Dr. J. M. Wainwright, Chairman of the Cancer Commission, Pennsylvania State Medical Society, Scranton, Pa. Publications of the American Society for the Control of Cancer, 25 West 45th Street, New York.

This brochure discusses a number of points under general consideration. The early diagnosis is then taken up. The pre-cancerous condition is next discussed. The disease as it appears in different organs is gone into very fully. Sarcoma and other forms of malignant disease is handled in an able manner. The final chapter is on treatment. This booklet is timely and valuable.

PLASTIC SURGERY.

Plastic Surgery, Its Principles and Practice by John Staige Davis, Ph.B., M.D., F.A.C.S., Instructor in Clinical Surgery, Johns Hopkins University; Assistant Visiting Surgeon, Johns Hopkins Hospitals; Visiting and Plastic Surgeon to the Union Protestant Infirmary; the Hospital for Women, Maryland, and the Children's Hospital School, Baltimore, Md.; Fellow of the American Surgical Association; the Southern Surgical Association, etc. With 804 illustrations,

containing 1637 figures. Philadelphia: J. Blackiston's, Son and Company, 1012 Walnut Street.

The author covers the subject of plastic surgery in this volume of about 750 pages in a very full, efficient and painstaking manner. The volume opens with a short historical note, which is followed by a chapter on general considerations. There is a chapter on the method and materials to be employed. The author takes up trans-plantation of the skin and other tissues. There is due attention given to pedunculated flaps and the treatment of wounds. Next comes a discussion on ulcers and varicose veins. Scars and keloids, malformations, harelip and cleft palate, ectopia vesicae, epispadias, hypospadias, atresia of vagina, plastic surgery of various regions, surgery of eyelids, ear, nose, jaws, cheeks, hips, neck, and extremeties make up the volume. The illustrations are very fine and make the surgical procedures very clear. We can commend this work most cordially, and wish to extend congratulations to both author and publishers.

A VICIOUS CIRCLE IN DISEASE.

The Vicious Circle in Disease. By Jamieson B. Hurry, M.A., M.D., Author of Poverty and Its Vicious Cirles. With Illustrations. Third and Enlarged Edition. London: J. and A. Churchill, 7 Great Marlborough Street. 1919. Price, 15 Shillings, Net.

This is without doubt one of the most interesting and useful of medical books. At a glance one sees the relationship between cause and result. The illustrations are very numerous and of a very original nature. The text is brief and clear. We do not hesitate to say that every medical practitioner should study this book. It will prove most helpful. It is a veritable mine of information.

A VOLUME OF PAPERS.

Papers published during 1914. By W. J. Macdonald, M.D., Attending Surgeon, Wellandra Hospital, St. Catharines, Ontario. Toronto: T. H. Best Printing Company, Limited.

This volume contains Dr. Macdonald's papers on the diagnosis and treatment of prostalic hypertrophy, the clinical significance and surgical treatment of indigestion, and some interesting surgical cases. These papers are of a very thoughtful character, and evidence keen study on the part of the author, who merits praise for the manner in which he has approached these various subjects. All will enjoy reading these papers.

HEALTH OF TEACHER.

The Health of the Teacher by William Eastobrok Chancellor, author of "Our Schools", etc. Chicago: Forbes and Company, 1919; Price $1.25, Cloth.

This is an extremely readable and instructive book, and covers what a teacher should know about the topic of health in general. What

to do and what to avoid are clearly set forth. Much attention is paid to the preservation of health and the prevention of sickness. The leading aim of the book is to show the teacher how to be well, to be useful, and to live long. The author has a good style and avoids all technicalities. We found much pleasure in reviewing this excellent book.

MISCELLANEOUS

SUCCESSFUL CANDIDATES IN MEDICAL EXAMINATIONS.

Dr. R. W. Powell, registrar of the Medical Council of Canada, announces the following pass list from the October examinations held during last week at Montreal: L. P. Beaudien, Lennoxville, Que.; G. N. Belyea, Coldstream, N.B.; J. M. Clark, Port Perry, Ont.; A. C. Farlinger, Fort Covington, N.Y.; R. A. D. Gillis, Summerside, P.E.I.; G. Hernandez, Mexico City; M. W. Lebel, Ottawa; H. H. Lees, Peterborough, Ont.; C. A. Marlatt, Waterford, Ont.; A. J. Martin, Westmount, Que.; J. N. Nathanson, Ottawa; J. A. O'Regan, St. John, N.B.; J. A. Stewart, Brockville, Ont.; V. F. Swencesky, New Westminster, B.C.; J. A. Tallon, Cornwall, Ont.; J. L. Tower, Belleville, Ont.; E. C. H. Windeler, St. John's, Nfld.; H. M. Young, Regina, Sask.

WILL THE FLU RETURN?

(Authoritative Statement issued by the U.S. Public Health Service.)

Probably, but by no means certainly, there will be a recurrence of the influenza epidemic this year.

Indications are, that should it occur, it will not be as severe as the pandemic of the previous winter.

City officials, state and city boards of health, should be prepared in the event of a recurrence.

The fact that a previous attack brings immunity in a certain percentage of cases should allay fear on the part of those afflicted in the previous epidemic.

Influenza is spread by direct and indirect contact.

It is not yet certain that the germ has been isolated, or discovered, and as a consequence there is yet no positive preventive, except the enforcement of rigid rules of sanitation and the avoidance of personal contact.

A close relation between the influenza pandemic and the constantly increasing pneumonia mortality rate prior to the Fall of 1918 is recognized.

It is now believed that the disease was pretty widely disseminated throughout the country before it was recognized in its epidemic state. This failure to recognize the early cases appears to have largely been due to the fact that every interest was then centered on the war.

Above are the important facts developed by the United States Public Health Service after a careful survey and investigation of the influenza pandemic of 1918-19, carried on in every State and important city, and even in foreign countries.

No one of the many experts of the Service would make a more positive forecast of the all-important question, will there be a recurrence? All agreed, however, that a recurrence was not unlikely, and in the face of the known facts, that it would be wise to be prepared, more with a view of being on the safe side than actually anticipating danger.

The following excerpts from the Government report are published for the benefit of the public and health officers in the hope that this will serve to set at rest the daily publication in the newspapers of statements, which on one hand are calculated to lull the public ino a sense of false security and on the other so unduly cause alarm.

Contrary to the opinion expressed frequently during the early weeks of last year's pandemic by a number of observers, the studies of the U.S. Public Health Service indicate that the epidemic was not a fresh importation from abroad. Careful study of the mortality statistics of the United States shows that there were a number of extensive though mild forerunners of the pandemic during the previous three or four years. In Chicago and New York in the winter of 1915-16 for example, these were sufficiently well marked to occasion considerable public comment at the time, leading in the latter city, to a well organized "Don't spit, don't sneeze" campaign on the part of the health authorities. The reports of the U.S. Public Health Service of January, 1916, shows influenza to be epidemic in 22 states, including practically all sections of the United States. The epidemic was generally of a mild type and has since been almost forgotten. It occasioned, however, a noticeable increase in the recorded death rate from pneumonia.

In the spring of 1918 there was another sharp rise in the mortality rate from pneumonia. In the larger cities of the Atlantic seaboard these increases occurred during January, February and March. In the rest of the country, especially the central and western states, the increases occurred in April, a month during which pneumonia mortality is generally on the decline. This increase was sufficient to indicate a strong departure from the normal. The increased mortality rate extended into May and in some areas even longer.

This occurrence has, it is believed, a definite significance in relation to the influence epidemic. In the United States in the spring of 1918, a number of definite local outbreaks of influenza were observed; thus in Fort Oglethorpe, near Chatanooga, Tenn., in March; in Chicago during March; in San Quentin prison, California, in April, October and November. At Camp Funston recurrent outbreaks of pneumonia were observed in March, April and May of 1918 and were definitely associated with co-incident epidemics of a mild type of influenza.

The rise in mortality from pneumonia, this very similar type of disease, in the spring of 1918 is so sudden, so marked and so general throughout the United States as to point very clearly to a definite relation. Everything indicates that the increased mortality from pneumonia in March and April of 1918 was the consequence of a beginning and largely unnoticed epidemic of influenza, the beginning in this country of the pandemic which developed in the autumn of that year.

In British cities the epidemic manifested three distinct waves—the first and slightest in point of mortality occurring in June and July, the second and most severe in November, the third in February and March. Data which need not be cited here in detail indicate that the course of the epidemic in western Europe generally was similar. In cities of India the sequence was similar but the mortality far greater. In the United States the epidemic developed more largely in a single wave during September, October and November. If, however, the epidmic already mentioned as occurring in the spring be considered the first phase and the explosive outbreak of the autumn the second, a third phase of recrudescence is quiet evident in may areas. In general, this winter recrudescence was less marked in those cities which suffered most severely in the autumn epidemic.

The prevalence of a serious epidemic of influenza was first recognized in and around Boston in September of 1918. Within about two weeks it was general in the Atlantic seaboard, developing a little later among cities further west. Rural districts were usually attacked somewhat later than large cities in the same sections.

In the cities east of the line of the Appalachians the excess mortality from pneumonia and influenza during the weeks ended September 14, 1918, to March 1, 1919, was approximately 5.6 per 1,000; in cities between the Rocky Mountains and the Appalachians 4.35; and in those of Pacific Coast 5.55 per 1,000.

Notwithstanding this general geographic relation, there are notably wide differences in the mortality rates of individual cities in the same section, even between cities close together, differences which are not as yet

explained on the basis of climate, density of population, character of preventive measures exercised, or any other determined environmental factor.

More details can be given only the briefest mention here.In order to secure reliable statistics of morbidity the Public Health Service has made special house-to-house surveys in a number of localities, ascertaining the number of persons affected, the dates of onset, and a few other simple facts in accurately enumerated groups representative of the general population. Partial analysis of the results of these surveys in eight localities, giving an aggregate of 112,958 persons canvassed, shows the following as the chief facts of interest:

The percentage of the population attacked varied from 15 per cent. in Louisville to 53.3 per cent. in San Antonio, Texas, the aggregate for the whole group being about 26 per cent. This agrees with scattered observations in the first phase of the 1889-90 epidemic, when the attack rate seems to have varied within about these limits.

The case incidence was found to be uniformly highest in children from 5 to 14 years of age, and progressively lower in each higher age group. It was slightly higher in females than in males of corresponding age; usually higher in the white than the colored population.

The ratio of pneumonia cases to total prohibition varied from 5.3 cases per 1,000 in Spartanburg, S.C., to 24.5 per 1,000 in the smaller towns of Maryland. The pneumonia rate showed little correlation with the influenza attack rate.

The ratio of deaths to population varied from 1.9 per 1,000 in Spartanburg to 6.8 in Maryland towns. The death rate was by no means parallel to the influenza attack rate, but was closely correlated with the pneumonia rate. In other words the case fatality rate of pneumonia tended to be fairly constant, around 30 per cent. The death rate was notably high in children under one year old, in adults from 20 to 40 and in persons over 60; high in males than in females of comparable ages; higher among the whites than the colored.

Concerning the important question of immunity conferred by an attack of influenza, the evidence is not conclusive, but there is reason to believe that an attack during the earlier stages of the epidemic confers a considerable, but not absolute immunity in the later outbreaks.

In general the pandemc of influenza was largely similar to that of 1889-90 in its development, first a mild form, later in a severe world-wide epidemic, in the rapidity of its spread and its high case incidence. It has however been notably different in a much higher mortality, especially among young adults. Such evidence as has been gathered confirms the conclusion previously reached that it is transmitted directly and indi-

rectly by contact. It appears probable, however, that the infection was already widely disseminated in this country sometime before a serious epidemic was recognized.

Despite the fact that there is still some uncertainty as to the nature of the micro-organism causing pandemic influenza, one things is certain, that the disease is communicable from person to person. Moreover, judging from experience in other disease, it is probable that the germs whatever its nature, is carried about not only by those who are ill with influenza, but by persons who may be entirely well. Everything which increases personal contact, therefore, should be regarded as a factor in spreading influenza.

Much was heard last winter of the use of face masks. Though the use of suitably constructed masks will reduce the interchange of respiratory germs through inhalation, it must be remembered that there are many other paths by which such germs are transmitted from person to person. Soiled hands, common drinking cups, improperly cleaned eating and drinking utensils in restaurants, soda fountains, etc., roller towels, infected food—these are only a few of the common vehicles of germ transmission. The use of face masks appears to make people neglect these other paths of infection, and so the use of face masks has not been attended with the success predicted for them:. If we would be more successful in combating influenza greater attention must be paid to the factors just enumerated.

The question of most practical and immediate interest is the probability of recurrence in the near future. Recurrences are characteristic of influenza epidemics; and the history of the last pandemic and previous ones would seem to point to the conclusion that this one has not yet run its full course. On the other hand this epidemic has already shown three more or less distinct phases and has been more severe, at least in mortality, than the three-year epidemic of 1889-92 facts which justify the hope, though not the conclusion, that it has run its course already.

It seems probable, however, that we may expect at least local recurrence in the near future, with an increase over the normal mortality from pneumonia for perhaps several years and certainly we should be, as far as possible, prepared to meet them by previous organization of forces and measures for attempted prevention, treatment, and scientific investigation.

There should be no repetition of the extent and distress which accompanied last year's pandemic. Communities should make plans now for dealing with any recurrence of the epidemic. The prompt recognition of the early cases and their effective isolation should be aimed at. In this connection, attention is called to the fact that the cases may

appear to be just ordinary colds. A recent extensive outbreak of what were regarded as "summer colds" in Peoria, Illinois, proved on investigation to be an epidemic of a mild type of influenza. Experience indicates that these mild epidemics are often the starting points of more severe visitation. Hence every effort should be made to discover as early as possible any unusual prevalence of "colds".

For municipalities operating on a budget basis, it is important that all delay in providing the necessary financial support to the health authorities in dealing with a recurrence of the epidemic be avoided by setting aside an emergency epidemic fund. This may prove of the greatest value in carrying out important preventive measures in the early days of the epidemic, at a time when their beneficial effect is greatest.

The most promising way to deal with a possible recurrence of the influenza epidemic is, to sum it up in a single word, "Preparedness". And now it is the time to prepare.

ONTARIO MEDICAL ASSOCIATION.

The Executive Meeting of the Ontario Medical Association was held in the Academy of Medicine, Toronto, on Wednesday, September 24th, 1919.

At this meeting of the Executive many matters of interest to the medical profession in Ontario, were discussed and arranged.

Pursuant to instructions laid down at the last Annual Meeting of the Association, the Executive divided the Province of Ontario into ten Counsellor Districts. This step was deemed advisable in order that each Counsellor might have a territory which would enable him to render the best service to the profession in general and the Association in particular.

The following is a list of the Executive as now constituted:

President—Dr. F. W. Marlow - - - - - - Toronto
1st Vice President—Dr. J. H. Mullin - - - - Hamilton
2nd Vice President—Dr. J. H. Farley - - - - Trenton
Hon. Treasurer—Dr. G. Stewart Cameron - - - Peterboro
Hon. Secretary—Dr. T. C. Routley - - - - - Toronto

Dr. J. A. Macgregor, London	Dr. T. S. Farncomb, Trenton
Rr. E. R. Secord, Brantford	Dr. H. A. Boyce, Kingston
Dr. George S. Burt, Owen Sound	Dr. Fenton Argue, Ottawa
Dr. J. P. Morton, Hamilton	Dr. Edgar Brandon, North Bay
Dr. F. A. Clarkson, Toronto	Rr. E. B. Oliver, Fort William

It was also decided at this meeting that the Fortieth Annual Meeting of the Ontario Medical Association would be held in Toronto on May 26th, 27 and 28th, with the Committee on General Purposes meeting on May 25th.

With regard to University Post Graduate Extension Courses, it was decided to advise the Committee in charge of this Department to at once get into communication with the various Medical Faculties and the profession at large, in order that much good may accrue to the profession through this Department. Members of the profession have already been selected to address District and County Society Meetings and it is hoped that in the very near future a Bureau will be established in the Secretary's Office which may be utilized by all local societies desiring the services of outside men to address them.

At an early date each County and Local Society will receive definite instructions, accompanied by an application form for affiliation with the Ontario Medical Association, and it is particularly hoped that every Society will give this mportant matter the attenton which it deserves.

In order that the profession may be kept properly informed as to the activities of the Ontario Medical Association and the work of its Executive during the year, it was decided to have the report of the last Business Meeting of the Association printed for distribution to the County Societies, and also to have synopsis of the points of interest decided at Executive Meetings forwarded to the various Medical Journals for publication.

T. C. Routley, Secretary F. W. Marlow, President.

NEW MEDICAL BUILDING IN LONDON.

Arthur T. Little, the new Chairman of the Board of Governors of Western University, and Philip Pocock, a member of the same body, have commenced a canvass to fulfill a pledge made that they would raise $100,000 with which to make possible the immediate erection of a new medical college building. They have $35,000 of the amount. It is learned that the public-spirited generosity of the two campaigners is largely responsible for the excellent showing. A gift of $15,000 was made by Mr. Little and two others of $10,000 each have been contributed by Mr. Pocock and Mayor C. R. Somerville, who recenty resigned the Chairmanship of the Board of Governors.

The cost of the new medical college building will be approximately $305,000. The contract has been awarded to John Putherbough of London, and the work will be undertaken at once. The city voted $100,000 for the building at the last election, and assistance from the Provincial Government has been requested. But until Messrs. Little and Pocock offered personally to raise $100,000 the work could not be commenced.

The Medical Department this year has a freshman's class of 58, and but for lack of accommodation the number would have been much greater.

MEDICAL, DENTAL AND NURSING WORK IN WEST CHINA

A Great Advance Planned.

About mid-September the Board of Governors of West China Union University—representing five constituent denominations, convened in Toronto. A great many very important questions were dealt with by the Board, especially looking toward large developments of the institution in the future. Great stress was laid upon the importance of promoting medical, dental and nursing instruction, for China is especially weak along these lines.

Victoria College took advantage of the occasion to give a dinner to the members of the Board, in order that they might meet with some of the leading doctors and dentists of the city, together with other guests.

The great theme of the occasion was the consideration of an enlarged scheme of profesisonal education in connection with the Chengtu University, which the three professions of medicine, dentistry and nursing in Canada and Newfoundland, are being asked to specially provide for. A central committee has already been formed in Toronto and every member of these professions in this country will be circularized and invited to cooperate in a movemnet which must mean large developments in medical, dental and nursing instruction among the one hundred millions of Chinese, aborigines and Thibetans in West China.

Rev. Dr. Goucher, Chairman of the Board of Governors, sketched the scope and outlook of the University, and its immensely strategic position; and Rev. Dr. Beech, the President of the University, followed with a lucid survey of its rise and development, illustrating it most convincingly by the exhibition of some beautiful lantern slides showing buildings and groups of students. These pictures visualized the institution and impressed all with its wonderful progress since its beginning ten years ago, and also with its possibilities for a great future.

Dr. C. W. Service, of Chengtu, was then called upon to make a statement as to the medical needs of China. He urged that fully 99 per cent. of China's need for doctors and nurses and almost 100 per cent. of her need for dentists have still to be met. He stated that the proposal for enlisting the healing professions of Canada and Newfoundland in an effort to secure more adequate facilities for training Chinese doctors, dentists and nurses would do much to help meet these dire needs.

Dr. N. A. Powell, in a brief but earnest address, spoke on behalf of the members of the medical profession, promising hearty sympathy and cooperation.

Dr. A. E. Webster, Dean of the Royal College of Dental Surgeons, enthusiastically seconded Dr. Powell's address, making mention of the fact that four of the dental surgeons of China were graduates of the