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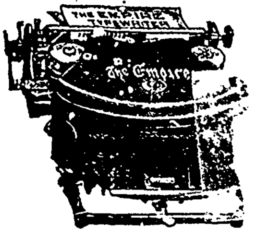

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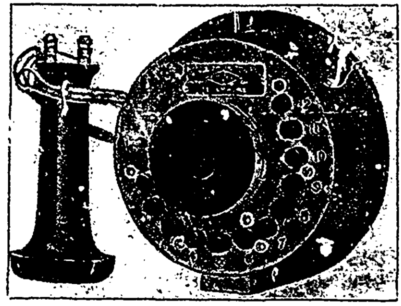

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WESTERN CANADA MEDICAL JOURNAL

VOL. I. AUGUST, 1907 No. 8

ORIGINAL COMMUNICATIONS.

INFANT MORTALITY

BY W. G. BROCK, M.D.; D.P.H.

Medical Health Officer, Germiston, S. Africa.

Infant mortality, in the ordinary use of the term, signifies the deaths of children under one year of age. For convenience this mortality is estimated in proportion to every thousand births registered during the same year.

There is little to be learned by examining by themselves the small number in our table; but protected against the vagaries liable to occur in the analyses of small numbers by being placed alongside the Infant Mortality Tables of a large population for comparison, they have a value as indicators to the causes which are chiefly responsible for the Infant Mortality within our Area, and should help in directing any efforts to lessen this mortality into the proper path.

For this purpose of control the figures of England and Wales are convenient. It is necessary, however, to know some of the outstanding facts disclosed by the English tables before using them as a guide.

In view of the fact that the Infant Mortality for England and Wales had remained practically the same, 154 per 1,000, for sixty years, notwithstanding the marked fall in the general death-rate,

sanitary authorities began, a few years ago, to make an effort to reduce the high rate. This has succeeded to such an extent that the mean infant death-rate for 1901-5 had fallen to 138 per 1,000 births. This was accepted as being in some measure due to the low summer temperature prevailing in 1902 and 1903 having materially reduced the mortality from infantile diarrhœa, a form of disease which is one of the controlling factors in the annual rate of infant mortality. The summer temperature for last year was, however, above the average; still, the Registrar-General, in his annual summary for that year, reports the infant mortality for the year as 128 per 1,000* "the lowest on record since the commencement of civil registration in 1837†' It may therefore be taken that the great fall in the deathrate during these years is, in great measure, to be credited to the effects of the authorities having provided well-trained female inspectors to visit and teach the mothers how to care for and feed their offspring properly, and to other measures taken to help towards the same end. The infant mortality in England and Wales varies from little over 80 per 1,000 in some country districts up to far beyond 200 in some of the large towns. Epidemic infantile diarrhœa is a "town disease," and it is in the towns where the great decrease in mortality has been brought about.

The "*Lancet*," of the 26th May, 1906, in its review of the Registrar-General's recently issued detailed annual report for 1904, states that the tables "show that the mean rate of infantile mortality in England and Wales in 1904 was equal to 145 per 1,000, of which 10 were due to the principal infectious diseases . . . 32 to diarrhoeal diseases, 46 to wasting diseases including premature birth, congenital defects, atrophy and debility). . . . It may also be pointed out that in recent years there has been a marked and steady increase in the deaths referred to premature birth. During the five years 1866-70 these deaths were equal to a proportion of 11 per 1,000 births registered, whereas

---

* Along with these figures should be considered the very nearly related and important subject of birthrate—and although this would not materially alter the figures its importance may in some measure be appreciated from the fact that during the last 20 years it is estimated that there is a shortage of 4,000,000 births, which there is good reason to believe is not due to diminished fecundity.

† Registrar-General's annual summary for 1905, *Lancet* 26th May, 1906, page 1481

the proportion had increased to 19 per 1,000 in the five years 1896-1900, and further to 21 in the year 1904." The article further states that the deaths from premature birth in industrial towns and country districts do not "show any wide variation," and that the figures do not suggest any very intimate connection between the industrial occupation of women and the proportional mortality attributed to premature birth.

For immediate purposes it is sufficient to note—

1. That the chief causes of infantile mortality may be placed in two groups:

   (a) Wasting diseases, as enumerated above, which may be called causes indicative of physical unfitness and are associated with maternal weakness;

   (b) Diarrhoeal diseases.

2. That there is evidence of the first group growing in importance, and that this growth has been even greater in country districts than in towns,* while there is evidence that during the last few years the deaths from the second group of causes show a tendency to decrease, and that this decrease has taken place principally in large industrial towns. Another point that should be stated is that it has been found that in times of poverty, low wages, scanty work, etc., the infant mortality has not been increased on account thereof.

We may now examine the Infant Mortality for the district during the past year.

The notified causes of infant deaths, with the age distribution in months of these deaths, are given in the following table:—

* In considering this point the very serious change in the class distribution of the birth-rate which has taken place in recent years must not be forgotten.

	Diseases	Age Distribution in Months						Total	Per Cent. of Total Infant deaths.
		0–1	1–2	2–3	3–6	6–9	9–12		
1st Group	Premature Birth....	7	1	—	—	—	—	8	11·77
	Marasmus	9	3	—	1	2	—	15	22·06
	Inanition	4	1	1	—	—	—	6	8·82
2nd Group	Diarrhœa, Gastro-enteritis	—	—	2	13	5	4	24	35·30
	Dysentery	1	—	—	—	—	—	1	1·47
3rd Group	Bronchitis	—	2	—	—	—	—	3	2·94
	Convulsions	1	—	1	—	—	—	2	2·94
	Meningitis...........	1	1	—	—	2	1	5	7·35
	Other Causes.......	2	—	—	1	—	2	5	7·35
		25	8	4	15	9	7	68	100·00

Comparison of this table with the figures for England and Wales shows it to be in general harmony with the English statistics as is evidenced by the following figures:—

	1904 England & Wales	1905-6 Germiston
Mean infant mortality per 1,000 deaths	145	150.44
Percentage of mortality in—		
First three months of life.....	49†	54.4
Second three months of life	20	22.00
Last half of first year	31	23.53
Rate per 1,000 births from premature births	21	(nearly) 18

On the other hand, when we go a step further and group the diseases as indicated above, as might be expected when dealing with such small numbers great differences appear. In this instance, taking the form of exaggerating relatively the first two groups, thus we have:—

† The tables further show that the percentage of death for this period is increasing, that this increase is almost confined to the 1st month and the 1st week of the 1st month, while there is a decrease in the rates for the other quarters.

	England & Wales 1904	Germiston 1905-6
The death date per 1,000 births—		
From wasting diseases (Group 1 of table)	46	64
From diarrhoeal diseases (Group 2)....	32	55
From other causes	67	31 nearly

No doubt much of the exaggeration may, as mentioned above, be due to the smallness of the numbers dealt with in the local table.

Climatic conditions also are important; thus, in the third group, the 67 of England is made up as follows:—Infectious diseases, 10; bronchitis and pneumonia, 23; tubercular diseases, 6; meningitis and convulsions, 16; and other causes, 12; while the 31 against Germiston contains the items in the ratio mentioned in Table 9, infectious and respiratory diseases hardly finding a place therein. The second group, too, is influenced by our great variations of temperature, etc. The numbers in the first group will also be influenced by the small figures, and, in common with other groups and by the variation that takes place from year to year in the Infant Mortality from any particular cause or group of causes, nevertheless it appears more stable than the others.

When all kinds of allowances have been made it would appear that the figures for the first and second groups are sufficiently marked in their indications to justify the conclusion that they are in accordance with the English tables, are leading factors in the production of infant mortality, and in all probability result from the same ultimate causes as in England.*

In regard to Group 2, as has been shown above, the education of the mothers in the care of their children has materially reduced the Infant Mortality in England and Wales during the last few years, so that instead of the time-honored 154 per 1,000, last year's figures were 128 per 1,000. This is a notable result, and it may be hoped with some confidence that when there is proper education provided for girls in the responsibilities of motherhood and the personal hygiene and feeding of children (which should be provided in every Government aided school) it will, when such

* Figures available from other localities support this. See a very interesting report on Infant Mortality by Dr. Porter, M.O.H., Johannesburg, 1905, and the Annual Report of Dr. Boyd M.O.H., Pretoria.

education has had time to mature, result in a continued reduction in the number of deaths from the group of causes known as diarrhoeal cases.

It is satisfactory to note that the Government of the Colony has, in the impositon of a prohibitive tariff on imported preserved skimmed milks, taken important and practical action towards aiding in the preservation of infant life.

The first group (wasting diseases) as a cause of waste of child life is even more important, and stands prominently in all infant mortality tables. For all practical purposes these diseases may be said to result from some "hereditary taint," as it is sometimes called, in the parents; at all events, an inability on their part to produce what is called a healthy child on account of having degenerated below the normal standard. These tables, however, do not reveal all that must be considered as chargeable to the same causes, as are mainly responsible for deaths under this group. Thus, looking at our own table, 29 stand against this group. There are, however, 17 registrations under the heading of "stillborn," which must be added to these (not to speak of the unknown number of earlier "accidents," part of which, at all events, are due to the same cause) which would raise the percentage figure from 42 per cent. to over 54 per cent. of the total infant deaths.

If such a "taint" as just suggested, capable of causing such havoc in the infant life of a country, exists, there must surely be some indication of it in the adult life of such a community. Insanity is just such an example of unfitness for the strain of life, and also the evidence of some degenerative process being at work. Does it then give any support to such an idea? The following is a quotation from a recent article on "The Increase of Insanity," which seems to give a clear answer to this question:—

"In 1844 the total number of insane persons of all ranks discovered in England and Wales by a careful official inquiry was 21,788, or, roughly, one in 761 of the then existing population. On 1st January, 1905, the number of insane persons actually under the control of the commissioners was 119,829, or roughly, one in 272 of the population as determined by the census of 1901; and throughout the whole of the intervening time the increase has been steadily progressive.

"In insanity, we have a disease which at the present moment actually incapacitates 0.35 per cent. of the total population of England and Wales, which as increased five-fold in the last sixty years, during which time the population has only doubled itself, and which, if both it and the population continued to increase at the same rate for 60 years more, would consign to the asylums nearly 1 per cent of the inhabitants of England and Wales in 1965."†‡

As the writer points out, the mischief does not end here, for to these must be added the very large number of eccentric and borderland cases, and the large numbers who go to make up the societies of cranks and faddists, whether religious, political, or the many antis who clearly show minds of an unstable nature, whose progeny must always be a source of weakness to the community of which they may form a part.

Those familiar with the large cities of Europe, and especially the poor quarters of these, will have no difficulty in recalling and recognizing the physical degenerates in the weedy crowds that people them. There is no data available, however, by the aid of which the amount of this well-known example of degeneracy can be put into figures.

There are four causes recognized as being capable of, and which are generally accepted as being responsible for, placing the "stamp of degeneracy" on those who come within their scope

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† The accuracy of the figures of the papers from which these facts were taken has been questioned by no less an authority than Dr. David Nicolson, Lord Chancellor's Visitor in Lunacy in a letter addressed to and published in the *Lancet* of 9th June last. The burden of this letter seems to be, as I understand it, that if all those who have been certified lunatics, but who have recovered so far as to be placed in his class of potentially insane, and who might be, without danger to the public, entrusted to the care of others than the Lunatic Authorities, these would cease to be on the list of registered lunatics and would thus very materially decrease the amount of insanity in the country. The letter seems to be written to allay the anxiety that the papers in question seem to have raised; there is however, a naivete in this explanation of how to reduce the amount of insanity in a country that is refreshing.

In a "leader" which the *British Medical Journal* devotes to Dr. Nicolson's letter in its issue of the 7th July last, the writer while sympathetic with Dr. Nicolson's object, does not seem to appreciate his line of argument or use of figures, and very pertinently points out that "This does not however, do away with the facts that whereas there were 536 sane persons to every insane person in 1859, there were only 288 in 1904, and 285 in 1905."

From this it is clear that even when attacked by such an authority and expert as Dr. Nicolson, the statements and figures in the papers remain unshaken. It might be pointed out that the explanation offered leaves an impression that even the very high figures given in the papers referred to, do not represent the full extent of the evil they deal with.

‡ Since this was written "The 60th report of the Lunacy Commisioners has been published as a Blue Book. It shows that the number of persons in England and Wales certified as insane on January 1st last, was 121,979 an increase of 2,150 as compared with the number recorded on the same day in 1905."—*The Mail*, 7th Sept., 1906.

of action. These are:—(1) Alcoholism; (2) Tuberculosis; (3) Consanguinity; (4) Syphilis.

Alcoholism was for many years believed to be the chief and most powerful cause in producing the habit of body and mind that satisfies the term degenerate, and that it was the chief cause of the Infant Mortality falling under the Group I. in the table. Many circumstances both of fancy and convenience aided in giving it this position in the public mind, and although many even to-day hold this to be true, others, in face of the fact on the one hand that for years there has been a steady decrease in drunkenness—last year the country's drink bill was £6,000,000 less than the previous year, and in the last five years there has been a reduction of expenditure on drink of no less than £22,000,000—while on the other hand the death-rate from the causes mentioned have been steadily on the increase, acknowledge that the belief must be abandoned, and other causes recognized.

Tuberculosis as a cause is in the same position, the death-rate having fallen during the last 60 years from one in every 252 of the population in 1847, to one in 574 in 1903, a fall of 56 per cent. in the reputed cause, while an increase of the conditions it was credited with continues.

"*Consanguity*" too, while it may at once be admitted as a probable cause, and that it acted on communities in isolated positions such as islands more or less remote, villages with peculiar traditions, &c., it must also be admitted that the circumstances which led to the custom of intermarriage amongst relatives and the conditions that upheld the custom are rapidly disappearing, and in any case never applied to the population as a whole, and could have no wide influence for evil in the direction indicated.

"*Specific Disease*" is the most fruitful source of degenerative changes in those who have the misfortune to contract it, and its taint is transmitted to the offspring. In contrast with the other causes it appears to be on the increase. Nor is this surprising, being a disease that puts disabilities on the sufferer, is very often concealed and probably neglected, the sufferer's surroundings become contaminated, and being a contagious disease may be communicated to others, and often is, in a variety of ways. It

is eminently a disease that produces all the conditions resulting in the causes of death in Group 1 of the table, so well are its disastrous ravages on a people, in this respect, known, that every country in Europe, save one, has by special laws and regulations tried to check its spread. Notwithstanding all precautions, statistics show that in the large cities of Europe one in seven of the population have or have had the disease. That being the condition where great care is taken to limit contagion, what must it be where not only is no protection provided, but conditions are made such, that one might almost say, every precaution is taken to spread it. The infant mortality tables, the increase of insanity, and the physical degeneration of the cities, may in some measure answer the question.

It may even possibly be that infant mortality in this country is to some extent adversely influenced by such causes. Medical men who have lived long in this country know well how frequently "unfortunate" cases occur where all families become infected, generally through a want of knowledge. The mode of transmission is from the native nurse to the youngest child, from child to mother, and thence through the family. The disease is very prevalent amongst the natives. To illustrate this, it may be mentioned that in a report written sixteen years ago, your medical officer states that during the year 1888-9, of 1,691 natives seen for the first time, 1,075 suffered from syphilis, and during the year 1899-90, out of 1,189 natives seen for the first time, 732 suffered from this disease.* In regard to natives, it is an interesting fact that, up-country at all events, they show a remarkable tolerance of the disease, and under treatment, to all appearances, throw it off in a manner unknown to Europeans.

Seeing that possible sources of danger are so near, it would appear that it would not be amiss if some provision was made to

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* Dr. Gregory, M.O.H. for Cape Colony, at page xcv. of his very comorehensive and interesting report for 1904 and 1905, under the heading "Prevalence and spread of Syphilis," says 'It is certain that, under present conditions, the disease is spreading extensively in the Colony, and in some districts to a very alarming degree. In Bechuanaland, the extent to which the population is affected is extraordinary, and by some observers is fixed in certain districts at figures which are scarcely credible. As a cons quence of such reports, Dr. Thornton, a Medical Officer of this office, recently made inquiries into the state of things on the spot, and reported that from the testimony of various officials of Mafeking and Vryburg, and from inquiries among Natives, it would seem probable that it is very prevalent and threatens to endanger the very existence of the inhabitants of these areas' . . . . In the District of Tauns, the extent of the infection is even greater, and in the District of Gordonia it has baen reported to affect some 70 or 80 per cent. of the Bastard population.

avert it. This might be done on the lines adopted in other countries. There are many objections to this, even taking the measures at their best. Although they could not be more objectionable than the state of matters lately shown to exist, they have not afforded that amount of protection which would induce one to adopt them save as a very temporary measure to allow time for the development of the only reliable method, viz.: education of the young—male and female—as to the nature and danger of this disease. "Who pays the piper may call the tune," and it does not seem extravagant, taking its importance into consideration, that where the State bears the expense of education it should insist on this subject taking first place in those taught to the senior pupils. No doubt it would be a subject both delicate and difficult for most teachers to handle; but this could be got over, and in the course of time would pass from them to those who should naturally deal with it—the parents—who had in youth been taught to recognize its importance.

THE MEDICAL AND SURGICAL TREATMENT OF ACUTE AND CHRONIC APPENDICITIS

(Paper read before the Saskatchewan Medical Association at Prince Albert, June 21st, 1907.)

W. DOW, M.D.

REGINA, SASK.

In the medical treatment of acute appendicitis I wish to emphasize a few points which are of vital interest to the patient, and although known to the bulk of the profession, are not yet practised by a few, viz.: the total abstinence from solid or liquid food by the mouth, and cold water, and the avoidance of either opium or cathartics, until such time as the appendix can be removed, or an abscess drained, or the acute attack has passed and an interval operation considered. During this period, if there is no nausea, a little hot water at intervals may be given by the mouth, and the stomach lavaged if nausea or vomiting presents itself, and the rectum and colon emptied at the onset of the attack by enemata. Nutrient enema, such as liquid peptonoids in salt solution, should be given, and an additional half-pint of normal saline solution by rectum given about three times in the twenty-four hours. This treatment should be kept up for a period of at least four days in cases not coming to the operating table within the first thirty-six hours, or at the farthest forty-eight hours, from the onset of the attack. Opium given masks the symptoms by relieving pain, checks the secretions and is likely to add to the nausea and constipation, which are generally though not always present. If administered at all it should only be for temporary relief of the pain until preparation can be made for an operation. Cathartics, by increasing the peristaltic action of the intestines, do much toward increasing the hyperemia at the site of infection, and add a great factor in spreading the infection once it has got beyond the mucous and muscular coats of the appendix which it usually does in about thirty-six hours, sometimes in less time, and sometimes delayed a little

longer in the less fulminating cases. This increased peristaltic action of the bowels is to be avoided for the reasons named, and nature's efforts at localization of the peritonitis when it—the infection—reaches the peritoneum left unhampered, and as much done as possible to prevent diffuse peritonitis, which is the greatest cause of mortality in this disease. The blood count following a cathartic will always show an increase of the leucocytic count, indicating an increase in the intensity of the inflammation. For the relief of pain, an ice-bag or a hot poultice applied over the iliac area will sometimes be of benefit. Rest and quiet ;and if retention of urine a catheter used, and sponging of the body, will complete the general outline of medical treatment of an acute attack of appendicitis, with the addition of elevation of the head and shoulders, after the infection has reached the peritoneum, to prevent as far as possible the infection from reaching the upper quadrants of the abdominal cavity, and also raising the left side of the patient with a pillow to aid localization. The above line of treatment is that advocated by Professor A. J. Ochsner, by whom it was inaugurated. The same methods apply to the treatment of patients following operation, for a few days, with the addition of a greater quantity of salt solution per rectum during the first twenty-four hours by the method of Professor J. B. Murphy, viz., running in slowly a large quantity into the bowel, two or more quarts, by inserting the nozzle of a fountain syringe two to three inches, fixing it in place with a strip of adhesive plaster to the thighs, and elevating the receptacle only four to six inches above the nozzle. Such heart stimulants other than this may be administered as indicated, and if toxaemia from infection exists, streptolytic serum should be administered freely subcutaneously, in addition to the salt solution used. The medical treatment of chronic appendicitis consists chiefly in regulating the bowels and digestion, avoiding constipation, giving laxatives if necessary. An acute or subacute attack supervening in a chronic case should be treated on the plan outlined above for acute cases. In the surgical treatment of appendicitis all authorities are agreed that in acute attacks an early operation should be done for removal of the appendix if a competent surgeon and the requisite facilities can be obtained; and by an early

operation is meant an operation while the infection is confined to the mucous and muscular coats of the appendix, before it has reached the peritoneum, the limit of which time will usually be about thirty-six hours, or in less severe attacks forty-eight hours, though in some gangrenous cases perforation may occur as early perhaps as twelve hours, and did occur in a recent case of Dr. J. C. Black's, of Regina, just about twenty-four hours from the onset of the symptoms, and when the operation of opening and putting in drainage was done about thirty six hours from the beginning of the attack he was suffering from a diffuse peritonitis, and pus was present in the peritoneal cavity. I am pleased to state that this patient, on whom I assisted at the operation one month ago, is doing well, and the fistula which followed the perforation has apparently closed and all drainage practically ceased. The appendix in this case was not removed, as the patient at the time was suffering from shock, and it appeared too hazardous to life to prolong the operation by removing the appendix, or adding to the shock by manipulating the bowel and further (if such could be) spreading the infection, even if the peritonitis had become diffuse a few hours preceding the operation. It is contemplated to do another operation on this patient and remove the appendix or any portion of it that has not sloughed, if such there be.

In the surgical treatment of chronic appendicitis all surgeons of authority are also agreed that an operation for the removal of the appendix in the interval between the acute or subacute attacks is the safest and most desirable operation, but when an acute or subacute attack supervenes in a chronic recurring case, operation, I believe, should be done early, as in an acute case of first attack, within thirty-six hours, rather than take the chances of securing the more desirable one of an interval operation when the attack subsides, and this, I think, is in accord with the best writers on the subject. True it is that second attacks are as a rule milder than first ones, and more likely to be recovered from under proper medical treatment, as spoken of in this paper; and it is also true that the interval operation is a rather more favorable time and the mortality less than one done early in the attack, but the difference in risk is not so great as to

counterbalance the dangers of delay in hope of securing the most favorable time, for that most favorable time, in too many instances, never comes.

The other question that arises in the surgical management of cases is this: Shall we in delayed cases, cases that either have not been diagnosed, or consent to operation has not been obtained, or the means at hand to operate, until after the period for an early operation, viz., thirty-six to forty-eight hours has passed, operate on receiving their consent? Or shall we invariably do as Ochsner teaches—place them on his method of medical treatment and wait until the eighth day from the beginning of the attack before operating, then open and drain the localized abscess if one is present, only removing the appendix if it comes in view with a little manipulation, and do a second operation later for its removal when the pus is all drained out? Of course, if no abscess forms the appendix can be safely removed but if one has formed there is danger of spreading the infection to the general peritoneum, from breaking of adhesive protection, when much difficulty is experienced in securing it. Or shall we do as Deaver and many others do—operate in those delayed too late for early operation, as soon as possible, whether it be the third, fourth, fifth, sixth or seventh days (the time forbidden by Ochsner), removing the appendix at the first operation? Of the two courses outlined in such late operation cases the writer believes that in the hands of the majority of surgeons who operate for appendicitis, the plan taught by Ochsner will be followed by the lower mortality. The liability to diffuse peritonitis resulting from operation for the removal of the appendix at a time when the infection which has reached the peritoneum over the appendix, being greater than if nature is given a chance to localize the infection from lymph and fibrinous exudate, and thus form a wall for an abscess, if such form. The disadvantages of delay, however, are not to be overlooked—such as likelihood of fœcal fistula, long delay in recovery, more liability to obstruction of bowel following from adhesive bands which have not dissolved and absorbed, etc. The writer of this paper has believed for some time that a course somewhat between these two ways could be pursued to advan-

tage in the majority of those late cases for operation, and it is as follows:—When receiving a case for operation on the third, fourth, fifth, sixth or seventh day (if not in a moribund state) simply make a small incision through the abdominal wall over the site of the appendix and put in drainage, not removing same until about the eighth day from the onset of the attack, and then if pus is not present at this time—eighth day—and patient is strong enough to stand an operation, remove the appendix and complete the operation; otherwise wait until pus is drained out, then remove the appendix after getting patient sufficiently nourished to stand it. This method will apply to advantage, I think, in all classes of cases, whether there be general peritonitis or not, and will do much toward limiting or localizing the peritonitis, and thus lessen the number of diffuse peritonitis complication cases, which is the greatest cause of death. The relief to tension will be the main factor in assisting nature in her efforts to localize. The intestines will not have been manipulated, the shock will be very slight, drainage will be established, and the tendency to gangrenous sloughing will be diminished. No attempt should be made at this time to remove the appendix, except in, perhaps, cases of obvious perforation with already diffuse peritonitis, when, if the shock is not likely to be too great, the appendix might be removed, and thus the seat of perforation closed, and the patient afterwards placed in the raised head and shoulder, or Fowler position, with an additional drainage opening above the pubes. This is the method of treating acute diffuse suppurative peritonitis from any cause, and the writer believes it should apply in cases of acute appendicitis even when there is not evident spreading of the local peritonitis. When diffuse peritonitis is not present the additional opening for drainage above the pubes need not be made. The plan of the writer thus described has the endorsement of Dr. Lewis S. Pilcher, of Brooklyn, editor of the Annals of Surgery. In the few cases in which it has been tried it has been satisfactory, and in the case recently operated on by Dr. Black, of early perforation and diffuse peritonitis already alluded to, the chances for ultimate recovery seem good, although the prognosis at time of operation was not at all favorable.

As to the mode of operating for appendicitis it is unnecessary to dwell upon. The writer prefers the oblique incision over the caecum in the direction of the fibres of the external oblique muscle, separating it, and then separating the fibres of the transversalis and internal oblique in their longitudinal direction, which is about at right angles to the external oblique. A stronger abdominal wall is thus obtained, with less liability to after hernia, than with the straight incision through the rectus muscle. When pus is present and a rapid opening is demanded with little delay, the latter may be the preferable location of the incision. In dealing with the stump of the appendix the writer follows the plan of inverting when not too much thickened; if so, ligate, excise and cauterize, and place two Lembert sutures over edge of stump, using chromic gut of small size oo or 1. In doing the purse-string inversion it is well to cut the appendix off next the proximal clamp with a thermocautery to secure against hemorrhage, which sometimes occurs from the artery to the appendix, occasionally dividing at its base, or more distal, instead of on the caecum, as it does in normal position, and thus being left open. If not cauterized an extra loop of the purse-string at side next the meso-appendix passed under it will secure it and caccum in the direction of the fibres of the external oblique obviate the danger. Tier closure of abdominal wall, using plain catgut, chromatised or iodized gut and silkworm gut, for peritoneum, musles and fascia and skin respectively is to be preferred to through and through sutures unless great haste is demanded.

SYPHILIS INSONTIUM

(Read before the Saskatchewan Medical Society, at Prince Albert June 21st, 1907.)

GEO. R. PETERSON, M.D.

SASKATOON SASK.

Mr. President and Gentlemen:—

I wish to thank you for the opportunity afforded me of reading this paper, and to the following very interesting case I wish to direct your attention for a few moments. It occurred in my practice in the spring of 1905, and on account of its unusual source of origin, as well as to its unusual course, I thought it might be of some interest to you, and therefore report it.

Mr. B——, an Englishman living on a farm; aged 48. He is married, but his wife at the time of the occurrence of the disease was in England. He has been in this country since March, 1903. He complains of a sore on his chin.

On the 14th day of February, 1905, the patient, while being shaved at a barber shop of bad repute in Saskatoon, received a cut on the lower lip about half an inch below the muco-cutaneous margin. This was slight, and healed in a few days without any trouble, although at the time there was slight hemorrhage, for which, as usual, it was cauterized with the styptic pencil of the barber. These circumstances were forgotten entirely by the patient, and not mentioned by him when he was describing his case to me, until his attention was drawn to it by questioning, it being such a trivial accident. In about four weeks after he noticed a small dusky papule, as afterwards proved, on the site of the cut. This did not pain, nor was it sore, and only attracted his attention when he was shaving himself, when he at times accidentally cut off the top. His description of it as it existed at that time is as follows, and his description I had to take, as I did not see it for some time after: "It was a small, warty pimple, and very hard, almost like a grain of shot. It was rough, and,

in fact, I took it for a wart beginning." It continued to heal every time it was cut till about nine days later, when, after shaving this time, it refused to do so and a small ulcer developed. Using an ointment of his own for some days, which had no effect, he consulted a doctor, who gave the diagnosis of barber's itch. He was given an ointment which he applied to the sore for some time, but to no effect. In fact, the sore enlarged, and when seen by me on March 20th was as follows:—

Situated on the lower lip was a round ulcer, about 1 inch in diameter, extending from the muco-cutaneous border to within a short distance from the point of the chin, and fairly in the middle line. The edges were considerably elevated, quite infiltrated and rounded. The base was infiltrated also, and gave to the whole sore a cartilaginous feel. The surface was greyish and fungoid in appearance. Three fissures ran across it transversely, one of which, corresponding to the labio-mental fold, was very deep and had a tendency to bleed at the slightest provocation. The sore was quite painless as a rule, except at such times as the blood-stained discharge, which exhibited a marked tendency to form crusts, was allowed to do so, when it became quite annoying during any movement of the lip. The lip was but slightly swollen, but the sub-mental lymph glands were very large and hard and at times somewhat painful. They remained separate and distinct, and showed no tendency to attach to the surrounding tissue. He had no fever at this time, and the pulse was normal, although a little later on he began to complain of pain, weakness and languor, the pains being more or less central but most marked in the back. At times he says he fainted while attempting to do his work. There was now slight fever in the mornings, increasing in the afternoon as usual.

His personal history in regard to disease is quite clear. He has never been ill except with the acute diseases of infancy. He uses tobacco and drinks occasionally, especially beer, but never to excess. He had been a veterinary surgeon in the old country, but since coming to this country has been a farmer. His family history was good, and there was no hereditary tendency to disease. He himself was a sturdy, fine example of manhood, 6 ft. 1 in., and weighing about 225 lbs., which weight was not

made up principally of fat but muscle and sinew, and whose intelligence was of a high order.

The lymphatic glands beneath the chin were large and hard, and not matted together, and gave no evidence of suppuration or adherence. They were slightly tender to firm palpation, and at times pained slightly. The other glands of the body, while palpable, were not so much so as to attract attention particularly. The epitrochlear was faintly palpable.

The respiratory system was normal, including the nose, throat, etc. The circulatory system was likewise normal.

The digestive system, except that in the last few days his appetite was not so good as formerly, exhibited no signs of disease. The genito-urinary system was normal, and there was no evidence of any old scar to be seen.

The skin was clear except at the site of the lesion above described. The hairs which grew from the site of the sore were loose and dead. Under the microscope there was no definite evidence of favus or trichophyton.

The nervous system was normal, and there were no symptoms whatever attracting attention to it.

Having obtained a clear and exact history of the development of the case, together with the dates of appearance of the various symptoms, an examination of the sore aroused suspicion of Syphilis Insontium, which suspicion was fully corroborated a short time after by the appearance of typical secondary symptoms in the form of a rash, sore throat and mucous patches. In diagnosing a case of this kind mistakes are apt to be made, and at first sight primary syphilis of the lip could easily be mistaken for carcinoma, lupus or rodent ulcer.

From epithelioma it is to be distinguished by its rapid development up to a certain point by the early implication of the glands, which soon become very large, there being as a rule no typical cachexia, epithelioma appearing later in life and finally its course and the results of treatment. Its local appearance also differs in that its surface is flatter, less warty and irregular than epithelioma, and the discharge of the latter is more offensive. Microscopic examination in epithelioma shows epithelial nests;

in syphilis, small, round-celled infiltration, especially around the blood vessels.

In lupus the ulcer as a rule begins in early life, and has been very chronic and slower in its progress. It is preceded by soft, raised, apple-jelly-like masses as a rule. There may be an history of tuberculosis or other signs of the disease. The lymphatics are not enlarged.

Rodent ulcer as a rule begins as a flat papule at the side of the nose, on the lower lid or at the angle of the mouth, and slowly and steadily progresses, destroying all tissues alike as it spreads. There is an absence of deposit in the surrounding tissues and a very scant dischaıge.

Regarding the treatment of this case, which affords an interesting circumstance, no active medication was begun other than the local treatment of black wash, etc., and constitutional treatment of Emuls. Ol. Morrh. and hypophosphates, a strong diet of fats and carbo-hydr..tes, and a regulation of his life and habits in regard to alcohol and tobacco. The hygiene of his mouth was given particular attention. We discussed the subject of early medication, but, as he desired it, it was postponed until the beginning of the secondaries, when active treatment was begun by large doses of Hg. being applied under the arms and inner surfaces of the thighs, the dose being regulated by the patient's susceptibility after beginning with drachm ı. The macular eruption soon began to fade, but the throat and mouth condition, in spite of the fact that he was getting as much mercury as he could stand, seemed stubborn to treatment, and although it would clear up for a time it would soon return. However, after about five months, he seemed to have gained control of the disease. The mercury was stopped, as we thought we could do so safely for a time, and he was given a course of tonic treatment of iron and potassium iodide. After a short course of this, about one month, he was again put on the Hg., but seemed to be unable to tolerate large enough doses to control the disease, which began to appear again in the throat a d mouth, and a papular rash appeared on the skin, later on to be followed by a few pustules. He failed considerably. The Hg. was persisted in, as well as the rigid treatment of his mouth, every precaution being taken not to over-

step the safety line of dosage. Tonics were given as well. By these and dietetic means we endeavored to keep up his strength and the condition of the blood, but in spite of it all he seemed to go from bad to worse. The inunctions were left off and grey powder was tried, with no better results. Two grains were given at first, but had to be cut down owing to the tendency to salivation appearing. With this decrease in dosage the disease seemed to increase in virulence, and we decided to try another method of treatment.

One of the local druggists was given the formula for Zittman's decoction. He put up the recipe, which seemed a terrific dose, but the patient, discouraged with the mercury and disgusted with the scourge from which he was suffering, readily consented to undergo the treatment, and to his gratification as well as mine, long before the fifteen days were up, which finished the treatment, all signs of the disease were gone. True, he felt weak after it; but after a few days of good diet and rest from the treatment and ravages of the disease, he again became quite well. From then till now, about two years, there has not been a sign of the disease, but the scar on his chin and the wreck of a constitution the disease has left him. He is continually taking small doses of mercury interrupted by Pot. Iodid, and tonics of iron, etc. According to some authorities, cases of extragenital syphilis seem to run a more severe course than cases infected in the ordinary way, and probably that accounts for the refractory nature of this case.

The decoction seems to have as its underlying principle the expulsion of the poison by diaphoresis and purgation, and Sir A. Cooper, in the London "Practitioner" for July, 1904, says: "The way in which bad cases will clear up under it when all other treatment fails is astonishing."

But this is only one instance of a perfectly healthy, happy individual stricken down in his or her innocence by the vile disease. I readily recall to mind other cases I have seen, and did every physician report the cases he has met with the number would swell tremendously. Were it confined to men alone it were not so bad, but we find in the cases reported far more women than men afflicted with Syphilis Insontium. No one for a moment

doubts the extremely infective character of the disease in its primary and secondary stages, so called, not only from the sores but also from the blood; and recently the germ having been positively demonstrated in the tertiary lesions as well, there can be no doubt that should the seed fall upon proper soil infection would be the sure result.

"Were syphilis a disease confined to those guilty of sexual transgression and the offender bore the cross alone," it were not so bad, but we find it being transmitted to the innocent not only by accident but also as marital syphilis, which method stands prominent as a means of the innocent acquiring the disease. But it does not stop here, and every year there are born into the world of misery and death thousands of innocent babes, to whom it would be a blessing were they never born rather than begin such a life which from its inception means misery and early death. It is seen at all ages, from the babe unborn to the gray-haired man and woman tottering on the verge of the grave, and none seem to be immune or safe from infection, no matter how carefully they live, but those who have had the disease.

Medical men also are martyrs to the vile infection, and case after case has been reported of infection occurring while carrying out their duty. Dr. Osler a few years ago stated that he had known of six cases of such, and Balsac, of Berlin, reports twelve cases of physicians who were likewise infected, ten of them occurring in Berlin alone; this happening in spite of the fact that medical men are alert to its infectious nature. Furnier has stated that 50 per cent. of the female cases in his private practice are syphilis insontium, and in married women the percentage rises to eighty-five.

In view of the fact that syphilis has existed from time prehistoric, as is evidenced by certain bones exhumed in different parts of the world, the references to it in the Bible, as it is the only disease which explains the circumstances mentioned, and by certain writings in the ancient literature of China and Japan, and yet remains not even in the slightest degree controlled and just as virulent, if not more so—the innocent being stricken down every day and there being more people with a syphilitic than a tuberculous taint, in spite of the licensing of houses of ill fame,

medical supervision and segregation, and all the other impractical methods so far adopted to control the disease—it seems to me it is time there were some practical steps, methods based upon scientific facts, taken, whereby the disease in its very infective stages at least would be controlled. The present epidemic of smallpox is mild in the extreme as compared to the ravages of syphilis, yet anyone caught suffering from it are at once quarantined and disinfected at great expense, while there is wandering about the streets and into healthy homes a worse plague still. As *a rule, the man, woman or child, in a month or little more recov*-ers from smallpox none the worse for the disease except a few scars, maybe, unless it be a severe case. Of course, who can tell if the individual exposed will have a mild attack if he has not been protected by vaccination?

As a rule the man, woman or child rarely recovers from syphilis. He has both the scar of the primary sore as well as a broken constitution, and this very often in spite of the fact that he has had a mild infection.

I fail to see why anyone who is a menace to the public should be allowed to wander around indiscriminately any more than a criminal or a leper, and I think the same methods should be adopted for its control as are used to suppress all the other infectious diseases, and why we should discriminate in favor of syphilis as compared with such mild infections as varicella is more than I can understand.

* THE TREATMENT OF EPILEPSY

The author admits that the treatment of epilepsy is not in a hopeful condition, which is the more to be regretted as the disease is fairly frequent and also because the subjects of it are damaged mentally and socially so that eventually many of them are compelled to go into institutions or asylums for the insane.

Many agents have been tried with very meagre results, but the writer warns against pessimism on this account, as many individual cases have been cured and in many more much relief obtained. The aetiology and symptomatology should be carefully worked out in each case.

Prophylaxis—As it is easier to prevent a disease than to cure it, this point is important. As to marriage, where undoubted epilepsy exists in either candidate, it is advised not to marry. All of the offspring will not have epilepsy, but a good percentage will; besides, there is a disposition to other nervous affections. In regard to young women the question of marriage is important, owing to the fact that many of the laity, and sometimes physicians, believe that such a step leads to the cure of the disease in many cases. The writer is of the opinion that this is a very serious mistake, for while the young woman is pregnant the convulsive seizures may remain in abeyance and become more frequent after the puerperium, or a latent epilepsy may break out afresh. Children of epileptics should be most carefully reared, avoiding all things that could injure them mentally or physically, and doing all possible to strengthen the organism. This applies also in cases where persons receive severe head injuries and the like where heredity is not a factor.

The treatment of the cause of epilepsy is scarcely possible, because we are powerless in the majority of cases, and besides, the pathogenesis of the the disease is only partly known. There is also the fact that after the attacks have persisted in recurring for some time there arises changes, possibly irritability of the brain tissue, so that convulsions will occur though the original

* Deutsche Medizinische Wochenschrift No 37., by Dr. Emil Redlich, Vienna.

cause of them has been removed. This is also true of cases having a traumatic origin.

The chances are better in cases of reflex epilepsy, that is, where there is peripheral irritation, as from scars on cranium or extremities. For example, where nerves of the skin are in scar tissues, changes in nose or ears. These cases are not numerous. Rediick warns us againt the enthusiastic reports of cases cured by operative methods or correction of refractive errors of eye. After a time the attacks recur. Even in reflex epilepsy the convulsions are apt to reappear even when the cause is removed, owing to the establishment of a vicious habit. Where the aura goes out from the region of a scar, or from the nose or ear, it is well to treat these conditions in order to get all possible relief from the epilepsy. The group of epileptics due to alcohol is much larger than those due to reflex causes. In this group are such cases where chronic alcoholism is the cause and brings about attacks. Total abstinence from alcoholic beverages cures convulsions unless of old standing, but it is difficult in many cases to enforce the total abstinence. Syphilis is the causal factor in a small group in which is not included cases where there are foci of syphilitic origin, such as gummata and softening from endarteritis. Sometimes, but not always, a thorough antisyphilitis treatment will bring about a cure. Of course it is necessary in all the groups mentioned to carry out all the useful measures of treatment in order to reduce the irritability of the brain.

In the most of cases a definite causal indication for treatment is not to be found. Therefore we must treat symptomatically to reduce the convulsions partially or totally. In a few cases one may bring about a cure in this way. In what folows the treatment refers to genuine epilepsy, but these measures are frequently found beneficial for the symptomatic epilepsy.

Hygienic Treatment—It is very important to regulate the patient's method of living. From this alone good results have been obtained. Of course there are points still under discussion; but much is decided, and can serve to indicate the proper course to pursue. As to sending an epileptic child to school, when the convulsive seizures are frequent the child should be

taught at home when it is possible. On the other hand, if the attacks are seldom and mental condition good, it may attend school and even take up a calling demanding considerable mental activity. However, as a rule it is strongly advised that mental and physical overwork should be avoided in childhood, and that an occupation having the same advantages should be chosen. Also that the position should not be dangerous if an attack developed while at work. Heat and exposure to the sun should be avoided.

Dietetic Treatment has always been considered important, though it has undergone changes at various times, and even now all the authorities are not agreed. By many, a strict vegetarian diet has been strongly recommended. The author favors a diet of milk, butter, vegetables and fruits being the principal ingredients, meat being allowed only once a day.

During recent years the amount of salt allowed with the diet has been cut down, it being desired that the bromine of the bromides should displace the chlorine from the fluids of the body, in this way becoming more effective in its action.

Toulouse and Richet advise the following diet:—*Milk*, 32 oz., meat 10 oz., potatoes 10 oz., bread 6 2-3 oz., 2 eggs, 1 2-3 oz. sugar, 1 1-3 oz. butter, 1-3 oz. coffee, daily, and without salt.

It has been found that the absolute withdrawal of salt gives rise to loss of appetite, general weakness, and even threatening symptoms, so that it is better to reduce the amount of salt taken and not withdraw it. The foods poor in salt, according to Tischler, are milk, eggs, mushrooms, fruit, watercress, vegetables prepared without salt, and flour. Meat is poor in salt also, but it is usually added in preparing it. The same occurs with bread. A bread made with bromides is sold under the name of Bromopan. Butter must be made fresh.

All digestive disturbances must be treated and bowels regulated. Alcohol should be forbidden, especially when it is found to predispose to attack.

Baths of tepid water, either full or half-bath, are recommended, but no douches or anything liable to irritate the nervous *system is allowed, especially if directed to the head. Sometimes* a stay in a hospital or sanitorium is of considerable benefit owing

to the careful carrying out of the methods of treatment, thus educating the patient to their benefit.

Where the disease has not existed very long, and where the seizures are divided by a considerable period of time, we may get good results without drugs. Among drugs the most important is salts of bromine. It is not a specific. It only works indirectly, reducing the irritability of the brain centres. In giving the bromides we must proceed gradually, beginning with a comparatively small dose and increasing as required to stop the convulsions. Generally a mixture of pot. and sod. bromide equal parts, and ammon. bromide one-half part, is recommended; or tabloids made by Burroughs, Welcome & Co. Must not give any more than is needed to render the attacks mild or to stop them. It is good to have the patient mark in a calendar the frequency and nature of attacks, so as to govern the action of the bromides. In judging treatment it is necessary to take into consideration that without any apparent cause variations in the number of epileptic seizures may occur, and especially that after what is called a series of convulsive attacks an interval free from such attacks may occur.

Some French authorities have advised to increase the effective dose gradually and then decrease it again, but Redlick is of the opinion that it is best to find the efficient dose and continue to give it a long time, only decreasing it after patient has been free from any symptoms for months. Rate of decrease advised is 7½ grs. at a time. Even when attacks have not occurred for a year it is best to continue with 30 grs. daily for a further period of one to two years. This must be impressed upon the patient, as he is apt to cease medication when the seizures stop. During the time that the patient is suffering from any febrile disease the bromides may be omitted but resumed when fever has left.

In an adult with a moderate number of attacks, begin with ½ oz. per day, increasing to 6 drs. or an ounce if necessary. In severe cases one may give more if necessary, but such has disadvantages. It is best to divide the daily quantity into two or three doses, taken in plenty o fwater, preferably soda water, after food. If the attacks occur at night, take rather more than one-half the daily dose at bedtime, but if most frequent in

the early part of the day, take the large dose upon rising. If a series of attacks come on, increase the dose rapidly to try to cut short the series.

Bromism refers to the chronic poisonous effects of the bromides when given medicinally over long periods. The author thinks that the bad effects of the bromides has been overestimated, but mentions that physicians should be well informed as to their deleterious effects in order to avoid them. Some of the phenomena of bromism are unavoidable or even necessary, as they are evidence of the saturation of the tissues with the drug. Such is the loss of the pharyngeal reflex, which is proof of the reduction of the irritability of the central nervous system. The writer does not agree that it is necessary to push the drug so far that the corneal reflex disappears. Not unfrequently the patients complain of a general languidness, a slight blunting of their energy, especially their initiative and productivity, a certain drowsiness, blunting of the memory and decreased sexual desire. There is also a characteristic disagreeable taste. These are effects which ,if kept within the bounds of moderation, are lesser evils than the convulsive seizures. A real reduction of the intelligence or severe injury to the memory are not due to the usual doses of bromides but to action of the pathological condition in the brain producing the epilepsy. These undesirable effects must be kept at a minimum, and to assist in doing this regular action of the bowels must be secured, frequent baths given, and general hygienic and dietetic measures adopted. These rules apply also to the acne due to bromides. This acne is usually more severe the larger the doses given and the longer they are prescribed, but in this, as in many other of the phenomena, there is an individual difference amounting occasionally to an idiosyncrasy, some being able to take large quantities of the drug without any trouble arising, while others get many bad effects from small doses. This is particularly true of acne. A bad condition of skin favors it. Thorough washing with soap and brush or rough cloth and Fowler's solution internally are recommended. If patient is anæmic iron may be given, with the arsenic, preferably in the form of natural mineral waters (Levico, Roncegno, Guberquelle). If the acne goes on to form furuncles or a diffuse

inflammatory atrophy of the skin occurs, we must stop the bromides either temporarily or permanently.

Bromides must be stopped also in cases where poisonous effects are severe. The symptoms of this are general prostration, a marked loss of memory even to apathy or stupor, reduction or loss of corneal, skin or even tendon reflexes, a stammering, unintelligible speech, complete loss of appetite, bad smelling breath, severe anæmia, loss of flesh, slowing of respiration, weakness and irregularity of pulse, finally may get aspiration, pneumonia with high fever ending in death.

In order to increase the therapeutic value of the bromides and at the same time to decrease their injurious effects, various other combinations of bromine than those mentioned above have been tried. The acne of bromism is doubtless much less where bromophin (a preparation of bromine with sesamum) is given. It has an oily taste which can be avoided to some extent by quickly swallowing the remedy and then eating a bread crust followed by a peppermint lozenge. It must not be given in beer.

Bromalin and bromocoll are said to act similarly to bromopin. Bournville has recommended camph. monobrom. in many cases, but its value is undecided. Neuronal is not good to give for any length of time, as after fairly large doses it predisposes to drowsiness and maybe stupor. It is said to be good in attacks occurring in a series, or an irritable condition, or in delirium. In some cases of epilepsy it is good to combine cardiacs with bromides. Gowers recomends digitalis, and Bechterew advises adonis vernalis.

The method of Flechsig was to begin with opium in ¾ grs. per day, increasing gradually to 15 grs. per day, then suddenly stopping the opium and beginning with large doses of bromides (2 drachms), these large doses being gradually reduced to those usually given. Its effects in a certain number of cases is very successful, attacks ceasing for a number of months and even more than a year have been reported, but still the attacks do come beck and no lasting cures are known. The method is rather dangerous, and must always be carried out in a hospital. Opium causes complete loss of appetite, severe disturbance of the stomach and bowels, diarrhoea, apathy, stupor, disturbance

of heart, and has even ended in death. The sudden cessation of opium may give rise to unpleasant effects also. The bromides in large doses often cause acute bromism. We may avoid the effects of opium to some extent by careful nursing, regulation of bowels, high irrigation and baths. This treatment is not suitable for elderly persons or those with permanent mental disturbances. It may be said that these cases are usually bad subjects for our present methods of treating epilepsy. In such cases we may control the seizures, but the mental disturbances, especially are irritability and ill-temper, are so marked that the convulsive attacks are preferable. Flechsig's method may be tried carefully in young persons without mental disturbances and in good nutrition where the ordinary bromide treatment gave no results.

There are cases of epilepsy, and unfortunately these are not rare, where the bromides cannot be used because they are either ineffectual or forbidden owing to some of the grounds mentioned above. The older authorities have left us a number of medicinal agents which they claimed were of value. Valerian is one of these, but alone has scarely any effect. The author often prescribes it with other agents, and in form of tinct. 20 drops, or in infusion. Belladonna was formerly much used in epilepsy, and no doubt with effect. At one time the tinct. and extract of belladonna were given, but atrophin is preferred at present. In a few cases this succeeds where the bromides have failed. We may also try to combine some bromides with atrophin. Zinc is another agent to replace bromine, and has been much praised recently, but Redlick does not believe it to be so effectual as bromides. Borax was recommended by Gowers, but its curative effect is doubtful and it may cause diarrhoea and a psoriasis like eczema. Cerebrin and opocerebrin have been recommended, but their value has not been proved yet. In an attack it is useless to begin any treatment. It is best to see that the patient lays in a favorable position, that he does not injure himself, and to loosen the clothes so that respiration may not be hampered. If there is a marked aura various methods may be used to abort an attack, but this is of doubtful value, as the patient usually feels much better if the attack passes off in its usual way.

The treatment of those cases where the seizures follow each

other rapidly, where consciousness is not regained between attacks ,and where the temperature may rise, fairly frequently, ending in death, is important. This status epilepticus is to be combated by large doses of bromides. Certain of the hypnotics have proved very effective in this condition, and may be given by the rectum if consciousness is completely lost. Among these are chloral, in doses of grs. 15, repeated from 1 to 3 times; amylen hydrate, a drachm to 1½ drachms; dermiol, up to 1 drachm dose. If heart is weak add preparation of strophanthus or digitalis. Put an ice bag to the head. If patient is cyanotic give inhalation of oxygen. In very severe cases may try venesection followed by subcutaneous injection of normal saline solution. If attacks still persist must use chloroform, at same time giving careful attention to heart and respiration.

Operative Treatment—which has recently been revived, is an old method. Many forms of operations have been advised and performed, giving rise to the author stating that they show a lack of criticism in therapeutics. Owing to the epileptic seizures ceasing for a longer or shorter time after any form of surgical procedure upon any part of the body and these cases being reported as cures produced by the particular operation, others were led to attempt to achieve the same results, which they did; but all the cases relapsed in a longer or shorter time after operation.

Kocher employs trephinning in traumatic cases of epilepsy involving either the cranial bones or brain substance, believing that the outlet for the cerebro-spinal fluid is insufficient, therefore by operation an outlet is provided. However this may be in traumatic cases, it is not effective in genuine epilepsy. It has been recommended to trephine to excise the cerebral contex in cases where the convulsive seizure began in a definite region, so that one could locate the centre in the cerbrum. This mthod is not always followed by good results as yet among other disadvantages paresis remaining. The writer is of the opinion that this operation cannot be employed for idiopathic epilepsy, but thinks simply trephining with an even temporary decrease of brain pressure has a favorable effect. He cites the case of a twelve-year-old boy suffering from a Jacksonian type of epilepsy, with 38 to 40 seizures in twenty-four hours, being much benefited

by simple trephining followed by 15 grs. a day of bromides. No brain tissue was removed.

Cases of epilepsy due to traumatic injury to the bones of the head are frequently operated upon, and in cases of well defined Jacksonian epilepsy a portion of the cortex is removed and frequently gives good results, but not always, as in some cases the operation causes conditions which keep up the irritation of the brain cortex. Where the injury is not localized, results are not better than in the idiopathic form.

Removal of the upper portion or the whole of the cervical sympathetic ganglia has been recommended owing to the belief that the cerebral circulation is involve din producing a convulsion. This is doubtful and unproved at least. The same may be said about ligature of carotid or vertebral arteries.

WESTERN CANADA MEDICAL JOURNAL

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EDITORIAL

Infant Mortality

Unfortunately, owing to the lack of reliable statistics of Infant Mortality in the West, we cannot compare the state of affairs in Western Canada with other countries at present. This, we hope, will be possible shortly. It is well to compare ourselves with others, and not talk of healthy climate, plenty of work for all, etc., etc. Let us see if we are making the best of such conditions and are able to render a good account of our stewardship. Or are we so delighted with the apparent prosperity of the majority, forgetting the undercurrent which may eventually drag us down? It has been said success is gained by profiting by the mistakes of others, and observing their experiences. Really, our opportunities to do this are golden. But "evil is wrought by want of thought, as well as by want of means." We cannot, in a country that boasts it has no poor as in older countries, make the excuse of want of

means. But our babies die just as in the old world, and die mostly in the first month of life. The statistics we have of some parts show this fact. Without the difficulties and poverty of the old world we have the same evil. Truly has it been said the high infant mortality is the greatest blot on the present day civilization. No good talking of our wheat, our mines, and, even more absurd still, *Race Suicide* when so many infants die —and worse, die of *preventible causes* The thoughtless, heartless individual has said, "Let them die, and let us have the survival of the fittest." What is the fittest? The surviving is a question of physical care of mother and child—not mental. The physically weak may mentally be of great benefit to the nation. Through intelligent nursing and care, R. L. Stevenson grew to manhood; and Mrs. Browning , a delicate child, delicate woman, lived to write "The Cry of the Children," which was the means of drawing attention to and abolishing child slavery in the factories of England. This is an answer to such an elementary way of dealing with the question. Nowadays one can hardly pick up a paper without finding some article on *Race Suicide*—especially in the States; and yet in Chicago the death-rate of infants is appalling in spite of the hard work of the health authorities! They do their best, but, as Dr Bryce said in his speech at Edmonton, true success in health matters is only possible when there is the *intelligent co-operation of the public.* As yet the public do not realize this evil and menace to the good future of their land. Statistics are not generally read by the average reader. The matter should be brought forcibly before them by lectures (here we may note the good results from lectures by Dr. Seymour in the Northwest on Typhoid), by the papers, and the result will be an anxiety to find the remedy. The great number of deaths of young and middle-aged men in Chicago through the strenuous life is causing many to slacken a bit in their mad chase for wealth. But the attention of the public is much easier drawn to the number of deaths of prominent men than to the terrific number of deaths of unknown, poor, and under-a-month-old infants. Hence the lack of knowledge on this question. Statistics are what we need on the matter. Good, hard facts. No good making a boom about work and wealth in the country if the children do not flourish. The best asset that any nation

can have—and every day it is more realized—is *Health*; and the foundation of this is laid in *Infancy*. Time enough to discuss Race Suicide when we have setted the question of rearing the children *already here*. All writers on the subject seem to have found the causes of mortality much the same; and all agree to the terrible number of deaths through wrong and careless feeding, especially in towns. Also that in congested districts the danger from *flies* is not enough considered; from impure milk, ignorant nursing and lack of personal hygiene; and, even saddest of all, arriving in this world unfit for the struggle for existence. Here in a new country, a new cause may be found, but already we have the other causes. Our women need education for their duties as mothers, in nursing and feeding their infants. Pamphlets are all very well, but many cannot read them and many *won't*, preferring to be advised by older women whose babies and themselves have survived—in spite of their ignorance, not because of their knowledge. In England charity has stepped in, and schools for mothers have been started—one at St. Pancras, where not only are lessons, but a good meal a day given the mothers to enable them to nurse their infants themselves. France seems to have done even better. Owing to the great success of Professor Budin's "Consultations for Infants"—practically Schools for Mothers—the *State* is proceeding to the organization of consultations for mothers in all districts. Registration of birth is *compulsory* within three days. The great decrease caused by the above education has caused a general return to breast-feeding. It is the nation that will suffer. As Dr. Brock says, "He who pays the piper, must call the tune." Education is State-paid in Canada, so compulsory education of the older girls in nursing, feeding and personal hygiene of infants should form part of the curriculum as much as geography or cookery, and provision could be made for this just as easily as for the visiting teachers of cookery, drawing and singing. The subject should be undertaken by qualified medical authorities. The wonder is that the most important branch of knowledge is left to chance, and what a truly unskilled tutor is chance in some homes! Let us educate the young girls at schools and the older women at schools for mothers, as in France and Belgium, and now in England. The work of the sanitary authorities has done much to lessen the

death-rate. The impure milk and food is being taken up. One might mention that among Jews, whose women do not often work in factories and who nurse their infants themselves and also whose food regulations, if followed, are hygienic—the death-rate is not so high. Here immense sums are spent every year on *Agriculture* for the good of plants and animals, but how much for the good of the human species! Strange to say, all medical authorities are subservient to the *Minister of Agriculture*. Is this a suitable position? Wheat is evidently more important than the sowers! In London, often, the mothers must get a meal in order to feed their infants—but here, *Ignorance*, not poverty, is what we must fight—unless that poverty comes predicted by Proverbs, "like an armed man," because we have "slept and slumbered" over this vital question.

Every day in the papers one sees either the Dental, Pharmaceutical, or Veterinary Councils prosecuting men for practising in their particular field without the necessary qualifications. The general public do not seem to realize that the qualified registered medical practitioner represents skilled medical labor, and the quack *the unskilled*. We note also that druggists are arranging for *one standard of examination* for the Dominion. Let us hope that at the Canadian Medical Association meeting the matter will be enthusiastically discussed and that the day is not far distant when our profession, through being *one strongly united mhole* will also have its rights thoroughly protected.

* * *

The British Columbia Annual Meeting at Victoria was very successful, the increased attendance this year promising well for the future. During the short time much work was done and several good papers read, which we shall have the pleasure of publishing in the "W. C. M. J." shortly.

* * *

The quick response to the circular calling on the men of the Yale and Kootenay districts to form an Interior Medical Association is another proof that all that is needed in the West is *organization.*

* * *

Do not forget the next meeting of the Saskatchewan Medical Society at Indian Head in September.

LETTER TO OUR SUBSCRIBERS

May we again ask any subscriber who has any Personal or Medical News, or any item that may be of general interest to the profession, to send it in to the "Editorial Department." Statistics of Infectious Diseases and Vital Statistics are still much wanted. We wish not only the leading towns but all the small townships and districts. We do not need point out the importance of such statistics. Also please give as near as possible the population of the town or district. When giving deaths, kindly give details of *cause of death.*

A paper that would be of great interest not only to the West but the medical world would be "Infant Mortality in Western Canada;" another, "The Difficulty of Dealing With the Indians in Health Matters." We trust some subscriber will work these up.

Notices of meetings should be sent as soon as known to give time for arrangements to be made to attend. Contributions for current month should be in by the 7th inst. Please address such to "Editor-in-Chief," not just "Western Canada Medical Journal." This saves time and trouble.—G.O.H.

ANSWERS TO CORRESPONDENTS

Manitoba.—Yes, you can register at present in Sask; write Dr. Lafferty, Calgary, for particulars.

D.—A graduate (M.B.; C.M. or M.D.) Edinburgh 1884, could be registered in London now on proof of identity and presentation of Diploma.

Reciprocity.—Only those who have passed examination in Nova Scotia are eligible for Reciprocal privileges with Great Britain.

ACKNOWLEDGMENTS

We acknowledge with thanks the following Journals:—

The Journal of Mental Science (London); The Annual Report of the London County Asylum; The New York Medical Journal; New York Medical Record; The Canada Lancet; The Maritime Medical Times; The Lancet Clinic; The St Paul's Medical Journal; The Canadian Journal of Medicine and Surgery; The Canadian Practitioner and Review; The Bulletin of the Toronto Hospital for the Insane.

GENERAL MEDICAL NEWS

MEDICAL SOCIETIES

The Eighth Annual Meeting of the British Columbia Medical Association, which was held in the Parliament Buildings, Victoria, on August the 1st and 2nd, Dr. R. L. Fraser of Victoria, presiding, was a most successful one. About forty members from all sections of the province were present.

A number of very interesting papers were read and discussed by the members, not the least interesting being one by the Honorable Dr. J. D. Helmcken, of Victoria, who, in an interesting and witty address, described some of his experiences during fifty years of practice. A hearty vote of thanks was passed to the doctor, and he was elected a life honorary member of the Association. Also one on the Opsonic Index, which was opened by Dr. R. V. Dolbey, who has recently come to the province from London, where he has been working under Wright.

The question of the cure of advanced cases of pulmonary tuberculosis was discussed, and the report of a special committee appointed to draft a resolution was adopted. The report was as follows:—

Your committee consider that certain cases of advanced consumptives, which for one reason or another are unable to enter a special hospital, should have provision made for them in one public hospital, and therefore recommend that the following resolution be adopted and transmitted to the Provincial Government:—"Resolved—That hospitals in receipt of Government aid be instructed to make provision for the handling of a limited number of advanced consumptives."

Resolutions were also adopted approving of the proposed new constitution of the Canadian Medical Association, and also endorsing the proposition of establishing a journal in connection with the Canadian Medical Association.

Drs. S. J. Tunstall and O. M. Jones were appointed to officially represent the B. C. Medical Association at the Montreal meeting.

It was decided to make *The Western Canada Medical Journal* of Winnipeg the official organ of this Association.

The question of patent and proprietory medicines, which had come up at the last annual meeting, was again discussed, and the following resolutions were carried and copies ordered to be sent to the Provincial Government, Dominion Government, and the Canadian Medical Association :—

"WHEREAS it is morally incumbent upon every medical man to protect the public against disease and sickness as far as possible ; and

"WHEREAS the so-called patent medicines are sold without restriction throughout this province, thereby constituting a menace to the public health ; and

"WHEREAS, proprietary medicines, the composition of which are not known, are prescribed by regular physicians to a certain extent ; therefore be it

"RESOLVED, that the British Columbia Medical Association place itself on record as being in favor of the enactment of suitable laws for the protection of the public against patent medicines ; and

"RESOLVED, that it appoint a committee, whose duties it shall be to institute such measures, or support them if introduced by legislators ; and

"RESOLVED, that it strongly disapproves of the unscientific and possibly dangerous practice of prescribing the proprietary medicines ; and

"RESOLVED, that the British Columbia Medical Council be requested to communicate with all physicians of the province, drawing their attention to the undesirability of prescribing these secret proprietary medicines."

The text book on Hygiene in use in the public schools of the province was discussed, and its unsuitableness generally admitted. A committee, consisting of Drs. Brydone-Jack, Fraser and Drew, was appointed to look into the whole matter of the

teaching of Hygiene, etc., in schools, and report at the next annual meeting.

The election of officers resulted as follows:—President, Dr. I. M. Pearson, of Vancouver; vice-president, Dr. Douglas Corsan, of Fernie; Treasurer, Dr. J. D. Helmcken, of Victoria; secretary, Dr. R. Eden Walker, of New Westminster.

Next place of meeting, Vancouver, B.C.

On Friday afternoon the Association was entertained at a most enjoyable excursion to the Dominion Quarantine Station at Williams' Head. The party were conveyed to the station by the s.s. Madge, which was kindly placed at their disposal, and on arriving at the Head were received by Dr. Watt, the superintendent, and Mrs. Watt, and later entertained at a delightful luncheon. The details of the methods adopted when an ocean liner with infectious diseases on board arrived were fully explained by Dr. Watt and Dr. Andrews, his assistant, and all expressed themselves pleased with the thoroughness and efficiency of the system.

R. EDEN WALKER, Secretary.

The officers of the Interior Medical Association, recently formed, are as follows:—Executive: President, Dr. E. C. Arthur, Nelson, B.C.; vice-president, Dr. Wm. A. Sutherland, Revelstoke, B.C.; sec.-treasurer, Dr. S. Petersky, Sandon, B.C. Committee: Dr. J. H. King, Cranbrook, B.C.; Dr. F. P. Patterson, Trail, B.C.; Dr. S. Bonnell, Fernie, B.C.; Dr. J. S. Burriss, Kamloops, B.C.; Dr. B. de Boyce, Kelowna, B.C.; Dr. Jas. E. Spankie, Greenwood, B.C.

The following letter was sent July 29th, 1907, to all registered men in Yale and Kotenay:—

My Dear Doctor,—

As proposed in circular letter of Dr. Arthur, dated July 13th, 1907, a meeting of the members of the profession was held in Nelson on Thursday, 25th inst. Twenty-seven persons were present in person or by proxy, while as many more had signified their approval of the forming of the Interior Medical Association, open to all registered practitioners residing in Yale and Kootenay.

At the meeting it was unanimously agreed to organize the B.C. Interior Medical Association, to meet annually in July, date to be fixed by the executive and place by annual meeting. To defray necessary expenses an annual fee of one dollar was fixed. Rossland was named as the next meeting place.

There are over eighty registered practitioners in Yale and Kootenay. In all fairness they are entitled to two representatives on the B.C. Medical Council. Accordingly it was unanimously decided to place Dr. Sutherland, of Revelstoke, and Dr. Arthur, of Nelson, in the field as candidates for the next election to the Council.

The programme of next meeting was left in the hands of the executive.

You are respectfully urged to become a member of the Association at once by sending the fee of one dollar to the secretary. The meeting also passed a resolution urging all the practitioners to see that their annual dues to the Medical Council are paid in plenty of time to ensure them votes at the next election.

Yours truly,

S. PETERSKY, *Secretary-Treasurer.*

VITAL STATISTICS

	Winnipeg, June, 1907.	
	Cases.	Deaths.
Typhoid Fever	26	3
Scarlet Fever	36	1
Measles	33	0
Tuberculosis	3	2
Diphtheria	13	1
Mumps	4	0
Erysipelas	4	0
Smallpox	4	0
Total	123	7
Total number of deaths (from all causes)		162
Total births		303
Number of marriages		193

	Vancouver, July, 1907.
Deaths (36 children)	76
11 Accidents	
9 Tuberculosis	
4 Suicides	
4 Pneumonia	
Births	95
Marriages	115

	Brandon, July, 1907.
Births	27
Marriages	23
Deaths	7

MEDICAL NEWS

Dr. P. H. Bryce, of Ottawa, has been visiting Alberta in connection with the organization of the Provincial Board of Health. Dr. Bryce has been a pioneer in this work. In his address to the Canadian Club, at Edmonton, on the subject, he stated that in Ontario during the last twenty-five years the number of deaths from contagious diseases (though the population had greatly increased) had been reduced from over 3,000 to

under 1,500. He asked for the new Board of Health the co-operation of the people, very wisely pointing out that for the carrying out of the duties of any Board of Health successfully, the *intelligent* support of the citizens was needed.

As a result of the visit of Dr. Montizambert to the Coast, all municipalities at the Pacific Coast are now to be relieved of the maintenance of lepers.

The medical profession in Scotland has sustained a great loss in the death of Sir William Tennant Gairdner. Sir William was Professor of Medicine in Glasgow from 1862 to 1900. He was the first Medical Health Officer for Glasgow, and carried on the duties of this post as well as those of his Chair. In 1862 he delivered the first course of lectures on the subject of sanitation in Scotland. His absorbing interest in the subject led to his carrying out a scheme for establishing a Health Department for Glasgow.

At Crystal City, Manitoba, a man was convicted of practising as a veterinary surgeon without the necessary qualifications, and was fined $50 and costs, or one month. The Veterinary Association of Manitoba laid the information. Thus the animals are protected!

Dr. Binguay, a dentist in Vancouver, was recently fined $25 and costs on the charge of illegally practising dentistry. He was a member of the dental profession of Nova Scotia, but had not qualified before the British Columbia Board. Contending that the work he did was done while articled to a Vancouver dentist, he appealed, and his appeal was sustained. Judge Cane held that as he was an articled student he was acting within the statute.

D. P. McCall, Deputy Commissioner of Education, has been appointed to act as Registrar for the purposes of the Act to establish and incorporate a University for Saskatchewan. The first convocation is to consist of all graduates of any University in His Majesty's Dominion, resident in the province three months prior to October 16th, the date of the first meeting of convocation at Regina. Registration must be made three weeks before date of meeting.

Professor McKendrick, who has lately retired from the Chair of Physiology at Glasgow, is to have his services recognized by

a presentation of his portrait and the furnishing with suitable equipments of a laboratory for experimental physiology in the new Physiological Buildings of Glasgow University.

Dr. McArthur, of Ottawa, has been travelling through the interior of British Columbia and Vancouver Island gathering samples of water from various mineral springs. He is to make an analysis of the different waters with the view of determining their medical values.

Dr. J. Hutchinson, of Montreal, lately made a trip of inspection of the 320 miles of grading between Saskatoon and Edmonton. He reported the health of the camps good. There are four hospitals and 16 medical men on the grade.

Any person coming into the city of Edmonton now, and taking up residence in temporary quarters or in a tent, must notify the Board of Health, and upon payment of $1 fee he will be given a certificate. Also he must have the number of his license inscribed on his tent or temporary quarters. This is done to enable the Health Officer to enforce sanitary measures.

There is a proposal that the three Western Provinces should unite and have a Western University equal to any in the Dominion.

Three delegates from Toronto, three from Quebec, and one from each of the other Provinces, are to meet in September at Toronto to form the Canadian Pharmaceutical Association to provide a uniform standard of education, interprovincial exchange of diplomas, and the establishment of a Canadian formulary for unofficial preparations.

The Alberta Veterinary Association are taking vigorous steps to enforce the proper sanitary conditions of dairies.

The Attorney-General of Manitoba has recommended that an order-in-council be made declaring pure carbolic acid and phosphorus *poisons* within the meaning of the Pharmaceutical Act.

At a meeting of the Alberta Medical Council, held at Edmonton, it was decided that as a result of the decision of the Supreme Court of Canada, given on the 7th May, 1906, declaring the Alberta Medical Act *intra vires* and legal, all persons registered under the College of Physicians and Surgeons of the

North-West Territories since the date of the passing of the Alberta Medical Act—9th May, 1906—must comply with terms and pass examinations.

There is said to be a great need at Port Arthur of a Government medical officer to examine the immigrants from the United States.

HOSPITAL NEWS

The by-law to vote $10,000 for building an Isolation Hospital and a grant of $5,000 to the new wing of the General Hospital, was carried on July 31st by the Medicine Hat Council.

At a meeting recently held to discuss plans for establishing funds for a public hospital in Vermilion, Drs. Bryan and Burris moved that the town be requested to pass a by-law for the issue of debentures for building a hospital and securing a site for the same.

The new public hospital at Edmonton is to be called the "Royal Alexandra."

The Lady Minto Hospital of Melfort, opened May 15th, 1906, was built by local and outside contributions. The cost was about $8,000. The Masons, Oddfellows, Independent Foresters and Orangemen each furnished a ward of the institution. The building is heated by hot air. There is accommodation for fifteen patients, and a staff of four, and it is conducted by the Victorian Order of Nurses. The lady superintendent is Miss Heales. The three medical men of the town—Drs. Grant, Shadd and Spence—give the medical attendance required. We are glad to hear that already the erection has been more than justified by the good work that has been done.

At a recent meeting of the Vancouver General Hospital Board the subject of establishing an Oriental Ward was discussed, and a committee have taken the matter up. Dr. Keith was appointed to the regular hospital staff in the place of Dr. Young, deceased.

The Isolation Hospital at Richmond Park, Strathcona, is now in thorough working order. At present the town is reported to be in a highly satisfactory health condition.

A three-storey building is to be erected at Pakan, and will be known as the Methodist Hospital. The need of a hospital in this district has been greatly felt.

$2,700 has been handed to the Hospital Board of Management as a donation to the building fund by the Ladies' Aid of the new Railway, Marine and General Hospital of Port Arthur, as a result of their "Made in Canada Fair." The ladies are to be congratulated on the success of their work.

The Board of Management have decided to build an addition to the Victoria Hospital, Prince Albert. The additon will be double the size of the hospital, and will cost $18,000. When this is completed Prince Albert will have one of the largest and best equipped hospitals in the West.

The Board of Control, Toronto, is considering the establishment of a municipal hospital for poor patients instead of making annual grants to the various hospitals. The question arose when the discussion over the $200,000 grant to the city hospitals was being discussed. The suggestion has been favorably received, and Dr. Sheard, the Medical Health Officer, is to make a report.

A by-law to grant a bonus of $20,000 to the Order of Grey Nuns to assist in building a hospital at Regina was framed by the City Council, on the terms that the building cost at least $100,000, and that it should be ready by 1st July, 1909, and is to be voted on by the burgesses on 8th August, 1907.

The Board of Winnipeg General Hospital, on recommendation of the medical staff, have decided to appoint a nurse to assist in the X-ray department of the hospital.

PERSONALS

Dr. Lafferty, Calgary, has been elected chairman of the Alberta Provincial Board of Health.

We are glad to report that Dr. J. R. Jones, of Winnipeg, who met with a serious accident last winter, the results of which necessitated a complete change and rest, for which he went East and to England, has now returned greatly improved in health. His son, who is at Cambridge University, accompanied him.

Dr. Amos, of Lloydminster, physician to the Indian Department between that town and Shoal Lake, has taken Dr. Cassels into partnership.

Dr. Archibald, of Strathcona, is visiting Vancouver, B.C.

The following medical men from Canada are attending the B. M. Conference at Exeter, England:—Dr. Birkett; Professor Starkey, of McGill, Montreal; Professor Irving Cameron, Dean Reeves, Drs. Baines, Bruce, Maybury, Temple, Oldwright, Starr, Doolittle, of Toronto; Dr. Burt, of Paris, Ont.; Dr. Atherton, Fredericton, N.B.

Dr. G. C. Arthur, of Nelson, has been elected president of the Interior Medical Association of B.C.; Dr. Sutherland, of Revelstoke, vice-president; and Dr. Petersky, of Nelson, secretary-treasurer.

Dr. E. Delong has gone for a hunting trip in the foothills of the Rockies.

Dr. William Workman, assistant medical superintendent of the Public Hospitals for the Insane at New Westminster, B.C., has resigned, and his successor is Dr. Clare of Toronto, formerly of Woodstock Asylum.

Dr. Wishart, of Toronto, is, we are glad to hear, recovering from his illness due to blood poisoning.

Last month, Dr. Corbett, Edmonton, was given instead of Dr. Cobbett, as a member of the Alberta Provincial Board of Health.

Dr. Corbett, late of Winnipeg, is starting practice at Snowflake.

Dr. Weagart, of Calgary, has been visiting friends at Portage la Prairie.

Dr. Weld, of Vancouver, B.C., left July 16th on a trip to England.

Dr. H. Auld, Regina, has been visiting Winnipeg.

Dr. and Mrs. Archer, of Lamont, have been visiting Edmonton and are going on to the Coast.

Dr. Crawford, of Stettler, will in future reside at Innisfail.

Dr. Carter, of Victoria, B.C., has gone to Europe.

Dr. J. C. Black, of Regina, has returned from his visit to the East, during which he visited Montreal, Rochester and Chicago.

Dr. Arthur Wilson, late of Alix, Alta., has entered into partnership with Dr. F. T. Bennett, of Fort Saskatchewan.

Dr. Hopkins, of Prince Albert, has been visiting his parents at Moose Jaw.

Dr. J. Russell, for twenty years superintendent of the Insane Asylum, Hamilton, has been visiting Calgary.

Dr. J. M. Hutchinson, Winnipeg, has now returned from his trip to Vancouver and Victoria, B.C.

Dr. W. H. Reilly, a graduate of McGill and post graduate of New York Post Graduate Hospital, has started practice in Winnipeg.

Dr. George, of Innisfail, has settled at Red Deer.

Dr. V. E. Casselman, of Napinka, Man., proposes settling in Vancouver, B.C. Dr. Casselman has practised in Napinka for about seven years, and his departure is greatly regretted.

Dr. McDonald and family, of Wapella, are visiting Brandon.

Dr. J. E. Tyndall has opened an office in Brandon.

Dr. McIntyre, Winnipeg, is taking a holiday, visiting Alberta and B.C. Dr. Kerr, late of the General Hospital staff, will take charge of his practice during his absence.

Dr. W. A. Gray, of Smith Falls, and Dr. Douglas, of Toronto, are touring through B.C.

Dr. J. W. Armstrong, M.P.P., Gladstone, has been visiting Winnipeg.

Dr. Gibson, of Calgary, has returned from his holiday.

Dr. and Mrs. Radcliffe, of Moose Jaw, have gone for a month's holiday to the Coast.

Dr. F. C. McTavish, of Vancouver, has returned from his trip East.

Dr. Argue, M.P.P., Grenfell, Sask., has been visiting Calgary and the West.

Dr. Seymour, of Regina, who has been seriously ill with influenza, is, we are glad to say, greatly improved, and was visiting Winnipeg recently.

Dr. Hobson and family, of Strathcona, have been spending a holiday at Cooking Lake.

Dr. Donovan, of Red Deer, has disposed of his practice to Dr. Rowntree, of Toronto, and will in future practise at Edmonton.

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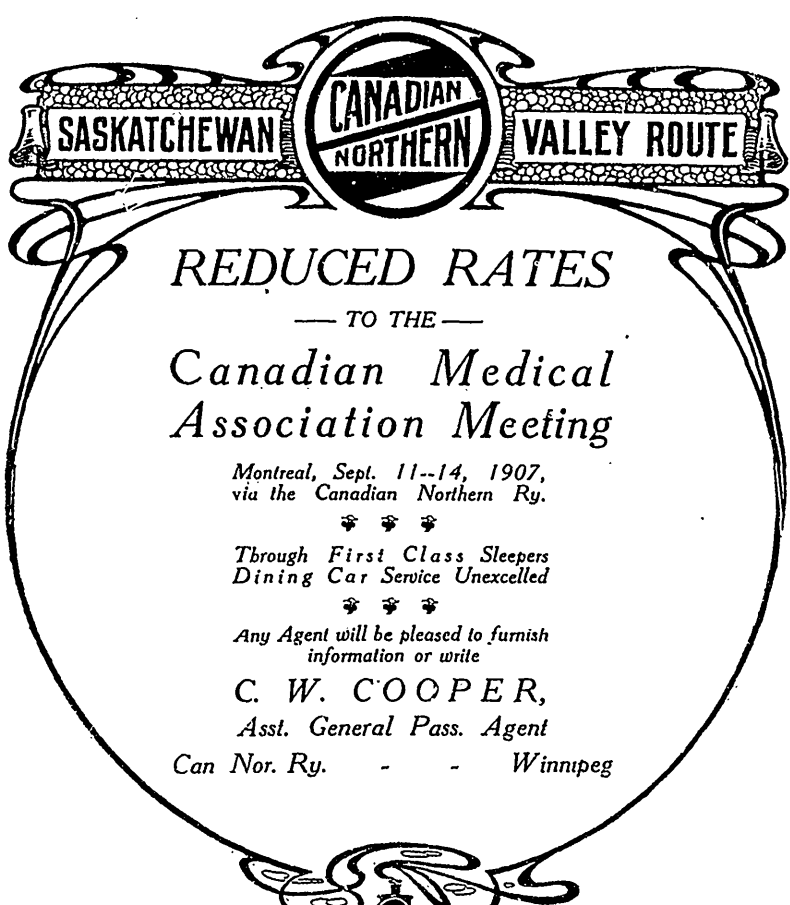

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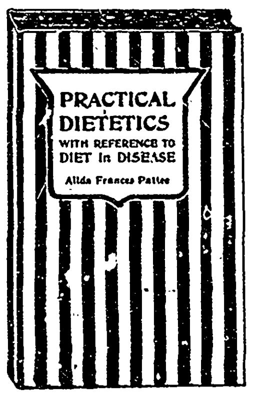

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