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NOTES

ON

DISEASES AMONG THE INDIANS

FREQUENTING

YORK FACTORY, HUDSON'S BAY.

BY

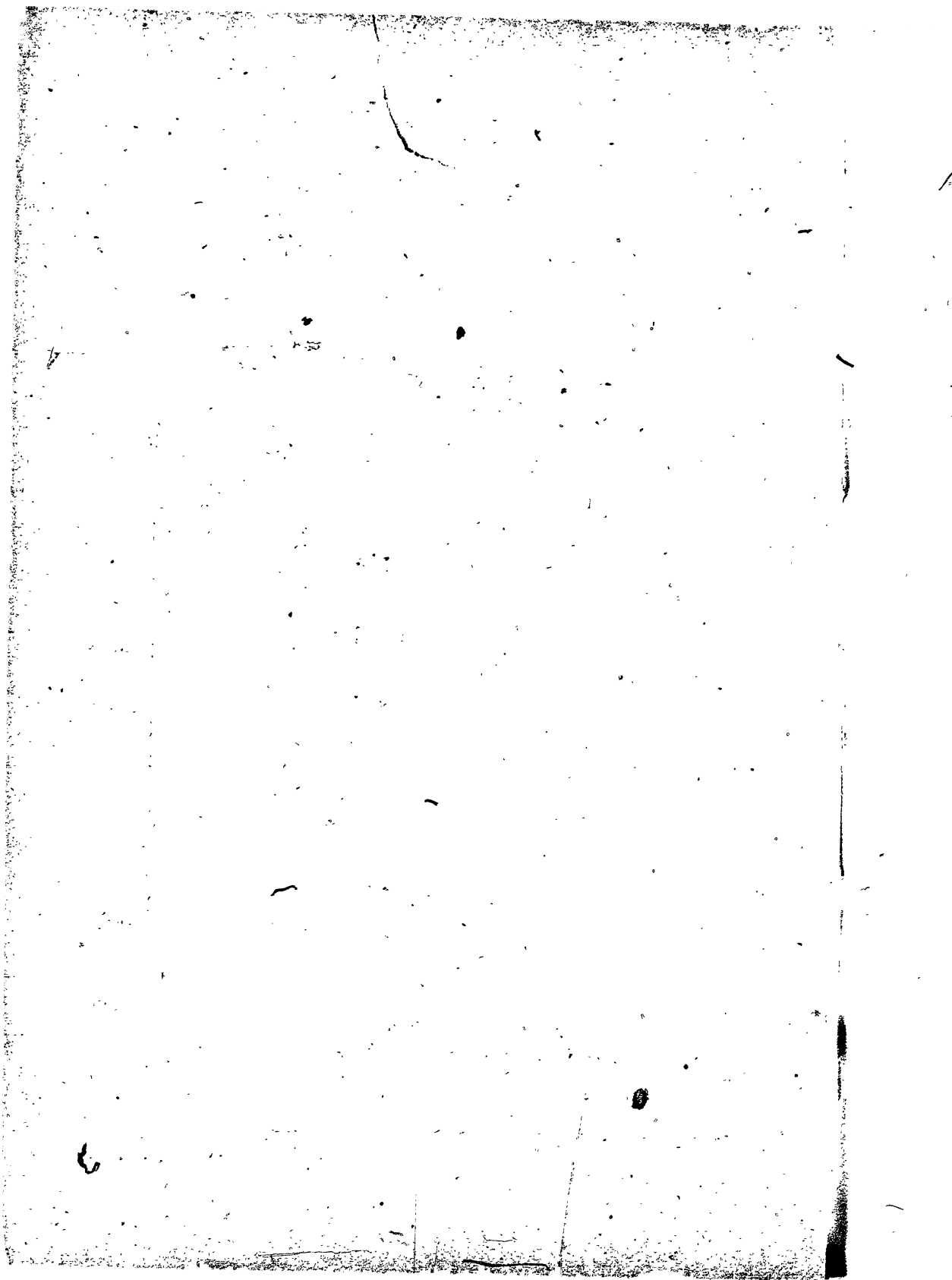
PERCY W. MATHEWS, M.R.C.S.E., M.R.C.P. (LOND.),
MEDICAL OFFICER TO THE HUDSON'S BAY COMPANY.

(Read before the Medico-Chirurgical Society of Montreal, February, 1885.)

Montreal:

GAZETTE PRINTING COMPANY.

1885.



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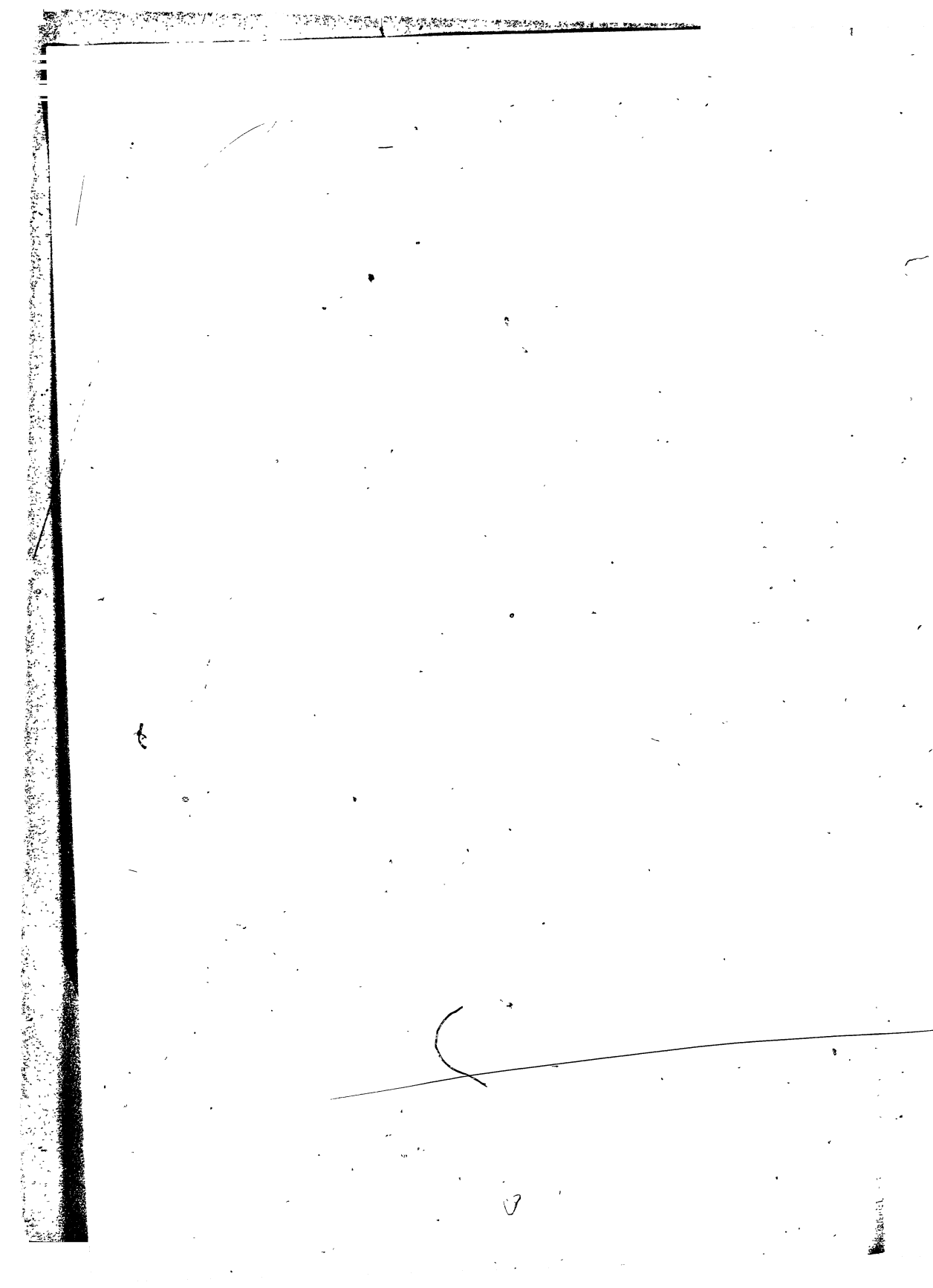
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NOTES ON DISEASES AMONG THE INDIANS FRE-
QUENTING YORK FACTORY, HUDSON'S BAY.

By PERCY W. MATHEWS, M.R.C.S.E., M.R.C.P. (LONDON),
Medical Officer to the Hudson's Bay Company.

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In treating of diseases in the district under consideration, it is impossible, even were it desirable, within the limits of this paper to touch upon other than those which are most common, and to refer to any modifying or exaggerating influences which endemic circumstances may seem to have over them. Therefore, for the purpose of ensuring what I deemed to be a fair average, I have taken account of the last twenty years (1864-84), and thereby ascertained the death-rate to be 12 per 1,000 of the Indian population, which somewhat exceeds 500; but it is necessary to explain that this refers to registered deaths at York settlement only, as it is for no longer a period than the space of six weeks or possibly two months that this population is gathered in and around York, though it must be recognized that the period in question may be considered the most unhealthy of the whole year—June, July and August. Hence, during some ten months, the population is reduced possibly by some 300 souls; although, when it is practicable, sick Indians are brought in to the local hospital at any time of the year. Still, if all deaths in connection with this population were taken into consideration, the ratio per thousand, as far as I am able to ascertain, would

be some two or three in excess of that already stated. Before dismissing the subject of population, it may possibly be interesting to note that the birth-rate for the last 20 years is 3.2 per cent. in excess of the death rate, or 44 per thousand compared with 12 per thousand.

I will now proceed to classify those diseases which are most fatal. Bronchitis and pneumonia come first, representing 35 per cent. in the death rate. Next, tubercular disease, including scrofula, tabes mesenterica and pulmonary phthisis, 30 per cent. Heart disease, including rheumatism, 10 per cent. Infantile convulsions, 10 per cent.; and various causes, 15 per cent. Before I refer to the first mentioned (bronchitis), it is, I think, desirable to describe briefly the position and surroundings of York, as indicating possible climatic influence. York is situated on the west bank, five miles from the mouth of the Hayes, and some six miles to the east of the Nelson river, and is surrounded on the north-west and south by maskeg or swamp, with small tamarac growth here and there, and is fully exposed to gales from all quarters, but more particularly the east—a raw, biting wind sweeping over Hudson's Bay. In the month of April, when the snow begins to melt and stagnant pools to form, an epidemic of catarrh, influenza, bronchitis, or, certainly, some malarial cachexia will very shortly make itself evident, giving rise to dyspepsia, diarrhoea or dysentery. When we consider the organisms of disease that must evolve from the surrounding swamp by decomposition of both animal and vegetable life, it cannot be difficult to realise at least some poisonous principle at work. And, again, later on, when the sun attains almost tropical power, some epidemic of a very serious nature is certain to develop. I may bear this out by only instancing the month of August of 1883. An epidemic of capillary, vesicular and acute bronchitis attacked upwards of 200 people, including one case of acute phthisis and four of vesicular emphysema; 16 deaths ensued in less than one month—acute phthisis, 1; emphysema, 1; bronchitis, 14. My small hospital could only admit ten patients; therefore, the majority of these poor Indians were treated in their wigwams, pitched here and there on rising ground, the

surrounding vegetation of itself necessitating a damp and heated couch, to say nothing of the scanty protection afforded by the nature of the tent itself against the heavy falls of rain. The only distinctive treatment I adopt is the expressed oil from the liver of the Myri (*Lota maculosa*), a fresh-water ling abundant in the rivers and lakes of the Hudson's Bay territories.

Pneumonia.—In connection with pneumonia, I would also say a few words on epidemic disease at this place. I landed at York in the summer of 1878, and found awaiting me 17 cases of pneumonia in their several different stages. (There had been others which were then convalescent.) This may instance the epidemic form that disease assumes in a small isolated place like York. When the surroundings, mode of living, and nature of food are very much the same, individual susceptibilities seem to be done away with, and disease then takes a generally aggressive character.

To bear out the effect of isolation regarding nervous development, even axe wounds are popularly said to be infectious. When one does occur, it is followed by many—the whole mind being absorbed in the contemplating of the “coming wound,” and the nervousness induced thereby often consummates the catastrophe.

Phthisis.—Coming next to pulmonary phthisis, it is a matter of some surprise that phthisis is not more prevalent among the Indians, when one takes into consideration that nothing is wanting to exaggerate their strumous habit or develop it more generally as complicated with scrofula. Within the last six years, I have had three cases only—one acute phthisis and two tubercular phthisis. The first case was that of a woman aged 40, who lingered on in the bright and bracing winter, with perforation and painful dyspnoea, till the coming spring developed an unmanageable diarrhoea and death ensued. The second form, acute phthisis, being rare, I will briefly touch upon the outlines of the case referred to. A man aged 50, whose history was phthisical, was admitted to the hospital for scrofulous enlargement of the knee joint. Symptoms of phthisis suddenly set in, profuse sweating and diarrhoea markedly; tubercle formed in the lower lobes of both lungs, and rapidly spreading upwards, death from exhaustion took place in five weeks. The last case is that

of a woman aged 38, who has been suffering from tubercular phthisis for upwards of seven years; at times she has severe attacks of hæmoptysis, taxing my utmost efforts to check; on one occasion common salt was used, almost as a last resource, and succeeded; the sputa contained most of the elements of phthisical sputa. She then became pregnant, and as she advanced in pregnancy she improved in health; the cavities broke down and healed, and now, excepting an occasional attack of hæmoptysis, she is comparatively well and able to get about.

Before concluding my remarks on tubercle, I may mention that several cases of death have taken place from tubercular meningitis and tabes mesenterica.

Scrofula will now be referred to briefly. Whatever position is tenable regarding its somewhat debated cause, assuredly York can boast (save the mark!) of both hereditary influence and every other excitant, only excepting syphilis. Diseased nutrition in infancy; food insufficient in quantity, innutritious in quality, and badly cooked; want of cleanliness, intermarriage, prolonged lactation (extending to 3, 4 and 5 years I have noted, and even longer is reported), nasty living, and, in short, every adjunct to the perpetuating of this terrible bane to humanity. The more marked characteristics in the scrofulous Indian babe are: eyes somewhat projecting, oblique, edges of eyelids everted, lower nearly straight, with considerable arch of the upper lid, and colorless; development of *alæ nasi*; early cutting of teeth and soon becoming carious; later on, forms of strumous dyspepsia show themselves, more or less modified; purulent discharge from the ear and nose; vesicular eruption of the head; enlargement of the glands of the neck and tonsils, and again of the *axillæ*; and *aphthæ*, very common. The raising of the temperature in scrofula, with tubercle, can be thoroughly borne out at York. The Indian child, if weaned early, which is exceptional, is fed on uncooked oatmeal and often grease, and very soon partakes of its parents' food. Scrofula, without tubercle, so far as it refers to glandular swellings, more or less ulcerations and indolent abscesses, is far from uncommon, and several cases of strumous disease of joints have also come under observation during

my practice at York. I have also had several cases of posterior spinal curvature, and one rare case of anterior curvature. Scrofulous ulcers are also met with, and are most troublesome to treat, the main difficulty being to secure cleanliness in dressing. I necessarily place great reliance on constitutional treatment and wholesome, regular food. As to drugs, the salts of iron and potash are very efficacious, and carbolic acid and permanganate of potash very excellent as lotions. I may mention here that I have met with decided success by using the syrup of the iodide of iron with young children.

Heart disease has to be referred to next, but I consider that it could be more correctly mentioned as a complication of rheumatism, inasmuch as I have only met with two cases of organic disease, both mitral; but functional, cardiac derangement is very common, and may probably be attributed to many causes. In particular, dyspepsia and excessive and continuous walking and running. Applications are continually being made to me for "heart medicine," which generally consists of some simple ethereal mixture. As one cannot be in a position to remove the exciting cause, the efficacy of the treatment as regards the allaying of the symptoms is somewhat difficult.

Old age, although a cause of death, and can hardly be classed as a disease, is seldom attained to any great degree among the Indians. Within the last twenty years there are four instances, respectively estimated at 80, 85, 90 and 100; the latter I should question. When we take into consideration the life the Indian leads, the bitter winter and scanty clothing, the continuous exercise and precarious food supply, it cannot be wondered at that longevity is not often attained. But when the history of those around a settlement is examined, the wonder is still greater that even exceptional age should be reached. Adopting the habits of the white man, without his precautions, and drinking to excess of tea, whenever they can, in place of the spirituous liquors which they formerly indulged in whenever they could get them, taking to living in houses, instead of following their old wandering, open-air life, and thus being tied to one place, a lack of food-supply follows, and a condition of semi-starvation is sustained for

years, only varied by a surfeit of venison, white bear's meat, or any food that happens to be temporarily plentiful. Some form of disease sets in, and when spring comes, their surroundings are permeated with emanations of offensive matter, for which, reeking putridity is not too exaggerated a term; and lying in their close, hot houses, their scurvy breath rivals the offensiveness of the immediate outside air. Can it then be wondered at that comparatively early dissolution is the result, and that the bright, beautiful winter, with its cumulative suspended poison, is but a temporary negation of the disease-laden swamp of summer.

Cholera.—During the month of May, 1884, I had one isolated case of malignant cholera, originating in the patient (a child) drinking stagnant water or drainage (for there are no sewers here) around its dwelling, the symptoms setting in suddenly—continuous diarrhœa (rice-water evacuations) and vomiting, cramps, coldness and lividity of body, the marked facies cholericæ, and death within 15 hours. For treatment, I tried calomel and jalap, iced milk, warm bath, hot bottle to extremities, sinapisms to abdominal walls, and all sanitary measures that were practicable with such surroundings and with constitutions so vitiated. In the treatment of a disease like this, when its first principles are undecided, and the subject of much controversy among the highest authorities of the past and present, a disease at whose call the whole pharmacopœia has at one time or another been tried, and which has incontestably been acknowledged to have no antidote, chance recoveries being accredited to chance “specifics,” can it be wondered at that the practitioner soon becomes involved in a maze of perplexity and bewilderment? I would say, in all humanity, that if our endeavors, while awaiting the result of the philanthropic Pasteur's investigations, were directed to the destruction of the agencies, where practicable, through which the dread disease operates, instead of essaying the extravagant treatment advocated by many authorities, that obnoxious word, *empiricism*, would not suggest itself. The blind man at Laporta employed himself in mixing colors for his brother painters. It was acknowledged that he often made mistakes, yet he was much encouraged and esteemed by his brethren of the Grand Academy.

At the time of writing, I have several cases of malarial dysentery. I maintain somewhat the same treatment as referred to in cholera, and hitherto with success. Meningitis supervening in one case, has been relieved by the bromide of potassium. And, lastly, I would say that with such *materies morbi* around us, we can but arrogate an especial providence to ourselves, which permits one of us to escape. I will now touch upon various diseases endemic to this district.

Dyspepsia is the first that must come under notice, including, as it does in local phraseology, every internal organ from the gullet downwards. Among some of the causes of this disease, which are to a certain extent characteristic of the Indian mode of life, I may note improper and uncooked food, largely diluted while masticating, "taking to the track" immediately after an excessive meal, and abuse of tea. I cannot but think that the concentrated and long infused potions of tea taken at short intervals are a fruitful source of dyspepsia, the tannin probably proving injurious to the stomach and the theine to the nervous system; and last, and certainly not least, but still natural to the Indian, surfeiting himself whenever opportunity occurs. I once heard it remarked by an Orkeyman, "that they not only filled their stomachs, but every part of them," the Orcadian intellect only realizing a vacuity in regard to the animal economy. In reference to dyspepsia, it is as well to allude to diseases of the teeth as often dependent on gastric derangement, acting as they do such an important part in the digestive system. It may possibly be interesting to make a comparison between the "good old times" and the present day in connection with the teeth of the Indian. I have only had an opportunity of examining six skulls of ancient Indians during my residence here. All of them are sound in every respect. One of them, which is before me as I write, and which, judging by the worn condition of the molars, belonged to an old Indian, is perfect; not a trace of caries; teeth regular and well formed. Six cases are, I grant, hardly sufficient to be typical, but they show a very marked contrast to the teeth of the present day. White, indeed, the latter are, which may be partially attributed to their habit of chewing

“pitch” (gum of the *Abies balsamar*), but sound they certainly are not. In this respect, Eastern and Western nations differ in their views of æstheticism and conservatism, for the betel-nut and “pitch” have somewhat marked opposite properties. I may state that I have extracted a very considerable number of teeth here at York, though such assertion is slightly in contradiction to that appearing in a Saskatchewan paper of February, 1884, “that the first Indian tooth in the country had been that day drawn.” In all deference, I must maintain that the Indians suffer a great deal from toothache, which I think to be in a great measure due to dyspepsia, as has been borne out by treatment. Excessive smoking cannot be laid to their charge. The dyspeptic symptoms are generally characterized by anorexia, foul or furred tongue, flatulency, heartburn, palpitation, sense of fulness in the epigastrium, and invariably by constipation. The treatment is simple. The compound rhubarb powder, followed by some chalybeate tonic or mineral acid, generally answers well; diatetic treatment being impossible with a people who think drugs can do everything. In connection with this subject, I may mention that both aphthous and ulcerative stomatitis are distinctly epidemic every year. I consider the chlorate of potash a remedy that can be almost deemed a specific.

Rheumatism.—With regard to rheumatism or “sore bones,” I cannot but think it is more common now than in olden times, from what I hear. Whether this is owing to the more enervating life and different habits of the Indian, or possibly to inferior clothing and the more extensive use of tea which now prevails, or to the settlement being more exposed than in old times to both malarial and climatic influence, owing to the cutting down of wood for many miles around, it is difficult to say; possibly it is due to all combined. Still, it is not here fatal of itself, but its complications are frequently so, involving cardiac lesions in several cases. Synovial rheumatism, with metastasis, is met with, but not commonly; and as age advances, in some few cases I have noted an arthritic form, producing enlargement at the joints and the usual constitutional febrile symptoms. The treatment is necessarily according to circumstances, both iodide

of potassium and salicin acting well ; but the Indians themselves have great faith in local treatment, probably theorizing that the rapidity of the cure will be in proportion to the strength of the " rubbing stuff."

Epilepsy is a disease to which the Indians are peculiarly subject, and when it is realized that four per cent. of the population are afflicted, the statement is warranted. I must note that 50 per cent. of the deaths that take place at York are of children under five years of age, and those deaths have almost, without exception, been of cases who labored under a scrofulous or epileptoid diathesis. To proceed, there were six cases of idiocy at one time (four in two families), two of epileptoid convulsions and one of epileptoid insanity. The first case of convulsions was a somewhat strange one. An Indian, aged 30, was attacked by the fit *with but little warning*. Perfect prostration ensued for about half an hour ; then violent convulsions followed by his seeming to pass into a condition of acute mania, then seizing hold of the first thing (on more than one occasion an axe), would rush off to the woods and commence felling trees right and left. This individual being a tall, powerful man, was not considered harmless, so he was somewhat expeditiously despatched to Winnipeg.

The next case of convulsions came within my own cognizance. Heavy doses of bromide of potassium (15 to 20 grs. three times within the twenty-four hours) apparently prevented a recurrence.

The next case is a remarkable one of epileptoid insanity, and the instance of recovery must excuse a somewhat lengthy account of it:—An Indian, aged 20, was sent to me as insane. He was confined to a small building, erected for a jail, two keepers having been provided, and everything removed from an inner room of the jail. I examined him, and, possibly from excitement, epileptoid convulsions set in during my first visit. In the afternoon of the same day I again visited him, and having had some experience with lunatics in the Channel Islands Lunatic Asylum, I did not anticipate much trouble, as he was a slightly built man ; but before the door was bolted he had torn down a shelf and leaped at me. I avoided the shelf, as it was a big bit of wood,

and tripped him. I then realized that moral suasion would not work, so there and then, though with difficulty, I straight-waist-coated and manacled him. After that day he never attempted to attack me, but for the first two months fits were of frequent, daily occurrence, sometimes several in the day, during all which time he was utterly insane. As to treatment, the tincture of Cannabis Indicus, with bromide of potassium, seemed to modify and in some measure control the fits; and regular, wholesome food, daily exercise and cleanliness, together with firm, consistent kindness, contributed largely to his physical improvement. Latterly he was taking 15 grs. of bromide of potassium daily, during which period the fits and general excitement decreased; then he began to appear pleased at seeing a visitor, and gradually the raving gave way to something approaching intelligible utterance. This went on until the eighth month, when sometimes he talked sensibly, but again at times wildly. At the beginning of the ninth month he had expressed a wish "to go to the doctor's house," so he was brought, and the first thing he "felt it right to tell me was that his veins were returned to him," and he was anxious to work. Expressing my pleasure, but with some close watching, I allowed him to try, but he soon gave up, saying that "his bones were all broken." However, with continued care and treatment, he became what he is now—a rational, good, hard-working, and, further, what is strange in an Indian, a thoroughly grateful man. I am fully aware that epilepsy with insanity is stated to be incurable. I can only assert that the foregoing is a faithful *resumé* of the case, and that epilepsy with insanity in this case was and is cured. This is a practical argument, as the man has been working for two years without a relapse.

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* Before dismissing epileptic and epileptoid disease as endemic at York, I would lay greater stress on the term *endemic* than perhaps its casual employment indicates, basing the *rationale* of my assertions not only on hereditary influence, consanguineous marriages, excessive sexual intercourse, and other recognized causes generally, but to some considerable extent upon climatic, and thereby miasmatic, influence. For the sake of exemplification, it is necessary to be somewhat discursive. In the first

instance, lactic acid was and is rightly presumed to be the cause of rheumatism, because its toxicological effect on the living animal produces one of the most striking complications of rheumatism—endocarditis; but it is equally allowed that climate and surroundings generate the same poison. Again, with endemic cretinism, the more generally stated cause is endemic brochocele and consanguineous marriages, though miasmatic poisoning is equally allowed. Instances could be greatly multiplied, but hardly so within the scope of unpretending notes. Therefore, taking into consideration that some swamps, marshes and jungles produce cholera, some yellow fever, some ague, in malarious districts, the question seems to me to devolve itself into one only of suitable conditions of moisture and temperature. It is, I think, feasible to admit that epilepsy, allowed as it is to result from the poison of rheumatism, scarlet fever, diphtheria, &c., may result from a poisonous principle that produces these diseases. Then may not the brain equally, directly or indirectly, be influenced by a like poison of a miasmatic nature. In short, if so many diseases can be traced to miasmatic influence, as a direct exciting cause, may it not be recognized as an exciting or exaggerating influence in epilepsy, since epilepsy is itself attributed to such varied causes, themselves induced by malarious poisons.

Fevers.—It may seem somewhat strange, yet it is most fortunate, that of late years, beyond symptomatic fevers, this class of disease is almost unknown at York; one death only, from measles being recorded. Many years ago typhus fever “was landed” by a ship and carried off many of the natives; and again, 1862-3, thirty-five deaths took place from scarlet fever, introduced originally from Manitoba.

Skin Diseases.—It may be noted of diseases of the skin, that they have, without exception, a scrofulous diathesis. Enveloped as the Indians are with the dirt of ages, skin diseases seem hardly to have a fair chance of satisfactorily developing; or such immunity may possibly be attributable to the antiseptic qualities of mother-earth. Were an isolated portion of cuticle to be examined at any time, the enterprising histologist must needs relegate its owner to the order of the pachyderms, and

the condition of their feet is certainly suggestive of that terrible form of leprosy—*elephantiasis*. Not long since an old Indian was asked when he last washed. “Ah! that was many years ago, when I was young and foolish,” was the still regretful reply. I am not aware of distinctive skin diseases among the Indians, with the exception of, perhaps, one or two, which I will touch upon, together with the more marked of those that are met with.

A few cases of *Erythema* and *Urticaria* are noticed. *Herpes labialis* is very common, it being induced by the action of the sun and wind, and exposure generally. Vaseline gives great relief. I have not met with a case of *shingles*.

Strophulus.—The children are particularly subject to a very aggravated form of this generally considered simple “tooth rash,” but at York it assumes a distinctive character of *Lichen Scrofulosum*, and is extremely hard to treat.

The only form of *eczema* I have noticed among the Indians is *Eczema Marginatum*, a seemingly modified form of *Tinea circinata*, closely allied to the Burmese ringworm, occurring about the fork of the legs, near the junction of the thigh and scrotum, and is caused by dirt, heat, friction and moisture. It yields readily to treatment with a solution of bichloride of mercury (2 grs. to the ounce of fluid), or a strong solution of hyposulphite of soda (5vi ad 3vi of fluid), washing well with soap and water previously.

Mal de Raquet.—“Snow-shoe sickness” is necessarily commonly met with at York. In some cases, and where it is necessary “to carry on” or continue the journey, I have applied the moxa.

Snow-blindness.—The upward reflection from the snow of the strong actinic sunlight of spring soon sets up an inflammatory action of the optic nerve. The little intolerance of light and the sense of “sand in the eyes” is most painful. Cooling sedative lotions, or warm decoction of poppy capsules, and perfect protection for the eyes is the general treatment.

Scurvy is frequently met with among those of the Indians who live in houses. In fact, in winter, I may say that almost every disease met with is complicated with the scorbutic taint.

Undoubtedly the sameness of diet, use of salt meats, lack of fresh, exposure to impure air and want of sufficient light exert a strong predisposing influence. In the more serious cases, the salts of potash and iron are most efficacious. As anti-scorbutics for distinctive treatment, the cranberry (*Vaccinium oxycoccos*), infusion of the cones of the coniferæ generally, Labrador tea (*Ledum latifolium*), the mountain tea, and the dried leaves of the beautiful little partridge berry (*Mitchella repens*), are employed. The latter is used as a beverage when other tea fails.

Obstetrics.—As may well be imagined, among a people but little removed from the savage, obstetrical complication is of somewhat rare occurrence. Within the last 20 years, and probably for many years previous, but three deaths have taken place. One a case of twin delivery (by-the-by, extremely rare among the Indians), the other two (the first on record) being puerperal mania and insanity. Putting aside the fact of this disease being highly contagious in an isolated place like York, it is *highly sympathetically infectious*. Impressionable, superstitious, and easily influenced as these Indians are, had circumstances allowed (notwithstanding my precautions as regards direct contagion), I am convinced that there would have been several cases. *En passant*, one nurse, who was past child-bearing, was perfectly fascinated, as if by mesmeric influence, and had to be removed and kept away by force, and was completely demented for over a week, during which she had her first epileptic seizure. Regarding the first case, some two or three months before labor set in, symptoms of mental excitement, together with strange forebodings, made themselves evident. The cause of the subsequent fever and insanity was, I consider, primarily, a retention of a portion of the placenta, and, secondarily, the morbid condition she had worked herself into regarding the irregularities of her past life. The usual treatment was adopted with marked success, but, becoming partially convalescent, she contracted a chill, which ended in double pneumonia and death. In the second case, mania developed the third day after delivery with the usual symptoms of agitation, excitement, violent delirium and raving, continuing for five weeks, when she

rallied, became perfectly sensible, and was about to be discharged from the hospital when she died suddenly of syncope. This case, though occurring a year or so after the other, was undoubtedly sympathetically influenced by it, inasmuch as it was the first that has ever been noted at York, and like impressions were typical of both cases.

Passing on to labor cases, I have had but few with anything like difficulty,—only two or three cases of post-partum hæmorrhage, one “hour-glass contraction,” and one case of forceps; but year by year the Indians are becoming more dependent on the white man. A labor at the settlement can hardly take place now without the doctor being sent for. This possibly may be owing to the fact that his obstetrical sympathy oft-times has to assume the somewhat practical shape of tea and sugar, or chocolate, the latter “drug” being highly esteemed. Inconsistently apeing some of the habits of the white people, as these poor Indian “ladies” do, uterine mischief is caused by the utter disregard of necessary rest after labor. I have known several instances of fetching water from some distance and bringing it up a steep bank, and cutting wood, the same day (although I must allow they conscientiously take to their bed on their return), the result naturally being severe uterine complications and constitutional irregularities. To this cause, I am sure, may in a great measure be attributed the long intervals between pregnancy and the small families generally met with. The “good old days” have passed away. The degenerate Indian “wife” cannot now retire to the small brushy camp beside the track, and overtake the lordly creature who has not abated one jot of his snow-shoe stride. I have heard of somewhat analagous cases in England among the gipsies, but there is nothing of the “glen and forest green” in the case of the poor Indian woman. Hardy and inured to hardship she well may be; beast of burden. God help her.

Syphilis.—Although I have excepted the syphilitic taint in these notes, as one of the predisposing causes of disease generally among the York Indians, it may be interesting to notice that what is said to be “a bastard form of syphilis” exists, and appears to

be indigenous not far from the district, and among Indians with whom they have casual communication. The disease is locally known as the "Nelson River Complaint," and among the Indians "Muchetas-pinawin"—literally, bad disease. It appears, from description, to be contracted or contractable by the ordinary modes in which syphilis is contracted, but its appearance and results differ widely. Although evidently a primary disease, it is usually seen in a form similar to the so-called tertiary form of syphilis, and exhibits itself in patches of scab raised above the skin, more or less extensive in various parts of the body. The scalp is sometimes covered with it, also the scrotum, prepuce, genitals, lips, elbows, and large joints. In appearance, and when fully developed, it is an elevated greenish-yellow incrustated scab. When this is removed by friction or otherwise, a raw surface is exposed, which, however, granulates and heals, to break out in a contiguous place, unless again exposed to the issue of contagious sores. The lining membrane of the mouth is also attacked, and a warty excrescence of greater or less extent grows there. My informant has seen the whole of the tongue covered with the growth, and at the same time, in the same individual, the scalp matted with the incrustated scab. On the same man, also, old cuts opened and discharged a thin ichorous fluid. My informant heard that when the nose is attacked, the cartilaginous substance is not unfrequently destroyed, as in syphilis. Chancre is said to exist, but no history of bubo is traceable, as it was represented as being always the result of infected coition; although I have since learnt that other means of infection must not be precluded, as the interchange of pipes, and using the same eating utensils, etc. The name known for this complaint in the settlement of olden times was *Sivvens*, which certainly points to a species of *Frambæsia*, the French nomenclature now taking the place of the old Celtic *sisvin*, and so corrupted to *sivvens*, and the Scotch *sibbens*. This, however, is not generally known to be endemic to North America. A medical authority of the settlement told my informant that he believed it to be a form of syphilis. My informant himself saw several cases at Norway House, on Lake Winnipeg, and found it yielded readily

to mercury internally, and externally in the form of black wash. Iodide of potassium was also used. The effects of the disease itself were not so fearful as those of ordinary syphilis, and the mouth excrecence was amenable to nitrate of silver, applied in the solid form. Locally it goes by the name of the Nelson River complaint, and was very prevalent there at one time. Only in generations far back, say over 100 years, could these Indians possibly have had exposure to syphilitic taint, as they were not in contact with either the Red River settlement or York, and the true disease was stated not to exist in those days in either of the two places. Syphilis, however, is said to have been a long time in the McKenzie River district, whither it was conveyed by the various Arctic expeditions, but the Indians of that region had no contact with those of the Nelson River, and, as far as I could learn, the symptoms of the McKenzie River disorder were those of true syphilis. Cases are now and again being heard of from Norway House, which, I fear, cannot be associated with pre-historic times, but have, from all accounts, the usual first-born energy of unadulterated syphilis, and this disease is conscientiously developed in its several forms. At all events, I have given it the benefit of any existing doubt, and treated it accordingly.

It may not be uninteresting to trace briefly the etiology of Sivvens, together with one or two somewhat analagous diseases, associating them (as I think they ought to be associated) with unrecognized forms of syphilis, although I am fully aware that I am now touching upon very debateable ground. In the first place, towards the end of the 17th century, Sivvens or Sibbens was very prevalent in the north of Scotland, and was supposed to have been introduced by Charles the Second's troops in their campaigns. Bearing upon this, I may add that for the last 200 years the European employés of the Hudson's Bay Company are year by year engaged from the north of Scotland. Again, in the 18th century, it became very prevalent in the north of Scotland, and, it may be noticed, it became equally prevalent among the Nelson River Indians about the same time. This may be only a coincidence, but it is a suggestive one. Again,

Mal Anglais, Mal de la Baie de St. Paul, invaded the upper part of Canada about the same time, and several tribes of Indians, hitherto strangers to the disease, were rapidly and widely affected by it. That syphilis, like small-pox or measles, spreads rapidly when introduced into a new district, is allowed by many authorities, and it equally assumes an endemic character when localized in secluded districts, and, spreading among individuals of similar habits, acquires an especial character varying from ordinary syphilis. Possibly it may become confounded with other diseases, like the "Radezge" of Norway, which, if I remember rightly, consists of syphilis and leprosy; equally as the "Nelson River complaint" may consist of syphilis and scrofula. In short, were the matter thoroughly entered into, I do not think it would be very difficult to prove, notwithstanding many authorities to the contrary, that the Yaws of Jamaica, the Sibbens of Scotland, the Mal Anglais of St. Paul's Bay, the Nelson River Complaint, and many others, are simply various endemic and modified forms of syphilis.

Thinking that some meteorological data may be interesting, and also perhaps instructive, as bearing on climatic influence in epidemic disease, I am enabled, through the courtesy of Mr. William Wood, our very zealous meteorologist of York, to give the following:—

	MONTHLY MEAN TEMPERATURE.	MONTHLY MEAN BAROMETER.
1883—January.....	-25.34 F.	29.975
February.....	-19.78	30.073
March.....	-13.90	31.55
April.....	*1.92	31.78
May.....	*36.53	29.969
June.....	*53.19	29.968
July.....	*57.43	29.954
August.....	*55.46	29.978
September.....	*43.42	29.920
October.....	*31.72	30.067
November.....	-0.25	30.010
December.....	-22.27	29.999
	MONTHLY MEAN OF SEASONS.	BAROMETRICAL.
Winter —Oct., Nov., Dec., Jan., Feb., March, April.....		30.322
Spring —May.....		29.969
Summer—June, July, August.....		29.966
Autumn—September.....		29.920

RAINFALL.

	<i>inches.</i>		<i>inches.</i>		<i>inches.</i>
May	0.30	July	6.03	September	3.63
June	3.02	August	6.35	October	0.62

RANGE OF TEMPERATURE.

July 5th, 1883	99° F.
January 3rd and 4th, 1884	52° = 151° F.

MILEAGE OF WIND.

January	9,720 miles.
February	9,940 "
March	9,530 "
April	8,000 "
May	8,380 "
June	7,910 "
July	7,510 "
August	8,730 "
September	8,060 "
October	8,340 "
November	9,740 "
December	9,650. "

Prevailing Wind:
North-West.

Total runs.....104,510 miles.

Monthly average:
8,709 miles.

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