LEPROSY IN CANADA

By J. J. Heagerty, M.D.
Chief Executive, Assistant,
Department of Pensions and National Health, Ottawa, Canada

The first known cases of leprosy in Canada were discovered in the county of Gloucester, New Brunswick, in the year 1815. Undoubtedly these were only recognized as such after the disease had claimed many victims. Sixteen years later as many as thirty persons were found to be victims of the disease.

Several stories are extant as to how leprosy in Canada originated. One is that two sailors from the Levant, who are reported to have exhibited several ulcers on their bodies, landed from a schooner at Caraquet, N. B. From there they walked to Tracadie, where they received hospitality from a French family named Benoit. Within the few years immediately following, certain members of the Benoit family were found to be suffering from leprosy, and this is supposed to have constituted the focus from which the disease spread to the neighboring population.

Another story is that a Scotsman who had served in the British Army in India brought leprosy to Nova Scotia. It is also said that leprosy was introduced into Louisiana, U. S. A., by French families who settled there following their expulsion by the British from the Maritime Provinces of Canada. Assuming that this statement is authentic, it would be reasonable to infer that leprosy existed in those provinces years previous to 1815, and might have been imported there by French settlers from St. Malo, where the disease was known to exist at the time.

In 1844 the people of New Brunswick became so much alarmed at the spread of the disease that they prevailed upon the provincial government to erect at Tracadie, in that province, what was the first government-operated leprosarium on this continent; in a short time as many as 27 lepers were segregated there. From the incomplete information available regarding the evolution of this institution, and the manner in which it responded to the needs of the time, it may be concluded that it cared for not fewer than 150 lepers, while as

many more undiscovered cases may have died of the disease outside the institution.

In the year 1868 several nursing sisters came to the lazaretto from the Hotel Dieu of Montreal, these sisters of mercy being known as Les Religieuses de l'Hotel Dieu de St. Joseph de Tracadie. The nursing of the lepers has been carried on by this same order since that time.

Strong evidence in support of the opinion of modern medical science that of the infectious diseases leprosy is one of the least communicable is obtained from the history of this institution. During the sixty years these sisters have been tending the patients, not one has ever contracted the disease. Furthermore, no secondary cases have been known to occur in the other districts throughout Canada from which individual leper cases have been removed, though it is known that in some instances such individual lepers had the disease for years prior to admission to the lazaretto, during which time they mixed freely with their families and with their fellowmen.

As the years went by, applications from other provinces began to come in for the admission to the Tracadie institution of lepers of foreign origin. This development formed the basis of an appeal from the provincial authorities of New Brunswick to the Federal Government to take over the maintenance and administration of the lazaretto. This arrangement was consummated in the year 1880. In 1896, the old buildings having been found inadequate, new ones were erected, making the institution one of the most modern and up-to-date of its kind.

In 1906 what is known as the Leprosy Act[1] was passed by the Federal Government. It provides for the compulsory segregation of lepers when such a request is received from the health authorities where the disease is found to exist. When the disease is not in a communicable stage, or when proper sanitary conditions as regards isolation and treatment exist locally, the Act gives the Minister discretionary power to suspend or omit proceedings as regards apprehension and compulsory confinement.

Some years later the D'Arcy Island lazaretto in British Columbia, which had been operated by the government of that province, was taken over by the Federal authorities. Previous to 1917, however, this lazaretto was used solely as a depot for the detention of lepers

[1] An abstract of the present Leprosy Act, and the regulations governing the release of patients, are appended to this article.

from oriental countries until arrangments could be made for their deportation. Under the present immigration law it is no longer possible to deport such persons if they have been in Canada more than five years.

These two leper stations are administered by the Quarantine Division, Department of Pensions and National Health. A full-time medical officer is in charge of the Tracadie lazaretto. The British Columbia lazaretto, which about four years ago was transferred from D'Arcy Island to Bentinck Island, closer to the William Head Quarantine Station, is under the medical supervision of the officer in charge of that station, who visits the island two or three times a week, or as needed. In this institution the inmates, in accordance with modern practice, are housed in cottages, each with his own room and outfit. When able, the patients do light work, attend to their quarters, do their own cooking, cut their own wood, cultivate gardens, and and keep chickens. In charge on the island there are two male caretakers and a trained female nurse, the wife of one of the caretakers.

LAZARETTO AT TRACADIE, N. B.

(*Medical Superintendent, Dr. J. E. Hache*)

In the latter part of 1932, there were nine patients in this institution—four males and five females. Five of these patients showed clinical signs of active leprosy; the other four were considered to be arrested cases.

TABLE 1.—*Patients in the Tracadie, N. B., lazaretto on September 1, 1932.*

Patient	Age	Sex	Date admitted	Nationality	Where from
P. D.	45	M.	May, 1909	French Acadian	Lameque, N. B.
B. T.	81	F.	October, 1914	French Acadian	Portage River, N. B.
A. D.	33	F.	July, 1918	French Acadian	Lameque, N. B.
J. D.	70	M.	April, 1919	French Acadian	Lameque, N. B.
V. de L.	32	F.	January, 1921	French-Scotch	Toronto, Ontario
J. P.	38	F.	November, 1926	Russian	Blaine Lake,Sask.
N. P.	27	M.	February, 1930	Russian [a]	Blaine Lake,Sask.
G. A. L.	36	M.	August, 1930	British	Montreal, Quebec
A. D. S.	33	F.	August, 1932	British [b]	Toronto, Ontario

[a] Doukhobor. [b] Born in the West Indies.

During the preceding year two patients were released as cured, in accordance with Departmental regulations. As regards the arrested cases, these patients were so marred as a consequence of the infection that they could not possibly resume their places in the community.

Particulars of the patients in this institution are given in Table 1.

LAZARETTO AT BENTINCK ISLAND, B. C.

(Medical Officer in Charge, Dr. C. P. Brown)

Late in 1932 there were five patients in this instiution, all Chinese males. Dr. Brown reported that medicinal treatment was being carried on along approved lines. The condition of two of the cases showed some improvement; that of the remaining three was such that cure could not be expected. During the preceding year two patients had been returned to China as cured.

Particulars of the patients in this institution are given in Table 2.

TABLE 2.—*Patients in the Bentinck Island, B. C., lazaretto on September 1, 1932.*

Patient	Age	Date admitted	Nationality	Where from
F. H.	46	August, 1916	Chinese	Victoria, B. C.
C. K. W.	47	October, 1918	Chinese	Vancouver, B. C.
L. A.	35	November, 1918	Chinese	Victoria, B. C.
C. K.	52	March, 1922	Chinese	Saanich, B. C.
W. K. D.	47	October, 1925	Chinese	Nanaimo, B. C.

In view of the fact that no case of leprosy has been discovered in Gloucester county, New Brunswick, since April, 1919, it is reasonable to assume that the disease has now become virtually extinct among the native population where it had its source. If this assumption be justified, then any new admissions to the two leper stations from now on will largely, if not entirely, consist of immigrants settled in the various provinces from oriental or tropical countries who, prior to discovery, have resided in Canada long enough to have obtained Canadian domicile within the meaning of the Immigration Act.

ABSTRACT OF CANADIAN LEPROSY LAW

The Leprosy Act (R. S., c. 136, s. 1) promulgated in 1927 provides for the proclamation of lazarettos and the making of rules and regulations for their management by the Governor in Council, for the appointment of medical superintendents and other personnel of the lazarettos, and for periodical inspection of these institutions.

Every person found to be afflicted with leprosy may be confined in a lazaretto. Persons suspected of being so afflicted may be examined by a medical officer or officers to be designated by the Minister of Health, who may authorize the admission of those found to have the disease.

If the disease is considered not to be at a stage at which it is communicable, or if the patient can provide, under proper conditions,

for his proper isolation, attendance and medical treatment at home, the Minister may suspend proceedings for his confinement in a lazaretto.

When it appears that the person should be so confined, action is taken through legal channels for the issuance of a warrant for his apprehension and commitment. Detention continues until the medical superintendent of the lazaretto certifies that the patient may be discharged safely. Such discharge may be under conditions certified by the medical superintendent as necessary or expedient. Provision is made for the re-apprehension of escaped inmates. It is an offense for anyone knowingly and deliberately to conceal a person with leprosy, and a penalty for this offense is provided. Provision is made for issuance of warrants for inspection of premises where it is believed a person with leprosy is harbored.

QUARANTINE REGULATIONS PERTAINING TO LEPROSY

The Dominion of Canada Quarantine Regulations include a provision which is designed to protect Canada, so far as is humanly possible, from the admission of any person suffering from leprosy on arrival in this country. This provision (Section 3) reads as follows:

> It is the duty of every quarantine officer to satisfy himself by the presence or absence of obvious signs, whether or not leprosy exists among the passengers or crew. In the event of this disease being found, the person affected shall not be allowed to enter Canada, but shall be detained in Quarantine at the vessel's expense until taken aboard by the same vessel when next outward bound, unless satisfactory reasons be given for further delay. In the event of the vessel failing to take back the said leper, he or she shall be deported by the Department at the expense of the owners of such vessel.

DEPARTMENTAL REGULATIONS FOR THE DISCHARGE OF PATIENTS [2]

As the lines of treatment which have been followed for years at both Bentinck Island and Tracadie are in harmony with those of the most advanced institutions of the world, it seems that we should also have some definite rules along the lines that have been in practice elsewhere for the discharge of patients when we have reason to believe that the disease has been arrested. Therefore the Department has rules that:

(1) As to treatment, no change should be made from our present methods unless it has been found justified as the result of experimentation based on research work by some recognized authorities on leprosy.

[2] Promulgated by the Department of Pensions and National Health, Ottawa, March 20th, 1931.

(2) When a leper patient has been found bacteriologically negative at two consecutive semi-annual examinations (i. e., at an interval of six months) a bacteriological examination should be made every month during the following year. Then, if each of these examinations is negative, and it is considered, after the patient has been subjected to a critical physical examination, that the disease is arrested, four smears should be sent to the Chief of the Laboratory of Hygiene of this Department for confirmation or otherwise. In each case two of the smears should be taken from the nasal secretion and two from tissues having previously shown evidence of active leprosy.

The technique for the preparation of the tissue specimens should be carried out as follows:—(Extract from Dr. Harris' report of his visit of inspection to the Carville Lazaretto, dated February 27th, 1928).

> Selecting an indurated or nodular area of the skin, be it in the ear lobes, cheeks, nasal alae or the supercillary regions, or in fact anywhere else in the body, a sharp sterilized scalpel is taken, the skin being pinched up between the forefinger and thumb, a slight cut about 3 to 4 mm. long and about 2 to 3 mm. deep is made. The skin is then slightly rolled between the finger and thumb so as to cause an eversion of the cut edges of the wound. With the appearance of blood the area is firmly scraped with the blade of the scalpel held almost at right angles to the surface of the incision. In so doing the edge of the knife scrapes the exposed tissue, and it is from this situation that one expects to derive acid-fast bacilli. The scrapings are transferred to a slide and spread out to a suitable thinness, dried and fixed over the flame, and stained in the usual manner. A positive diagnosis is based upon, primarily, the presence of small or large globi, practically made up entirely of leprosy bacilli.
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> In the preparation of the smear doubtless some of these globi are broken and their contents spread out in the film in an irregular fashion, so that the bacilli appear in some instances to be free.

If the findings at the Laboratory of Hygiene are negative, the patient concerned will then be released on parole for the next three years, subject, however, to reporting every six months to an official of the Dominion or provincial health service designated by the Department, who will report as to whether there is any sign of recurrence of the disease.

(3) If during this three-year period there has been no evidence of the disease lighting up again, intervals between subsequent re-examinations may be extended to two or three years for the next fifteen years. This should be done confidentially so as not to expose the "suspect" to the criticism of his friends and neighbours.

(4) Should evidence of reactivation be discovered in the meantime, the patient should be readmitted to the lazaretto or advantage taken of clause 10 of the Leprosy Act, whereby he may be given proper treatment at home if in the opinion of the Department such is available.

(5) In the case of lepers of foreign origin who wish and have means to be repatriated to their home country, only six negative monthly examinations will be required before action could be taken to meet their desire.