ENDEMIC FOCI OF LEPROSY IN THE STATE OF TEXAS

by

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Very little has been written dealing with the epidemiology of leprosy in Texas. The first available data are those of 1920, when a survey was made of the city of Galveston by two Public Health Service officers (1). Galveston, at that time, was considered the oldest focus and endemic area in that state. Several interesting facts were reported at that time, though the authors were handicapped in that earlier health department records were meager and patients purposely hid pertinent facts for reason of protection of families because of the attitude of the public towards leprosy.

While Galveston is probably the oldest known endemic area, there are other areas just as important, mainly Brownsville, Corpus Christi, San Antonio, Laredo, and areas in the Rio Grande Valley between Laredo and Brownsville. As far as I know, there has been no concerted effort to study the epidemiology of leprosy in any of these latter cities or areas. The only accurate records available are those of the Public Health Service at the Marine Hospital in Carville, Louisiana, and they date only from from 1921, insofar as leprosy outside of Louisiana is concerned.

When Boyd and Fox (2) made another epidemiological study in 1921, their reported study covered only a period of approximately 30 years. This does not mean that leprosy was unknown prior thereto, but that there were no official data regarding its early occurrence. The earliest case they learned of was recognized in 1886, two others in 1889, and from then on to 1920 they found a record of 45 cases over this thirty year period. Twenty-five additional cases were reported by various authors, but there was not enough substantial information to justify including them in the study. Of this number, 5 were imported, 36 were of local origin, and 4 were of unknown origin. Of 40 patients for whom the sex was recorded, 25 were males and 15 were females.

The conclusions of Boyd and Fox were:

(1) The majority of the known cases of leprosy acquired the infection locally.

417

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International Journal of Leprosy

- (2) There was apparently a greater incidence of the disease among native-born persons of foreign-born German parents than among any other group in the population.
- (3) There was a preponderance of cases among males.
- (4) More cases had developed during the second decade of life than in any other age period.
- (5) The majority of cases developed the disease during the second decade of residence.
- (6) In proportion to the population of the area, there was a higher incidence of leprosy in the area studied than elsewhere in the Continental United States.
- (7) A major proportion of the cases gave a history of contact or association with a case of leprosy prior to the onset of their own infection.

Another study of the Galveston focus was made in 1937 by Williams and Goldberg (3) of the School of Medicine of the University of Texas. They state that there had been found 17 cases in 1929, and in 1937 they found 6 additional cases. I have not been able to locate a copy of this detailed report.

Since 1921, when the United States Public Health Service took over this hospital, 26 patients have been admitted from Galveston. Of this number 12 were of German parentage, 4 of Mexican, 1 of Negro, and 8 were of a mixture of German, French, and English. The records of the old Louisiana Leper Home show there was one patient admitted from Galveston in 1909. These figures do not in any way give an accurate count of the number of cases of leprosy in Galveston, and it would be rather difficult to estimate the number of active cases which have been at large during all these years. I have talked with a number of physicians who attended the Medical School of the University of Texas in Galveston, and they have told me that there were always available for clinical purposes a number of patients who came to the clinic at the John Sealy Hospital.

In close proximity to Galveston is Corpus Christi, which is considered another endemic focus. Here again we lack statistics other than those gained from the records at Carville. These records show 10 patients admitted from Corpus Christi, all Mexicans, except one, a Negress who is a native of Louisiana. The old records from the Louisiana Leper Home show a case admitted in 1918.

Farther south on the Mexican border is the coastal gulf city of Brownsville, another important endemic focus. The records of this hospital show that the first case from Brownsville was admitted in 1930, although it is known that leprosy has been present there for many years. Thirty-three patients in all have been admitted from there; 23 of these are known to have been born in Brownsville. At this point I wish to note that, to my knowledge, there are 2 other cases not listed in this group who no doubt contracted their leprosy in Brownsville, although they were admitted from remote sections. One, a white female, was born and reared in Brownsville but was admitted from St. Louis, Missouri. The other, a white male of German descent who came from his native state of Kentucky and lived about 15 years in Brownsville, later moving to Northern Texas, was admitted from Amarillo. These 33 patients are of Mexican parentage, two of them half-German and half Mexican. Most of these 33 patients I examined and accompanied to Carville, and from my many visits and observations to this section I am convinced that there are probably more active cases in that city and in the immediate vicinity.

San Antonio, another important focus, is noteworthy for being the only important focus in the United States where the spread of leprosy is not in a seaport, this city being about 150 miles from the Gulf of Mexico. Our records show that the first case was admitted from there in 1922, since which time 42 patients have been admitted. Of this number, 17 are of German-American parentage, 19 are Mexican, and 6 are of other or unknown extraction.

Houston, which is the largest city in Texas, has given us 22 cases, but this city has not been considered an endemic focus as most of the cases which have been admitted from there give a history which would indicate that the disease had been contracted elsewhere. Two of the number admitted were born in Houston, and had lived in San Antonio and Louisiana and could well have contracted the disease in either place. Five were born in Galveston, 5 in Louisiana, and 3 in San Antonio. Six were born in Mexico and had lived most of their lives in either Mexico or on the Mexican border. One was born in Italy and the source of his infection is unknown. One gives a clear history of having, without a doubt, contracted the disease in the Philippine Islands during the Spanish American War.

It need scarcely be pointed out that often the place from which the patient is admitted is not the place in which the infection was acquired. It is often impossible to determine whether in a given case the disease was acquired in Texas or in Mexico, because of free immigration from the latter country and of frequent crossing of the border in both directions.

A total of 231 patients have been admitted from Texas since

1921. Sixty-two have been discharged as arrested cases. Eightyfive are at present in the institution. The birthplace of the entire group is as follows:

- 162 South of Mason Dixon line (all had lived in endemic areas of Louisiana and Texas)
- 11 North of Mason Dixon line (all had lived in endemic areas in Texas)
- 52 Mexico
- 1 Hawaii
- 2 Unknown
- 1 Germany
- 1 Italy
- 1 Hungary

Below are the counties from which these patients were admitted:

Maverick	1	Nueces	14	Matagorda	2
Zapata	1	Victoria	1	Comal	1
Jim Hogg	1	Pecos	1	Refugio	1
Duval	1	Parker	2	McLennan	2
Bexar	43	Harris	22	Uvalde	1
Kerr	3	Starr	5	Caldwell	2
Wharton	1	El Paso	8	Dallas	5
Jim Wells	2	Zavala	2	Kleberg	3
Galveston	25	Bee	1	Smith	1
Leon	1	Orange	1	Webb	5
Cameron	38	Travis	2	Taylor	0
Bell	4	Jackson	2	Lavaca	1
Jefferson	4	Brooks	1	Kendall	1
Mason	ĩ	Chambers	2	Tarrant	3
Bowie	ĩ	Hidalgo	11	Carson	1

It is interesting to note that 137 either were born in Mexico or were of Mexican descent, and 2 were half-German and half-Mexican. The remaining 92 were Americans of European ancestry (51 were of definite German parentage), so that approximately 3/5 of the number from Texas were of Mexican stock and 2/5 were of American. According to Hopkins (4), the ratio of the native born American to the Mexican as given by the U. S. Census in 1930 is more than six to one in Texas. If the number of admissions be taken as an index of the prevalence of leprosy in the two races in Texas, it must be recognized that the incidence among Mexicans is greater than among Americans. On the other hand, it is to be noted that only 10 of the entire number sent to Carville from Texas were Negroes. According to Hopkins (4), this indicates that the fact of being of a dark-skinned race does not of itself explain the comparatively large number of Mexicans admitted to Carville. It cannot be fully determined whether the Mexican cases contracted the disease in Mexico or Texas, for, as before stated, there is free access across the border to and from Mexico and the United States.

The writer in a paper presented before the Texas State Medical Society in 1939 (5) stated that perhaps the most interesting, though as yet purely hypothetical explanation suggested for the failure of the disease any longer to take hold among descendants of Europeans in general is that the white race has acquired a relative immunity. The latest census taken in Mexico shows 7173 known cases of leprosy, the greater number distributed over six foci, namely in diminishing importance, the Federal District and the States of Guanajuato, Jalisco, Michoacán, Sinaloa, and Calima. Sixteen hundred ninety two cases were in persons of mixed races; the remaining cases were about equally divided between persons of Caucasian and Indian race. The leprosy problem in Mexico is obviously of interest in relation to the leprosy problem in Texas. It is noted that the prevalence of the disease is principally confined to the southern portion of the state where the climate could be classed as subtropical. Generally speaking a line could be drawn from El Paso to Houston, and for all practical purposes the disease, with few exceptions, is located south of this designated line. Only a few scattered cases have developed in north or central Texas, such as Dallas, Fort Worth and Waco. There are many local peculiarities of distribution for which there is no adequate explanation. It is also apparent that in Texas there is, as is usual in endemic areas over the world, a great excess of males. This has been true as far back as records go. It has been noted significantly, however, that in childhood there is apparently no difference in incidence between the sexes.

It is not surprising that the problem of the control of leprosy should frequently be a matter of discussion and of difference of opinion among leprologists and public health authorities and that segregation of patients afflicted with leprosy should be opposed by those afflicted with the disease. Various arguments are brought against our system of segregation by many patients, the principal ones of which are:

- The patient afflicted with leprosy is not a criminal offender and is the victim of unusual interference with his personal liberty.
- (2) Leprosy is not a dangerous communicable disease in the sense of smallpox and other contagious or infectious diseases.

International Journal of Leprosy

(3) Attention is paid to leprosy disproportionate to its importance compared with other diseases, as, for example, tuberculosis.

Leprosy is an infectious disease that is transmitted from one person to another; in other words, it is to all intents and purposes, a contagious disease. To deny this is deliberately to ignore all that is known of the matter. That it is not highly or rapidly contagious among adults is obvious; among children it is much more so. Its slow onset, slow progress, and the relatively low average percentage of infections among contacts differentiates it from other contagious or infectious diseases. It does not occur in conspicuous epidemics. In recent years there has been a tendency to minimize the importance of classifying leprosy as a communicable disease, and I find that in trying to allay the fears of a leprosy-ignorant public and alter its attitude towards patients suffering from leprosy, I have been guilty of minimizing the danger. To accomplish the control of the disease, the association of infected persons with healthy persons must be minimized or prevented. It cannot be denied that leprosy is of especial importance where it is endemic, as in portions of Texas. The important and unique factor is the popular fear of the disease.

Therefore, leprosy cannot be dealt with on the same basis as tuberculosis and some other diseases usually associated with the argument put forth by people opposed to segregation. It must be given more attention even though the former diseases are more prevalent. As regards the question of the relative importance of leprosy and certain other diseases determining the relative attention that should be paid to them, it is probably impossible to arrive at a decision that would meet with universal agreement. It can only be pointed out that the control of other contagious diseases is a tremendous problem with which the educational and economic status of the population is inseparably involved. As people are better housed, fed, clothed, and acquire the habits of personal and general hygiene, the incidence of tuberculosis automatically declines. On the other hand, leprosy being in many regions a relatively minor problem as regards the numbers of persons affected and being evidently dependent on personal contact, it should be feasible to control the disease by direct methods of separation from healthy people, especially children. If this program could be rigidly carried out it would probably cause the rapid diminution of the incidence of the disease in Texas, especially in endemic areas. From the opportunities I have had to observe the disease in these endemic areas of Texas, I am of the opinion that we have only

422

"scratched the surface" as far as segregating leprosy is concerned, and that unless some concentrated effort is made to regard leprosy as a public health problem in this and other endemic areas, there will certainly be a gradual increase in the incidence of the disease in these localities.

It is to be understood that these suggestions apply to an area where leprosy is decidedly endemic. Other considerations apply in areas where the disease shows little or no tendency to spread. In any case due consideration must be given to the condition of the patient and to his environment.

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