

Disabilities in Leprosy

TO THE EDITOR:

Even with successful treatment, the leprosy patient is frequently left with various disabilities and deformities which result in social boycott of the patient.

Disabilities and deformities frequently remain a grim remainder of the disease even after successful treatment. Disability rates reported from various centers vary

greatly because of the type of leprosy prevalent and the criteria followed for labeling disabilities. The second report of the World Health Organization (WHO) Expert Committee on Leprosy estimated that about 25% of leprosy patients have some degree of disabilities⁽⁸⁾. In our retrospective study (1971–1993) after going through the records of an urban leprosy clinic, we evaluated the disabilities of 180 patients.

TABLE 1. Age, disability rate and disability index for 180 patients studied.^a

Age (yrs.)	No. cases	No. disabled	Disability rate	Mean DI-2
0-15	6	1	16.7%	1.00
16-30	47	14	23.8%	1.71
31-45	70	37	52.9%	1.61
46-60	43	19	44.2%	1.54
>60	14	8	57.1%	1.60
	180	79	43.9%	1.49

^a $\chi^2 = 0.39$ for disability rate in >45 years versus <45 years ($p > 0.05$).

The disabilities for hands, feet, eyes and face were recorded for 180 patients who attended the urban leprosy clinic during the study period and who were classified on the Ridley-Jopling scale. A disability index-2 (DI-2) was calculated for the hand, foot and eye only using the method suggested by Bechilli and Martinez-Dominguez (¹). A score of 1 was given for grade I disability, 2 for grade II and 3 for grade III disability. All three disability scores were added and divided by 6 to get the DI-2. The data for this disability study were analyzed using simplified classification of leprosy, i.e., lepromatous, borderline and nonlepromatous leprosy.

The disability rate was found to be the highest in the age group above 60 years (57.1%), followed by 52.9% in the group 31-45 years. The disability rate was lowest in those 0-15 years (16.7%) (Table 1). Table 2 shows the disability rate and sex of the patients. The disability rate was higher in males (48.8%) than in females (32.7%). As shown in Table 3, the disability rate was highest in lepromatous leprosy (67.8%) and lowest in nonlepromatous leprosy (11.8%). The duration of disease and the disability rate were directly proportional to each other; as the duration of leprosy advanced the disability rate also increased (Table 4).

TABLE 2. Disability rate and sex of patient studied.^a

Sex	No. cases	No. disabled	Disability rate
Male	125	61	48.8%
Female	55	18	32.7%
	180	79	43.9%

^a $\chi^2 = 3.99$ for disability rate in males versus females ($p < 0.05$).

TABLE 3. Type of leprosy and disability rate.

Leprosy type	No. cases	No. disabled	Disability rate
Nonlepromatous	34	4	11.8%
Borderline	59	16	27.1%
Lepromatous	87	57	67.8%

Hands were the most common site of disability in all disability grades, followed by the feet and eyes. The larynx was involved in 3% of the cases, collapse of the nose was seen in 15% and facial palsy in 5% (Table 5).

Rao, *et al.* (³) in Karigiri, South India, found the disability rate to be 42.9%. Kushwah, *et al.* (²) in Gwalior, India, found the disability rate to be 30.2%. Reddy and Bansal (⁴) in Pondicherry, India, observed the disability rate to be 16% and Sehgal and Sharma (⁶) in Delhi found the disability rate to be 30%. Saha and Das (⁵) found the disability rate to be 22% in Calcutta. The highest disability rate and index in our study are mainly due to the large number of lepromatous and borderline leprosy cases—87 (48%) and 59 (32%), respectively.

The disability rate in our study was significantly higher ($p < 0.05$) in males (48.8%) as compared to females (32.7%). Also, it was higher in older patients than in younger ones. Similar observations were also noted by the other studies compared above. The disability index was significantly higher ($p < 0.001$) in those with a duration of disease more than 2 years (58%) as compared to those with a disease duration of less than 2 years (23%). These findings are consistent with those of Sehgal and Sharma (⁶), Thappa, *et al.* (⁷) and Saha and Das (⁵). Males, by virtue of their occupations, out-

TABLE 4. Duration of disease and disability rate.^a

Duration (yrs.)	No. cases	No. disabled	Disability rate
0-2	73	17	23.3%
2-5	48	17	35.4%
>5	59	45	76.3%
	180	79	43.9%

^a $\chi^2 = 21.17$ for duration of disease <2 years versus >2 years ($p < 0.001$).

TABLE 5. Site of disability and disability grade.

Site	Total	Grade I	Grade II	Grade III
Hands	76	74	50	15
Feet	68	67	37	4
Eyes	24	13	14	1

door habits and smoking, are more likely to be injured.

The disability rate in our study was highest in lepromatous cases (67.8%), least in nonlepromatous cases (11.8%) and intermediate in borderline cases (27.1%). These findings are consistent with those of Reddy and Bansal (⁴), and Saha and Das (⁵). The hands and feet were involved most frequently in our study. Anesthesia of extremities, i.e., grade I, was the commonest disability seen. This is parallel to the studies by Thappa, *et al.* (⁷) and Saha and Das (⁵).

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