

Prevalence of leprosy among in-patients in general hospitals—A survey in Bombay*

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Summary Screening of 11,505 adult in-patients admitted in various general hospitals (for complaints other than leprosy) revealed that 101 had leprosy with a prevalence of 8.8 per 1,000. Ten of these were found to be smear positive (prevalence rate 0.9/1,000). Such surveys provide a quick and convenient method of screening the urban population, especially adults who usually are not available during mass surveys.

Introduction

The National Leprosy Control Programme in India is based on the survey, education and treatment (SET) technique. Our experience during surveys in urban slums shows that a large section of the adult male population is not available for examination during house-to-house visits, because the subjects are away at work. Further, it is amongst the adult male population that the highest prevalence of the disease and bacteriological positivity are encountered (Ganapati *et al.*, 1977). We have therefore examined in-patients admitted to various hospitals in Bombay, to determine the prevalence of leprosy amongst them. Surveys for leprosy in factories and industrial establishments are difficult to conduct because if any worker is found to be suffering from bacteriologically positive types of leprosy he is liable to lose his job or remain on long leave till he becomes negative.

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Material and methods

Six large hospitals in Bombay, including three catering for industrial workers (under the Employees State Insurance Scheme—ESIS), were selected for the study. One large tuberculosis hospital was also included. None of these hospitals admitted patients for the treatment of leprosy *per se*. All the in-patients except seriously ill and post-operative cases were examined at the bedside for evidence of leprosy by medical and paramedical teams, trained and experienced in leprosy. Each hospital was surveyed twice after an interval of about 4 months to cover freshly admitted patients. All the suspected infectious cases were subjected to bacteriological examination at different leprosy treatment centres in the city.

Observations and discussion

Table 1 shows the population examined and the number of patients detected.

Table 1. Population examined and prevalence rates

	Male adult	Female adult	Child population	Total
Enumeration	8,197	3,800	830	12,827
Examination	7,880	3,625	799	12,304
Percentage of coverage	96%	95%	96%	95%
Total cases	76	25	2	103
Prevalence per 1,000	9.6	6.8	2.5	8.4
Smear + ve cases	9	1	—	10
Prevalence of smear + ve cases per 1,000	1.1	0.2	—	0.9

A total of 12,304 in-patients (out of 12,827) were examined. One hundred and three leprosy cases were detected, giving an overall prevalence of 8.4 per 1,000 with smear positive case prevalence of 0.9 per 1,000. Table 1 shows that:

- (1) Ninety-six per cent of male adult subjects could be examined (as compared with our experience of 60% coverage of this group in the slums).
- (2) Maximum prevalence rate (9.6 per 1,000) was found in the male adult group.
- (3) Maximum number of smear positive cases, i.e. 9 (1.1 per 1,000), was also found in the above group.

An analysis of leprosy cases detected among 11,505 adults examined in various hospitals is shown in Table 2.

The highest prevalence was found in the ESIS hospitals which admit industrial workers. In one such hospital situated in North Bombay, we

Table 2. Prevalence rates in various hospitals

	General hospitals	TB hospitals	ESIS hospitals	Total
Total cases	48	12	41	101
Prevalence rate per 1,000	7.5	5.3	14.5	8.8

encountered 19 cases among 716 subjects examined (prevalence of 26.5 per 1,000). Since ESIS hospitals admit industrial workers residing in areas in their vicinity, such surveys may provide useful epidemiological data about leprosy among industrial workers. However, the sample in this study is small and such findings deserve confirmation on studies on larger series. Twenty-two patients (22%) had pulmonary tuberculosis besides leprosy. More extensive surveys in tuberculosis wards can be expected to reveal useful data on the co-existence of these two diseases.

Table 3 indicates the deformity status of the patients detected among the adult group.

Table 3. Deformity status of leprosy cases

Deformity	No. of cases	(%)
Nil	75	74
Grade I	13	13
Grade II	13	13
Total	101	100

No patients were found to have gross (WHO grade III) deformities, while 13 (13%) had grade II deformity. This perhaps indicates the fact that patients with obvious gross deformities could not gain admission into general hospitals for their general complaints not related to leprosy.

Sixty (59%) leprosy patients were detected in the general medical and surgical wards, while 17 (17%) were in the tuberculosis wards, the remaining being found in the gynaecological, orthopaedic and ophthalmic wards (one case was found in the skin ward). Only in three instances were the patients admitted for complications arising out of leprosy (two in orthopaedic and one in skin wards). It is interesting to note that out of 103 cases detected only 8 were known to the hospital staff.

In the above investigations, one trained worker was able to examine on an average 26 subjects per hour and 95% of the inpatients could be examined. Therefore, it appears to us that such surveys provide a quick and convenient method of screening male adult population for leprosy, especially since they are carried out in a hospital set-up. The hospitals selected in this study predominantly cater for the low- and middle-income groups. Since data on prevalence of leprosy among the high-income group are not available, such

surveys if carried out in the private hospitals may provide useful information on these lines.

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Reference

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