CHANGING TRENDS OF LEPROSY IN ARMED FORCES

Col PN ARORA*, Sqn Ldr S GROVER+

ABSTRACT

A total of 651 cases of leprosy were hospitalised from Jan 1987 to Dec 1992. Each patient underwent haemogram, total and differential white cell count, urinalysis, liver function tests, skin slit smear for AFB and skin biopsy. Nerve conduction studies, electromyographic studies and nerve/nerve sheath biopsies were undertaken as and when indicated. These patients were managed with multidrug therapy. Paucibacillary (PB) leprosy accounted for 476 (73.1%) cases which comprised of indeterminate leprosy 90 (13.8%), tuberculoid leprosy 14 (2.2%), borderline tuberculoid leprosy 310 (47.6%) and neuritic leprosy 62 (9.5%). The remaining 175 patients (26.9%) were multibacillary (MB) which included borderline leprosy 9 (1.4%), borderline lepromatous leprosy 129 (19.8%) and lepromatous leprosy 37 (5.7%) patients. There were total 153 patients in 1987. This number declined to 44 in 1992. PB declined from 113 in 1987 to 39 in 1992 and MB cases from 40 to 5.

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KEY WORDS : Leprosy

Introduction

The total number of registered cases of leprosy in the world are 5 million, whereas WHO estimates the number to be 11.5 millions [1]. Nearly one third of world leprosy patients live in India. The estimated number of leprosy cases in India was 2.5 million in 1961, 3.2 million in 1971 and 3.9 million in 1981 [2]. Some countries have reported well documented declining trends of leprosy, whereas others still show increasing trend [3]. Thus there is a need to carefully evaluate the work done and to collect reliable data on the patients and the population to which they belong. We report data on the changing trends of leprosy in serving soldiers of Indian Armed Forces.

Material and Methods

This study is based on the records of 651 consecutive new cases (service personnel) hospitalised for leprosy at Command Hospital (Southern Command) over a six years period from Jan 1987 to Dec 1992. A detailed history was recorded followed by general physical, systemic and dermatological ex-

amination. Each patient had undergone a haemogram, total and differential white cell count, urinalysis, liver function tests, skin slit smear examinations for acid fast bacilli and skin biopsy. Nerve conduction studies, electromyographic studies for muscle charting and nerve/nerve sheath biopsies were performed as and when indicated. The investigations were repeated during follow up. Patients were managed by multi drug therapy (MDT). Different regimens were used for PB and MB cases in accordance with the WHO recommendations [4]. Statistical analysis was done using 'Z' test and null hypothesis.

Observations

A total of 651 cases were hospitalised and managed from Jan 1987 to Dec 1992 (Table 1). There were 153 cases in 1987. The number declined to 44 in 1992 ($p < 0.05$). The paucibacillary cases (PB) declined from 113 to 39 and multibacillary (MB) cases from 40 to 5 during the same period. PB leprosy accounted for 476 cases (73.1%) which comprised of indeterminate leprosy 90 (13.8%), tuberculoid (TT) leprosy 14 (2.2%),

* Senior Adviser (Dermatology & Venereology); + Graded Specialist (Dermatology & Venereology); Command Hospital (Southern Command). Pune 411 040.

TABLE 1
Yearwise distribution of leprosy cases hospitalised during 1987-1992

Year	Paucibacillary (a)					Multibacillary (b)				Total (a+b)
	Indeterminate	TT	BT	Neuritic	Total	BB	BL	LL	Total	
1987	21	05	70	17	113	—	34	06	40	153
1988	15	02	75	20	112	—	39	08	47	159
1989	11	—	63	11	85	02	30	17	49	134
1990	18	01	48	07	74	04	16	03	23	97
1991	15	03	31	04	53	02	07	02	11	64
1992	10	03	23	03	39	01	03	01	05	44
Total	90	14	310	62	476	09	129	37	175	651

borderline tuberculoid (BT) leprosy 310 (47.6%) and neuritic leprosy 62 (9.5%). Remaining 175 (26.9%) were MB leprosy cases which included borderline (BB) leprosy 9 (1.4%), borderline lepromatous (BL) leprosy 129 (19.8%) and lepromatous (LL) leprosy 37 (5.7%).

Discussion

The PB to MB ratio in this study was 73 : 27. The reported ratio in the literature ranges from 70 : 30 to 85 : 15 [5].

The admission rate of leprosy showed a gradual decline from 153 in 1987 to 44 cases in 1992 ($p < 0.05$, $z = 2.53$). Since there was no reduction in the population dependent on the leprosy centre, during the period of study, the decrease in the number was consequential. It appears that the decline in the number of leprosy cases is due to reduction in the bacterial load, leading to reduced transmission of leprosy, following MDT as observed in many parts of India [6]. The mean prevalence rate of leprosy in our country has come down from over 5 per thousand to approx 3.5 per thousand since the vigorous implementation of MDT in 1981 [7]. A change in the socio-economic condition was also one of the major determinants of leprosy decline in the developed countries [8]. The better living conditions, leading to reduced transmission of the disease, could be a contributory factor in the decline of leprosy cases.

The PB cases declined from 113 in 1987 to 39 in 1992 and the MB cases from 40 to 5, a

reduction of 65.5% and 87.2% respectively. The decline in MB cases was more compared to PB cases ($p < 0.001$). It appears that awareness of the disease and its cure, gradual removal of the stigma associated with the disease and a regular medical examination of all serving personnel in the Armed Forces had led to the early diagnosis and management of all such cases. However, it is imperative to keep a watch on the change, if any, in the clinical pattern of the disease that may emerge on interaction with the human immunodeficiency virus infection.

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