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RESEARCH ARTICLE

AN EPIDEMIOLOGICAL STUDY OF LEPROSY CASES AT A TERTIARY HOSPITAL IN SOUTH KERALA

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ABSTRACT

A retrospective descriptive analysis of 43 leprosy patients who attended the leprosy clinic in Dr. SMCSI Medical College was carried out. The male: female ratio was equal. The maximum number of patients were in the age group of 21-40 years. A childhood incidence of 9.3% was noted. Multibacillary (MB) cases were more than paucibacillary (PB) cases and more men had MB cases than women.

Key words:

Leprosy, Multibacillary, Paucibacillary.

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INTRODUCTION

Leprosy is a chronic mycobacterial disease of low infectivity, spread mostly by the respiratory route, with a high morbidity because of the debilitating deformities it can leave behind. Leprosy has been declared to be eliminated from India in August 2005 (NLEP 2011-12) (prevalence rate < 1 per 10,000 population). However, pockets of endemicity still remain. (WHO 2014) Kerala, one of the southern states of India, is one of the most literate states. It is a state with one of the highest living standards in India. However, 14 states including Kerala, showed an increase in the number of new leprosy cases in the period 2010-11. (NLEP 2011-12) We undertook the study to elucidate the epidemiological pattern among the cases at our leprosy clinic in Dr. SMCSI Medical College which is located at the southern tip of Trivandrum in Kerala, which also shares its borders with Tamil Nadu.

MATERIALS AND METHODS

This is a retrospective, descriptive analysis of the leprosy case reports of all patients who attended the leprosy clinic of the department during the period 2007-2014. The epidemiological and clinical aspects were recorded and analyzed.

RESULTS

A total of 43 patients had registered with us and completed treatment during the period of July 2007 to June 2014. 21 of them were male and 22 were female, making the male to female ratio almost equal. The cases recorded in each age-

group were as follows: 1-20 years = 4 (approximately 9.3%); 21-40 years = (39.3%); 41-60 years = (30.2%); 61-80 years = (18.6%); > 80 years = 1 (2.3%). Thus the maximum number of cases were in the age-group 21-40 years (17 out of 43 = approximately 39.3%) The percentage of cases in the paediatric age-group was 9.3. The number of MB: PB cases was 26:17. That is 60.5% of the total cases were MB. Of the MB cases, 18 were male and 8 were female. That is, 59.23% of MB cases were male. Of the PB cases, 14 were female (82.35%), showing a definite female preponderance. Of the 4 paediatric patients, 3 were PB and 1 was MB. 2 of the PB children were siblings, and had their grandfather (an MB case) as contact. Our youngest patient was 8 years of age (PB case) and oldest was 83 years (MB case).

DISCUSSION

The total number of patients in our study of 7 years was 43. Our study was conducted after 2005 (the year in which leprosy was declared to be eliminated in India). So, the average number of new cases we had after 2005 was about 7 per year. 14 states in India, including Kerala, showed an increase in the number of new cases detected in 2010-11 (WHO 2014). The male to female ratio in our study was almost equal. This was different from the findings in earlier studies. Most of the studies done in developing countries showed a male to female ratio of 2:1. (Peters and Eshiet 2002; Varkevisser *et al.*, 2009; Kumar *et al.*, 2004; Norman *et al.*, 2006) A study done in Delhi showed a male: female ratio of 3:1. (Tiwarly *et al.*, 2011) One of the reasons may be that female literacy is high in Kerala. Therefore, women are more aware of the disease and empowered enough to take care of their health. It may also be due to the fact that females form a large workforce in the state and so travel more, and are more exposed to the disease. The

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maximum number of cases was in the productive age-group of 21-40 years (39.3%). This is in concordance with the studies done in Karigiri (Norman *et al.*, 2006) and Brazil. (Santos *et al.*, 2013) The percentage of childhood cases of leprosy in our study was 9.3%. This is in concordance with a study on childhood leprosy from Delhi in 2007. (Singal *et al.*, 2011) The NLEP report of 2012 recorded 9.7% cases of childhood leprosy and mentions that the proportion of childhood cases has been found to be more than 10% in 10 states including Kerala. It is significant that 2 of our childhood cases had an MB contact in the family (grandfather), and both of them had indeterminate Hansen's disease. In our study, the percentage of MB cases (60.5%) was more than PB. The general trend of a rise in MB cases in the post-elimination period as seen in other studies is reflected here. (Norman *et al.*, 2006; Pandey and Patel 2005) Our study showed a 69.23% of male preponderance of MB cases, which is concordant with other Indian studies. (Santos *et al.*, 2013)

Conclusion

This study highlights the importance of continuing surveillance in leprosy despite its elimination from the country. The proportionately higher number of MB cases (potentially infectious) and the trend of increase in childhood cases are worrying and should caution physicians and health workers not to rest on their laurels in this post-elimination era.

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