

Incidence of Leprosy – Real or Relative?

Dr. J. Jayasri¹, Dr. R. Aruna Devi², Dr. S. Jayakumar³,

¹Senior Resident In Dermatology, Govt. Tiruvannamalai Medical College & Hospital, Tiruvannamalai.

²Former Head Of The Department, Department Of Dermatology, Madras Medical College, Chennai.

³Former Head Of The Department, Department Of Dermatology, Madras Medical College, Chennai.
Madras Medical College, Chennai, Tamilnadu, India.

Abstract: Migration of people across the states and countries meant for occupation, studies, etc. can have several effects on the epidemiological patterns of diseases. This study is meant to analyze the impact of immigration of people on the incidence of leprosy in a hospital based study.

Keywords: leprosy, migration, epidemiology

I. Introduction

Migration of people across states and countries meant for occupation, studies, etc. can have considerable effects on the epidemiological patterns of diseases (both communicable and non-communicable) in a given community. It was believed that leprosy, the most ancient infectious disease had been introduced into Europe probably by the invasion of India and north eastern countries by Alexander's troops and by the invasion of Europe by the Persians.¹ Even after immense efforts to control the disease in various parts of the world over the past few centuries, it is again on the increase in places where it was controlled. Obviously, migration and globalization play an important role in the epidemiological pattern of the disease apart from other factors like relapses, emergence of drug resistance, etc. This study is meant to observe the impact of immigration of people from other states in Tamilnadu on the incidence of leprosy in a tertiary care centre.

II. Aim

To study the effect of immigration of population on the number of newly detected cases of leprosy in a hospital based study.

III. Materials and methods

Among the new leprosy patients registered in our Department of Leprosy from March 2010 to September 2011, immigrants from other states were sorted out. Patients were enquired in detail about the evolution and duration of symptoms, family history and previous treatment taken for leprosy, if any. They were thoroughly evaluated for skin lesions, nerve involvement, deformities, trophic ulcers and reactions. Skin biopsies were taken in doubtful lesions. Slit skin smears for acid fast bacilli were taken from the skin lesions and at routine sites. Patients were classified under various spectra of the disease based on clinical, histological and laboratory findings.

IV. Results

Of the total 174 newly registered patients over the study period, forty nine (28.16%) were from other states. Among the forty nine, twenty seven patients (55.10%) fell under Borderline Tuberculoid (BT) spectrum, five (10.2%) were in lepromatous leprosy (LL) spectrum, five (10.2%) in borderline lepromatous (BL) spectrum and two (4.08%) in midborderline (BB) spectrum. Two (4.08%) patients had Histoid leprosy and eight (16.33%) had the pure neuritic variety. Eighteen patients had complications of which resorption of fingers and toes was the most common one seen in seven patients (38.88%). Four (22.22%) patients presented with claw hand deformity and five (27.78%) had trophic ulcers.

Foot drop was seen in one patient (5.60%) and facial nerve palsy was seen in another (5.60%). Four (8.16%) were relapses. Eleven patients (22.44%) were in reactional state, nine with type I and two with type II reaction at the time of presentation. Twelve patients (24.48%) were in the infectious spectra (BL, LL, Histoid) with positive slit skin smears.



Fig.1 Borderline Tuberculoid Leprosy



Fig.2 Lepromatous Leprosy



Fig.3 Midborderline leprosy.

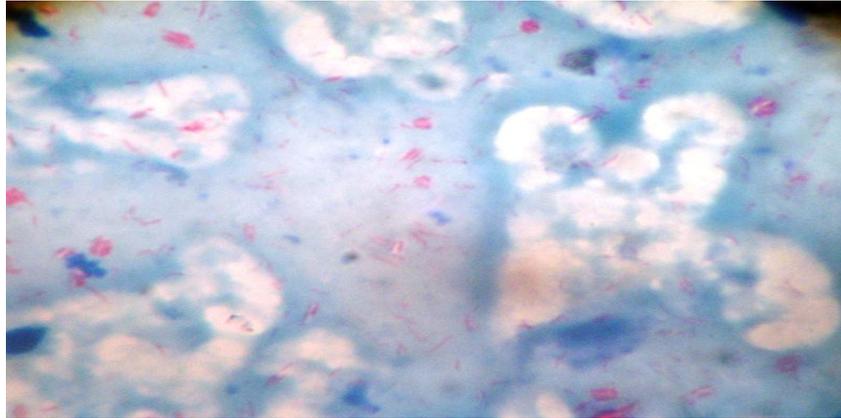


Fig.4 Slit skin smear showing Acid Fast Mycobacterium leprae bacilli.

V. Discussion

The proportion of patients from other states was found to be significant (28.16%). Nearly one fourth of them were in the infectious spectra, who were capable of spreading the disease. Hence both emigration and immigration of people have the ability to affect the incidence and prevalence of the disease in a community. In Leprosy, certain epidemiological factors like host factors, mode of transmission other than the droplet route are still inconclusive. There isn't any satisfactory way to detect past or inapparent present infection. Hence the potential danger of transmitting the disease across states and countries is a matter to be given ample importance.

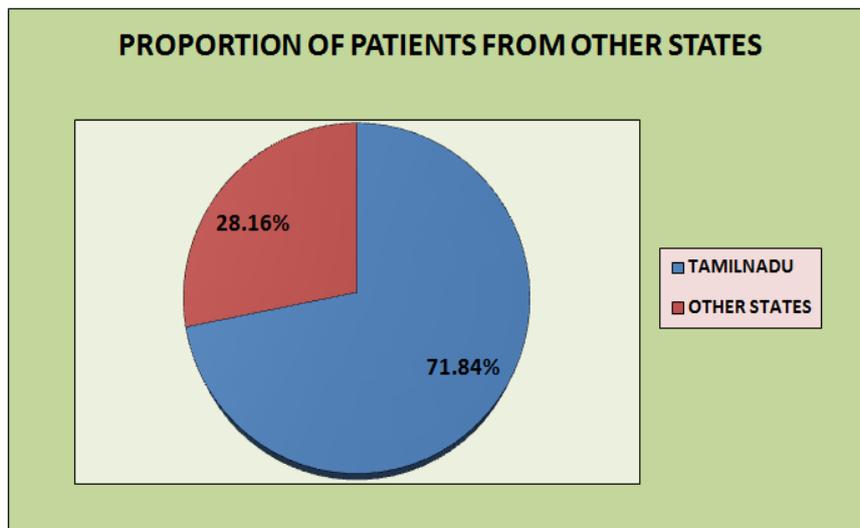


Fig.5

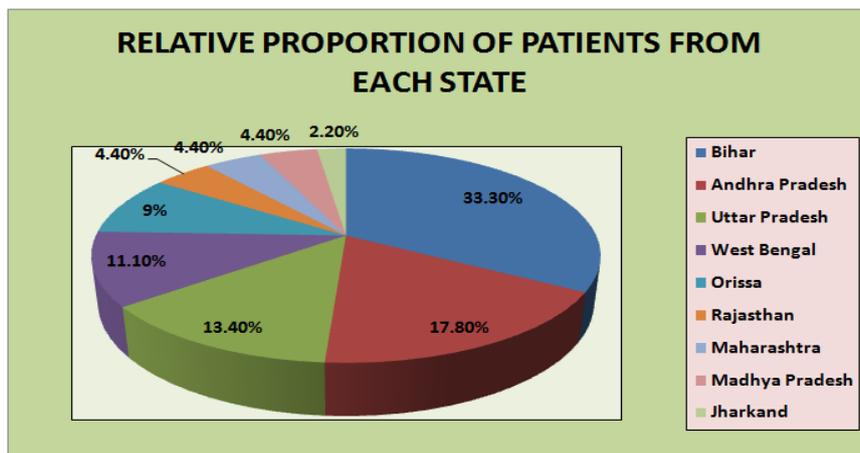


Fig.6

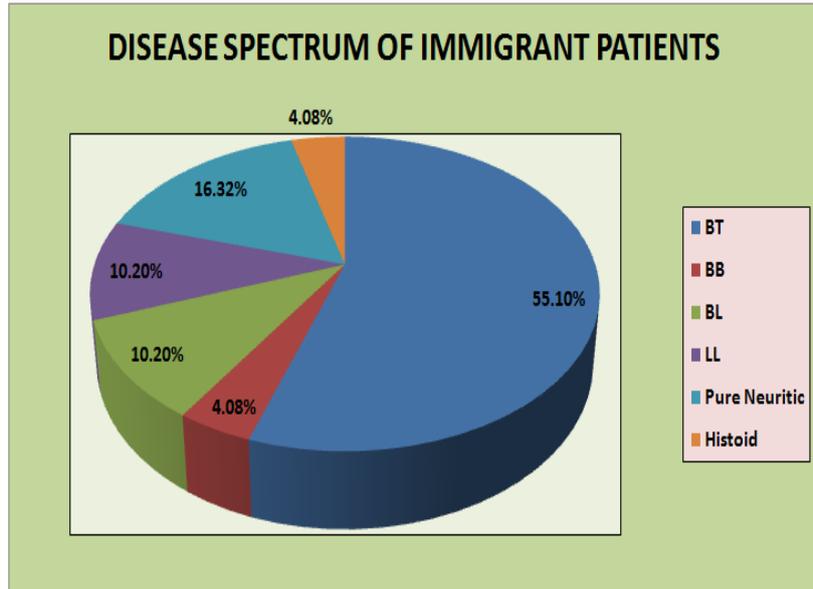


Fig.7

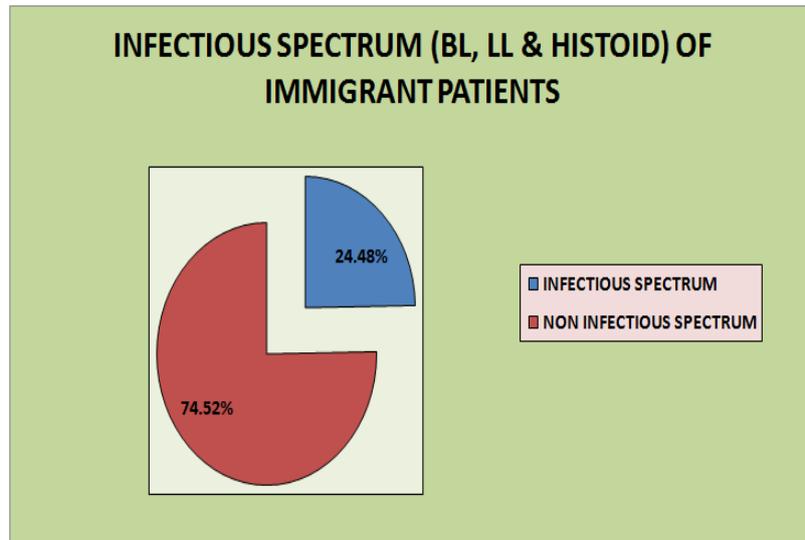


Fig.8

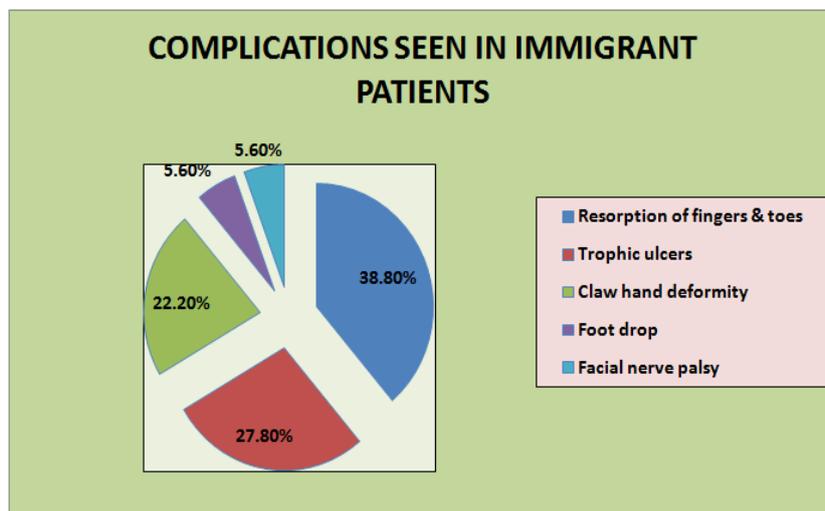


Fig.9

VI. Conclusion

Leprosy is considered as a special disease by virtue of its unique epidemiological aspects, slow generation time of the bacillus, longer incubation period, a wide spectrum of manifestations ranging from spontaneously healing skin lesions to mutilating deformities, lack of multiple drugs to overcome drug resistance and the potential to create deformities and social stigma.² Such a unique disease needs special attention when it comes to migrating population. This study highlights the necessity to effectively screen the people migrating across a large scale area especially from an endemic region so that the disease can be identified and treated at an earlier stage thereby preventing the disease transmission. This in turn can minimize the incidence as well as prevalence of the disease. Complications can also be prevented by early diagnosis and treatment. Similarly when people move to a place endemic for leprosy, health education needs to be given regarding the symptoms and signs of the disease and the importance of early treatment.

Leprosy has been documented to be prevalent in India even before 1400 BC. Yet the elimination of this disease is still challenging. Taking into account this migration effect, the leprosy elimination strategies should include effectively screening and educating the immigrant population. Being a hospital based one, this study may not show the real estimate of the impact of migration on the incidence or prevalence of the disease among the population. Yet it enlightens the necessity to conduct more detailed studies on a large scale basis for a complete evaluation in future.

References

- [1]. All about leprosy. P.V.S. Prasad. First edition. Jaypee Publications.
- [2]. Park's textbook of preventive and social medicine. K. Park. Eighteenth edition. M/s Banarsidos Bhanot Publications. Page 62