



The Clinical Profile of Leprosy Patients Attending- A Tertiary Care Centre

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Abstract

Background: India contributes to more than 60% of leprosy case burden in the world.

Objective: To study the clinical profile of leprosy cases who attended the Dermatology outpatient department of a tertiary care unit during a period of one year, to document the diagnostic delay in individual case and to determine the role of rehabilitation age, sex and initial symptom as risk factors for diagnostic delay by analysing data from previous case records.

Methods: Retrospective study

Sample-Size-53 patients with diagnosed leprose

Results: Among the 53 leprosy patients male to female ratio was 1.8:1. A diagnostic delay of more than one year was noted in 18 patients (34%). Age, sex and initial symptom were not found to be statistically significant risk factors for diagnostic delay.

Conclusion: Diagnostic delay of more than one year in one third of cases highlights the need to increase the efficacy of existing system to detect disease early.

Limitations: Small sample size and retrospective study.

Keywords: Leprosy, Diagnostic delay, Retrospective study.

Introduction

India announced elimination of leprosy as a public health problem at the national level on 30th January 2006 and thereafter leprosy services were

decentralised and integrated into the general health system.^{[1].[2]}

With the declared elimination of leprosy there has been less enthusiasm for active surveillance and

early case detection. This disturbing trend can pave way for the comeback of this ancient disease. In this scenario, we thought it worthwhile to carry out a study on the clinical profile of leprosy cases who attended the Dermatology outpatient department of a tertiary care unit during a period of one year.

Objectives

1. To study the clinical profile of leprosy patients attending a tertiary referral centre from 1.1 2017 to 31.12.2017
2. To document diagnostic delay in individual case and to find any association between age, sex and initial symptom of the affected with diagnostic delay

Materials & Methods

Methodology

Study design: Retrospective descriptive Study

Study Subjects

Inclusion criteria: All leprosy patients diagnosed to have leprosy from our institution (as per the cardinal criteria proposed by WHO) from 1st January 2017 to 31st December 2017 were included. **Exclusion criteria:** Patients who were diagnosed from other centres and referred to us after starting treatment were excluded.

Method

After obtaining ethical clearance from our institution data on patient profile, evolution of disease including initial symptom and diagnostic delay were noted in individual case. Information on clinical features (site and size of skin lesions, nerve thickening and nerve function impairment, disease spectrum and lepra reactions), laboratory data including skin smear status for acid fast bacillus and histopathology analysis of leprosy skin lesions and treatment received were documented.

Statistical Analysis

Data was analysed by SPSS software. To statistical significance was determined by chi-square test and p value less than 0.05 was considered as significant. included in the study. [3]

Results

During the one year study period 53 leprosy patients attended our institution. Thirty four were males with a male to female ratio of 1.8:1. Age of the study group ranged from seven to 72 years. The most common age group affected was 30-45 years (17 cases, 32.1%) followed by 16-30 years (16 patients, 30.2%).

Table 1: Age and sex profile of study group

Study subjects	< 15 years			16 -30 years			31 – 45 years			46 -60 years			61 -75 years			Total		
	M	F	Total	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
No of patients	2	3	5	9	7	16	11	6	17	10	3	13	2	0	2	34	19	53
	5.9%	15.8%	5.7%	26.5%	36.8%	30.2%	32.4%	31.6%	32.1%	29.4%	15.8%	24.5%	5.9%	0%	3.8%	100%	100%	100%

Table 2: Diagnostic delay in study population

Time interval between onset of symptoms and diagnosis																		
< 6 months			6 -12 months			12 – 24 months			24 -60 months			>60 months			Total			
M	F	Total	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	
11	6	17	10	8	18	6	2	8	6	2	8	1	1	2	34	19	53	
32.4%	31.6%	32.1%	29.4%	42.1%	34%	17.6%	10.5%	15.1%	17.6%	10.5%	15.1%	2.9%	5.3%	3.8%	100%	100%	100%	

On most occasions, there was a diagnostic delay of 6 -12 months (18, 34%) while a diagnostic delay of more than 5 years was documented in two patients (3.8%).

Initial symptom was skin lesion in 38 cases (71.7%); 15 patients (28.3%) had initial symptom related to nerve function impairment.

Most common spectrum of disease noted in study group was borderline tuberculoid leprosy in 36 (67.9%) cases followed by pure neuritic variant (6 patients, 11.3%, Figure 1).

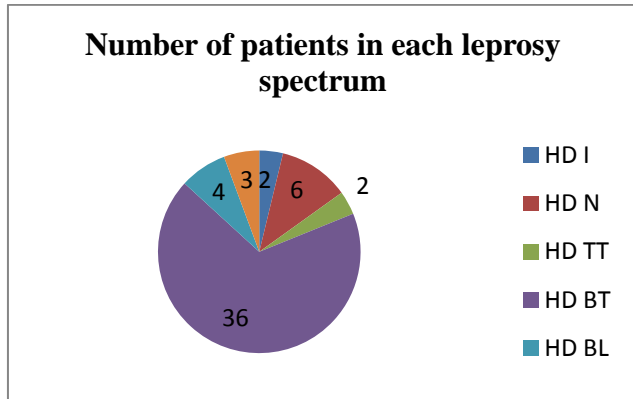


Figure 1: Distribution of study subjects in various leprosy spectra

HD I : Indeterminate HD; HD N: Pure neuritic HD; HD TT: Tuberculoid HD; HD BT: Borderline tuberculoid HD; HD BL: Borderline lepromatous HD; HD LL: Lepromatous HD; HD: Hansen’s disease (leprosy)

5/19 females (26.3%) and 2/34 (5.9%) males had no nerve thickening.

Nerve thickening and nerve palsy documented in study group are depicted in Figures 2&3.

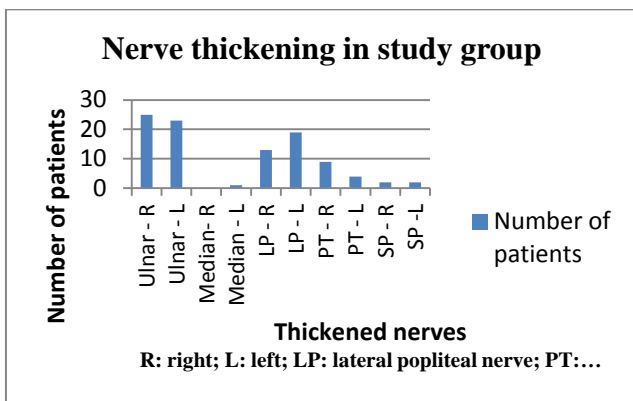


Figure 2: Nerve thickening in study group

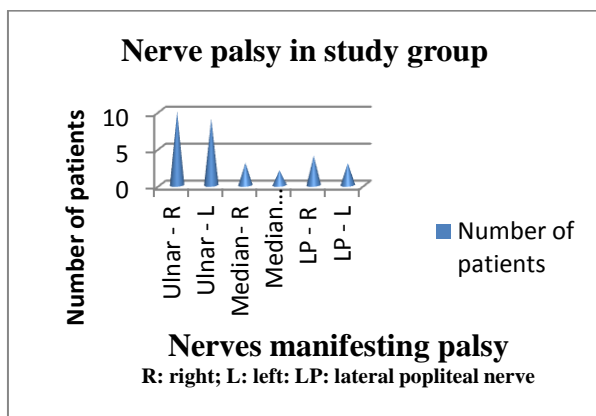


Figure 3: Nerve palsy in study group

Four females (21.1%) and one male (2.9%) had trophic ulcer of head of first metatarsal. The higher risk of trophic ulcer observed in females was statistically insignificant.

Seven patients (13.2%, one female and six males) had smear positive disease. A higher chance of smear positive disease noted in males was statistically insignificant.

11 females (57.9%) and 30 males (88.2%) required multibacillary and eight females (42.1%) and four males (11.8%) required paucibacillary treatment. The higher chance for extensive disease requiring multibacillary treatment observed in males was found to be statistically significant (p value 0.01)

3/19 (15.8%) females 11/34 males (32.4%) had T1R at the time of diagnosis while none had T2R. The higher risk for T1R observed in males was not statistically significant.

Six of the 20 cases (30%) above 40 years of age suffered a diagnostic delay of more than one year while the same was documented in twelve (36.4%) of 33 patients below the age of 40. This was not statistically significant. In thirteen of thirty four males (38.2%) and five of nineteen females (26.3%), diagnostic delay was more than an year and this was statistically insignificant. Diagnostic delay of more than one year was observed in 12 /38 (31.6%) patients whose initial symptom were skin lesions and 6/15 (40%) of whose initial symptoms were neurological (Table 3) which was statistically insignificant.

Table 3: Relation between diagnostic delay and initial symptom

Initial symptom	Time interval between onset of symptoms and diagnosis																	
	< 6 months			6 -12 months			1 3- 24 months			25 -60 months			>60 months			Total		
	M	F	Total	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Skin lesion (38)	7 29.2 %	6 42.9%	13 34.2%	7 29.2%	6 42.9%	13 34.2%	5 20.8%	1 7.1%	6 15.8%	4 16.7%	1 7.1%	5 13.2%	1 4.2%	0 0%	1 2.6%	24 100%	14 100%	38 100%
Neuritic sy mpyoms (15)	4 40%	0 0%	4 26.7%	3 30%	2 40%	5 33.3%	1 10%	1 20%	2 13.3%	2 20%	1 20%	3 20%	0 0%	1 20%	1 6.7%	10 100%	5 100%	15 100%
Trophic ulcer	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Total	11 32.4 %	6 31.6%	17 32.1%	10 29.4%	8 42.1%	18 34%	6 17.6%	2 10.5%	8 15.1%	6 17.1%	2 10.5%	8 15.1%	1 2.9%	1 5.3%	2 3.8%	34 100%	19 100%	53 100%

Discussion

The age and sex profile of the study group and the clinical pattern of disease documented were comparable to previous studies^{[4],[5],[6]} Certain other studies have documented lack of any sex predilection.^[7]

The diagnostic delay of more than one year documented in eighteen study subjects (34%) underscores the importance of field surveys and leprosy detection camps since the disease may remain unnoticed owing to its asymptomatic nature.

Many recent studies have documented more number of patients presenting with extensive disease requiring multibacillary treatment similar to our observation. More extensive disease requiring multibacillary treatment showing amale predilection was also in concordance with existing literature.^[5]

Consistent with previous data ulnar nerve was the most common nerve trunk found enlarged followed by lateral popliteal nerve.^[8] The predilection for right ulnar nerve observed in study group and lack of the same with respect to lateral popliteal nerve could be attributed to the possible right hand dominance in most of the population.

Lema et al reported less chance of trophic ulcer in females. It was attributed to non-diagnosis of the same in females owing to their difficulty in accessing medical care. The contradictory finding in our study may be a reflection of better social status enjoyed by the women of the state.^{[9],[10]}

Higher risk for T1R observed for females in our study was discordant to the finding of Scollard et

al.^[11] The reason for this disparity remains unclear.

Our finding of shorter diagnostic delay in females when compared to males (though statistically insignificant) was contrary to the finding of Peters and Eshit and is attributed to the high female literacy in our region and better access to health care.^[12] Though statistically insignificant, the longer diagnostic delay reported in patients having neurological symptoms as initial complaints could be explained by the fact that those with skin lesions often seek dermatology care while neurology symptoms initially get evaluated for medical and neurological causes. This signifies the importance of considering leprosy as a differential diagnosis whenever a patient presents with peripheral neuropathy.

Limitations

Small sample size and retrospective nature were the limitations of our study.

Our study indicates that though less prevalent now, leprosy continues to affect people. Delay in diagnosis and initiation of treatment can promote its transmission in the community.

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