Incidence of Leprosy in a Tertiary Care Centre of Surguja District, Chhattisgarh

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ABSTRACT

Introduction: Leprosy is a chronic infection as it still remains a major health hazard. India has a high incidence and prevalence rate of leprosy. The disease derived its name from the latin word lepra meaning scaly. Chhattisgarh is a leprosy endemic state with a predominantly tribal population. Even after six decades of the launch of National Programme for eradication of leprosy, Chhattisgarh continues to have the highest prevalence rate of 2 to 4 cases per 10,000 person. The other 33 states of India have achieved the elimination level of less than 1 case per 10,000 person. Aim of our study was to estimate the incidence of Leprosy among the native population in a tertiary referral centre of Surguja district, Chhattisgarh.

Material and methods: This was a Retrospective study of 65 cases attending a tertiary care centre of Surguja district, Chhattisgarh. Presence of AFB in Slit Skin Smear examination remains the Gold Standard of diagnosis of Leprosy.

Result: Out of 65 cases 16 cases were positive for AFB in Slit Skin Smears. This accounts for 24.61% cases.

Conclusion: Close surveillance, early diagnosis and complete treatment is still needed for elimination of leprosy from India.

Keywords: SSS (Split Skin Smear), AFB (Acid Fast Bacilli), Leprosy.

INTRODUCTION

Leprosy caused by Mycobacterium leprae is a chronic infectious disease, which can affect all ages and both sexes. In the last century leprosy has been a major public health problem in India. National leprosy elimination programme (NLEP) was initiated in 1993 to decrease prevalence rate of leprosy below 1 case/10,000 population.[1] India has managed to eliminate leprosy as public health hazard in December 2005 with a prevalence rate of 0.95/10,000 population[2] and it has further declined to 0.84/10,000 population in march 2006.[3] But still India accounts for 64 per cent cases of prevalence and 78 per cent cases of new case detection, worldwide.[4] In the beginning of 2006, 219,826 cases were registered for the prevalence of leprosy.[5] During 2005 the numbers of new cases reported were 296,499. As the peripheral surveillance activities are discontinued the numbers of new cases in hospitals are steadily increasing.[6] It requires a special emphasis on early diagnosis and detection, complete treatment and management of disabilities.

Chhattisgarh state has a large tribal population and is still endemic for leprosy. During 2003-2009, total of 1530 untreated leprosy cases were reported to Leprosy Mission Referral Hospital in Champa out of which 151 (9%) were classified belonging to scheduled tribes.[7] The aim of this study was to estimate the incidence of leprosy among the native population in a tertiary referral centre of Surguja district, Chhattisgarh.

MATERIAL AND METHODS

This was a retrospective study of the data from the January 2016 to December 2016, which was undertaken in a tertiary care hospital. As this was a retrospective study no patient consent or ethical clearance was needed. In the Tertiary care hospital the patients who were suspected for leprosy by the clinician were advised for Slit Skin Smear examination. Smears were prepared from six sites (nasal mucosa of both the nostrils, both the ear lobes and two of the most prominent lesions) and then the prepared slides were stained with modified Zeihl-Neelsen stain. Smears were examined under oil immersion to look for acid fast bacilli (AFB) both intra and extra-cellular, and reported as positive or negative for AFB.

Exclusion criteria: Patients with other skin diseases such as SLE were not included in the study.

Inclusion criteria: Patients who had decreased sensation with no obvious skin lesions were not included in the study.

STATISTICAL ANALYSIS

It was done with the help of Microsoft office 2007. Descriptive statistics like mean and percentages were used for the interpretation of data.

RESULT

65 suspected cases of leprosy were studied over a period of 1 year out of which 16 were positive for AFB. This accounts for 24.61% of the total cases studied over the year. Out of 65 cases 48 were male and 17 were female. Male to female ratio was 2.82:1. Of the 48 male cases 13 were positive for AFB which accounts for 28.08% of the male cases and of the 17 female cases 3 screened positive for AFB. This accounts for 17.64% of the female cases. The minimum age was 18 years and maximum age was 65 years with mean age of 40.2.

The sites from which slit skin smears were made were nasal mucosa of both the nostrils, both the ear lobes and two of the most prominent lesions. Of these ear samples showed maximum positivity followed by forehead and hand.

DISCUSSION

Leprosy is also known as Hansen's disease is caused by Mycobacterium leprae. It is one of the oldest diseases known

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to man and even mentioned in Vedas and bible but still we have not been able to eradicate it. It is a treatable and curable disease so for this National leprosy eradication programme was launched six decade ago in 1983. It is mainly of two types paucibacillary and multibacillary types. Its spread is through aerosol method by droplets, contrary to popular belief it is not highly contagious. The drugs for treatment such as rifampicin, dapsone and clofazimine are provided free by world Health Organisation. Demonstration of AFB is still considered important for diagnosis, management and classification of leprosy.[8,9] While biopsies give better demonstration of AFB, it is technically demanding, invasive and without any definitive role in management of leprosy.[10-12] Therefore in our study we have employed slit skin smear examination.

In deep reticular dermis AFB remain inaccessible to SSS.[13] SSS is quite sensitive in highly bacillated patients but less sensitive for patients with low tissue density of AFB. Similar observation were made by Srinivas *et al* and Ponnighaus *et al.*[12,14]

We observed that patients with similar lesions do not have the same severity of disease. In leprosy patients clinical features reflect only the gross morphology of the pathological changes. Significant discrepancies between bacteriological and immunological status of nerve and skin compared to the clinical diagnosis have been reported.[15-17]

Strategy of leprosy elimination programme have been somewhat simplifies over the years in many aspects of MDT regimens. These changes reflected simplifications in working methods implemented by field staff lacking some skills. For example during 1980's SSS examinations were regarded extremely important, but by the late 1990's were deemed unnecessary.[18]

As over the years the number of leprosy patients have substantially decreased, the workload and financial burden on leprosy programmes/organizations has also decreased. Hence SSS examination may again be considered an integral part of leprosy programme as it is quite sensitive and gives a definite diagnosis by direct demonstration of AFB.

CONCLUSION

Due to distribution of multidrug therapy, deformity prevention and management by the leprosy workers during the NLEP phase, leprosy cases are decreasing at this region i.e Surguja District. But to keep a check on leprosy special focus on early diagnosis, complete treatment and detection and management of disabilities is still required. Multidrug therapy should be made available not only at primary health centers and municipal dispensaries but also at tertiary care centers for prompt initiation of therapy.

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