

Original Research Article

**TO STUDY THE FUNCTIONAL INVOLVEMENT OF
KIDNEY IN LEPROSY PATIENTS IN TERMS OF SERUM
CREATININE.**

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Abstract:

Background & Method: The aim of the study is to study the functional involvement of kidney in leprosy patients in terms of Serum Creatinine. 70 Patients of, various age group ranging from 5 to 65 years were studied. out of which 53 patients were male and 17 patients were female. Creatinine reacts with picric acid in alkaline medium and form orange-red coloured complex formed, intensity of which is directly proportional to creatinine in the sample and measured at 520 nm.

Result: In 8.57% cases serum creatinine found to be raised and all belongs to MB group. No any patients have raised serum creatinine in PB group. Maximum number of leprosy patients were found in the age group between 31 to 40 years, in which male were 13 and female were 7, followed by the age group between 21 to 30 years, in which male were 16 and female were 3. Minimum number of patients found in the age group between 5 to 10.

Conclusion: We reached to the conclusion that in leprosy renal involvement is common and it is more in MB group as compare to PB group, in the form of serum creatinine. In 8.57% cases serum creatinine found to be raised and all belongs to MB group. No any patients have raised serum creatinine in PB group.

Keywords: kidney, leprosy & Serum Creatinine.

Study Designed: Observational Study.

1. INTRODUCTION

The majority of patients presents with immunological problems to clinicians, rather than with bacteriological problems as in the case of other chronic diseases such as tuberculosis. The proportion of multibacillary forms of leprosy with bacterial loads between 10^6 and 10^8 is around 12%, the remainder is paucibacillary types[1]. Even if lepromatous patients with multibacillary leprosy are left untreated, no gross systemic disturbances may be observed except at a very advanced stage[2].

Complications affecting the kidney, eye or nerves are due primarily to deposition of antigen-antibody, complex during the host reaction, rather than directly to live *M. leprae*. In the subcutaneous nodular reaction the nodules are situated on the small joints of the hands or tendons, if not managed properly, such patients are prone to develop a typical reactional hand or a swan, neck deformity of the hands[3].

In cases of paucibacilla, leprosy, the bacilli, may be killed in less than 6 months course of therapy with rifampicin. However reversal reactions and nerve damage may continue and skin lesions remain active even after adequate treatment[4]. This is observed especially among BT-BB patients. These observations indicate that the role of *M. leprae* may be limited to a triggering of the disease pathology. The subsequent pathological and clinical changes are attributable to immunological responses leading to spectrum of different presentations of leprosy with rare combinations of different types in some patients e.g. a patient with nodular and BT-BB lesions. It is characteristic of leprosy that even after bacterial death, the pathological process continues and complications continue to appear until mycobacterial antigens totally disappear. In other bacterial diseases, including tuberculosis, once the causative agent is tackled, pathology halts and complications generally do not appear[5&6].

2. MATERIAL & METHOD

We study 70 patients which reported in skin and leprosy (DVL) outpatient department of Hind Institute of Medical Sciences, Safedabad for 06 months.

70 Patients of, various age group ranging from 5 to 65 years were studied. out of which 53 patients were male and 17 patients were female. Number of patients among the various types of leprosy are : PB (35) , MB (35).

Creatinine reacts with picric acid in alkaline medium and form orange-red coloured complex formed , intensity of which is directly proportional to creatinine in the sample and measured at 520 nm.

Detail history including family history, duration of illness, duration of treatment, relevant complains like. puffiness of face, hiccough, vomiting, oedema, polyuria, oilgria, dysuria, frequency of micturition, Hematuria, fever. bleeding tendency were asked to the patients and noted.

3. RESULTS

TABLE 1: INCIDENCE OF LEPROSY IN DIFFERENT AGE GROUP IN OUR STUDY

Age group	Male	Female	Total
5-10	0	0	0
11-20	9	0	9
21-30	16	3	19
31-40	13	7	20
41-50	7	4	11
51-60	6	2	8
61-70	2	1	3
Total	53	17	70

In this study maximum number of leprosy patients were found in the age group between 31 to 40 years, in which male were 13 and female were 7, followed by the age group between 21 to 30 years, in which male were 16 and female were 3. Minimum number of patients found in the age group between 5 to 10.

TABLE 2: NO. OF PATIENTS HAVING PYURIA IN DIFFERENT TYPES OF LEPROSY

Type of leprosy	Total no. of patient	Patients having Pyuria	Percentage
PB	35	3	4.28%
MB	35	8	1.42%

TABLE 3: NO. OF PATIENTS HAVING RAISED SERUM CREATININE LEVEL IN DIFFERENT TYPES OF LEPROSY

Type of leprosy	Total no. of patient	Patients having Pyuria	Percentage
PB	35	0	0%
MB	35	6	8.57%

In 8.57% cases serum creatinine found to be raised and all belongs to MB group. No any patients have raised serum creatinine in PB group.

4. DISCUSSION

In the study of 70 cases maximum patients were found between the age group of 31 to 40 years, there were 20 patients, and the number of male female cases were 13 male & 7 female[7].

Next age group is 21 to 30 Years, in this age group there were 19 cases out of which 16 were male and only 3 were female. 11 cases were found in the age group of 41 to 50 yrs out of 11, the 7 cases were male and 4 were female.

In our study of 70 cases 35 cases were of PB leprosy. 35 cases were of MB leprosy, Out of which in PB , 26 were male and 09 were female and in MB group 30 are male and 05 female[8].

In the study of 70 cases, 6 had increased serum creatinine level, 63 cases had normal serum creatinine this means that 4.2 cases had increased serum creatinine level.

On dividing the increased serum creatinine cases into three groups of severe, moderate and mild, no patient had severe or remarkable rise in serum creatinine level. While 4 cases had moderate increase of serum creatinine level. 02 cases (38%), out of 36 cases had mild rise in serum creatinine level[9].

On analysis the serum creatinine level in different types of leprosy. It was found that in MB group, out of 35 cases 6 had increased serum creatinine level and in PB group, no patient has increase in serum creatinine. Thus conclude that serum creatinine is found to be raised in MB group of leprosy as compare to PB group of leprosy.

5. CONCLUSION

We reached to the conclusion that in leprosy renal involvement is common and it is more in MB group as compare to PB group, in the form of serum creatinine. In 8.57% cases serum creatinine found to be raised and all belongs to MB group. No any patients have raised serum creatinine in PB group.

6. REFERENCES

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