www.jmscr.igmpublication.org
Impact Factor 5.84
Index Copernicus Value: 83.27
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v5i5.210

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

# Observation on Proteinuria in Cases of Kala-Azar (Visceral Leismaniasis)

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**ABSTRACT**
*Kala-azar has been endemic in the eastarn part of india since more than a country. The Principal area affected are North Bihar, West Bengal, Assam, Tripura, Eastren U.P.& Nepal. In this study cases admitted in P.M.C.H were studied for proteinuria it was observed that 44% kala-azar cases had proteinuria and 18% proteinuria with haematuria.*

## INTRODUCTION

Visceral leismaniasis is a tropical disease produced by protozoan Leismania donovani charaterised by irregular fever, splenohepato-megaly, weight loss, anemia, leucopenia & hyperglobinaemia, endemic in Bihar, West Bengal, & Eastern part of India.

In patient with kala-azar, occasionally renal lesions has been described but with little distrubance of renal function. Slight albuminuria has been described regularly in kala-azar patients (Cole ACE 1944 in East Africa, Von Peenen & Reid 1962 from Upper Wile Province, Maru 1979 in North Western Ethopia) In Sudan (Sati 1962) albuminuaria was reported in 50% of Brazillian patients elevated urea & creatinine are only seen terminally. Microscopic haematuria is also frequent.

Although several foreign workers have shown abnormal urine analysis in visceral leishmeniasis still not much work has been done in case of Indian kala-azar.

## MATERIALS & METHODS

A total number of 100 patients of Kala-azar admitted to Kala-azar ward & medical indoor ward of Patna Medical College & Hospital were subject to present study. Diagnosis of Kala-azar was confirmed clinically as well as demonstrating parasite in bone marrow or splenic puncture smear. A thorough clinical examination of each patient was done and any another disease as Diabetis Mellitus, Jaundice, Cirrhosis of liver, Pulmonary tuberculosis, Pneumonia, Cardiac disease, Hypertension were excluded from the study. Only the fresh cases of Kala-azar without previous history of renal pathology were included in our study.

All confirmed cases of Kala-azar were subjected to following renal function test:-

Routine examination of Urine especially for albumin, cells and casts.

Estimation of Blood Urea, Serum Creatinine.

Estimation of GFR (by endogenous creatinine clearence).

24 hour total Urinary protein excretion.
USG of whole abdomen.
Other investigation as TC-DC of WBC, ESR, X-Ray chest, LFT, Viral markers to exclude other pathology.

## OBSERVATION

Hundred cases of kalazar patient were studied for renal function.

**Table 1** Showing Age wise distribution.

| S.N | AGE | No of cases | Percentage | Mean (year) |
|---|---|---|---|---|
| 1. | 11 - 20 | 54 | 54 | 16.04 |
| 2. | 21 - 30 | 36 | 36 | 26.55 |
| 3. | 31 - 40 | 0 4 | 04 | 35.00 |
| 4. | 41 - 50 | 06 | 0 6 | 43.66 |

**Table 2** Showing Sex wise distribution

| S.N | Sex | No of cases | Percentage | Male : Female ratio |
|---|---|---|---|---|
| 1. | Male | 70 | 70 | 7 : 3 |
| 2. | Female | 30 | 30 | |

**Table 3** Showing duration of illness in Patients

| Duration illness (Weeks) | No of Cases | Mean weeks | Percentage |
|---|---|---|---|
| 1 – 8 | 34 | 7.37 | 34 |
| 9 – 16 | 48 | 13.31 | 48 |
| 17 – 29 | 18 | 21.33 | 18 |

**Table 4** Showing urine analysis

| Urinary findings | No of Cases | Percentage |
|---|---|---|
| Proteinuria | 22 | 44 |
| Haematuria + Proteinuria | 09 | 18 |

**Table 5** Showing quantitative Proteinuria

| Total Urine Protein in 24hr range (mg/dl) | No of Patients | Mean urine protein in 24 hr range |
|---|---|---|
| Upto -50 | 32 | 22.35 |
| 50 – 100 | 12 | 95.35 |
| 100 – 300 | 42 | 298.28 |
| 300 – 1 Gram | 11 | 695.68 |
| Above 1 Gram | 03 | 1193.66 |

## DISCUSSION

The present work observation on proteinuria in cases of kala-azar was carried out in patients admitted in Nephrology Unit and kala-azar ward On of 100 cases 70 were male and 30 were females and mean age was 22.24.
In the present study no patients has the nephritic syndrome. Abnormal urinalysis was observed in 52% of cases, out of which 44% has proteinuria and 18% has proteinuria with haematuria ( In sudan sati 1962 albuminuria was reported in 50% cases) The incidence of proteinuria in the present series was 44% in Indian kala-azar patients thought majority of patients did not develops proteinuria. Proteinuria might be renal pathology due to urinary tract lesions or renal pelvis, bladder, prostate but all the lesion were excluded before assessing renal states, however fever and anemia which were main presentation of kala-azar might have secondary effects on kidney producing proteinuria but in this conditions significant proteinuria did not occur. It was difficult to opine that proteinuria present in some patients of kala-azar was an integral part of disease or not. Duration of illness seemed to have some association with proteinuria.

## CONCLUSION

In the present study it has been documented that proteinuria has been observed frequently in kala-azar patients. Further study are needed to document the specificity of the glomerular, tubular & intestinal lesions observed in parasitic diseases.

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