CORRESPONDENCE

Renal Granulomas in Hansen's Disease

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Sir,

Renal abnormalities in leprosy have been widely described in medical literature.[1] Kidney is one of the target organs during the splanchnic localization of leprosy without direct involvement of bacteria. Renal involvement is more often seen in lepromatous leprosy, especially with recurrent type II reaction as immune complexes deposits.[2] The histological renal spectrum includes glomerulonephritis, amyloidosis and interstitial nephritis. Leprous granulomas are known to occur frequently in liver, spleen, testes but rarely in kidneys. We present a case of Hansen's disease with presence of specific leprous granulomas in renal interstitium.

A 47 yrs. old male patient presented to our hospital with 3 months history of generalized oedema initially noticed on hands and feet. He had no history of joint pain, hemoptysis, nasal bleeding or any chronic illness. His past history too was unremarkable. On examination, there was pitting acral oedema (Figure 1). Cutaneous examination revealed multiple asymptomatic well defined erythematous plaques of variable size all over body (Figure 2). There was hypoesthesia to touch, temperature and pain over the lesions along with glove and stocking hypoesthesia. Examination of peripheral nerves showed thickened and slightly tender bilateral ulnar, right radial cutaneous, right common peroneal and bilateral posterior tibial nerves. There was no motor deficit. He had proteinuria and altered renal functions. Laboratory investigations revealed Hb-6.9 gm/dl, ESR-75 mm in 1st hour, TLC-6600/mm^3 and Platelet count-3.26 lac/mm^3. Urine analysis revealed 2+albumin, however there was no hematuria or any type of cast. His blood urea level was 51.3 mg/dl; serum creatinine 3.5mg/dl and urinary total protein was 1.6gm/24hrs. Renal biopsy was performed and on light microscopy it showed normal looking glomeruli with diffuse mononuclear inflammatory infiltrate in the interstitium along with non-caseating granulomas with presence of giant cells (Figure 3). On immunofluorescence immune deposits were absent. Slit skin smear showed a Bacteriological Index of 2+ and skin biopsy showed band like granulomatous infiltrate of epitheloid granulomas in the upper dermis and small granulomas filling a follicle in the mid dermis (Figure 4). Fite stain for acid fast bacilli (AFB) was negative. On the basis on these findings, we made a diagnosis of Borderline tuberculoid (BT) Hansen's disease with renal involvement in the form of minimal change disease and chronic interstitial nephritis along with chronic granulomatous inflammation. Patient was treated with conventional multi drug therapy (MDT) containing dapsone, clofazimine and rifampicin. Following MDT there was rapid improvement in both his skin lesions (Figure 5) as well as renal functions.

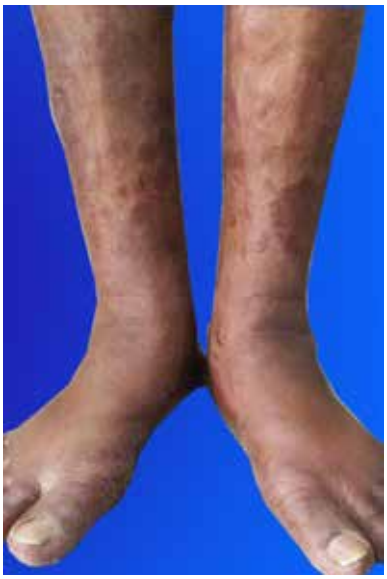

Fig. 1: Clinical photograph showing oedema over bilateral feet

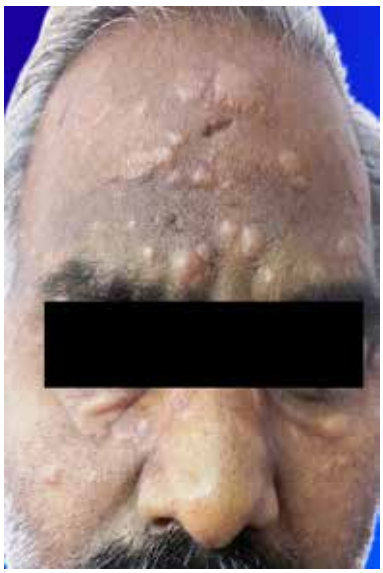

Fig. 2: Multiple well-defined erythematous plaques over face

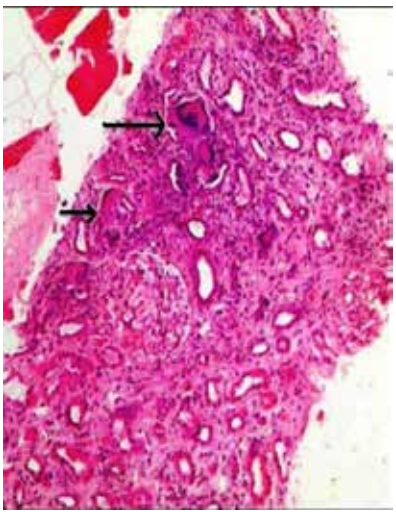

Fig. 3: Renal biopsy (10x H&E stain) showing non-caseating granulomas with multinucleated giant cells

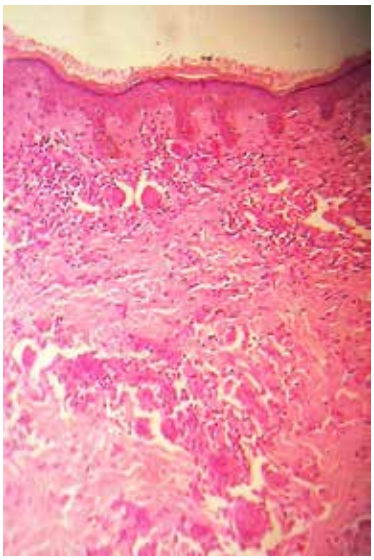

Fig. 4: Skin biopsy (10x H&E stain) showing band like granulomatous infiltrate of closely set epithelial cell granulomas with multiple Langhans giant cells

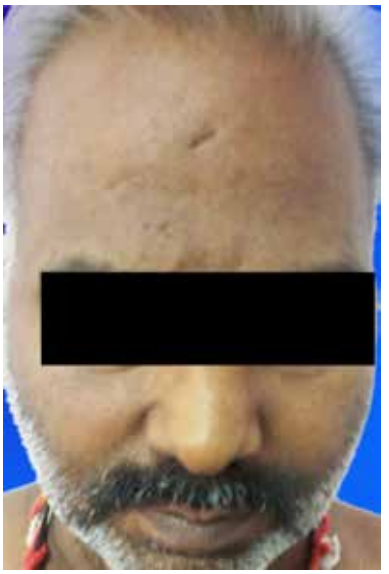

Fig. 5: Post treatment photograph showing clearance of lesions over face after 1 month of conventional MDT

One month post-treatment, patient had no proteinuria and his blood urea and serum creatinine levels were 26.7 mg/dl and 1.6 mg/dl, respectively.

Most authors in their studies of renal changes in leprosy have reported acute and chronic glomerulonephritis, interstitial nephritis, secondary amyloidosis and pyelonephritis.[3] Leprosy granulomas have rarely been reported. Nakayama et al reported granuloma in two of their 199 necropsies,[4] while Sainani and Rao reported only one granuloma in 60 cases.[5] Gupta et al did not find a single case of leprosy granuloma in renal biopsies in 50 cases.[6] In our case, even though no AFB could be demonstrated in skin or renal biopsy specimen, presence of well-defined epitheloid granulomas, absence of caseation, clinical picture and response to treatment suggests that granulomas observed in renal interstitium were of leprous origin. This case is reported because of rare findings of specific leprous granulomas in renal tissue.

References

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