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Clinicopathological spectrum of lupus nephritis in a sample of Sri Lankan patients

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Introduction: Lupus nephritis (LN) results in end-stage renal disease in 17% within ten years. The Euro-LN trial found proteinuria to be the best predictor of long-term renal outcome, while microscopic haematuria (MH) and serum creatinine (SCr) were of limited value.

Objective: To study the clinicopathological features of LN and to determine the association of selected laboratory parameters (LP), and active and chronic lesions at renal biopsy (RB) in a sample of Sri Lankan (SL) patients.

Methodology: A retrospective, cross-sectional study of eighty RBs was carried out, and the association between LP and histological features were determined using Mann-Whitney, Friedman and Chi-square tests.

Results: Seventy-six (95%) were females. The mean age at biopsy was 27 ± 10.713 years. Sub-nephrotic range proteinuria, 35 (43.8%), was the commonest presentation in classes I - V. In class VI it was rising SCr. The prevalence of LN classes I, II, III, IV, and VI was 5%(n=4), 15%(n=12), 10%(n=8), 66.3%(n=53) and 1.3%(n=1) respectively. Class V was combined with class III and IV in two patients. The mean activity index (AI) of class III and IV was 2.875 ± 3.28 and 2 ± 2.6 , respectively. The mean chronicity index (CI) of class III and IV was 7 ± 4.5 and 2.45 ± 3.06 , respectively. Endocapillary proliferation was the commonest histological feature contributing to AI in classes III and IV. The commonest histological feature contributing to CI was tubular atrophy in class III and interstitial fibrosis in class IV. SCr was associated with both AI ($p < 0.001$) and CI ($p < 0.001$). Glomerulosclerosis was associated with SCr ($p = 0.027$). Cellular/ fibrocellular crescents was associated with both SCr ($p = 0.007$) and MH ($p = 0.013$).

Conclusion: In this study, the associations between LP and histopathological features of LN at RB were analysed in a population of SL patients for the first time.

Keywords: lupus nephritis, laboratory parameters, activity index, chronicity index

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