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Glomerular HLA DR DP DQ Expression in Renal Diseases

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Abstract: The expression of major histocompatibility antigens class II (MHC II) in renal diseases has been studied extensively in the tubulo-interstitial compartment, while there are few articles about their expression in the glomeruli. In this series, glomerular expression of HLA DR DP DQ is evaluated in a total of 62 cases of pyelonephritis, glomerulonephritis, tubulointerstitial nephritis and systemic diseases with renal manifestations in order to identify their relationship with disease status and renal scarring. Formaline fixed paraffin embedded tissue sections from renal biopsy and nefrectomy specimens were stained by an antibody against HLA DR DP DQ by the streptavidin biotin method. Autopsy kidneys were used as control tissues. In order to understand the significance of glomerular HLA DR DP DQ expression in renal tissues, the results were correlated with glomerular sclerosis, interstitial fibrosis, tubular atrophy and interstitial inflammation by Spearman and Pearson correlation tests. Disease groups were compared with Kolmogorov-Smirnov tests in independent samples. Increased expression was identified in cases with chronic pyelonephritis and membranoproliferative glomerulonephritis compared with autopsy kidneys. On the other hand, when all the cases were considered, no correlation was found between glomerular HLA expression and glomerular sclerosis (p=0.458, r=-0.104), tubular atrophy (p=0.9, r=0.018) interstitial fibrosis (p=0.725, r=-0.049) and inflammation (p=0.987, r= 0.002). As there are few cases in each disease category, it is hard to reach definite conclusions about the different nature of HLA class II antigen expression in renal diseases. But their effect on renal scarring is not indicated by this study.

Key Words: HLA DR DP DQ, renal diseases, glomerular expression, immunohistochemistry, renal scarring.

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