

Pratheepkumar V., Farhan B.A.

**COMPARATIVE ANALYSIS OF NEPHROTIC SYNDROME PATHOLOGY
IN SRI LANKAN AND BELARUSIAN PATIENTS**

Tutor: PhD, associate professor Savosh V.V.

*Department of Pathological Anatomy and Forensic Medicine with a Course of Advanced Training
and Retraining
Belarusian State Medical University, Minsk*

Relevance. Nephrotic syndrome is a disease of the glomeruli with heavy proteinuria, low blood protein levels, edema, and high lipid levels. The histopathological and immunopathological basis of nephrotic syndrome is varied. The presentation of nephrotic syndrome can vary greatly among different races in different places for several reasons. It is important to understand these regional variations in order to make an accurate diagnosis and provide effective treatment.

Aim: for a comparison to be made on the clinical, histopathological, and immunohistochemical presentation of nephrotic syndrome in Sri Lankan and Belarusian patients, highlighting similarities and differences in presentation, severity, and pathology.

Materials and methods. The research focused on clinical features in two groups. First, 15 Sri Lankan patients were selected for analysis. The patients were between 22 to 60 years of age, with a mean age of 39.2. There were 8 men and 7 women. Second, 15 Belarusian patients were selected for analysis. The patients were between 21 to 77 years of age, with a mean age of 50.2. There was a slight predominance of women, with 9 women and 6 men. The features that were observed were hematuria, edema, proteinuria, hypertension, oliguria, fatigue, basement membrane changes, glomerular changes, sclerosis, fibrosis, and proliferation.

Results and their discussion. In the Sri Lankan patients, hematuria and edema were prominent and manifested in 60% of the patients; all the patients had proteinuria. Under the microscope, the common features that emerged were hypercellularity and thickening of the basement membrane. There was also the presence of sclerosis and mild fibrosis in the 20-30% range. Immunohistochemistry showed the presence of membranous nephropathy in 8 of 15 Sri Lankan patients, or 53%, particularly in the older patients, with the presence of IgG and PLA2R.

In Belarusian patients, membranous nephropathy was the most common cause, accounting for 9 of 15 (60%) of the cases. This type of nephropathy was characterized by thickening of the basement membrane and the presence of immune complexes, with IgG and PLA2R detected in all and 80%, respectively. Other aetiologies included amyloidosis (1 of 15, 7%), diabetic nephropathy (1 of 15, 7%), and IgA nephropathy (1 of 15, 7%). Renal tissue was found to be highly sclerosed and fibrotic, with global sclerosis detected in 47% of the tissue. Interstitial changes were also detected.

Conclusions. The majority of the cohorts showed membranous nephropathy, with 53% of the Sri Lankan patients and 60% of the Belarusian patients showing this form of the disease, which is defined by thickened basement membrane and the presence of immune complexes. The Sri Lankan patients were younger on average (39.2 years vs. 50.2 years) and had a more acute presentation with hematuria and edema, whereas the Belarusian patients had a more chronic presentation with heavy sclerosis and amyloid deposition.