Pattern of Glomerulonephritides in Adult Nephrotic Patients-Report from SIUT

Madam, The true frequencies of different glomerular lesions underlying nephrotic syndrome (NS) in our population are lacking. Occasional papers published in the past are mostly based on light microscopic (L/M) features and at the most represent morphological patterns and not the disease entities.[1-3] SIUT is a tertiary care centre for renal diseases and transplantation in Pakistan and is equipped with diagnostic modalities including immunoflouresence (IMF), serology and electron microscopy (EM) required for the precise diagnosis of glomerular diseases. We have reviewed renal biopsies of 350 adult patients with nephrotic syndrome over a period of eight years (June 1996 and July 2005). Ours is the first study of completely worked up renal biopsies from Pakistan, thus representing the true pattern of glomerular lesions in adults.

At our center, two cores of renal tissue are routinely obtained. One core is fixed in 10% buffered formalin and is processed for light microscopy; the other core is divided into two halves. One half is fixed in glutaraldehyde 2% and processed for electron microscopy and the other is put in OCT compound and snap frozen for immunoflouresence study. For light microscopy, routinely 10 serial sections are cut, with levels 1, 5, and 10 stained with haematoxylin and eosin (H&E), level 7 is stained with trichrome, level 8 by PAS, and level 9 by GMS (Silver). Multiple serial sections are also frequently examined to find the characteristic lesions of for example, FSGS. In our lab, renal sections are cut at a thickness of 2 um.

Our data indicate that focal segmental glomerulosclerosis (FSGS) is the single most common cause of NS (36%), followed by membranous GN (24%) and minimal change disease (14.2%). Other less common lesions included lupus nephritis (6%), mesangiocapillary GN (4%), mesangioproliferative GN (3.7%), Amyloidosis (3.7%), and IgA nephropathy (2.2%), IgM nephropathy (1.8%), diabetic nephropathy (1.2%) and a number of rare lesions.

This data reveals that our pattern of GN is similar to those reported in the West, as shown in recent reports from US[4-5], but in contrast with local studies.[1-3] Notably, the frequency of mesangiocapillary and mesangioproliferative GN is very high in local studies and that of FSGS very low or missing altogether.[1-3] This possibly is due to the fact that these morphologic patterns in our biopsies were categorized into distinct disease entities with the help of serology, IMF and EM. This should always be tried for precise diagnosis and optimal management of patients with glomerular diseases.

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