THE SPECTRUM OF GLOMERULAR DISEASES AMONG EGYPTIAN PATIENTS: SINGLE CENTER STUDY

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Objectives:

Changing the pattern of incidence of glomerulonephritis (GN) in different parts of the world makes the identification of the profile of glomerular disease very important academically, clinically and epidemiologically as GN is a major cause of mortality and morbidity from renal disease. We aimed to study the histopathologic spectrum of glomerular diseases among Egyptian patients with its correlation with the clinical and laboratory parameters

Methods:

A descriptive retrospective study included 857 renal biopsies were evaluated over a period from January 2013 to December 2015 in Pathology Lab , Ain Shams University hospitals,Cairo, a referral center for different governorates in Egypt. Data extraction sheet was designed to collect clinical and laboratory data from medical records of patients .All renal biopsy specimens at least two cores of renal cortex were obtained and samples sent for light microscopy (LM) , immunofluorescence (IF) and for electron microscopy (EM).

Results:

857 patients with mean of age 31.35±18.43 years and range (3-81) years. Children <16 years: 241 (28.3%), adults (17-60years): 548 (64.2%), elderly >60 years: 64(7.5%). 385 (45%) of total cases were females and 471 (55%) were males. Most common clinical presentations were Nephrotic syndrome in 204 (23.8%), asymptomatic proteinuria in 175(20.4%), chronic kidney disease in 148 (17.3%) and hematuria in 116 (13.5%) of the total patients .The most common glomerular diseases were primary focal segmental glomerulosclerosis (FSGS) in 137 (16%) (Figures 1-3) , lupus nephritis (LN) in 125 (14.20%) as 45(36%) of them with Class IV ISN/RPS class, membranoproliferative (MPGN) in 88(10.2%) as the majority was type I MPGN in 55 (62.5%) of cases , Membranous in 80(9.3%), minimal change disease in 69(8.1 %) and IgA nephropathy in 64 (7.5%) of total cases. The most common GN among children age group was minimal change disease (17.8%) followed by IgA nephropathy (17%). In adults FSGS (18.6%) followed by lupus nephritis (17.3%). In elderly group the most common was FSGS (18.8%) followed by diabetic glomerulosclerosis (12.5%) and membranous glomerulonephritis. FSGS was common in males followed by IgA and membranous GN. Among females lupus nephritis was the commonest GN followed by FSGS .

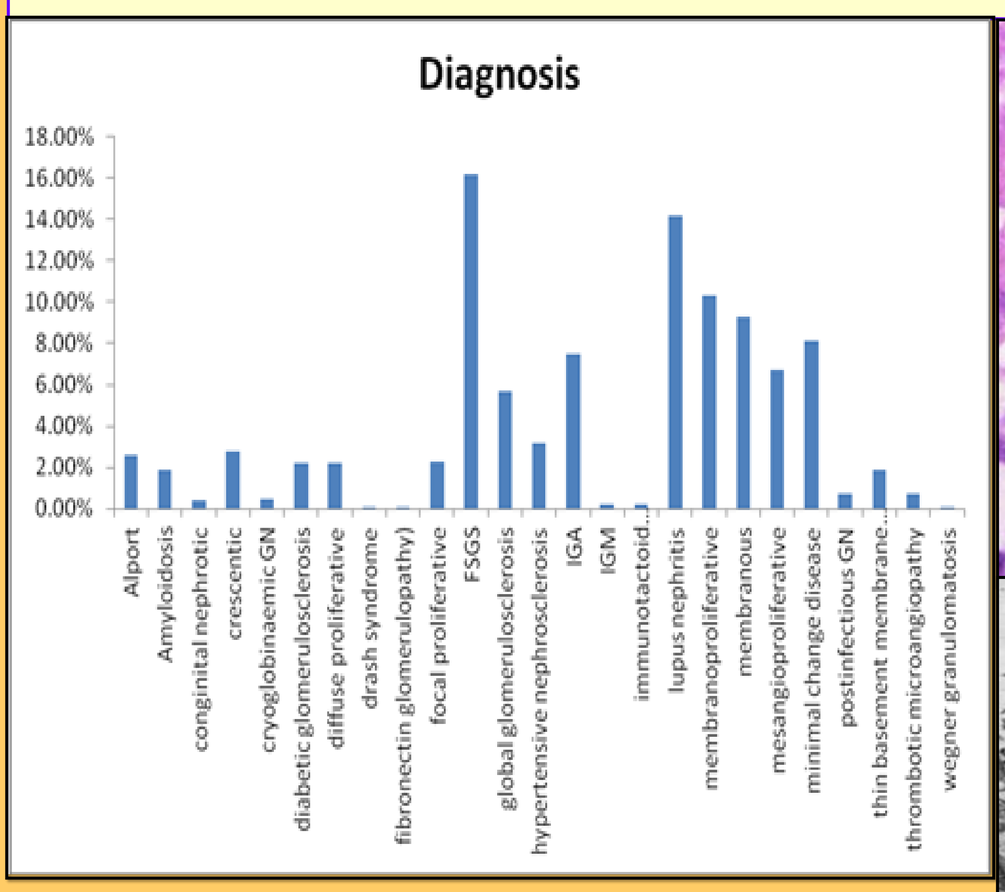

Fig.(1) Pathological diagnosis in studied renal biopsies

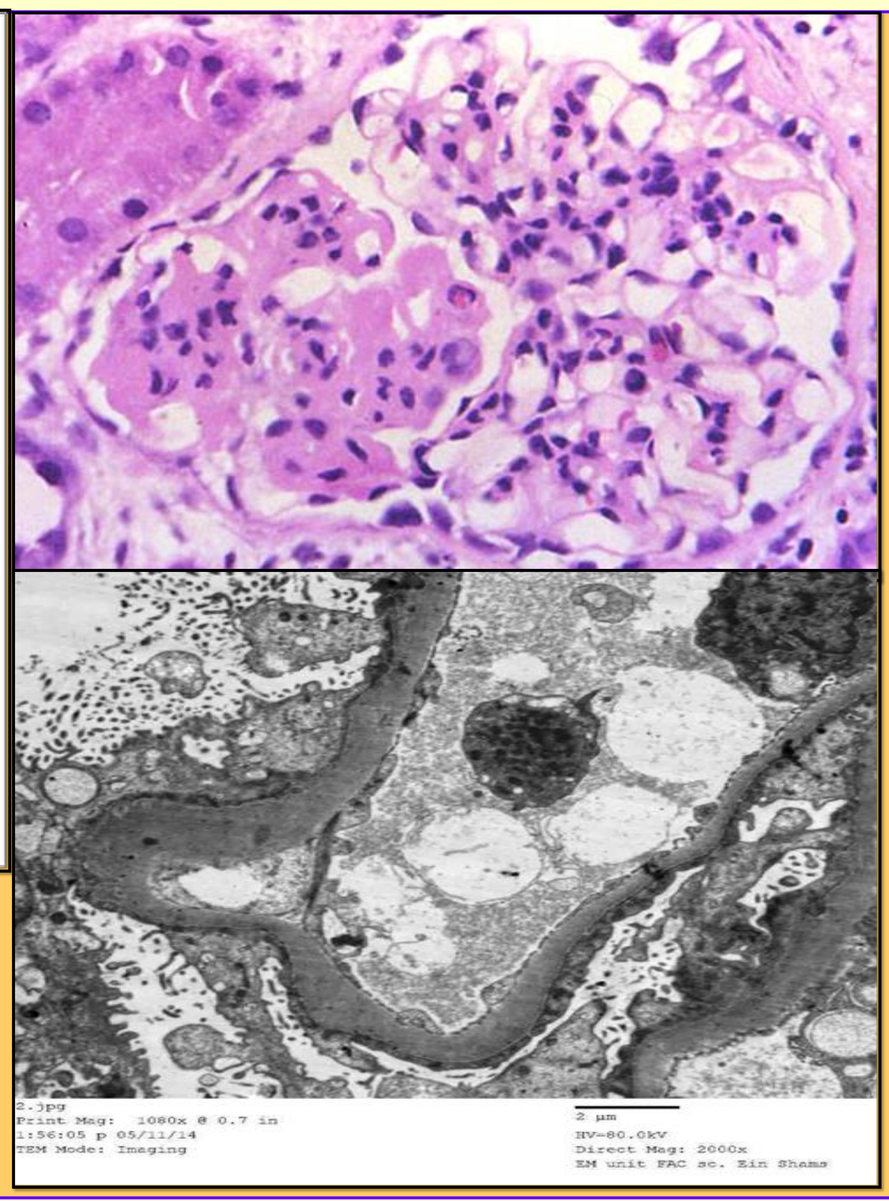

Fig. (3) An electron micrograph of FSGS showing focal thickening of glomerular basement membrane with diffuse effacement of podocytes (direct magnification: 2000x)

Fig. (2) A case of FSGS showing a glomerulus with segmental sclerosis (arrow) and mild mesangial hypercellularity with neutrophil infiltrate in the rest of the glomerulus (H&Ex400).

Conclusiones:

The most common glomerular disease is primary FSGS and most common clinical presentation of GN is Nephrotic syndrome among Egyptian patients.

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DOI: 10.3252/pso.eu.54ERA.2017