

Nephropath teaching point-4: Nodular glomerular sclerosis



Nodular glomerular sclerosis is a unique morphological pattern of glomerular injury seen in diverse and apparently unrelated conditions. Classically described as the Kimmelsteil- Wilson lesion of Diabetic nephropathy, it is now known to be associated with several diseases. All the entities mentioned in the teaching point question can produce a nodular glomerular sclerosis pattern injury. This finding in the renal biopsy should prompt a diagnostic algorithm aimed at delineation of the etiology in the unsuspected case. The differential diagnosis includes:

1. Diabetic glomerulosclerosis
2. Membranoproliferative glomerulonephritis (primary and secondary forms)
3. Dysproteinemias:
 - a. Amyloidosis
 - b. monoclonal Ig deposition disease (Light and heavy chain deposition disease)
4. Glomerular diseases with organized deposits:
 - a. Fibrillary glomerulonephritis
 - b. Immunotactoid glomerulonephritis
 - c. Fibronectin glomerulopathy
 - d. Collagen III glomerulopathy (collagenofibrotic glomerulopathy)

e. Cryoglobulinemic glomerulonephritis

5. Chronic hypoxic or ischemic conditions:

a. Takayasu's arteritis with renal artery stenosis

b. cyanotic congenital heart disease

c. cystic fibrosis

6. Idiopathic nodular glomerulosclerosis (often associated with smoking and chronic/long standing hypertension)