

Membranous glomerulonephritis in patients with type 2 diabetes

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INTRODUCTION:

Diabetic nephropathy is a form of glomerulopathy commonly described in diabetes mellitus. However, other glomerular disease can also occur especially in type 2 diabetes mellitus patients but its prevalence and nature vary from study to another. The most common glomerular disease reported in the literature are focal segmental glomerulosclerosis, membranous nephropathy and Ig A nephropathy.

PATIENTS AND METHODS:

We studied 11 cases of membranous glomerulonephritis in patients with Type 2 diabetes mellitus who have renal biopsy at our department from January 1988 to Mai 2014.

RESULTS:

Mean age at biopsy was 52.4 years [30-65], ten patients were males. Median duration of diabetes was 71.4 months (0 month-30 months). Three patients were dependent to insulin therapy. Diabetic retinopathy was identified in 2 cases. Nine patients have nephrotic range proteinuria. Hematuria was identified in one case. Two patients have renal failure. Indications for renal biopsy were the absence of diabetic retinopathy in 7 cases, followed by short duration of diabetes in 6 cases, presence of hematuria in 1 case, presence of extrarenal signs in 1 case and rapid decline of renal function in 1 case. Membranous glomerulonephritis (figure 1) was isolated in 5 cases and superimposed on diabetic glomerulonephritis in 6 cases. It was idiopathic in 9 cases, secondary to systemic lupus erythematosus in one case and to Hashimoto thyroiditis in another case.

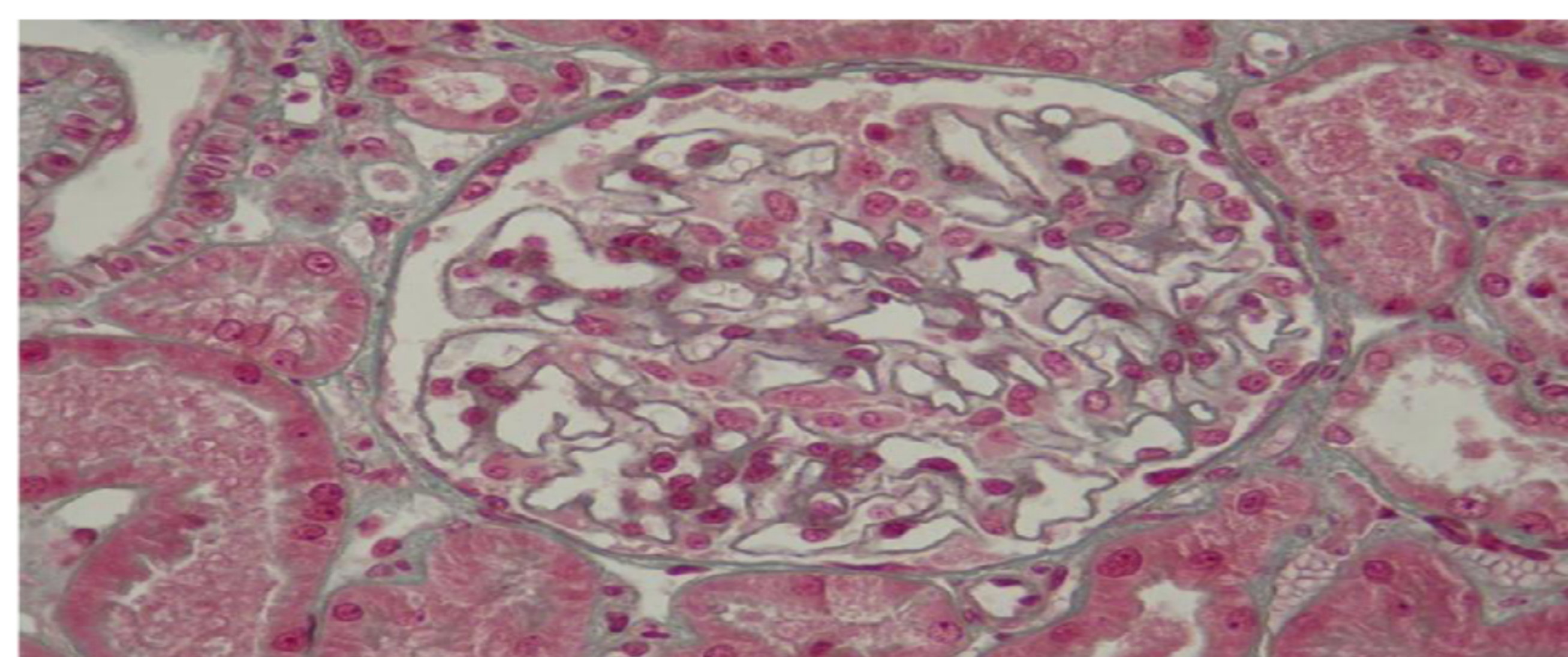


Figure 1: PAS coloration: membranous nephropathy

DISCUSSION:

Membranous nephropathy is one of the most common glomerulonephritis than diabetic glomerulonephritis occurring in diabetic patients with a prevalence between 23 and 32%.

It is postulated that these atypical features are caused by altered turnover of the glomerular basement membrane, impaired glomerular clearance of immune complexes, changes of the glomerular capillary wall as the result of hemodynamic alterations, and/or nonenzymatic glycosylation in diabetic milieu.

CONCLUSION:

Pathological changes of diabetic nephropathy are almost always irreversible while membranous glomerulonephritis are often treatable. Therefore, it would be desirable to expand renal biopsy indications especially in the absence of diabetic retinopathy, in shorter diabetes duration, in presence of hematuria or independence of insulin therapy.