Idiopathic Membranous Nephropathy in an Australian Population: The Incidence of Thromboembolism and Its Impact on the Natural History

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Dear Sir,

The administration of disease-modifying therapy in idiopathic membranous nephropathy is a matter of controversy [1-5]. It also remains unclear, given its association with renal vein thrombosis [6, 7], which (if any) of these patients should receive prophylactic anticoagulation [8].

To establish whether some patients are at particular risk of thromboembolic complications, we reviewed the records of 71 consecutive biopsy-proven cases of primary membranous nephropathy.

The following information was obtained at diagnosis and most recent review: sex, age, serum creatinine, creatinine clearance, 24-hour total urinary protein excretion, triglycerides, cholesterol serum albumin, ESR, C3, C4, blood pressure, biopsy staging. Nephrotic syndrome was deemed to be present when 24-hour protein excretion was 3 g or greater, serum albumin concentration was below 30 g/l and the patient had edema.

Of the 71 patients, 16 were female and 55 male. The mean age was 50 ± 15.3 years and the mean duration of follow-up 4.1 ± 3.5 years. 47 patients (66.1%) had the nephrotic syndrome at presentation. Mean albumin at presentation was 26.8 ± 8.6 g/l.

Clinically manifest venous thromboembolism was common (8 episodes of pulmonary embolism, 2 episodes of renal vein thrombosis with flank pain and hematuria, 3 episodes of deep venous thrombosis and 2 epi-

sodes of inferior cava thrombosis with associated renal vein thrombosis). Its overall incidence was 21.1%, it affected 12 patients (16.9%) and its presence was associated with a more unfavourable prognosis (table 1).

The presence of the nephrotic syndrome and of a low serum albumin (< 25 g/l) at presentation was associated with a significantly greater risk of thromboembolism, whereas the severity of proteinuria and the use of steroids were not. These findings strongly suggest that those patients

with membranous glomerulonephritis who, at presentation, have the nephrotic syndrome and a serum albumin < 25 g/l are at significant risk of major thromboembolic complications. All others have a relatively low incidence (2.7%) of clinically manifest thromboembolism. With a bleeding risk of approximately 5% associated with the use of oral anticoagulants [9], we believe that the former group should receive prophylactic anticoagulation, and that the latter may be safely spared the risks associated with it. We consider it important that, in an attempt to find a pathogenesis-specific immuno-suppressive therapy, one should not forget this significant therapeutic issue that clearly affects patient morbidity and mortality.

Table 1.

Presentation

Patients with thromboembolism

Patients without thromboembolism

Mean serum

Creatinine, $\mu\text{mol/l}$

Mean creatinine clearance, ml/s

Mean 24-hour protein excretion, g/day

Mean cholesterol, mmol/l

Mean triglycerides, mmol/l

Mean serum albumin, g/l

Therapy with immunosuppression

Protein excretion > 10 g/day

Nephrotic syndrome with albumin < 25 g/l

Deaths

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