Lobular membranoproliferative glomerulonephritis with organized microtubular monoclonal immunoglobulin deposits associated with B cell small lymphocytic lymphoma

Sir,

Fibrillary glomerulonephritis (FGN) and immunotactoid glomerulopathy (ITG) are well known glomerular diseases with Congo-red-negative deposits [1–4]. While FGN is characterized by randomly arranged microfibrils around 20 nm in diameter with no underlying systemic disorder, ITG is defined by orderly arranged microtubular deposits, usually >30 nm in diameter with a hollow core; patients with ITG tend to have underlying lymphoproliferative diseases. Microtubular monoclonal immunoglobulin deposits with a diameter smaller than that commonly observed in ITG have been described in a few patients with lymphoproliferative disorders, and Touchard et al. coined the term ‘GOMMID’ for such glomerulonephritis with organized microtubular monoclonal immunoglobulin deposits [5,6]. We report here a patient with nephrotic syndrome due to GOMMID following B-cell malignant lymphoma associated with IgG-κ monoclonal gammopathy. Interestingly, although the patient developed AL amyloid deposition (κ type) in a cervical lymph node, no amyloid was recognized in the kidney.

Case. A 46-year-old Japanese man presented with lymph node swelling and IgG-κ monoclonal gammopathy. The lymph node biopsy revealed small lymphocytic lymphoma cell infiltration with amyloid deposition in the vessel walls and interstitium. The lymphoma cells were positive for CD5, CD20 and CD23, and κ light chains were detected in the cytoplasm of cell-differentiated lymphoma cells. Amyloid deposits were also positive for κ light chains. He developed nephrotic syndrome 5 months later from the lymph node biopsy. Serum immunoglobulin concentrations at renal biopsy were as follows: IgG was 1410 mg/dl, IgA was 93 mg/dl and IgM was 51 mg/dl. Although serum cryoglobulin was weakly positive, its type was not determined due to insufficient concentration. Renal biopsy was performed and light microscopic studies revealed membranoproliferative glomerulonephritis with lobular accentuation (Figure 1a). Congo red staining was negative in the renal biopsy specimens. Immunofluorescence microscopic studies demonstrated positive staining for IgG, C3 and κ light chain in the mesangium and glomerular capillaries, and IgG1 was dominantly positive among the IgG subclasses. Electron microscopy showed expanded mesangial areas containing orderly arranged microtubular deposits with an average external diameter of 15 nm (Figure 1b).

Discussion. GOMMID was proposed to include the following criteria: (i) the presence of organized microtubular deposits (15 nm in width) in glomeruli without thrombi in the glomerular capillaries and/or renal arterioles; and (ii) monotypic immunoglobulin deposits, irrespective of the presence of detectable monoclonal immunoglobulin in patient serum and/or urine, type I cryoglobulinaemia or immunoproliferative disorder [5]. Our case satisfies these criteria and features both pathological and clinical aspects of GOMMID.

The relationship between malignant lymphoma and GOMMID is not fully understood. Touchard et al. [5] showed that leukaemia/lymphoma cells were the major source of glomerular immunoglobulin deposits from immunofluorescence and electron microscopic studies. In the present case, although we failed to observe lymphoma cells with electron microscopy, their role was strongly suggested by the correspondence of the isotype of monotypic immunoglobulin deposited in the glomeruli with that of the serum paraprotein. On the other hand, the different patterns of Congo red staining, positive in the lymph node and negative in the glomeruli, were remarkable in this case. It would be suggested that each immunoglobulin deposition was related to the production of amyloid- or non-amyloid-forming κ light chains derived from different plasma cell clones. Diversity of the tissue microenvironment might also explain such different patterns of immunoglobulin deposition [7].

Conflict of interest statement. None declared.
Rituximab is an alternative in a case of contra-indication of cyclophosphamide in Wegener’s granulomatosis

Sir,

We read with interest the report by Ferraro et al. [1] on the effectiveness of rituximab in refractory Wegener’s granulomatosis (WG). We report a case of relapsing WG with remission under rituximab, whereas cyclophosphamide was contra-indicated.


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SIR,

Although uncommon, percutaneous renal biopsy can precipitate acute renal failure from ureteral obstruction, hypotension or parenchymal compression by perinephric haematoma [1–4]. We report a case of acute renal failure following percutaneous renal biopsy resulting from torsion and kinking of the main renal artery secondary to anatomic displacement of the affected kidney by a large retroperitoneal haematoma.

A 50-year-old man with a history of diabetes mellitus, hepatitis C and orthotopic liver transplantation presented with renal insufficiency of several months duration. The patient’s blood pressure was 128/49 mmHg, serum creatinine concentration (Scr) was 1.8 mg/dl and the urine albumin to creatinine ratio was 3.5 mg/ml. Additional serological work-up, renal sonogram and urine microscopy were unremarkable. Three months later, the Scr had increased to 2.6 mg/dl and a percutaneous kidney biopsy was performed.

Following the biopsy, the patient developed decreased blood pressure and increasing left flank pain. An emergent

Sir,