Incidental detection of renomedullary interstitial cell tumour in a renal biopsy specimen

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Case

A 51-year-old woman with asymptomatic proteinuria and haematuria was admitted for a renal biopsy. Upon admission, her blood pressure was 118/68 mmHg. Urinalysis revealed proteinuria 1+, blood 2+, but glucose-negative. A microscopic examination showed 0–1 white and 20–30 red blood cells per high power field. Laboratory investigations showed serum total protein 6.8 g/dl, albumin 4.3 g/dl, sodium 141 mmol/l, potassium 3.8 mmol/l, creatinine 0.4 mg/dl, blood urea nitrogen 15.3 mg/dl, creatinine clearance 114 ml/min, 24 h urinary protein 0.43 g and haemoglobin 13.4 g/dl. An immunological screen and radiological studies were normal.

A renomedullary interstitial cell tumour was identified in the medulla of a renal biopsy specimen (Figure 1). Glomeruli were mostly normal by light microscopy. Immunofluorescence studies were negative and electron micrography of glomeruli did not reveal dense deposits.

Discussion

Renomedullary interstitial cell tumour is a frequent incidental autopsy finding in the kidneys of patients >50 years of age [1]. These lesions are round to oval, unencapsulated, ≤7 mm in diameter (mean: 3 mm), pale grey to yellow and, because they are frequently located in the renal medulla, they often escape clinical detection. Lerman et al. [2], who found one or more such lesions in 30% of all autopsies, coined the name renomedullary interstitial cell tumour (renal medullary fibroma). Whether such tumours represent true neoplasms, hamartoma [1], scar response to unknown injury or simple hyperplasia with fibrosis of interstitial cells [2], remains unknown. Interstitial cells may play a humoral role in reducing blood pressure, but a relationship between the presence of those tumours and clinical hypertension has not been demonstrated [2].

Clinically evident renomedullary interstitial cell tumours are rare. Our patient was asymptomatic, with proteinuria and microhaematuria. Although standard methods using renal biopsy specimens did not find evidence of glomerulonephritis, proteinuria and haematuria might have been due to a renomedullary interstitial cell tumour in this case.

Conflict of interest statement. None declared.

References

Fig. 1. Photomicrograph of renal biopsy specimen. (a) Nodule is composed predominantly of collagen and not encapsulated. (Haematoxylin and eosin; magnification: ×50) (b) Varying proportions of spindle-shaped fibroblastic cells with indistinct cellular margins and vesicular nuclei set in fibrous and hyaline matrix. A few entrapped tubular cells are recognized in the tumour. (Haematoxylin and eosin; magnification: ×200) (c, d) Collagen in tumour by serial sections. [Masson-trichrome stain; magnification: ×50 (c) and ×200 (d)].