Clin Kidney J (2012) 5: 369–371
doi: 10.1093/ckj/sfr181
Advance Access publication 6 March 2012

CKJ

Images in Nephrology
(Section Editor: G. H. Neild)

Kidney infiltration due to malignant lymphoma

Gioacchino Li Cavoli[1], Rita Passantino[2], Angelo Ferrantelli[1] and Ugo Rotolo[1]

[1]Nephrology-Dialysis, Civic and Di Cristina Hospital, Palermo, Italy and [2]Anatomic Pathology, Civic and Di Cristina Hospital, Palermo, Italy

Correspondence and offprint requests to: Li Cavoli Gioacchino; E-mail: gioacchinolicavoli@libero.it

Keywords: kidney infiltration; renal lymphoma

A 72-year-old Caucasian man was admitted for dyspnoea and weight loss. He had hypoalbuminaemia (1.6 g/dL) and nephrotic proteinuria (18 g/day), mild renal failure, anaemia and thrombocytopaenia. Physical examination, abdomen ultrasound and computerized tomography scan showed splenomegaly (Figure 1a and b), pleural effusion, oedema in the lower extremities, laterocervical, axillary, ilo-mediastinic, abdominal lymphadenopathy and kidneys enlargement with changed parenchymal echogenicity. Axillary lymph node biopsy showed a non-necrotizing granulomatous process with epithelioid cells and rare giant cells. We performed bone marrow aspiration with diagnosis of B lymphoproliferative process. Search of amyloid in abdominal fat, immunological and virological screening, tumour markers and monoclonal paraprotein were negative. Due to worsening of renal function, the patient began haemodialysis treatment with regression of dyspnoea and significant reduction of pleural effusion and legs oedema. Renal biopsy showed a lymphoproliferative process. On pathological examination, normal kidney architecture was extensively replaced by lymphoma with a diffuse pattern (Figure 2). The neoplasm was composed predominantly of small lymphoid cells with mildly irregular nuclear contours and moderate cytoplasm. The neoplastic cells were CD20+, CD5−, CD10−, CD23− and bcl-2+ve (Figure 3a and b). We made a diagnosis of marginal zone lymphoma Stage IV. Following CVP chemotherapy (cyclophosphamide, vincristine, prednisone), his renal function gradually improved and it was possible to stop dialysis. The creatinine fell to 132 μmol/L and the nephrotic syndrome was in remission (albumen 31 g/L). There has been a progressive increase in the incidence of lymphomas seen over recent decades. Following the improved prognosis and longer survival of lymphoma patients, it is possible to observe more frequently the solid organ involvement. Kidney involvement can be related to obstruction, treatment-induced toxicity and, with more interest for nephrologists, to (i) direct infiltration, (ii) association with kidney malignancies (mostly renal cell carcinoma or urothelial tumours) and (iii) association with glomerular diseases (mainly minimal change disease). Primary infiltration is rarely seen [1].

Acknowledgements. The Authors would like to thank Drs Luisa Bono, Liliana Tortorici and Lorenzo Marasà for their participation in this clinical case.

Conflict of interest statement. None declared.

References

1. Omer HA, Hussein MR. Primary renal lymphoma. *Nephrology (Carlton)* 2007; 12: 314–315

Received for publication: 18.11.11; Accepted in revised form: 23.12.11

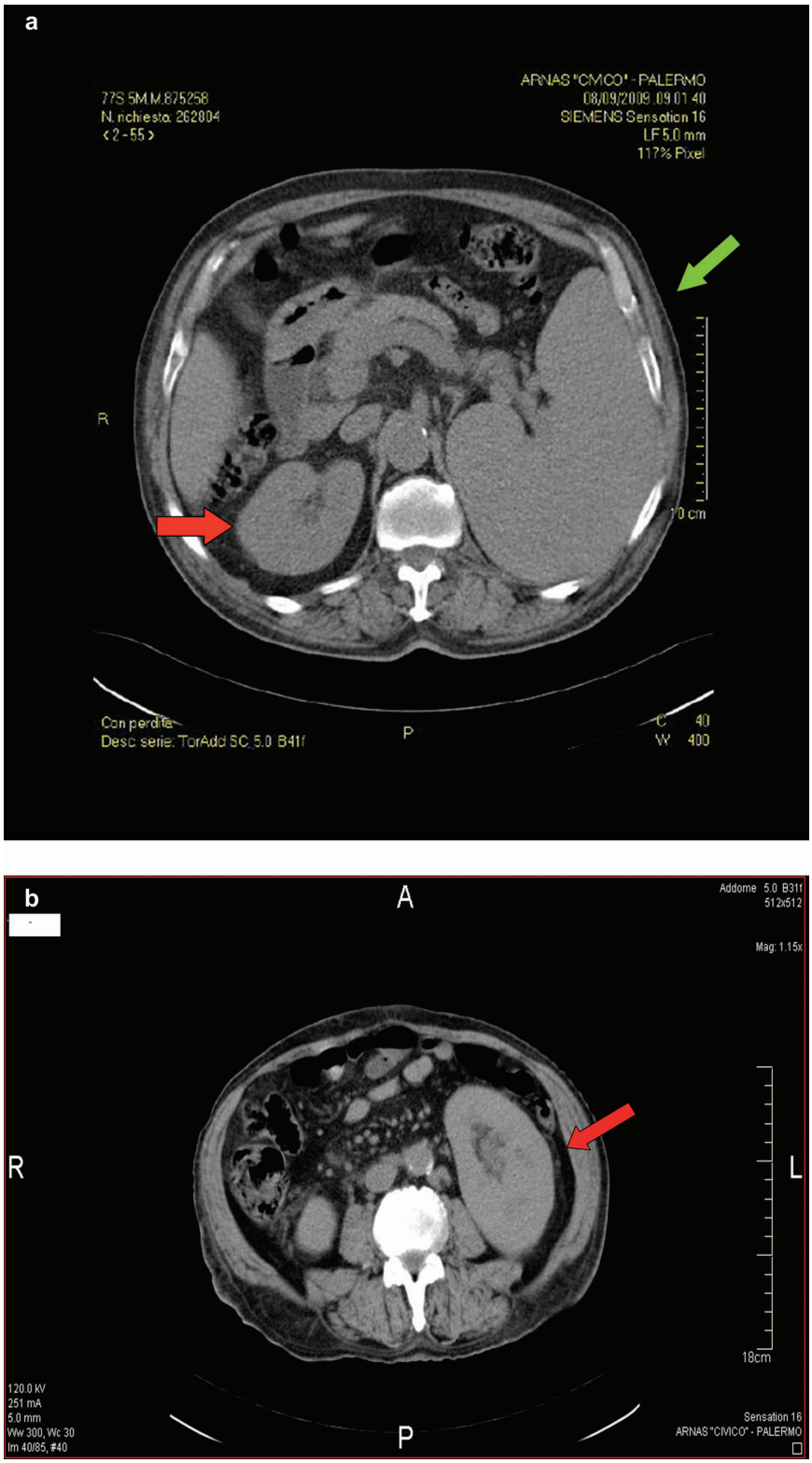

Fig. 1. (**a**) Computerized tomography scan abdomen: huge splenomegaly (green arrow) and enlarged right kidney (red arrow). (**b**) Computerized tomography scan abdomen: enlarged left kidney (red arrow).

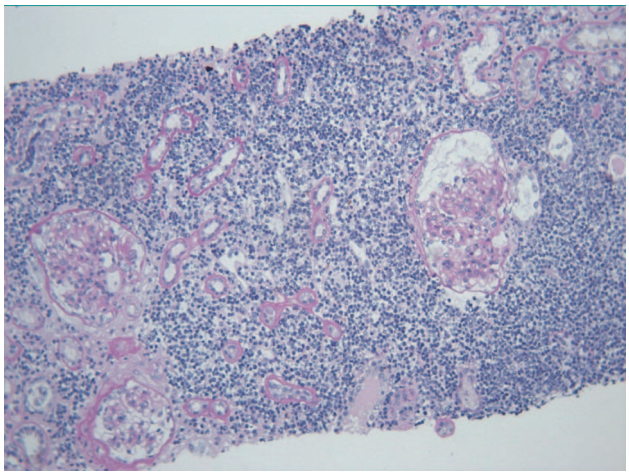

Fig. 2. Renal biopsy: the normal kidney architecture is extensively replaced by a lymphoma with a diffuse pattern; the neoplasm is composed predominantly of small lymphoid cells with round or slightly irregular contours and moderate cytoplasm. In some fields, the neoplastic cells exhibit plasmacytoid differentiation (periodic acid-Schiff stain, ×20).

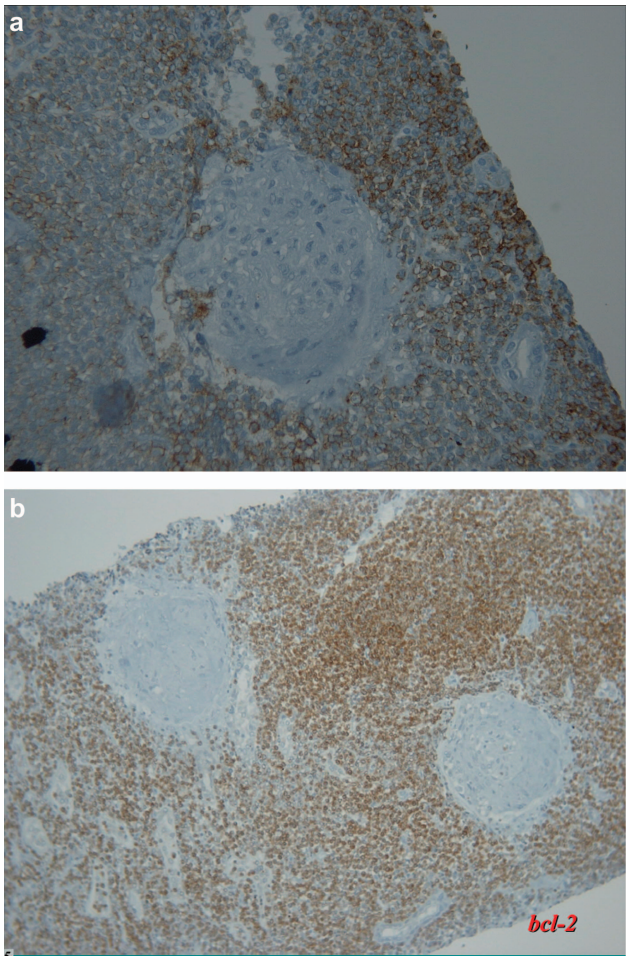

Fig. 3. (**a**) Renal biopsy: the neoplastic cells are CD20+ (immunohistochemical stain with haematoxylin counterstain for CD20, ×40). (**b**) Renal biopsy: the neoplastic cells are bcl-2+ (immunohistochemical stain with haematoxylin counterstain for bcl-2, ×40).