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Primary renal lymphoma: an uncommon diagnosis for acute kidney failure

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A 70-year-old male, previously well, had developed confusion. On investigation, he was found to have acute kidney injury (AKI) with a creatinine of 565 µmol/l, and a palpable irregular mass in the right flank. Abdominal ultrasound showed large voluminous kidneys with thickened parenchyma and probable peri-renal collection on the right side. Abdominal computerized tomography scan showed expansive right sided, peri-renal solid lesion. A renal biopsy was performed. Using light microscopy, an infiltration of neoplastic cells in the capsule and parenchyma, with destruction of the kidney architecture was detected (Figure 1A). Atypical and pleomorphic neoplastic cells were observed, with little cytoplasm and large vesicular nuclei and evident nucleoli. Immunohistochemistry showed: CD20 (Figure 1B), CD79a, Ki-67 and LCA (CD45RB) to be highly positive. The findings were consistent with a lymphoblastic lymphoma of B cells with high proliferation index. No primary focus could be found and it was assumed to be a primary renal lymphoma (PRL).

PRL represents 0.1% of all lymphomas and up to 0.7% of extranodal lymphomas [1–3]. To be considered primary renal, the lymphoma must be located only in the kidney without extrarenal involvement [1, 4]. Less than 100 cases of PRL have been described in the literature [2], and the initial presentation as AKI is extremely rare [4]. The diagnosis of PRL may be suggested by radiological imaging; however, the definitive diagnosis is obtained from histo-pathological examination with the exclusion of other extrarenal sites of lymphoma [4]. Despite being a rare etiology, it is important to remember that PRL

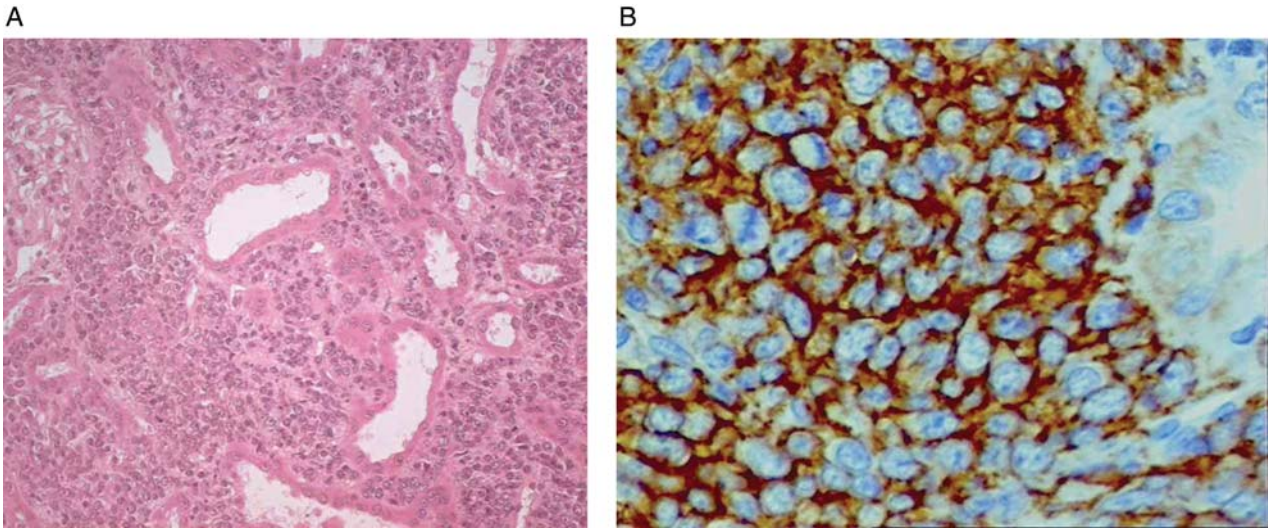

Fig. 1. Photomicrographs of renal biopsy: (**A**) Infiltration of atypical neoplastic and pleomorphic cells, with little cytoplasm and large nucleus, vesiculous and with nucleoli evident in the kidney parenchyma, and destruction of its architecture (Hematoxylin and eosin—320×). Immunohistochemistry: (**B**) CD20: Highly positive, membrane pattern (1280×) evidencing the origin from B-cells.

must be considered as a differential diagnosis in patients with unexplained AKI, when renal imaging shows enlarged kidneys.

Conflict of interest statement. None declared.

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