Haematuria and hydronephrosis caused by Castleman’s disease

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Keywords: Castleman’s disease; haematuria; hydronephrosis

A 16-year old man was referred with intermittent gross haematuria and left flank pain. On physical examination, there was a large mass in the left flank. Enhanced computed tomography demonstrated a 10 cm solid mass on the left retroperitoneal space compressing the renal pelvis and causing hydronephrosis on the left kidney. A few small lymph nodes were noted on the left para-aortic region (Figure 1A and B). F-18 fluorodeoxyglucose positron emission tomography/computed tomography (FDG-PET/CT) showed a mildly hypermetabolic tumour in retroperitoneum with para-aortic lymph nodes. The mass was resected surgically. Operative findings showed a huge retroperitoneal mass and upward displacement of the left kidney and ureter by the mass. The histopathological diagnosis of the resected tissue revealed hyaline vascular type of Castleman’s disease (CD) (Figure 2). Histologically, lymphoid follicles showed marked vascular proliferation and hyalinization of their germinal centre. There was a tight concentric layering of lymphocytes at the periphery of the follicles, resulting in an onion skin appearance. CD is a rare lymphoproliferative disorder characterized by hyperplasia of lymphoid follicles and proliferation of lymphocytes. CD consists of unicentric Castleman’s disease (UCD) and multicentric Castleman’s disease (MCD). UCD is often a benign disorder not associated with human herpesvirus 8 (HHV-8) infection, while MCD is associated with HHV-8 infection and immunosuppression [1,2]. The patients with CD may have complications including infection, nephrotic syndrome and malignancy such as Kaposi’s sarcoma, Hodgkin lymphoma and non-Hodgkin lymphoma [3,4]. Although Castleman’s disease is a rare retroperitoneal tumour, we should always consider this tumour in the differential diagnosis of retroperitoneal mass associated with hydronephrosis and haematuria.

Conflict of interest statement. None declared.

References


Received for publication: 12.3.09; Accepted in revised form: 16.7.09

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Fig. 1. Contrast-enhanced computed tomography demonstrated a 10 cm solid mass on the left retroperitoneal space (arrow) (A) and severe hydronephrosis on the left kidney (arrow) (B).

Fig. 2. Microscopic features are a typical pattern of hyaline-vascular Castleman’s disease. The lymph node contains atrophic follicles with hyalinized vessels and concentric rings of lymphocytes. (H&E stain, × 200).