Benign renal schwannoma: a rare entity

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Accepted 19 June 2015

DESCRIPTION

We present a case of a 55-year-old woman who presented with colicky pain on the right side of her abdomen. She had microscopic haematuria while urine cultures were negative. She had no other concomitant gynaecological or gastrointestinal symptoms. An ultrasound revealed normal kidneys apart from a prominent right renal pelvis even on post-micturition images. Non-contrast CT demonstrated a soft tissue density lesion adjoining the right renal pelvis (figure 1). The ureter was not obstructed and passed anterior to this structure. A CT urogram demonstrated mildly enhancing lobulated mass measuring approximately 5.1×4.7×2.4 cm, located outside the renal collecting system (figure 1). The right renal parenchyma was normal and the renal pelvis was draped around the lesion, without intrinsic filling defects. There was no dilation of the right ureter although there was mild dilation of the right

renal pelvis. The mass was not visualised on ureteroscopy. An MRI revealed similar appearances to the CT urogram, without additional information (figure 2). Based on imaging findings, possibility of transitional cell carcinoma was thought to be unlikely. A CT-guided biopsy was performed, which resulted in sudden deterioration and dramatic drop in the patient's blood pressure, which stabilised on intravenous fluid resuscitation. The postbiopsy CT examination revealed a large perirenal posterior retroperitoneal haematoma without any active extravasation. On histopathology, the tumour comprised of spindled cells with elongated hyperchromatic nuclei arranged in hypocellular and hypercellular zones (figure 3). Verocay bodies were noted. There was no necrosis and no evidence of mitotic activity. Immunohistochemically, the neoplasm showed positivity with S100 (figure 3). CD117 showed weak predominantly cytoplasmic

Figure 1 CT scan findings. Non-contrast CT (A), contrast-enhanced coronal (B), sagittal (C) and axial (D) reconstructions, show the tumour (white arrows) in the right renal hilum in close relation to the opacified renal pelvis (black arrow).

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To cite: Yong A, Kanodia AK, Alizadeh Y, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2015-211642

Figure 2 MRI findings. T2-weighted image (A), postcontrast T1-weighted images (B and C) show the tumour (white arrow) in relation to the renal hilum.

Figure 3 (A) H&E stained section of the core biopsy ($\times 10$) shows spindle cells in a collagenous stroma (Antoni A). A less cellular area with a myxoid background (Antoni B) is seen just at the right edge of the picture (black arrow). (B) The tumour shows diffuse and strong staining with S100 immunostain.

staining. Epithelial markers (MNFI16, AE1/3, EMA), Desmin, Melan A and CD34, were negative. MIB1 showed a very low proliferative index. The morphological picture together with the immunostaining pattern was suggestive of a schwannoma. Eight

months later, the patient underwent a right partial nephrectomy without complications and remained well 12 months after the surgery.

The current case demonstrates the presentation, imaging findings and potential biopsy-related complications of renal schwannoma, which is a very rare entity with only 21 reported cases in the literature.^{1 2} Schwannomas can be included in the differential diagnosis of mildly enhancing renal masses that do not involve the urothelium.

Learning points

- ▶ Renal schwannomas can present in a non-specific manner with colicky pain and microhaematuria.
- ▶ These are rare benign lesions, but can be considered in differentials of non-urothelial masses.
- ▶ CT and MRI findings are non-specific and may show mild almost homogenous enhancement.
- ▶ Some of these can bleed postbiopsy and may need active management.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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