Cystic schwannoma of the pelvis

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ABSTRACT
Schwannomas are benign tumours that arise from the Schwann cells of nerve fibres. They commonly occur in the head and neck, mediastinum and extremities. They are extremely rare in the pelvis. These are usually slow-growing tumours and are often detected incidentally. Preoperative diagnosis is extremely difficult as there are no definitive signs on imaging. Aspiration biopsy is often inconclusive or misleading. Surgical excision is both diagnostic and therapeutic. As these tumours are often large in size, open excision is most commonly performed. We describe a case of a large, cystic schwannoma of the pelvis causing bladder outlet obstruction and bilateral hydroureteronephrosis. Complete surgical excision was performed laparoscopically.

KEYWORDS
Schwannoma – Pelvis – Laparoscopy

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Case history
A 54-year old man presented to us with history of obstructive urinary symptoms for 2 years. He also complained of gradually progressive distension of the lower abdomen as well as numbness of the left hemiscrotum and medial aspect of the thigh. On examination, there was a 10cm x 8cm mass extending from the umbilicus to the pubic symphysis. The lower margin of the mass could not be palpated per-abdominally. The mass was dull on percussion. On rectal examination, the mass was anterior to the rectum. The prostate could be felt separately. There was no neurological deficit apart from loss of sensation of touch over the femoral triangle and lateral part of the left hemiscrotum. The haematological examination, serum biochemistry and urine analysis were normal.

Ultrasonography of the abdomen revealed a cystic mass with thin septations located between the bladder and rectum (Fig 1a). Contrast enhanced computed tomography (CT) of the abdomen revealed a well circumscribed, cystic mass of 11cm x 8cm x 7cm. There were multiple septations and focal areas of calcification in the wall of the mass. The major bulk of the mass was on the left side, and it pushed the blad-
The non-visualisation of the left genitofemoral nerve during surgery corroborated this presumption.

**Discussion**

Schwannomas are tumours of neurogenic origin. They may arise de novo or may be associated with von Recklinghausen’s disease. They are most commonly benign but may undergo malignant changes if they are a part of von Recklinghausen’s disease. They can occur in any part of the body but are extremely rare in the pelvis with fewer than 20 cases reported to date in the English literature. They are slow-growing tumours and do not cause many symptoms until they have attained a large size. They may cause non-specific symptoms such as hackache, abdominal or pelvic heaviness, distension and discomfort.

Preoperative diagnosis of pelvic schwannomas is difficult as there are no imaging findings that are specific for schwannomas. The differential diagnoses include psoas abscess, adnexal mass, fibrosarcoma, liposarcoma, ganglioneuroma, hydatid cyst and haematoma. CT and magnetic resonance imaging may reveal a well circumscribed mass with areas of calcification, cystic degeneration, haemorrhage and necrosis. Cystic changes occur as the tumour overgrows its blood supply and such tumours are designated ‘ancient schwannomas’.

As imaging findings are not specific, percutaneous biopsies are often used but they have been reported to be inaccurate and occasionally misleading. Surgical excision and histopathological examination is therefore necessary to reach a confirmatory diagnosis. As these tumours usually attain a large size, open surgical excision is generally performed. There are only anecdotal reports of successful laparoscopic excision of these tumours. To the best of our knowledge, this is the first and the largest ancient schwannoma of the genitofemoral nerve that could be excised laparoscopically. As these tumours are most often benign, the prognosis of patients after surgical excision is good.

**Conclusions**

Pelvic schwannomas are difficult to diagnose preoperatively. A high index of clinical suspicion is required. Preoperative imaging and biopsy are often inconclusive, and surgical excision is the mainstay of treatment. Laparoscopic excision is feasible and should be offered to the patients.

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