

Leiomyoma of the Prostate, a Rare Mesenchymal Tumour

The Editor,

Sir,

Leiomyoma is a benign tumour composed of smooth muscles. It is observed in the prostate in two forms. Its first form is nodular leiomyomatosis frequently observed with benign prostate hypertrophy, whereas the second form is true prostatic leiomyoma which is very rarely observed (1). We present a case of a 62-year old man who presented to hospital with acute urinary retention and a past history of constipation (five years) and gross haematuria. A urethral catheter was inserted.

A benign, grade III tissue filling the rectum was observed on rectal examination. The international prostate symptom score (IPSS) was calculated as 33; Qmax 7, Qaver 3 and post-micturition residue urine was measured as 168 cc on the uroflowmeter. No pathological findings were observed in the bladder and kidneys on abdominal ultrasonography. Prostate specific antigen (PSA) 3.21 ng/mL and free PSA 1.1 ng/mL were measured. Uncomplicated open prostatectomy was performed.

A prostatic tissue weighing 103 grams in total was observed in the macroscopic assessment. It had a smooth surface and was encapsulated, forming a whole homogeneous mass. Clusters composed of spindle form and narrow cytoplasm cells crossing each other were observed in the histopathological evaluation. Atypical mitosis, pleomorphism or necrosis were not observed. Vimentin (+), desmin (+) and smooth muscle actin (SMA,+) displayed staining in the immunohistochemical staining while (-) staining was observed with CD 34 and S100 protein (Figs. 1–4). The patient was diagnosed with pure leiomyoma.

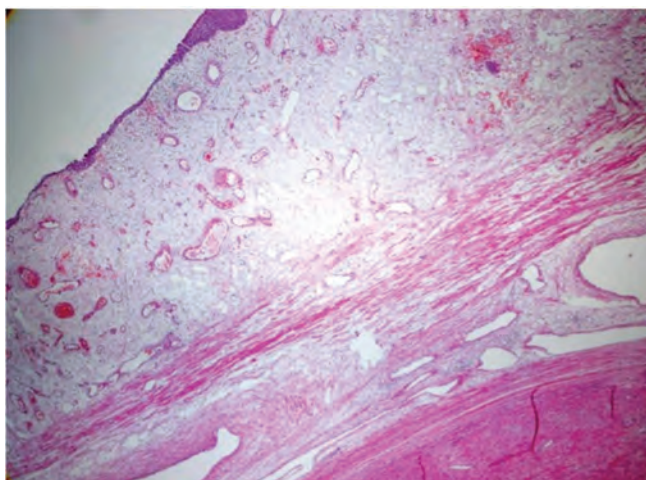


Fig. 1: Benign tumoural proliferation beneath the urothelial epithelium (HE x 4).

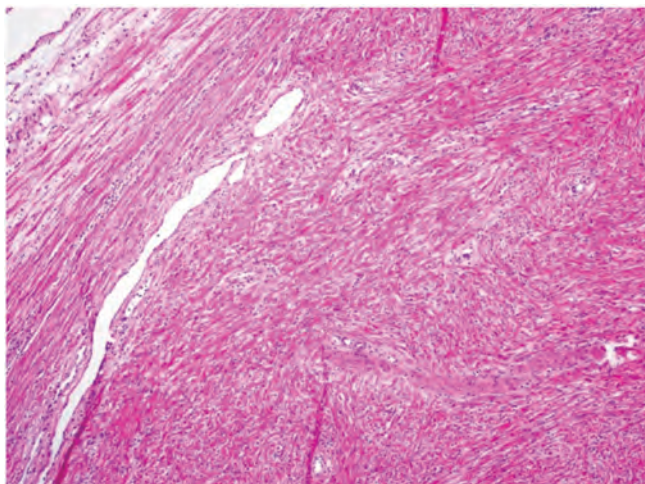


Fig. 2: Microscopic section of pure leiomyoma which is organized in fascicles (HE x 10).

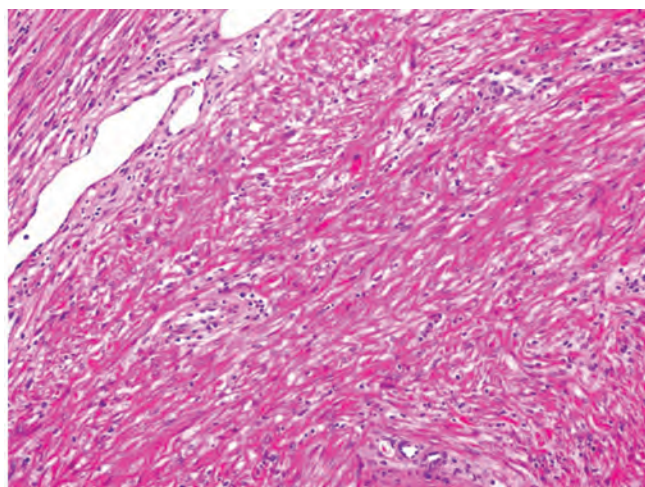


Fig. 3: Spindle cells of smooth muscle with abundant cytoplasm and without nuclear atypia or mitosis (HE x 20).

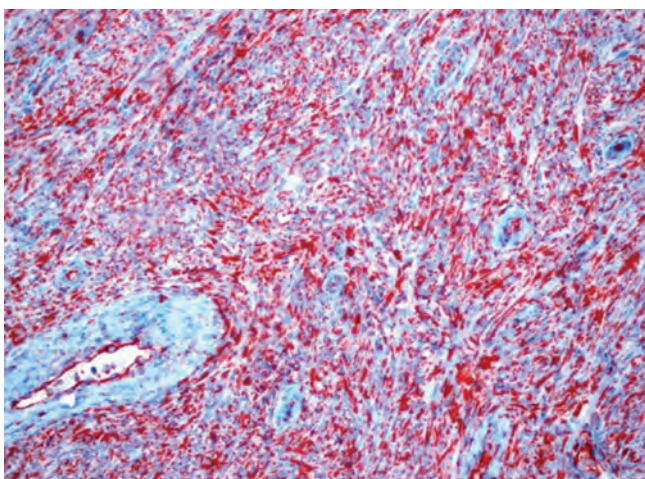


Fig. 4: The immunohistochemical analysis shows a positive reaction of the muscular cells for vimentin (x 20).

Leiomyoma of the prostate was first reported in 1876 by Lebec and true prostatic leiomyoma was specifically defined by Kaufman and Berneike (2). In this definition, it was expressed that it is a circumscribed or encapsulated mass of smooth muscle, 1 cm or more in diameter, containing varying amounts of fibrous tissue but devoid of glandular elements and which is either obviously prostatic or juxtaprostatic in origin and position (2, 3). Leiomyoma may be localized in many organs such as kidneys, ureter, bladder, urachus, prostate, urethra and seminal vesicles (4). The physiopathological mechanism of true prostatic leiomyoma has not been clarified (3–5). It has been suggested that repeated infections and inflammation can transform the glandular tissue into smooth muscle and the hypertrophy leads to leiomyoma (5, 6). Obstructive urinary complaints which cannot be distinguished from benign prostatic enlargement are frequently observed (7). More rarely, it may lead to constipation by placing pressure on the rectum (5). Leiomyoma led to long standing constipation in our patient. Gross haematuria is rarely observed.

When causing serious complaints, prostatic leiomyoma may be removed surgically. No recurrence and malignancy was observed (1, 7, 8).

Pure leiomyoma of the prostate is a rarely observed tumour detected in this patient *via* histopathological examination. Diagnostic physical examination, laboratory analyses and specific radiological screening were not available prior to this pathological diagnosis.

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