

Prostatic Stromal Tumour of Uncertain Malignant Potential (STUMP): A Case Presentation and Literature Review

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Case Presentation

A 67-year old gentleman presented to the two-week-wait urology clinic with an incidental finding of a left sided mass protruding from the prostate on CT scan as part of investigations for lower abdominal pain. Further MRI of the prostate showed an atypical left peripheral zone tumour. The patient denied any urinary lower urinary tract symptoms (LUTS) or any haematuria, and had a prostate specific antigen (PSA) of 1.6. Digital rectal examination (DRE) revealed a smooth prostate with a soft non-tender left sided prostatic mass.

Investigations

A CT abdomen/pelvis with contrast showed a 4.4 x 4.3 x 4.9cm mass arising from the left aspect of the prostate. A subsequent MRI scan of the prostate showed features suggesting a mucinous tumour (Figures 1,2,3).

The features were atypical for a prostatic adenocarcinoma. The case was discussed in a Multidisciplinary Team Meeting (MDT) and a decision was made to excise the mass robotically due to uncertainty of diagnosis and the possible malignant potential of this mass.

Intraoperatively, the tumour appeared to stem from the seminal vesicles and indeed initial histology prior to immunohistochemistry suggested a seminal vesicle adenomyoma. However, immunohistochemistry and three separate histopathologist opinions concluded that the features were most in keeping with a prostatic stromal tumour of uncertain malignant potential (STUMP).

The MDT follow up plan based on the histology is to repeat MRI pelvis at six months.

Discussion

Definition of STUMP

Is a rare tumour of the specialized prostatic stroma, it is considered by most to be a neoplastic lesion. As the histology shares similar features to prostatic sarcoma. The clinical course is unpredictable. Ranging from a focal incidental finding on biopsy that never progresses, to an obstructing mass that recurs after resection and in extreme cases a highly aggressive lesion leading to widespread metastases and death [1,2].

The term STUMP was introduced in 1998 by Gaudin et al [2] to represent prostatic stromal lesions that were not obvious sarcomas. Prior to that, STUMP incorporated all of the following:

- Phyllodes tumour of the prostate,
- Atypical stromal hyperplasia,
- Cystosarcoma phyllodes,
- Cystic epithelial-stromal tumour.

Age group

STUMP most commonly affect Men in their sixth or seventh decade of life

Presenting symptoms

These can be variable and include:

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Figure 1: Cross-sectional CT scan image showing 4cm mass arising from the left lateral aspect of the prostate.

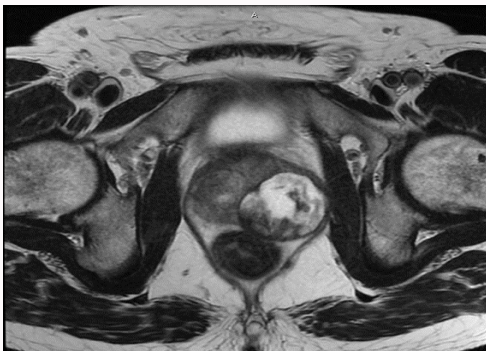


Figure 2: Cross-sectional MRI scan of the prostate showing 4cm mass with high signal on T2 weighted imaging indicating mucinous tumour.

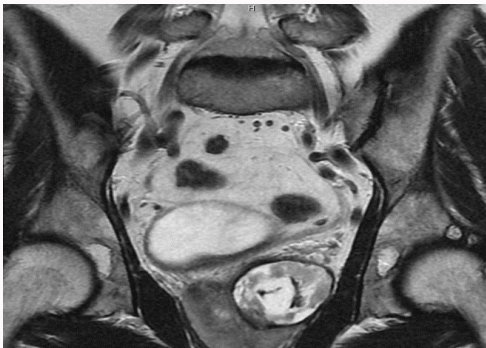


Figure 3: Coronal view of an MRI scan of the pelvis showing the mass (high T2 signal) in relation to the prostate and bladder.

Chronic obstructive LUTS,
 Abnormal DRE, Raised PSA,
 Haematuria, Haemospermia,
 Rectal dysfunction and/or sensation of fullness,
 Acute urinary retention,
 Incidental presentation on imaging,
 Rarely with distant metastases [1-3].

Diagnosis

This could be obtained by a needle biopsy, transurethral resection of the prostate or prostatectomy.

Pathologic features

Gaudin et al [2] classified STUMPs into 4 distinct histologic patterns. The first pattern demonstrates marked cellular atypia and normal stroma. This is the most common pattern and accounts for at least 50% of cases. The second pattern “hypercellular”: consists of hypercellular stroma and absent cytological atypia. The third pattern “hypocellular”: is composed of hypocellular stroma and some cytological atypia. The fourth pattern “myxoid”: resemble benign prostatic hyperplasia (BPH); but lacks the nodularity of BPH [2,4].

Treatment

The rarity of STUMP means that there is as yet no consensus on the appropriate management and follow up. A retrospective study showed a 46% recurrence in those patients with STUMP who did not undergo definitive resection [2]. In one study [1], 16% of patients with STUMP were found to have a concurrent or subsequent prostatic sarcoma. Therefore, the consensus recommendation is that of close follow up and definitive resection in younger individuals [1].

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