

Exophytic benign prostatic hyperplasia presenting with refractory retention: A rare entity

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ABSTRACT

The transitional zone is the most common site of benign prostatic hyperplasia (BPH). Exophytic BPH is an exceedingly rare entity with only one case described in the English literature. We herein describe a case of exophytic BPH in a 48-year-old man presenting as a large pelvic mass with refractory retention managed successfully with robot assistance. To the best of our knowledge, this is the first case of exophytic benign prostatic enlargement managed by surgical excision.

CASE REPORT

A 48-year-old male presented with history of urinary retention associated with mild suprapubic discomfort. He had a history of lower urinary tract symptoms (LUTS), predominantly voiding, for 10 months. Digital rectal examination revealed a large mass, and the prostate was not separately felt. Serum prostate-specific antigen (PSA) was 141 ng/ml. He underwent a finger-guided, transrectal prostate biopsy, which revealed benign prostatic hyperplasia (BPH). A magnetic resonance imaging scan 6 weeks after biopsy showed a 9.8 cm × 8 cm × 8 cm well-defined pelvic mass abutting the prostate with positive claw sign (indicating prostatic origin). The mass was hypointense on T1 images and heterogeneously hyperintense on T2-weighted images [Figure 1]. A 12 core Transrectal Ultrasound (TRUS)-guided biopsy was performed. The histopathology again revealed BPH. He underwent robot-assisted excision of the mass using 4-robotic arms and pelvic docking. Intraoperatively, a well-defined mass was seen impinging the bladder neck. Dissection was started with peritoneal incision

in the rectovesical pouch, identifying both the vas and seminal vesicles which were lifted with the mass. The dissection was then carried out between the bladder and the mass identifying both the ureters which were pushed laterally by the mass [Figure 2a]. The mass seemed to arise from the left lobe of the prostate; therefore, a partial prostatectomy was performed [Figure 2b]. The specimen weighed 90 gm. On cut section, multiple nodules ranging from 1.5 cm to 4.5 cm in size were seen to occupy the whole specimen [Figure 2c]. The final histopathology was consistent with BPH. Postoperative course was uneventful, and the patient voided well. Four weeks postoperatively, PSA was 1.98 ng/dl. Ultrasound showed a 21 cc prostate, and cystoscopy revealed Grade I prostate [Figure 2d].

DISCUSSION

Embryonic and fetal descriptions of prostatic anatomy by Lowsley^[1] followed by more detailed work of Franks^[2] identified the inner gland as the exclusive site of BPH. However, the most widely used description of zonal anatomy by McNeal^[3] states that the periurethral and the transitional zone are the exclusive seat of BPH.

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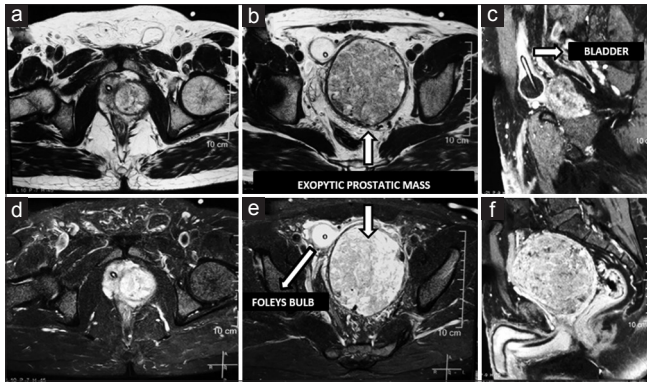


Figure 1: Multiparametric magnetic resonance imaging images showing a 9.8 cm × 8 cm × 8 cm well-defined mass arising from the prostate and compressing the urinary bladder. The mass is hypointense on T1-weighted images (a and b) and hyperintense on T2-weighted images (c-f)

Egawa *et al.*^[4] reported the presence of nodular hyperplasia in the peripheral zone (PZ) at an autopsy. He opined exophytic growth of the transitional zone glands into the PZ or hyperplasia of the ectopic transitional zone tissue as the possible explanation.

Blascko *et al.*^[5] described the only case of a multilobulated mass posterior to the urinary bladder detected incidentally in a 60-year-old male. In contrast to our patient, the serum PSA value of their patient was 1.87 ng/ml and TRUS guided and a separate computed tomography-guided biopsy revealed benign prostatic epithelium. The authors opined that although hyperplastic prostatic nodules most commonly protrude into the bladder, rarely, they can grow outside the prostate and present as pelvic mass.

Our patient presented with chronic urinary retention with background LUTS and significantly elevated serum PSA values. It is plausible that compression of the bladder neck by the mass caused his symptoms. Robot-assisted excision of the mass relieved the LUTS and also provided definitive exclusion of a malignant pathology.

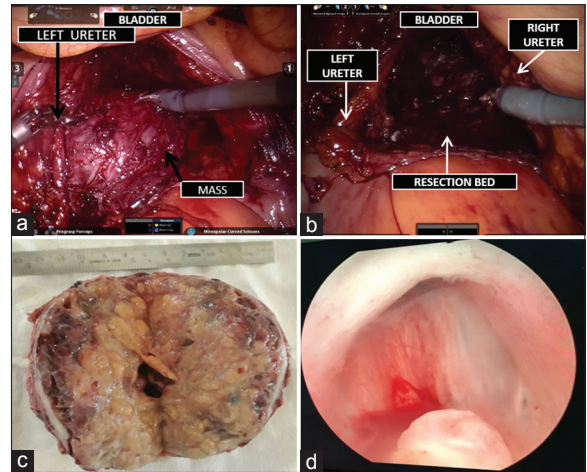


Figure 2: Intraoperative photos showing the relation of the mass with the ureter and bladder (a) and the postresection tumor bed (b). Cut section shows multiple nodules occupying the whole specimen with no areas of hemorrhage or necrosis (c) and postoperative cystoscopy showing normal prostatic urethra (d)

CONCLUSION

Exophytic BPH is a rare entity. A differential diagnosis of this entity should be considered in elderly male presenting with a retrovesical mass.

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