

Functional medicine

## Giant retrovesical ectopic prostatic adenoma. Case report and revision of the literature

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### ARTICLE INFO

#### Keywords:

Ectopic prostatic tissue  
Pelvic mass  
Transperineal biopsy  
Ectopic retrovesical prostatic adenoma

### ABSTRACT

We report a case of giant retrovesical adenoma originating from ectopic prostatic tissue. A 73-year-old man presented with progressive dysuria, increasing PSA values, and acute urinary retention. One year before presentation, the patient had undergone retropubic prostatic adenomectomy for benign prostatic hyperplasia. At last admission, PSA value was 23 ng/ml; mpMRI demonstrated a dysomogeneous retrovesical mass of 8 cm in diameter. Biopsy histology demonstrated acute prostatitis of the residual parenchyma and a prostatic adenoma in the retrovesical mass. After antibiotics and restored spontaneous urination, the patient was discharged and refused surgical lesion removal. After three months, the patient remains asymptomatic.

### Introduction

Retrovesical masses include benign and malignant diseases. Ectopic prostatic tissue may occasionally be found outside the genitourinary tract in the pelvic cavity in accordance with embryonic development. The diagnosis of ectopic prostatic tissue in the retrovesical space is very rare, and only a few cases have been reported in the literature. We report a case of a giant retrovesical adenoma originating from ectopic prostatic tissue.

### Case presentation

A 73-year-old man suffering from progressive dysuria and increasing PSA value underwent acute urinary retention and received an indwelling catheter. One year before presentation, the patient had undergone retropubic prostatic adenomectomy for benign prostatic hyperplasia (BPH) and histology confirmed the presence of a 150 g prostatic adenoma; the imaging before surgery (abdominal ultrasound) demonstrated a very large prostate (estimated weight of 250 g) but did not show any additional pelvic mass, moreover total prostate specific antigen (PSA) and PSA density were equal to 6.2 ng/ml and 0.02. At last hospital admission, the digital rectal examination showed a normal-size prostate gland although the PSA value was 23 ng/ml, and transabdominal ultrasound demonstrated the presence of a dysomogeneous retrovesical mass of 8 cm in diameter. Pelvic multiparametric magnetic

resonance image (mpMRI) as shown in Fig. 1 and <sup>18</sup>fluorodeoxyglucose positron emission tomography/computed tomography (<sup>18</sup>FDG-PET/CT) as shown in Fig. 2 indicated a heterogeneous contrast-enhanced mass between bladder and rectum; in addition, mpMRI did not indicate suspicious lesions for prostate cancer (PCa) in the residual prostatic parenchyma. Cystoscopy and urinary cytology showed negative results for bladder cancer but demonstrated an extrinsic compression of the posterior bladder wall. The patient underwent transperineal ultrasound-guided prostate biopsy plus targeted biopsy (four cores) of the retrovesical mass. Biopsy histology demonstrated the presence of acute prostatitis of the residual parenchyma and a prostatic adenoma in the retrovesical mass (Fig. 3). The patient underwent antibiotic therapy, and after 10 days, the transurethral catheter was removed with concurrent restoration of spontaneous urination. The patient was discharged after 15 days with the indication to take one tablet per day of dutasteride because he refused to undergo surgical removal of the lesion. After three months, the patient is still asymptomatic.

### Discussion

Ectopic prostate is an unusual finding in the genitourinary tract; most aberrant prostatic tissue occurs in the urethra and urinary bladder but has also been observed in the testis, epididymis, bowel, cervix, and seminal vesicle.<sup>1</sup> These findings suggest that embryonic prostatic tissue can migrate outside the urinary tract and reach a size that is large

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<https://doi.org/10.1016/j.eucr.2020.101383>

Received 3 August 2020; Received in revised form 9 August 2020; Accepted 12 August 2020

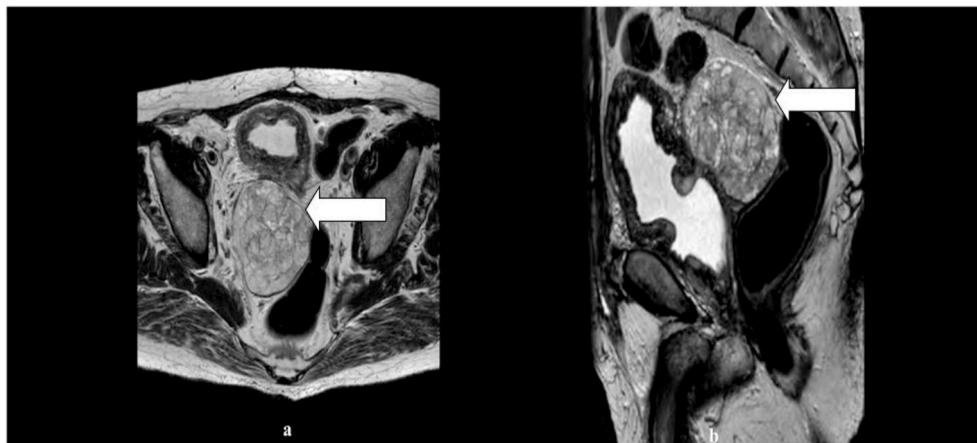
Available online 12 August 2020

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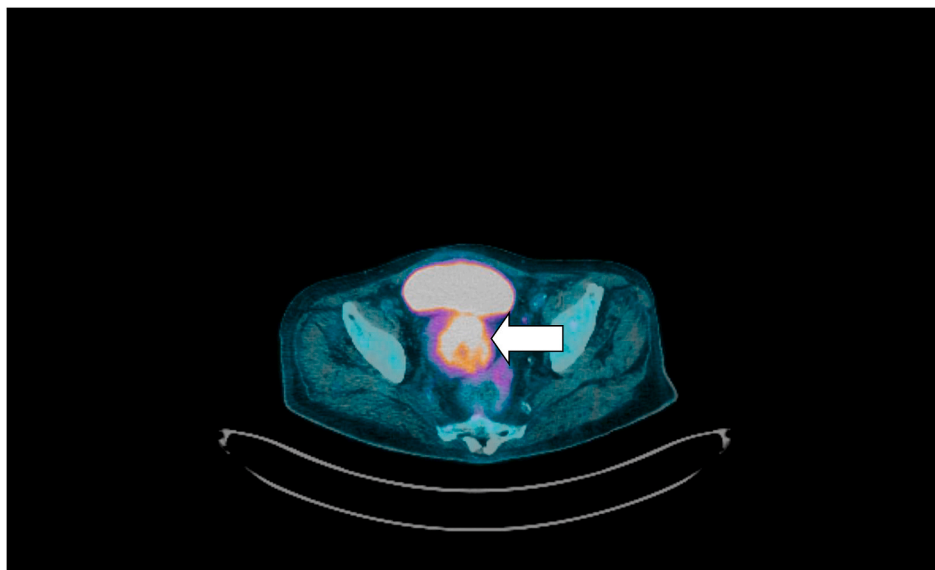
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**Fig. 1.** Multiparametric pelvic magnetic resonance imaging (T2-weighted sequence) demonstrated a dysomogeneous retrovesical mass (white arrow) of 8 cm in diameter between bladder and rectum (a: axial evaluation; b: sagittal evaluation).



**Fig. 2.** Total body 18fluorodeoxyglucose positron emission tomography/computed tomography ( $^{18}\text{F}$ FDG PET/CT) demonstrated a contrast-enhanced retrovesical mass of 8 cm in diameter (white arrow).

enough to cause problems in the majority of the cases but makes it difficult to detect in the early stages. Ectopic prostatic tissue has histological and immunohistochemical characteristics that are indistinguishable from those of normal prostatic tissue and most likely represent the persistence of embryonic structures; rarely is ectopic benign prostatic tissue accompanied by primary prostate cancer.<sup>2</sup> When a tumor is found in the retrovesical space in a man during a clinical examination, differential diagnosis includes teratoma, lipoma, lymphoma, gastrointestinal stromal tumor (GIST), local cancer recurrence (such as bladder, rectum), sarcoma and rarely, benign tumors<sup>3</sup>; therefore, only performing an ultrasound-guide targeted biopsy allows us to obtain the right diagnosis.<sup>4</sup> In case of a retrovesical mass combined with an increase in PSA levels, the presence of an ectopic prostate or malignant changes in ectopic prostate and/or primary prostate should be suspected. Up to now, a few cases of benign retrovesical ectopic prostate adenoma have been reported in literature<sup>5</sup>, and in the majority of the patients, the right diagnosis is obtained after removing the pelvic mass at definitive specimen.

In our case, the patient developed acute urinary retention one year after undergoing a prostatic adenomectomy, and the biopsy-based histology of ectopic BPH was surprising but easy to obtain because of the

absence of the native adenoma (150 g removed by surgery).

To our knowledge, this is the first case of retrovesical ectopic prostate adenoma diagnosed in a male patient who had previously undergone prostatic adenomectomy.

### Conclusion

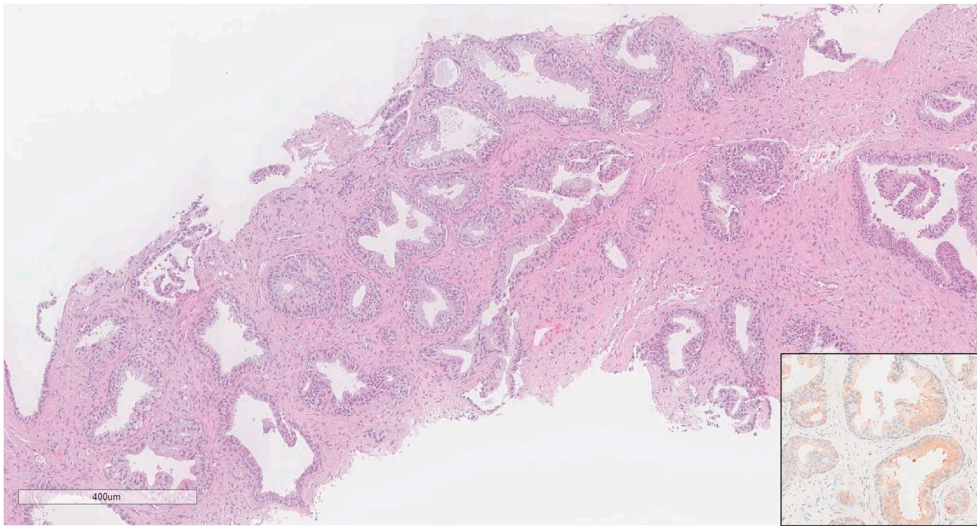
Retrovesical ectopic prostatic adenoma is a very rare lesion that should be differentiated from other more frequently found malignancies.

### Ethical approval and consent to participate

All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

### Informed consent

Written informed consent was obtained from the patient for his



**Fig. 3.** Biopsic sample of the retrovesical mass showed prostatic tissue confirmed by PSA immunoreactivity (insert lower right corner).

anonymized information to be published in this article.

#### Declaration of competing interest

The authors declare that they have no conflicts of interest.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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