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CASE REPORT

Prostatic cystadenoma. A case-report illustrating diagnosis and surgical management of an unusual condition

Vibeke M. Kristensen, Thomas Helgstrand, Janne Bayer Andersen, Kristi Krüger and Henrik Jakobsen

Department of Urology, Herlev Hospital, University of Copenhagen, Copenhagen, Denmark

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Introduction

Less than 30 cases of the rare condition large multilocular prostatic cystadenoma have been described [1,2]. Our aim is to increase awareness of the condition, associated symptoms, and to share treatment recommendations when encountering cases of prostatic cystadenoma.

Case report

A 54-year-old male presented with an elevated prostate specific antigen (PSA) level of 5.7 ng/ml and moderate obstructive LUTS; nocturia once to twice per night and two incidents of urinary retention, which both remitted spontaneously. No weight loss or pain was reported. The patient had no history of macroscopic hematuria or hematospermia nor did he report gastrointestinal symptoms. Additional blood tests (electrolytes, hemoglobin) were normal and urine analysis was normal. On digital rectal examination (DRE) the prostate was benign with soft compressible components, and no palpable tumors. Initial uroflowmetry showed voided volume of 177 ml with a Qmax of 12 ml/s, followed by a second voided volume of 117 ml with a Qmax of 9.7 ml/s. Residual urine was 400 ml. The Danish Prostate Symptom Score (DAN-PSS) is a validated patient reported outcome measure to assess irritative and obstructive LUTS and the perception of symptoms [3]. DAN-PSS score was 7, indicating mild obstructive LUTS (incomplete emptying, urgency, weak flow, and nocturia). Cystoscopy showed normal bladder mucosa with no signs of malignancy or cystitis. Several impressions from the surrounding tissue were noticed. Biparametric Magnetic Resonance Imaging (bpMRI) (3 T) revealed a 10×12 cm thin-walled process infiltrating the base of the prostate (Figure 1). The proces was encapsulated, multicystic, without solid tissue. The cysts were well-defined and contained fluid of variable signal intensities, a few with signals of hemorrhage. None of the bpMRI findings indicated malignancy; no diffusion restriction, no sign of extracapsular invasion, and no enlargement of regional lymph nodes. Due to these findings, biopsi of the prostate was not performed.

In planning removal of the tumor robot-assisted laprascopic removal of the cystic mass was considered; however, open surgical treatment course was chosen. Size, location and cystic nature of the tumor were the characteristics that led to the choice of open surgery. Access to the retrovesical cystic mass was obtained through a midline incision. Adherent to the prostate inferiorly, the tumor displaced the bladder anteriorly without involvement of the peritoneum. In dissecting the tumor from the bladder, a 4 cm bladder tear occurred which was sutured intra-operatively. Drainage of multiple cysts during dissection enabled en-bloc removal of the multicystic tumor measuring 12×15 cm (Figure 2). A thin 1–2 cm wide fibrotic band connected the tumor to the base of the prostate just anterior to the seminal vesicles.

The patient required four days of hospitalization due to hematuria and blood transfusion due to decrease in hemoglobin from 9.2 mmol/L preoperatively to 5.5 mmol/L postoperatively. Recovery after discharge included an in-dwelling catheter for three weeks.

At three-month follow-up the patient had no LUTS or other complaints. PSA declined to 1.5 ng/ml.

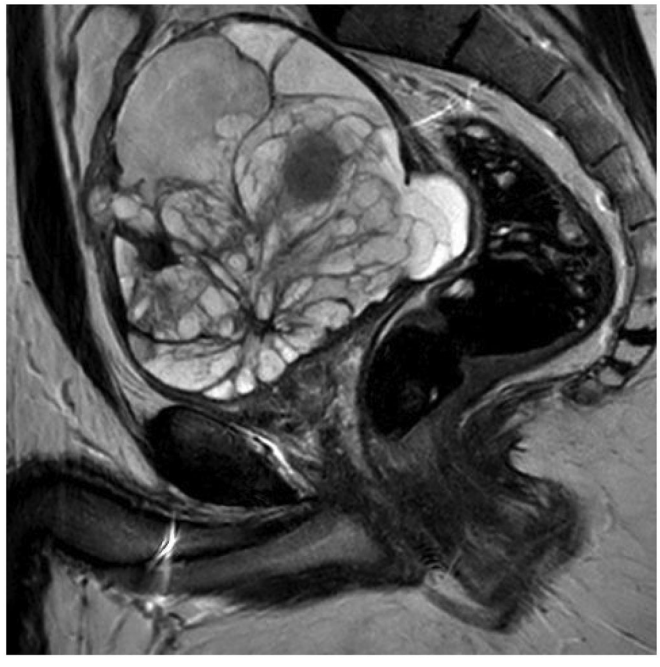

Figure 1. Pre-operative bpMRI.

CONTACT Vibeke M. Kristensen v.kristensen@me.com University of Copenhagen, Copenhagen, Denmark

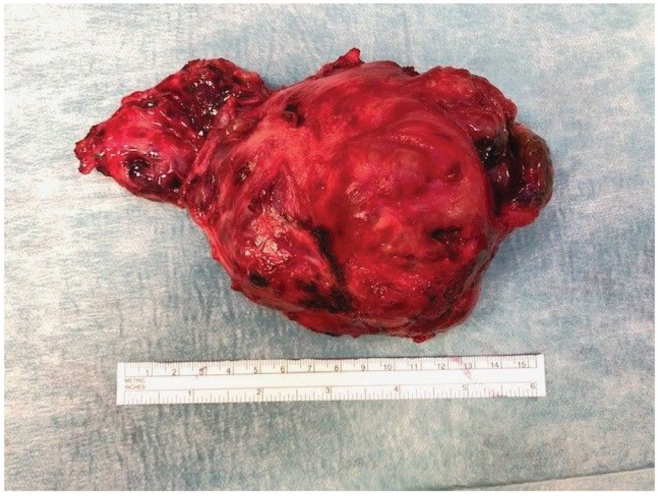

Figure 2. Tumor after en bloc removal.

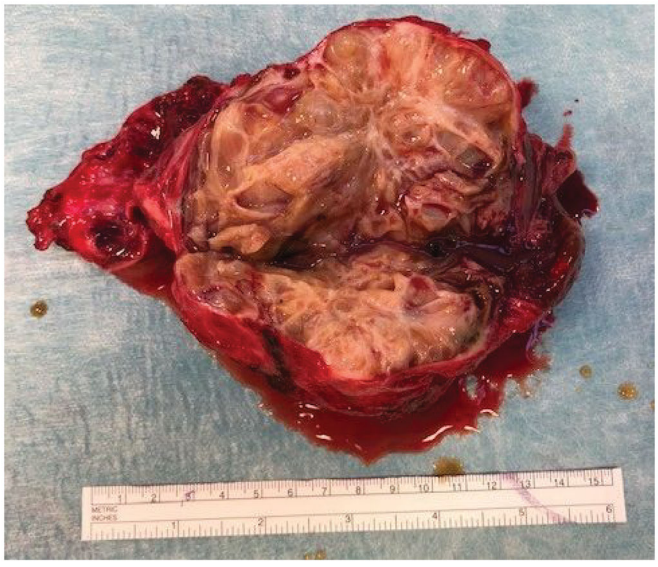

Figure 3. Tumor sectioning displaying multicystic cut surface.

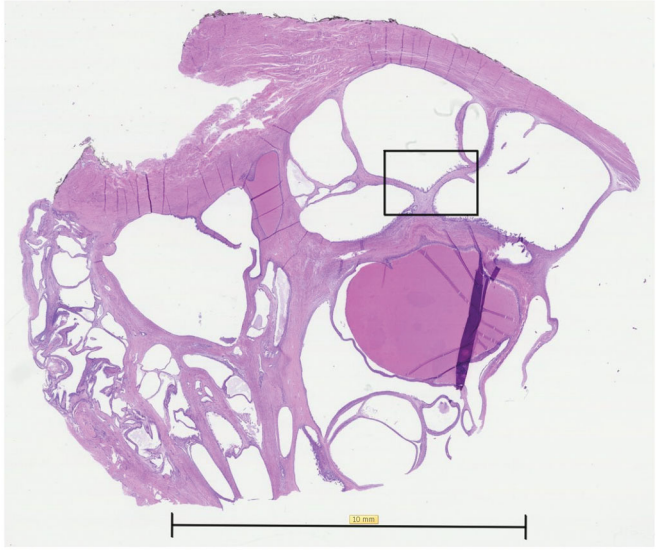

Figure 4. The multicystic proces, black ink on the periphery. H&E, low magnification.

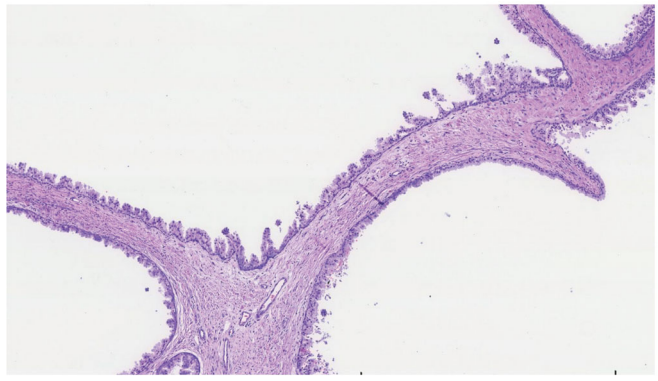

Figure 5. The multicystic process with benign prostatic epitheliem. H&E, high magnification.

Pathological examination showed a tumor measuring 125 × 100 x 70 mm. The cut surface was multicystic with seromucinous contents, (Figure 3). Histologically the tumor was composed of variably sized benign prostatic cystic glandular structures lined by columnar epithelial cells without atypical features. There were no signs of malignancy, (Figures 4 and 5). In conclusion the pathological examination was in accordance with a benign prostatic cystadenoma.

Discussion

Prostatic cystadenoma is a rare condition with less than 30 cases reported [1,2]. Patients often present with obstructive LUTS and constipation due to the presence of a large tumor [1,2,4]. PSA elevation is the norm but not the rule [4]. When encountering a urological patient with obstructive LUTS, cystadenoma should not be the first working diagnosis. However, it should be borne in mind if DRE reveals soft compressible components, cystoscopy shows large and multiple impressions from surrounding tissue, and/or when retroperitoneal cystic tumors are visible from radiological examinations. Moreover, prostatic cystadenocarcinoma, the malignant counterpart, should be considered as a differential diagnosis. In the case of cystadenocarcinoma, it is essential that surgical resection is complete, as the risk of recurrence seems high [1,2,4]. An association between benign cystadenoma and malignant cystadenocarcinoma has been theorized, suggesting a continued spectrum from cystadenoma to cysteadenocarcinom. There is no clear evidence proving the spectrum theory; however, findings of cystadenocarcinoma components within the cystadenoma are a proven argument that appropriate management of the benign condition is essential for management of a potential malignant condition [2,5].

Disclosure statement

No potential conflict of interest was reported by the authors.

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