PROSTATIC ADENOCARCINOMA PRESENTING AS LARGE CYSTIC LESION OF PROSTATE – A CASE REPORT

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Abstract

Seventy-three years old male presented with acute urinary retention. There was no history of lower urinary tract symptoms (LUTS) prior to this episode. On digital rectal examination, he had a large nontender cystic swelling on the anterior wall of the rectum. His serum PSA was 62.36 ng/ml. After Imaging & fine-needle aspiration cytology (FNAC), he was diagnosed as a case of a benign cyst, likely prostatic utricle cyst. He was given a trial without a catheter which failed, and He was managed with robot-assisted laparoscopic excision of the prostatic cyst. Histopathological examination of excised specimen revealed the presence of Prostate Adenocarcinoma arising within the cystic lesion.

Keywords

Prostatic Ductal Adenocarcinoma, Cystic Lesions of Prostate, Prostatic Macrocyt

Introduction

Common Prostatic cystic lesions include Prostatic Utricle cyst, Müllerian duct cysts, Benign Prostatic hyperplasia with cystic degeneration, retention cysts and ejaculatory duct cyst. Prostatic neoplasm with the formation of macrocyst is a rare entity. [1] We report a case of Prostatic Adenocarcinoma, which presented as a large cystic lesion of the prostate.

Case report

A seventy-three-year-old male with no known co-morbidities presented with acute retention of urine, for which he was catheterized and drained nearly 500 ml of urine. There was no history of LUTS prior to this episode. There was no history of hematuria, dysuria, or reduced urinary output. The patient denied any significant gastrointestinal symptoms, weight loss or bone pains. Past medical history and family history were not significant.

His general examination and systemic examination were essentially normal. On digital rectal examination, he had a large non-tender boggy swelling on the anterior wall of the rectum, prostate not felt separate from swelling, rectal mucosa overriding swelling was mobile. Another systemic examination was essentially normal.

His hemoglobin was 12.9 gm%, TLC - 7500/mm3, Platelet - 2.64 lac/mm3, Blood urea nitrogen - 15 mg/dl, Serum Creatinine - 0.9 mg/dl, Serum Sodium - 140 mmol/l, serum potassium - 4.4 mmol/l, Urine routine and microscopy showed 2-3 WBC's/HPF, 2-3 RBC's/HPF, Urine culture was sterile and Serum PSA was 62.36 ng/ml.

Ultrasonography of the Prostate revealed a 400 cc thick-walled cyst with irregular outline arising within the prostatic region, extending superiorly to rectovesical space and measuring 10 x 7 x 9 cm. (Figure - 1). Urinary bladder, Bilateral kidneys and ureters were normal. MRI pelvis revealed large well-defined midline cystic swelling of size 10.4x9.6x9.2 cm in the rectovesical space compressing rectum posteriorly and bladder anteriorly. (Figure - 2)

Because of raised serum PSA and large Prostatic cyst, he underwent ultrasound-guided aspiration of the lesion in the intervention radiology laboratory. Approximately 300 ml of serosanguinous fluid was aspirated and sent for cytology. FNAC of solid component was done at the same time. Prostatic fluid cytology did not shown any malignant cells. FNAC was suggestive of a benign cystic lesion.
Figure 1: Ultrasound of pelvis showing large thick-walled cyst with irregular outline arising within prostatic region, extending superiorly to rectovesical space.

He was given a trial without a catheter which failed. Re-evaluation with ultrasound pelvis after 2 weeks revealed a recurrent cystic lesion of volume 460 cc with thick walls and irregular outline seen in the prostatic region. With a provisional diagnosis of Prostatic Utricle cyst, he underwent Robot-assisted Laparoscopic excision of Prostatic cystic lesion under general anaesthesia. Per-operatively, he had a large cyst between the bladder and rectum; the posterior wall of the cyst was densely adherent to the anterior rectal wall, the content of the cyst was mucoid with no solid component. He had an inadvertent rectal injury identified during dissection of the cyst. He underwent primary repair of the rectal injury and proximal sigmoid loop diversion colostomy.

His post-operative recovery was uneventful. His per urethral catheter was removed after 2 weeks. He was planned for restoration of gut continuity after 06 weeks.

Histopathological analysis of excised specimen revealed most bits showing fibro-collagenous tissue with low columnar epithelial lining at places. One focus showed crowding of glands with occasional papillary and cribriform appearance. Extracellular basophilic mucin was present in between the glands. Lining epithelium showed monomorphic vesicular nuclei with prominent nucleoli. Immunohistochemical analysis revealed AMCAR: Positive, P63: Negative, CK20: Negative, PSA staining was positive. The final opinion was made of prostatic adenocarcinoma (Gleason’s score 4+3).

Discussion

Differential diagnosis of Prostatic cystic lesions can include Prostatic Utricle cyst, Mullerian duct cyst, Ejaculatory duct cyst, Vas deferens cyst, retention cyst, Abscess, Seminal vesical cyst, bladder diverticulum. Carcinoma Prostate presenting as a large pelvic cystic lesion is extremely rare, with a reported incidence of 0.32% in a series of 1559 patients. [1] In Prostate cancer, the cyst can be seen secondary to haemorrhage, necrosis of cancerous tissue or as a primary cyst associated with cancer. [2] Most of the cysts of the prostate associated with cancer are of secondary type. [3] As compared to Acinar Adenocarcinoma of prostate, the primary Ductal Adenocarcinomas can present as a cystic growth pattern, which is suggested to be due to the occlusion of prostatic ducts.[4] Some authors, such as Bock and Bostwick, have questioned the existence of ductal adenocarcinoma as a distinct pathologic entity because of the histological and clinical overlap with typical acinar carcinoma. [4] Malignant cysts should be suspected if inhomogeneous or enhanced cystic density indicating haemorrhage or protein component, cyst with irregular margins, enhancing septa or walls, cystic-solid mixed mass, rapidly growing cyst or recurrent cyst and those associated with elevated PSA. [5] Clinical features associated with large cystic lesions of the prostate are those of voiding or storage LUTS. The patient can have constipation, a symptom ascribed to large pelvic mass; hematuria suggests malignancy. On abdominal examination, there can be a palpable pelvic mass; on digital rectal examination prostate can be enlarged with palpable cystic mass felt on the anterior rectal wall. Imaging such as ultrasonography, CT scan, and MRI can give good anatomical details of the lesion. MRI is particularly useful in differentiating primary prostatic masses from pelvic masses that secondarily involve the prostate by carefully evaluating tissue planes surrounding the prostate. [5] A trans-rectal ultrasonography-guided aspiration of fluid and FNAC from solid component may confirm the diagnosis. Minimally invasive surgery such as transurethral resection or puncture may be preferred to relieve obstruction symptom. Cystic prostate cancer has been confirmed in several cases with a negative result of malignancy after transurethral surgery or biopsy. Transurethral resection may fail to attain diagnosis if the resected specimen does not include the malignant focus. Radical prostatectomy ensures complete resection and is associated with a higher probability of diagnosing underlying malignancy.
When complete resection is difficult, it is necessary to relieve the obstruction of the urethra and intestinal tract by surgery. [5]

**Conclusion**

Prostatic Adenocarcinoma can rarely present as a large prostatic cyst. Diagnosis should be considered in patients with elevated PSA and cystic lesion of the Prostate. FNAC may aid in the diagnosis, but the final diagnosis is difficult prior to the histopathological analysis of the surgical specimen.

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**Conflict of interest**

There are no conflicts of interest to declare by any of the authors of this study.

**References**


