A case report of an uncommon large size of prostatic cyst

Jingjin Yang, Xingkai Liu, Yong Zhang

ABSTRACT

Introduction: Prostatic cyst is an uncommon disease, especially large one, which need to be differentiated from prostatic neoplastic masses, prostatic non-neoplastic masses and periprostatic neoplastic masses.

Case Report: A 63-year-old male who had dysuria for three years and could not urinate for three days. Initially, he was diagnosed as prostatic hyperplasia by color Doppler ultrasound. After further examinations with prostate-specific antigen (PSA), computed tomography (CT) scan, magnetic resonance imaging (MRI) scan, cystoscopy and transrectal ultrasound-guided aspiration, he was diagnosed as prostatic cyst. The size of prostatic cyst was 9.2x4.9 cm. Two weeks after diagnosis patient received an open surgery through perianal incision to remove all content in the cyst and clean this large prostatic cyst. Patient is still seen for follow-up visits every two months to further assess the treatment.

Conclusion: Ultrasound, CT scan and MRI scan together help to get final diagnosis of prostatic cyst. The surgery of prostate cyst excision we performed improved outcome although we still need to follow our patient for longer time.

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CASE REPORT

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ABSTRACT

Introduction: Prostatic cyst is an uncommon disease, especially large one, which need to be differentiated from prostatic neoplastic masses, prostatic non-neoplastic masses and periprostatic neoplastic masses. **Case Report:** A 63-year-old male who had dysuria for three years and could not urinate for three days. Initially, he was diagnosed as prostatic hyperplasia by color Doppler ultrasound. After further examinations with prostate-specific antigen (PSA), computed tomography (CT) scan, magnetic resonance imaging (MRI) scan, cystoscopy and transrectal ultrasound-guided aspiration, he was diagnosed as prostatic cyst. The size of prostatic cyst was 9.2x4.9 cm. Two weeks after diagnosis patient received an open surgery through perianal incision to remove all content in the cyst and clean this large prostatic cyst. Patient is still seen for follow-up visits every two months to further assess the treatment. **Conclusion:** Ultrasound, CT scan and MRI scan together help to get final diagnosis of prostatic cyst. The surgery of prostate cyst excision we performed improved outcome although we still need to follow our patient for longer time.

Keywords: Prostatic cyst, Prostatic hyperplasia, Perianal incision

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INTRODUCTION

Prostatic cyst is a rare disease with uncertain origin [1–4], which needs to be differentiated from prostatic neoplastic masses, prostatic non neoplastic masses, periprostatic neoplastic masses, periprostatic neoplastic masses and cyst of seminal vesicle. Most of prostatic cysts are small and located laterally without spermatozoa [5–8]. To make a correct diagnosis it is needed to perform clinical test, ultrasound, computed tomography (CT), magnetic resonance imaging (MRI) and tissue biopsy. All these procedures can help to understand non-neoplasia or neoplasia, location, size, margins and its contents. Prostatic cysts include utricular and mullerian duct cysts, diverticula of the ampulla, cysts of the ejaculatory duct, retention cyst of the prostate, hemorrhagic prostatic cyst and cyst associated with prostatitis [6, 8, 9].

We noted that only very few cases have been reported worldwide. Herein, we reported an uncommon size of prostatic cyst, which finally diagnosed through all procedures of rectal examination, clinical test, ultrasound, CT, MRI and transrectal ultrasound-guided aspiration of prostatic cyst, and successfully performed an open surgery.

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CASE REPORT

A 63-year-old male without urination for three days was admitted to the hospital. The patient had suffered from dysuria, frequent urination, a delay in starting urination, a weak or slow urinary stream, a feeling of incomplete bladder emptying and getting up frequently at night to urinate (4–6 times/night) for three years. He was diagnosed as prostatic hyperplasia by abdominal color Doppler ultrasound without any treatment at his local hospital before coming to our hospital.

All his general physical examinations were normal except rectal examination. His rectal examination showed that his prostate gland was grade II prostate enlargement, the central sulcus swallowed, both sides symmetry increase, firm and smooth without nodules, absence of tenderness, feeling a cystic lesion (~4 cm) above dentate line without clear boundary and pain, and no blood on the glove. Color Doppler ultrasound showed 4.2 x 4.9 x 3.9 cm of enlarged prostate with clear outline, rough internal echo and multiple bright echos.

To further confirm the diagnosis, the patient received PSA test, CT scan, MRI scan and transrectal ultrasound-guided aspiration of prostatic cyst. Patient's PSA test was negative. CT scan demonstrated that there was a 4.5 x 4.2 cm of even hypodense shadow behind prostate gland resulting in pushing prostate gland to front left. Patient's prostate gland was enlarged with smooth boundary (Figure 1A–B). MRI scan showed there were irregularly a long T1 and T2 signals (9.2 x 4.9 cm) near the right peripheral leaves and penis cavernous part which extended to perineum and rectum (Figure 1C–D). Figure 1 showing that surrounding tissues were compressed and displaced. We performed transrectal ultrasound-guided aspiration of prostatic cyst and collected 15 ml of viscous milky fluid, which contained many epithelial cells and no sperm and no cancer cells. Bacterial cultures were negative.

Two weeks after diagnosing, we performed an open surgery through perianal incision to get rid of all content in patient's prostatic cyst, clean this cyst and try to remove all cyst lining although this surgery was not very easy. Currently, we follow-up this patient after every two months to monitor patient's condition and further assess our surgery treatment.

DISCUSSION

Patient was diagnosed as prostatic hyperplasia in the local hospital. After admitting to our hospital, we repeated abdominal color Doppler ultrasound plus CT scan. The results indicated that the patient could have the prostatic cyst. The negative PSA indicated that the patient did not have prostate cancer. A previous study suggests that MR imaging is useful in demonstrating the liquid content of prostatic [10]. Further MRI scan indeed showed clear image of prostatic cyst, and was consistent with CT scan. The patient was diagnosed as prostatic

Figure 1: Images of computer tomography (CT) scan and magnetic resonance imaging (MRI) scan. (A, B) computed tomography (CT) scan which showing that a 4.5 x 4.2 cm of even hypodense shadow is behind prostate gland and pushes prostate gland to front left. The prostate gland is enlarged with smooth boundary. (C, D) MRI scan showing there is irregularly a long T1 and T2 signals (9.2 x 4.9 cm) near the right peripheral leaves and penis cavernous part which extended to perineum and rectum.

cyst, an uncommon large size of the prostatic cyst. The result from transrectal ultrasound-guided aspiration of prostatic cyst further confirmed that the patient was suffered from the prostatic cyst, not prostate cancer and prostatic hyperplasia.

In general, treatments of prostatic cysts include transurethral resection, endoscopic marsupialization, endoscopic urethrotomy and incision, transrectal ultrasound-guided drainage, and open surgery [4, 11]. It suggests that invasive procedures are best avoided [2]. After patient was diagnosed, we had difficult time to decide which treatment would be benefit to the patient because we did not have good experience about the uncommon large size of prostatic cyst. Finally, we performed an open surgery through perianal incision to remove all content in the cyst, clean this large prostatic cyst and try to remove all cyst lining. We hope that the bladder and pelvic-cavity-pressure will push the prostatic cyst and eventually close dead space of the prostatic cyst. After surgery, all infravesical obstructive symptoms were disappeared. Patient is still seen for follow-up visits every two months in order to monitor patient's condition and further evaluate the effect of our treatment.

CONCLUSION

Ultrasound, computed tomography (CT) scan and magnetic resonance imaging (MRI) scan together help

to get final diagnosis of prostatic cyst. The surgery of prostate cyst excision we performed improves outcome although we still need to follow our patient for longer time.

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Author Contributions

Jingjin Yang – Substantial contributions to conception and design, Acquisition of data, Revising it critically for important intellectual content, Final approval of the version to be published

Xingkai Liu – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Yong Zhang – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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