



Case Report

Unexpected Healing of Urorectal Fistula Following Radical Prostatectomy After Leuprolide Atrigel Injection

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Abstract

The essential treatment of choice for organ confined prostate cancer (PCa) is radical prostatectomy (RP). Complications can occur after RP, even extremely ones. However, surgical intervention is needed to fix most of the complications, some of them rarely may be self-healing. We here presented a RP case which rectal injury occurred during RP. However, rectal injury was operated properly, urorectal fistula occurred in follow-up. After the first administration of leuprolide atrigel 22.5mg was given, colostomy was performed. At the end of 2. administration of leuprolide atrigel 22.5 injection, there was not urorectal fistula. After removing urethral catheter, the patient was also continent.

Keywords: Leuprolide, prostate cancer, prostatectomy, urinary fistula

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Prostate Cancer (PCa) is the second common cancer in men in our community.^[1] Screening tests are essential to diagnose PCa in early stages. Diagnostic tools are backbone to determine cancer level. One of the best treatment of choice is radical prostatectomy (RP) for organ confined PCa.^[2] Type of surgical treatment depends on clinical equipment, patients' status, surgical experience of surgeons. Our clinic is one of the referral centre of our community for urooncology cases and we usually perform extraperitoneal laparoscopic RP. If the patient has comorbidities that can cause an obstacle to laparoscopy, we perform open RP. Furthermore, androgen deprivation therapy (ADT) is used prior to biochemical recurrence after RP, in case of locally advanced disease and/or metastatic stage.^[3] The PCa is usually slowly progressing pattern.^[4] The PCa can rarely show aggressive pattern as protruding to surrounding tissues.^[5] However, diagnostic tools are effective to determine clinical level of PCa, things can change during RP as macroscopic invasion to surrounding tissues can be seen.

In view of all this above, we would like to present a clinical pT3b PCa case that rectal injury occurred during RP and had urorectal fistula in retrograde cystography 2 weeks after the RP. The patient experienced unexpected spontaneously healing of urorectal fistula following colostomy after 2 doses of Leuprolide atrigel injections at the 6. Month of RP.

Case Report

Fifty-four years old man admitted with mild lower urinary tract symptoms and was using alpha blocker medication since 2 years. He has not been regularly following in another peripheral hospital urology clinic. He had chronic obstructive pulmonary disease (COPD). After detailed physical examinations; digital rectal examination showed grade 2 prostate without any nodule. Laboratory examinations revealed that Prostate Specific Antigen (PSA) was 23 ng/dl. Then we referred the patient to radiology unit. Multi parametric magnetic resonance imaging was reported as prostate size was 42x38x40, bilateral seminal vesicle inva-

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sion without rectal invasion and pathologic lymph node; pT3b PCa (Fig. 1a). Then, transrectal ultrasound guided prostate biopsy was performed. Pathology reported PCa in all 12 cores with Gleason Score 3+4=7. Nuclear medicine reported that there was not any bone metastasis. Because of the patient has COPD we performed open RP with bilateral pelvic lymph node dissections. Unfortunately, rectal injury occurred during RP. However, we fixed this properly and took an expertise opinion of a general surgeon.

Pathology reported PCa with Gleason score 3+3=6. The tumor was 70% of the gland. There was not any pathologic lymph node and surgical margins were negative. On the

other hand, there was invasion to bilateral seminal vesicles and periprostatic fat tissue. Retrograde cystography was performed 2 weeks after the surgery and there was a urorectal fistula (Fig. 1b) and PSA was 0.33 ng/dl. Meanwhile, we administered Leuprolide atrigel 22.5 mg. Then, we consulted the patient to general surgery department and they performed colostomy. There was not fistula in retrograde cystography 3 months after colostomy and administration the 2. dose of Leuprolide atrigel 22.5 mg (Fig. 2a, b). Additionally, after removing urethral catheter, the patient was continent. The PSA level was 0.002 and testosterone level 5 ng/dl nowadays. The patient is now follow-up

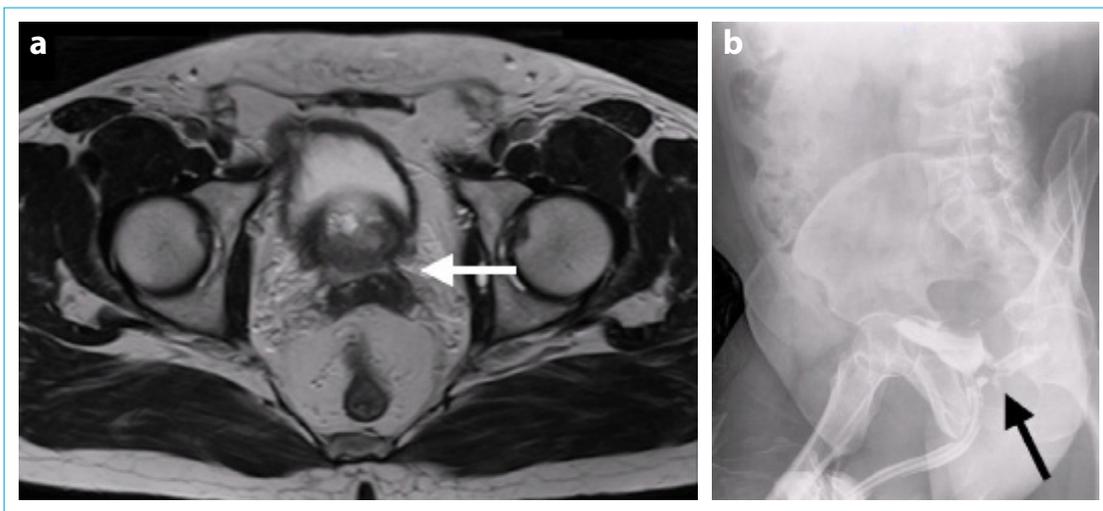


Figure 1. (a) Axial T2 weighted image showing diffuse tumour involvement of prostate with seminal vesicular involvement (Arrow). (b) Arrow shows urorectal fistula during retrograde cystography.

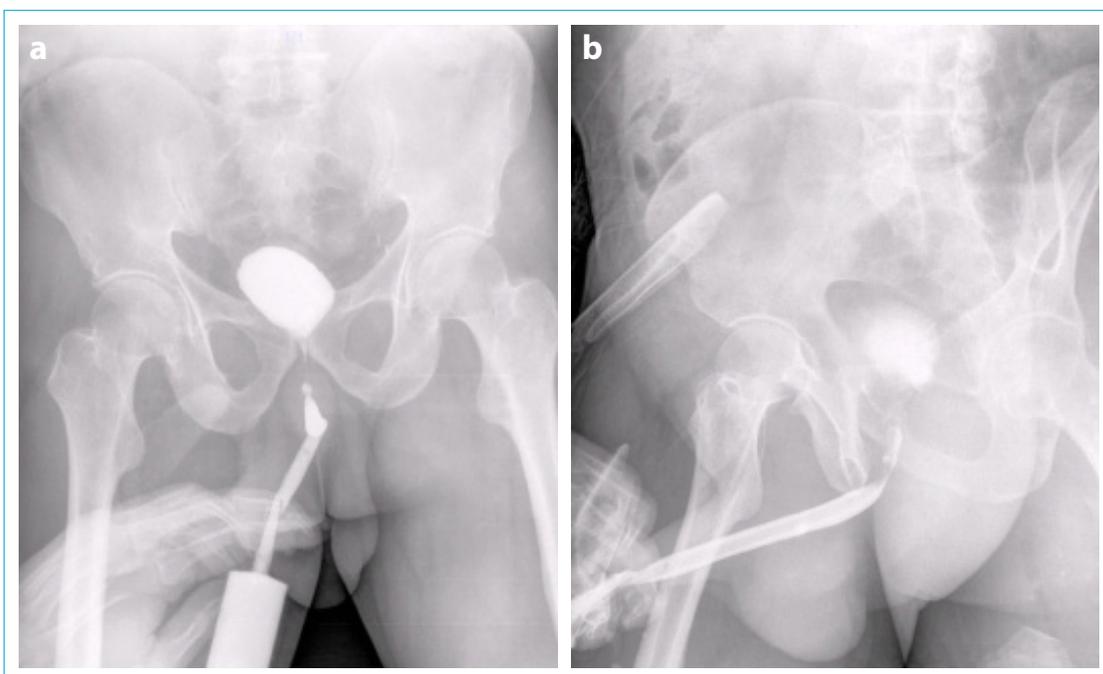


Figure 2. Normal retrograde cystography (a) at anterior-posterior position. (b) At oblique position.

in urology outpatient clinic and his ADT was changed to 45 mg Leuprolide atrigel at 6-month intervals.

Discussion

The fistula is an abnormal connection between an organ and another organ/structure and also needs to be repaired by surgery.^[6] Venkatesan et al.^[6] reported long period follow-up of urorectal fistula patients however there was not spontaneously healing. Furthermore, rectal injury is reported 0.3%-3.8% during RP and it is advised to close in at least two layers.^[7] Besides, urorectal fistula is one of the rare and serious complications prior to RP and it is reported 1%.^[8] Urorectal fistula is repaired separately by surgery.^[9] Accompanied by all this literature knowledge, our patient received 2 doses of Leuprolide atrigel 22.5 mg after diagnosing urorectal fistula and performing colostomy. Published literature is clear on fistula repair, however up to now it has not been reported spontaneous healing of vesicle-rectal fistula.

We know our limitations that lack of molecular study. The second one, the traditional treatment of urorectal fistula is begun with diverting colostomy. However, fistula is a small and there is possibility of spontaneous closing, there has not been reported yet. Nevertheless, spontaneously healing of urorectal fistula is an extremely rare. We strongly think that administration of Leuprolide atrigel 22.5 mg and colostomy contributed this entity. Surgeons should think about micro invasion to surrounding tissues that can avoid healing tissues around vesico-urethral anastomosis. Therefore, urorectal fistula can occur in retrograde cystography. Leuprolide might help to avoid activation of tumor cells around fistula and can indirectly help to heal.

Conclusion

Spontaneously healing of urorectal fistula is an extremely rare and administration of Leuprolide atrigel 22.5 mg and colostomy contributed this entity. Surgeons should think about micro invasion to surrounding tissues in case of complications prior to RP and ADT might indirectly help to heal.

Disclosures

Informed Consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

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