



Trauma and reconstruction

A rectal foreign body: An unexpected cause of a rectovesical fistula with hematuria

Abdelmoughit Hosni^{a,c,*}, Amine Saouli^{b,c}, Abdellatif Koutani^{b,c},
Ahmed Iben Attya Andaloussi^{b,c}, Laila Jroundi^{a,c}, Fatima Zahrae Laamrani^{a,c}

^a Department of Emergency Radiology, Ibn Sina University Hospital, Rabat, Morocco

^b Department of Urology « B », Ibn Sina University Hospital, Rabat, Morocco

^c Faculty of Medicine and Pharmacy of Rabat, University Mohamed V, Rabat, Morocco



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ABSTRACT

Cases of rectal foreign bodies (RFB) insertion are frequently encountered in the last years, leading to many complications, while many patients tends to obscure the context. This entity represent a particular form of rectal injuries that can be more lethal with the peritoneal involvement. However, combination of genitourinary injuries to rectal injuries doesn't worsen the prognosis.

We report a case of a RFB injury leading to an extraperitoneal rectal injuri with a recto-vesical fistula that was managed effectively conservatively with successive CT Cystogram follow-ups.

Introduction

Insertion of rectal foreign bodies tends to be more frequently encountered in the last years. The noticed annual incidence is 0.15 per 100,000 people. However, this incidence is undervalued while only patients with a retained RFB or with a complication land to the emergency room.¹ A variety of RFB is encountered under different circumstances. It is a stigmatizing situation and 20% of RFB traumas tends to be initially obscured by many different complaints, such as pain, bleeding or constipation. Disclosure is maked until further questioning, investigations or sometimes by an accompanying person.^{1,2} Complications can happen both at the time of the insertion of the RFB or at the extraction attempts.² Rectal perforation is a redoubtable complication that concern 6.6% of RFB traumas and requires usually a surgical intervention.²

We first report a case of a foreign body injury of the anterior rectal wall resulting in a recto-vesical fistula that was managed effectively with a conservative non-invasive management.

Case presentation

A 50 year-old man presented to the emergency department with a urinary rentention following a supposed domestic pelvic trauma. No

history of dysuria was reported. He benefited from a urine catheterization and adressed to the urology consultation. 24 hours later, the patient presented with a macroscopic hematuria. A contrast-enhanced CT Urogram (Fig. 1) was performed right away after clamping the urine catheter. At the excretory phase, we found out a leakage of contrast to the rectal and sigmoid lumen, describing a fistula between the posterior bladder wall and the anterior rectal wall, at the low rectum, 7 cm from the anal margin. The fistula had a diameter of around 3mm. No active blush or any other traumatic lesion were seen. The patient reported no history of rectal bleeding or fecaluria. Furthermore, he had no history of pelvic surgery, chronic inflammatory disease or tuberculosis. No anomalies were found at the digital rectal palpation.

On re-examination the patient about the precise mechanism of the pelvic trauma, he disclosed this happened while he was using an intrarectal foreign body (WC brush) for self-treating his constipation.

The patient was managed non-invasively by urine discharge using a FR 18 Foley catheter and analgesics. There was no need to blood transfusion and an oral iron cure was prescribed. 3 days later, urines were clear. A follow-up by CT cystography at 4 weeks (Fig. 2) showed a closing of the rectal orifice with a remained 15mm bladder fistula, ending between the seminal vesicles. A CT cystography at 6 weeks (Fig. 3) showed no leakage, urinoma or pelvic abscess.

* Corresponding author. Department of emergency radiology, Ibn Sina University Hospital, Rabat, Morocco.

E-mail address: abdelmoughith@gmail.com (A. Hosni).

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List of Abbreviations

CT	Computed tomography
RFB	Rectal foreign body

Combination of genitourinary injuries to rectal injuries is uncommon. It doesn't seem to increase complications rate, mortality nor hospital length of stay. Management in this situation focus to avoid formation of fistulas.⁵

In parallel, recto-urinary fistulas (RUF) are more commonly iatrogenic, usually as a complication of radical prostatectomy or after radiation therapy. Other causes of RUF include traumas and bowel

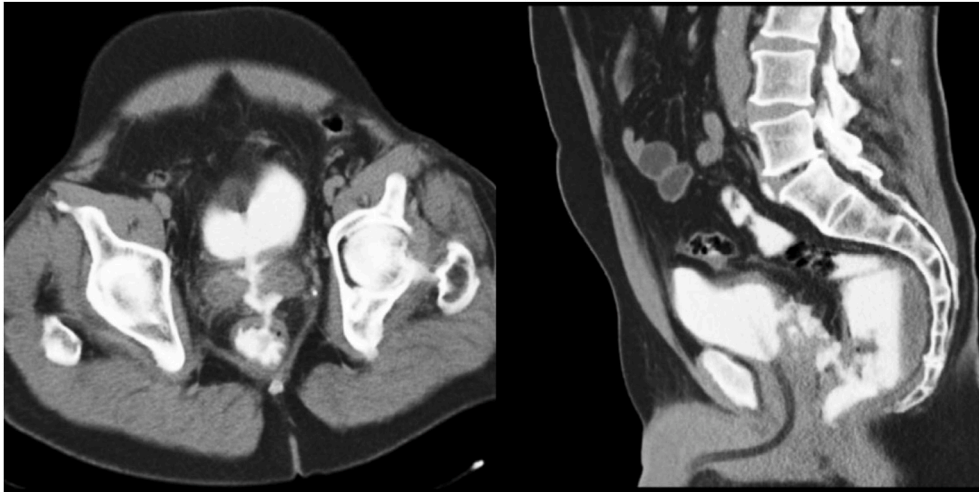


Fig. 1. Initial evaluation using a CT Urogram at the excretory phase showing a contrast leakage to the rectal and sigmoid lumen with a fistula between the posterior bladder wall and the anterior rectal wall.

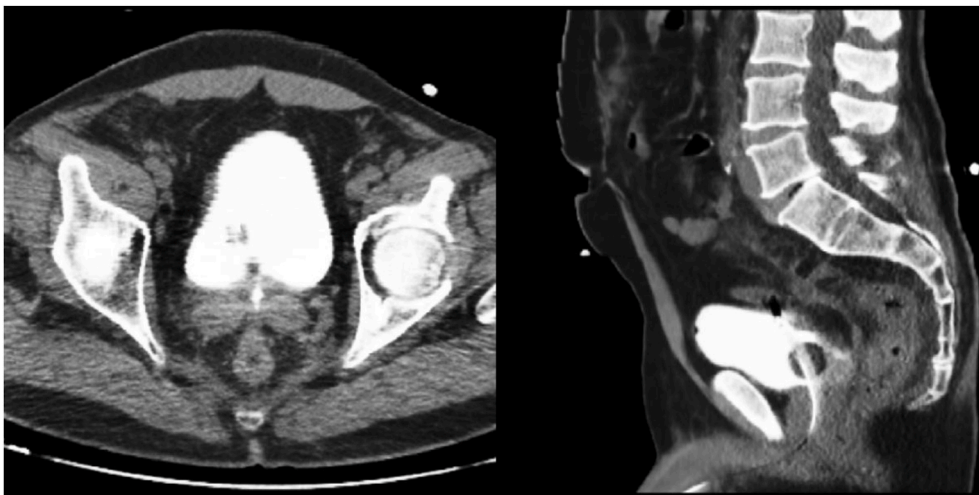


Fig. 2. A CT Cystography follow-up at 4 weeks showing a remained 15mm bladder fistula, finishing between the seminal vesicles.

Discussion

Rectal injuries are classically the consequence of two mechanisms: blunt or penetrant trauma.³ However, rectal foreign bodies (RFB) injuries represent a particular entity, where the two mechanisms are usually entangled. The RFB's injuries are classified depending on the severity of the rectal wall's damage and on the level of the injury, either intra or extraperitoneal.^{3,4}

It is reported that 67% of RFB's lesions don't evolve the full thickness of the rectal wall, not requiring any surgical intervention. Lesions with full thickness of the rectal wall are challenging, while peritoneal involvement worsen the situation. Luckily, 73% of RFB injuries remain extraperitoneal.⁴

inflammatory diseases. Management of these RUF is guided by the context and the diameter of the fistula. Urine catheterization associated or not to a diverting colostomy are first attempted. Cases of non-irradiated small fistula can heal spontaneously after a duration of 6–8 weeks.⁵ We conducted this conservative attitude considering the small orifice diameter at the rectal wall and the narrow width of the fistula. The tight clinical monitoring and screening by CT Cystograms showed the continuous closing of the RUF.

Otherwise, in cases of a remaining RUF, a surgical repair is needed. Several techniques aim to excise the fistula, while there's no consensus regarding the optimal one. However, the Posterior sagittal transrectal approach (York-Mason technique) was preferred by many teams by the excellent exposure that it allows.⁵

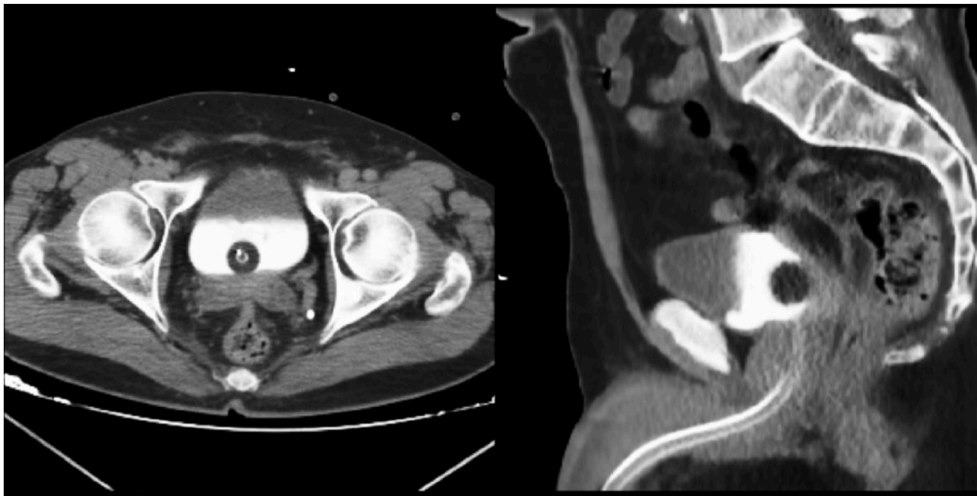


Fig. 3. A CT Cystography follow-up at 6 weeks showing no leakage through the bladder wall.

Regardless of the associated urogenital lesions, extraperitoneal rectal injuries used to be formerly managed surgically. Techniques used were presacral drain and/or distal rectal washout. This surgical approach is showing an increased rate of abdominal complications compared to the conservative approach, making this last more preferable.^{4,5}

Conclusion

A rectal foreign body trauma is a particular condition in rectal traumas. Genitourinary injuries can be associated to rectal injuries and result in rectorinary fistulas. It should be noted that conservative non-surgical attitude can be effective in extraperitoneal rectal injuries with a decreased rate of abdominal complications. However, peritoneal involvement graves the prognostic requiring emergent surgery.

Ethics approval and consent to participate

Yes.

Consent for publication

Yes.

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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Authors' contributions

All authors contributed equally to this work. All authors read and approved the final manuscript.

Declaration of competing interest

The authors declare that they have no competing interests.

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