Urology Case Reports 39 (2021) 101751

Contents lists available at ScienceDirect

Urology Case Reports

journal homepage: www.elsevier.com/locate/eucr

Inguinoscrotal herniation of the bladder: A rare case of obstructive uropathy

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ARTICLE INFO

Keywords:
Bladder herniation
Obstructive uropathy
Acute kidney injury

ABSTRACT

Inguinoscrotal herniation of the bladder is a rare presentation of inguinal hernia that can result in significant complications if untreated. We describe a case of an elderly male with a delayed presentation of bladder herniation resulting in severe acute kidney injury requiring urgent placement of nephrostomy tubes. Ultimately surgery is required for definitive management.

Introduction

Inguinoscrotal herniation of the bladder is a rare cause of inguinal hernia and obstructive uropathy.[1,2] Without treatment, patients can develop kidney injury, infection involving the urinary tract, or bladder infarction.[1,2] We present a case of complicated bladder herniation requiring multidisciplinary management by nephrology, urology, and interventional radiology.

Case Presentation

An eighty-year-old man had a history of hypertension, diabetes mellitus, and obesity. For a few months he noted incomplete emptying of the urinary bladder, which improved when he applied pressure to the left inguinal region. He presented to the emergency department with severe left sided inguinal pain, which was preceded by a week of nausea, vomiting, and anorexia. Physical examination revealed a large left inguinal hernia, which was exquisitely tender to palpation and only partially reducible. Initial laboratory tests were remarkable for serum creatinine of 14 mg/dl (baseline 0.7 mg/dl) and blood urea nitrogen (BUN) of 180 mg/dl. Computed tomography (CT) scan of the abdomen and pelvis without intravenous (IV) contrast revealed a direct left inguinal hernia containing the urinary bladder (Fig. 1) and bilateral hydroureteronephrosis (Fig. 2). A Foley urinary catheter was placed with 2 L of urine output. Urgent percutaneous nephrostomy (PCN) tubes were placed with relief in obstruction and significant improvement in pain and serum creatinine (6.4). Dialysis was not needed. Surgery to repair the hernia is planned once the patient is medically stable.

Discussion

Inguinoscrotal hernia of the bladder, or scrotal cystocele, is a rare condition, comprising 0.5–5% of inguinal hernia cases.[1,2] Most reported cases have been obese males over 50 years of age.[1,2] Benign prostate hyperplasia (BPH) and malignancy are additional risk factors. The most common presenting symptoms are inguinal swelling, reduction in inguinal swelling after voiding (Mery's sign), and lower urinary tract symptoms (LUTS), but some cases are asymptomatic.[1,2] Diagnosis of an inguinoscrotal hernia can be made by physical exam, but imaging is important to clarify the findings. CT of the abdomen and pelvis with or without contrast is preferred, as it is fast, relatively inexpensive, and highly sensitive.[1,3,4] The diagnosis might be delayed in many instances, because the LUTS might be attributed to more common causes, such as BPH. A delay in diagnosis may inadvertently result in serious complications, such as kidney failure, urinary tract infection, and in rare cases bladder infarction.[2] Definitive treatment is surgery.[1]

Conclusion

Our patient presented with a late complication resulting from inguinoscrotal hernia of the entire urinary bladder. For several months he had noted incomplete emptying of the bladder. The CT scan showed moderate thinning of the cortices of the kidneys, indicating that the obstructive uropathy was chronic. Because of the severity of the renal failure, emergent placement of PCN was performed. Surgery was delayed until after the renal failure improves. The presence of inguinal swelling and need for applying pressure to the inguinal area to aid voiding are important clinical indicators

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https://doi.org/10.1016/j.eucr.2021.101751
Received 24 May 2021; Received in revised form 7 June 2021; Accepted 9 June 2021
Available online 11 June 2021

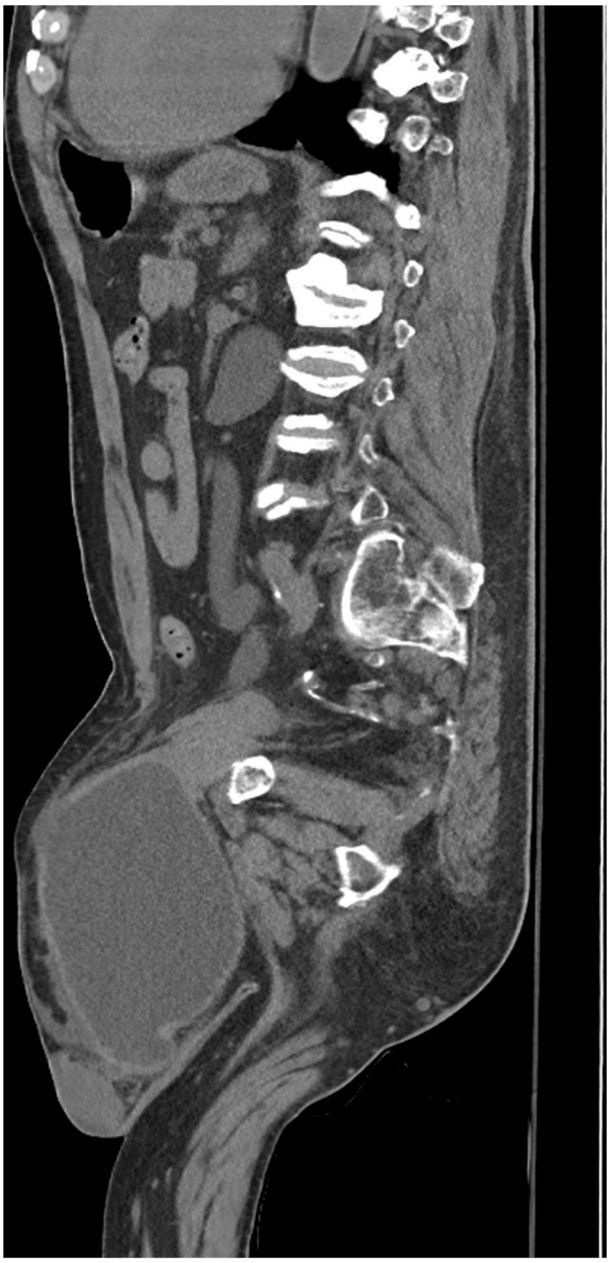

Fig. 1. Sagittal CT image of complete herniation of the bladder into the inguinal canal.

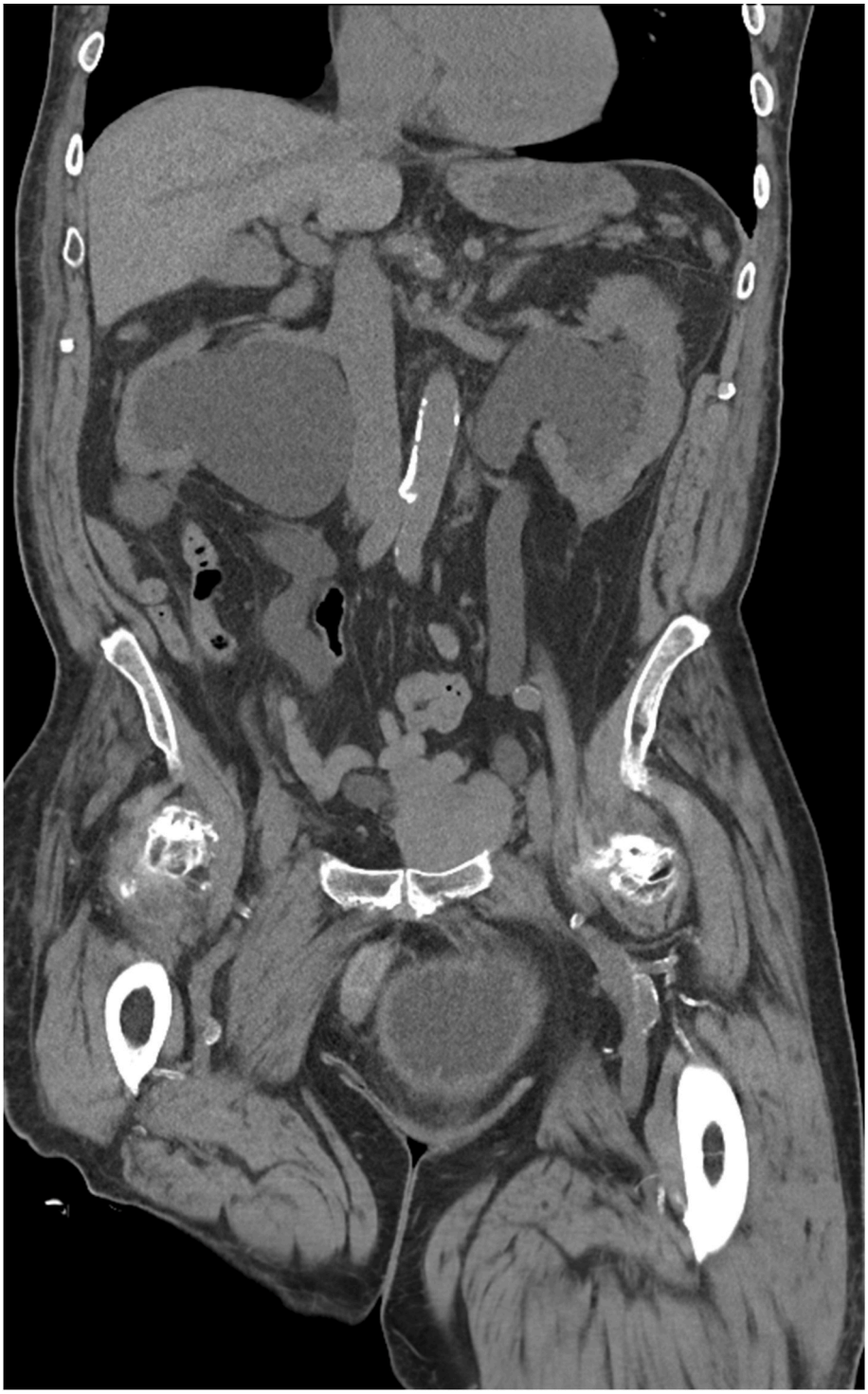

Fig. 2. Coronal CT image demonstrating the bladder in the scrotum and bilateral hydroureteronephrosis.

of this rare diagnosis.

Acknowledgements

The authors would like to acknowledge Dr. Gabriel A. De La Cruz Ku for his contributions to this case.

References

1. Branchu B, Renard Y, Larre S, Leon P. Diagnosis and treatment of inguinal hernia of the bladder: a systematic review of the past 10 years. *Turk J Urol*. 2018;44(5):384–388.
2. Papatheofani V, Beaumont K, Nuessler NC. Inguinal hernia with complete urinary bladder herniation: a case report and review of the literature. *J Surg Case Rep*. 2020;2020(1):rjz321.
3. Bacigalupo LE, Bertolotto M, Barbiera F, et al. Imaging of urinary bladder hernias. *AJR Am J Roentgenol*. 2005;184(2):546–551.
4. Ansari K, Keramati MR, Rezaei Kalantari K, Jafari M, Godazandeh G, Pakzad M. Gross hematuria as the presentation of an inguinoscrotal hernia: a case report. *J Med Case Rep*. 2011;5:561.