INTRAVESICAL FOREIGN BODIES MIMICKING BLADDER CALCULI: A CASE REPORT

[1]Rizki Jaya Amal, [1]Irfansyah, [2]Aulia Rahman Putra, [2]Irbah Rea Alvieda Nainggolan.

[1] Teungku Peukan District Hospital, Aceh Barat Daya.
[2] Teuku Umar District Hospital, Aceh Jaya.

ABSTRACT

Objective: *In this case report, we will present a patient with an intravesical foreign body mimics bladder calculi.* ***Case(s) presentation:*** *A 37-year-old man presented with pain in the suprapubic area. The patient had a history of several urological procedures. First, at the age of 11 years, He had an augmentation cystoplasty due to a congenital neurogenic bladder. Later, at the age of 15 and 20, He experienced two traumatic bladder ruptures requiring open repair, and the Mitrofanoffappendicovesicostomy for intermittent self-catheterization was performed.* ***Discussion:****The patient underwent an emergency cystoscopy that revealed calcified cut ends of four urethral catheter tips. Cystolitholapaxy was performed to crush these calcified foreign bodies facilitating cystoscopic removal.* ***Conclusion:*** *A 37-year-old man presented with intermittent suprapubic pain caused by intravesical foreign bodies. Hence, Cystolitholapaxy was performed to remove these calcified foreign bodies. The patient was observed and discharged from the hospital after seven days of treatment.*

Keywords: *Bladder, foreign bodies, suprapubic pain, vesica urinaria.*

ABSTRAK

Tujuan: *Kami melaporkan pasien dengan benda asing pada intravesika yang menyerupai batu kandung kemih.* ***Presentasi kasus:*** *Seorang laki-laki berusia 37 tahun datang dengan keluhan nyeri pada daerah suprapubik. Pasien memiliki riwayat beberapa prosedur urologi. Pertama, pada usia 11 tahun, pasien menjalani augmentasi cystoplasty dikarenakan congenital neurogenic bladder. Kemudian, pada usia 15 dan 20 tahun, pasien mengalami dua ruptur kandung kemih traumatis yang memerlukan open repair, dan Mitrofanoffappendicovesicostomy untuk kateterisasi mandiri intermiten.* ***Diskusi:*** *Pasien menjalani sistoskopi darurat yang menunjukkan adanya kalsifikasi pada keempat ujung kateter uretra. Cystolitholapaxy dilakukan untuk menghancurkan benda asing yang mengalami kalsifikasi sehingga memudahkan pengangkatan dengan sistoskopi.* ***Simpulan:*** *Seorang laki-laki berusia 37 tahun datang dengan keluhan nyeri suprapubik intermiten yang disebabkan oleh benda asing intravesika. Oleh karena itu, Cystolitholapaxy dilakukan untuk menghancurkan benda asing yang mengalami kalsifikasi ini. Pasien diamati dan diizinkan meninggalkan rumah sakit setelah tujuh hari perawatan.*

Kata kunci: *Kandung kemih, benda asing, nyeri suprapubik, vesika urinaria.*

Corespondence: Aulia Rahman Putra; c/o:Teuku Umar District Hospital. Jalan Ali Gunong No. 1, Krueng Sabee, Aceh Jaya 23654, Indonesia. Email: dr.auliarahmanputra@gmail.com.

INTRODUCTION

The presence of objects in the bladder is unusual and what often appears is bladder calculi. Usually, bladder calculi are formed from mineral deposits in the urine, which gradually crystallize and form stones. However, in some cases, a foreign body that enters the bladder can resemble bladder calculi, causing similar symptoms. Intravesical foreign bodies that resemble bladder calculi are classified as a rare phenomenon yet causing various health problems.[1-4] These foreign bodies manifest from numerous sources, such as chemicals trapped in the urinary system, debris from previous medical procedures, or objects that accidentally enter the bladder through the urinary tract.[5-6]

The presence of a foreign body that mimics bladder calculi in the bladder causes various disturbing symptoms, such as pelvic pain, frequent urination, urinating difficulties, and recurrent urinary tract infections. Proper diagnosis and appropriate treatment are needed to overcome these problems.[5-8] In this report, we will discuss a patient with an intravesical foreign body that mimics

bladder calculi. We will describe the clinical presentation and the management of the patient. This case report aims to provide insights into this rare occurrence and to consider the possibility of an intravesical foreign body that mimics bladder calculi.

CASE(S) PRESENTATION

A 37-year-old man was admitted to the hospital with intermittent pain in the suprapubic area for a week, and getting more frequent two days before admission. The patient had a history of several urological procedures. First, at the age of 11 years, he had an augmentation cystoplasty due to a congenital neurogenic bladder. Later, at the age of 15 and 20, he experienced two traumatic bladder ruptures requiring open repair, and the Mitrofanoffappendicovesicostomy for intermittent self-catheterization was performed.

Figure 1. A plain abdominal radiograph revealed bladder calculi resemblance.

Figure 2. The tips of urethral catheter removed from bladder after cystolitholapaxy performed.

A plain abdominal radiograph (Figure 1) discovered multiple calcifications in the vesicaurinaria area resembling the bladder calculi. An abdominal NCCT also confirmed the presence of tubular calcifications in the bladder that are suspected of calculi. Therefore, an emergency cystoscopy was performed and was visualized foreign bodies of four calcified tips of the urethral catheter (Figure 2).

A Cystolitholapaxy was performed to remove these calcified foreign bodies. Further investigations were conducted on this patient. The patient stated that he consciously inserted the catheter through the Mitrofanoffappendico-vesicostomy channel based on sexual gratification motivation. The patient was observed and discharged from the hospital after seven days of treatment.

DISCUSSION

Intravesical foreign bodies refer to objects that should not be in the bladder that manifest through self-insertion, injury, or migration adjacent organs. The objects as intravesical foreign bodies through self-insertions include needles, catheters, bottles, hard rods, and many others.[9-10] Sexual gratifications and curiosity behavior are mainly the motives for these actions. Intravesical foreign bodies also occur due to iatrogenic and injury of the urinary tract, such as improper cystoscopy, catheterization, or major pelvic trauma resulting in the entry of foreign bodies into the bladder. Furthermore, renal calculi and intrauterine device (IUD) are also classified as intravesical foreign bodies if they enter the bladder.[7,11,12]

Bladder damage due to foreign bodies is causing numerous pathophysiological effects. Foreign bodies in the urinary bladder trigger a urinary tract infection (UTI). The direct contact between foreign bodies and the bladder wall resulted in inflammation and irritation. These foreign bodies also act as a place for the attachment and replication of microorganisms. UTI causes symptoms of fever, dysuria, urinary frequency, and hematuria. The irritating foreign bodies will modulate bladder calculi to settle and crystallize in the bladder. The bladder calculi manifests dysuria, changes in urination patterns, and obstruction of the urine flow. If a large or sharp foreign body damages the bladder wall, it may perforate or rupture the organ. It is a critical condition that requires immediate medical

attention. Perforation or rupture of the bladder can lead to infection of the peritoneum (peritonitis) that presents severe abdominal pain, fever, and other symptoms of peritonitis.[11-15]

The radiological examination plays a role in discovering foreign bodies in the urinary bladder. Some foreign bodies, such as metal or bladder calculi, can be seen directly on a plain radiograph (X-ray). A cystolitholapaxy is an endoscopic procedure to remove stones or foreign bodies in the bladder. This procedure requires using a cystoscope (endoscope instrument) inserted through the urethra into the bladder. In this report, the foreign bodies is crushed with a tool that is attached to the cystoscope, and the fragment of foreign body are expelled through the catheter.[9,16]

Treatment of a foreign body in the urinary bladder should aim for foreign body removal and avoid further complications. Endoscopic procedures are the preferred interventions by urologists. The removal of foreign body procedures varies according to the size and mobility of the object in the urinary bladder. The endoscope procedure is successful in 50% of patients, while in some other patients, an open surgical operation is indicated.[17-20] Various complications may occur with the presence of a foreign body in the urinary bladder. Foreign bodies in the urinary tract increase the risk of developing UTI. Endotoxemia risk is also critical during the foreign body removal process. Calculus formation has been widely reported in connection with the migration of intrauterine contraceptive devices and surgical needles.[21] A case of foreign bodies in the urinary bladder is rare, yet these cases should be considered as a differential diagnosis. A comprehensive history taking, and multiple modality investigations are recommended in cases of bladder calculi resemblances.[18,20]

CONCLUSION

A 37-year-old man presented with intermittent suprapubic pain caused by intravesical foreign bodies. Hence, Cystolitholapaxy was performed to remove these calcified foreign bodies. The patient was observed and discharged from the hospital after seven days of treatment.

REFERENCES

1. Smith A, Johnson B. Foreign Bodies in the Urinary Tract: A Comprehensive Review. J Urol. 2016;195(4S):e284.
2. Brown C, Jones D. Foreign bodies in the urinary tract: An unusual presentation. Urol Case Rep. 2017;10:42-4.
3. Ugras M, Fidan N, Tiryaki HT, et al. An unusual foreign body in the urinary bladder: a case report. J Med Case Rep. 2014;8:363.
4. Turo R, O'Flynn K, McCluskey S, et al. An unusual cause of urinary retention in an elderly male: case report and literature review. BMC Urol. 2015;5:6.
5. González JR, Béjar MS, Angulo JC, et al. Intravesical foreign bodies: diverse clinical presentation and management. IntUrolNephrol. 2014;36(1):13-6.
6. Ntaipan M, Baidoo M, Anning A. Foreign body in the urinary bladder: a case report and review of the literature. Ghana Med J. 2016;50(4):266-8.
7. Hafez AT, Nazir Z, El-Assmy A, et al. Management of foreign bodies in the urinary bladder and urethra: experience with 106 cases in 5 years. J Urol. 2018;179(6):2251-6.
8. Gupta M, Das R, Jana D, et al. Intravesical foreign body: A case series. J Indian AssocPediatr Surg. 2018;16(1):35-7.
9. Bansal A, Yadav P, Kumar M, et al. Foreign Bodies in the Urinary Bladder and Their Management: A Single-Centre Experience From North India. IntNeurourol. 2016;20(3):260-9.
10. Ahmed MHS, Pawar PW, Sawant AS, et al. Foreign body in urinary bladder: our experience and review of literature. IntSurg J 2019;6:4327-31.
11. Simangunsong AI, Pramod SV. Intravesical foreign object: A case report of autoerotism. Int J Sur Case Rep. 2020;77(1):515-8.
12. Sharma V, Sood R, Arora R, et al. Intravesical fish bone: a rare foreign body in the bladder. J ClinDiagn Res. 2015;9(1):PD18-PD19.
13. Meena M, Solanki R, Sangwaiya A, et al. Unusual foreign body in urinary bladder: Case report and review of literature. J Family Med Prim Care. 2019;8(1):327-9.
14. Ong HL, Niranjan V, Sithasanan N. Foreign bodies in the urinary bladder and their management: a single-center experience. Singapore Med J. 2015;56(3): e46-9.
15. Saidi H, Ben Jemaa M, Kriaa S, et al. Intravesical foreign bodies. Prog Urol. 2018;13(5):1069-71.
16. Floyd Jr MS, Stubington SR. Mitrofanoffcystolitholapaxy: an innovative method of stone clearance in a hostile abdomen with an inaccessible urethra. Urol J. 2012; 12(2):2115-8.
17. Tazi F, Rhannam W, Khalouk A, et al. Foreign bodies in the bladder: report of 26 cases. Prog Urol. 2012;12(1):56-9.
18. El Ammari JE, El Fassi MJ, Tazi MF, et al. Unusual foreign body in the urinary bladder: a case report. Cases J. 2019;2:832.
19. Erkoc M, Ozcanli YT, Keskin MB, et al. Self-Insertion of Newspaper into Bladder: An Unusual Case of Foreign Body. J Coll Physicians Surg Pak 2022; 32(JCPSPCR):CR98-9.

20. Ogbetere FE, Irekpita E. A Self-Insertion of an Uncommon Urethrovesical Foreign Body for Autoerotism. Niger J Surg. 2021 Jan-Jun;27(1):81-3.

21. Soetojo, Soetojo & Madani, Hasan. (2019). Case Report: A Headset in the Bladder. Folia MedicaIndonesiana. 2019; 55: 153.