



Polarizing Case of Dysuria

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History of Present Illness

13-year-old male presented to the emergency department with a complaint of difficulty urinating. While the patient was being watched by his siblings, he states he “may” have gotten something stuck in his penis while “playing,” but was reluctant to discuss any further details. Once his parents arrived home, he reported that he was having difficulty urinating; only able to produce small volume voids that were uncomfortable. He endorsed normal frequency and the urge to urinate. He denies pelvic or abdominal pain. He had no prior history of genitourinary issues.

Physical Exam

BP: 118/81, Pulse: 98, Temp: 98.3, RR: 21, SpO2: 100% on room air

Patient alert and calm. No signs of pain or discomfort. Abdominal exam without tenderness or distension. Suprapubic palpation did not elicit pain but did elicit urge to urinate. Inspection of the genitalia did not reveal any signs of abnormalities and there was no evidence of blood at the meatus.

Radiology Studies:

Pelvic Xray: Several radiopaque 5mm foreign bodies occupying the urethra and bladder.



AP film of the
pelvis showing
foreign bodies in
the urethra
and bladder

Questions

1. What is the diagnosis and next step in management of the pictured condition?
2. In pediatric patients, the above diagnosis should prompt the evaluation for what other condition?

Answers

1. Urethral foreign body with suspicion for extension to the bladder. Consultation to urology should be placed for removal of the foreign bodies.
2. The above finding should prompt suspicion for abuse in any child or other at-risk population.

Case Outcome

Though patient was initially reluctant to reveal what had been placed in his urethra, he eventually embarrassingly stated that he had placed magnetic Buckyballs® into his urethra. Patient stated he was curious and put some in there. To get them out he kept attaching more magnetic balls to pull them out and they kept getting stuck. Plain films of the pelvis revealed that the objects had extended all the way into his bladder. Patient was able to urinate in the ED and the UA was notable for small RBCs; however, no infection. Urology was consulted and the patient was admitted and eventually taken to the OR. Urology performed a retrograde cystoscopy and removed a total of 62 5mm spherical foreign bodies. Patient had an uncomplicated recovery and was discharged home. Careful history with the patient and the parent did not reveal any evidence of abuse.

Lateral film of the
pelvis showing
foreign bodies in
the urethra
and bladder



Discussion

The self-insertion of foreign bodies into the urethra is known as polyembolokoilamania. It occurs in all but the youngest age groups with a range of underlying etiologies and involve items ranging from routine trinkets to devices designed for sexual stimulation. Patients may present with a primary complaint of pain, dysuria, hematuria, discharge, or anuria with urge. Often patients will be forthcoming with what happened; however, special populations, including children, may be more protective over the details of the events. When a child presents for urethral foreign body, the ED physician should keep a high index of suspicion for abuse. This includes the female pediatric patient presenting with retained vaginal foreign bodies.

The average urethral length in adult females is only 4cm, compared to 20cm in males, greatly increasing the likelihood of a foreign body reaching the bladder in woman than men. However, it is not uncommon for objects to advance far enough to reach the male bladder. In either case retained foreign bodies can lead to urethral stenosis and urinary retention, initially mimicking a UTI. Male patients are also at risk for prostatitis. Furthermore, bladder foreign bodies put patients at risk for development of bladder calculi.

If not readily visible at the urethral opening, most urethral foreign bodies can be confirmed with plain film imaging. If the object is not radiopaque, bedside ultrasound may be utilized to view bladder foreign bodies but can be limited in assessing for those contained within the urethra. If the index of suspicion is high despite lack of evidence on plain films, non-contrast CT imaging can be utilized but should not be first line. If the object is visible at the urethral opening an ED physician could attempt removal; however, any significant resistance or pain should prompt further evaluation with films as the object may extend to the bladder. If the object does extend to the bladder than urology should be consulted for cystoscopy. Most patients do well after removal; however, some can go on to develop long term sequela including infections and strictures.

Pearls

- Though rare, urethral foreign bodies can lead to complications from traumatic injury, to infection, to stricture and urinary retention.
- Plain films can usually identify the object(s) and once confirmed urology should be consulted for OR removal specifically for proximal locations, significant illness, or high risk of complication.
- Always keep an index of suspicion for abuse when a child presents with GU foreign bodies and realize a child is more likely to not fully disclose the events or the foreign body.

References

