

Acute Infection of a Documented Seminal Vesicle Cyst via Hematogenous Seeding

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INTRODUCTION

Genital abnormalities have been reported in up to 12 percent of men with unilateral renal agenesis.⁽¹⁾ There have also been reports of neurofibromatosis patients manifesting ipsilateral renal agenesis.⁽²⁾ Abnormal development of the mesonephric duct between the fourth and thirteenth week of embryonic life seems to be the origin of such cysts, which can have a variable clinical presentation.⁽³⁾ The presence of seminal vesicle cysts in patients with renal agenesis is well documented.^(4,5) Approximately 68 percent of all seminal vesicle cysts are associated with renal agenesis.⁽¹⁾ Here we report a 26-year old patient with neurofibromatosis type 1, unilateral renal agenesis, and a known seminal vesicle cyst who presented to the Emergency Department with bacteremia caused by an infected dual lumen hemodialysis catheter.

CASE REPORT

A 26-year old Caucasian male with a history of neurofibromatosis type 1 and left renal agenesis was admitted to the hospital because of perineal pain and fever. Twelve days earlier, he had been found to have methicillin-sensitive staphylococcus aureus (MSSA) bacteremia, which was treated with intravenous antibiotics (vancomycin, piperacillin-tazobactam, and nafcillin) and dual-lumen hemodialysis catheter removal. Simultaneous blood cultures obtained from the new dialysis catheter and periphery at the time of admission were negative and a computed tomography (CT) without contrast of the abdomen and pelvis revealed the acute expan-



Figure 1. Non-contrasted CT on the day of admission showed a large fluid filled structure, thought to be bladder.

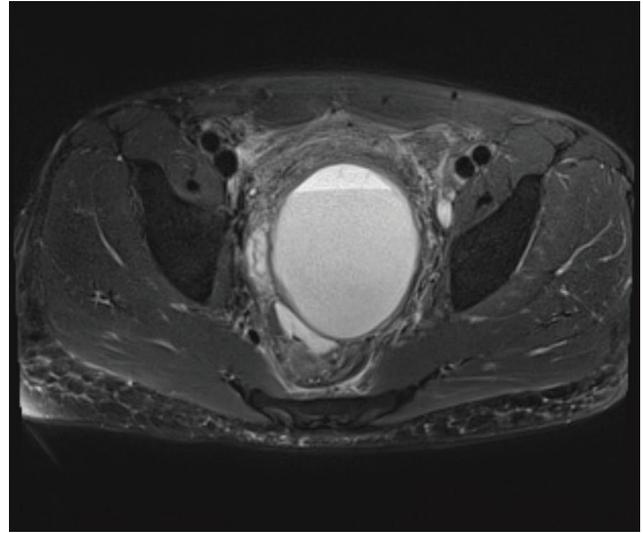


Figure 2. MRI without contrast showing infection of a giant seminal vesicle cyst.

sion of a left seminal vesicle cyst with a displaced bladder (Figure 1). The first documented visualization of the $6 \times 5 \times 9$ cm cyst by CT scan had been 17 months earlier. Failed Foley catheter placement by the Urology team and the need for more definite evaluation of anatomy prompted further imaging. A magnetic resonance image (MRI) without contrast demonstrated an $11.5 \times 9 \times 3.4$ cm cystic mass compressing the bladder anteriorly, which was consistent with a large infected left seminal vesicle cyst (Figure 2).

Percutaneous drainage of the cyst yielded 720 mL of dark fluid at the time of placement, and another 400 mL over the next several days via an indwelling drain. Culture of the fluid showed methicillin-sensitive staphylococcus aureus with the same sensitivity pattern as the positive blood culture that was performed during the previous hospitalization. The drain was removed and the patient was discharged on vancomycin. Blood cultures drawn two weeks later remained negative but the patient required transurethral unroofing of the cyst due to recurrence of the abscess.

DISCUSSION

Patients with seminal vesicle cysts can present with dysuria, epididymitis, prostatitis, or simply vague pain complaints of the lower abdomen, perineum, scrotum or lower back.⁽⁶⁾

However, patients with small cysts found incidentally often require no intervention.⁽⁷⁾ There has been at least one case report of a chronic seminal vesicle cyst infections in which pain was not present, with the only symptoms being urinary frequency and nocturia.⁽⁶⁾

Imaging techniques depend on presentation and clinical intuition. However, all have limitations. Vesiculography calls for general anesthesia and radiation exposure, along with needle insertion through the scrotal sac and vas deferens.⁽⁸⁾ Transrectal ultrasound is invasive and limited by low resolution and soft-tissue contrast.⁽⁷⁾ MRI can provide more information regarding tissue density and characteristics than any of the other imaging modality. This is key in determining whether the fluid inside the cyst is thin, proteinaceous, or hemorrhagic. However, MRI has its own drawbacks. It is more expensive than CT, and the administration of gadolinium may be contraindicated in renal patients due to the risk of nephrogenic systemic fibrosis.⁽⁹⁾

This case suggests that, the threshold to use MRI to assess the cyst for infection should be low. In low risk patients with a recent abdominal image that can be used for comparison, a contrast-assisted CT scan is reasonable to assess cyst anatomy. However, in light of the need for very accurate soft tissue differentiation in diagnosing an infected

seminal vesicular cyst, high clinical suspicion for infection should steer clinical management toward a non-contrasted MRI in order to make both the diagnosis and the appropriate therapeutic decisions.

CONFLICT OF INTEREST

None declared.

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