

UC Irvine

Journal of Education and Teaching in Emergency Medicine

Title

Sigmoid Diverticulitis Complicated by Colovesicular Fistula Presenting with Pneumaturia

Permalink

<https://escholarship.org/uc/item/2w78q0db>

Journal

Journal of Education and Teaching in Emergency Medicine, 4(2)

Authors

McCoy, C Eric

Khan, Faraz

Yanuck, Justin

Publication Date

2019

DOI

10.5070/M542043470

Copyright Information

Copyright 2019 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Sigmoid Diverticulitis Complicated by Colovesical Fistula Presenting with Pneumaturia

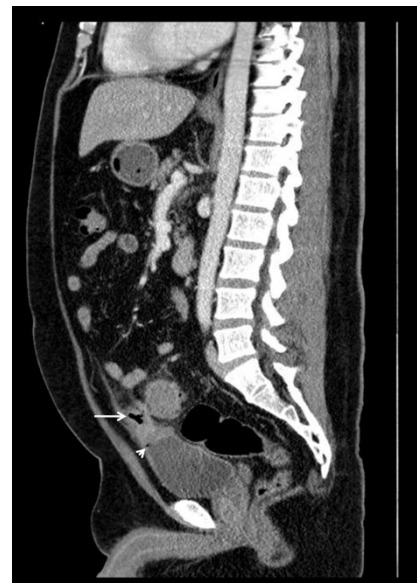
Faraz Khan, BS*, Justin Yanuck, MD* and C Eric McCoy, MD, MPH*

*University of California, Irvine, Department of Emergency Medicine, Orange, CA

Correspondence should be addressed to C Eric McCoy, MD MPH at cmccoy@uci.edu

Submitted: October 12, 2018; Accepted: January 10, 2019; Electronically Published: April 15, 2019; <https://doi.org/10.21980/J80G9T>

Copyright: © 2019. Khan, et al. This is an open access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY 4.0) License. See: <http://creativecommons.org/licenses/by/4.0/>



History of present illness: A previously healthy 39-year-old male presented to the emergency department with six weeks of suprapubic pain and dysuria. He also reported passing air with his urine over the last several days. The patient was afebrile with otherwise unremarkable vital signs. Of note, he had two prior urgent care visits where he was diagnosed with simple urinary tract infections (UTIs) and subsequently prostatitis, both of which have not resolved with two separate courses of antibiotics. His exam was significant for mild suprapubic tenderness, without rebound or guarding, and an unremarkable genitourinary exam of a circumcised male. Laboratories were significant for an abnormal urinalysis, indicating infection. Given his history of persistent symptoms despite antibiotics, the infrequency of UTIs in healthy adult circumcised males, and the presence of pneumaturia, a computed tomography (CT) scan of the abdomen and pelvis was ordered.

Significant findings: A CT scan of his abdomen/pelvis shows acute sigmoid colonic diverticulitis with adjacent extraluminal collection containing gas (axial view, white arrow) consistent with perforation, along with abutment of the urinary bladder with intraluminal bladder gas (sagittal and coronal views, white arrowheads) suggesting colovesical fistula.

Discussion: A colovesical fistula (CVF) is an abnormal connection between the colon and urinary bladder.¹ Although uncommon, CVFs can cause significant morbidity and may lead to death, usually secondary to urosepsis.^{1,2} These fistulas are most commonly complications of diverticular disease, inflammatory bowel disease, or cancer.³ Up to 20% of patients with diverticular disease and up to 1% of patients with Crohn's disease are found to have a fistula.^{4,5} Pneumaturia or fecaluria can be seen in up to 90% of patients.⁶ Other presenting signs/symptoms include dysuria, suprapubic pain, frequency, urgency, and rarely, gross hematuria.³ The diagnosis of a colovesical fistula is confirmed by abdominopelvic CT scan with oral or rectal contrast demonstrating air or contrast material in the bladder with adjacent colon and bladder wall thickening. This type of diagnostic imaging has been shown to have a sensitivity of 90 to 100 percent.³

The treatment for CVF is surgical correction usually by general surgery. However, any underlying infection resulting from the CVF should be treated with antibiotics prior to surgery.³ Antibiotic choice should cover colonic flora, usually quinolones, or 3rd generation cephalosporins with metronidazole, or amoxicillin-clavulanate can be used.³

The patient in this case was given antibiotics and admitted to the hospital with general surgery and gastroenterology consultations. Two months later, the patient had a sigmoid colectomy and appeared to have had a full recovery.

Topics: Gastrointestinal, GI, diverticulitis, colovesical, fistula, pneumaturia.

References:

1. Garcea G, Majid I, Sutton CD, Pattenden CJ, Thomas WM. Diagnosis and management of colovesical fistulae; six-year experience of 90 consecutive cases. *Colorectal Dis.* 2006;8(4):347-352. doi: 10.1111/j.1463-1318.2005.00928.x

2. Golabek T, Szymanska A, Szopinski T, et al. Enterovesicular fistula: aetiology, imaging, and management. *Gastroenterol Res Prac.* 2013;2013:617967. doi: 10.1155/2013/617967
3. Strickland M, Burnstein M, Cohen Z. colovesical fistulas. In: Chen W, ed. *UpToDate.* Waltham, MA: UpToDate, Inc. <https://www.uptodate.com/contents/colovesical-fistulas>. Updated July 11, 2017. Accessed. July 27, 2018.
4. Menenakos E, Hahnloser D, Nassiopoulos K, Chanson C, Sinclair V, Petropoulos P. Laparoscopic surgery for fistulas that complicate diverticular disease. *Langenbecks Arch Surg.* 2003;388(3):189-193. doi: 10.1007/s00423-003-0392-4
5. Labs JD, Sarr MG, Fishman EK, Siegleman SS, Cameron JL. Complications of acute diverticulitis of the colon: improved early diagnosis with computerized tomography. *Am J Surg.* 1988;155(2):331. doi: 10.1016/S0002-9610(88)80726-8
6. Melchior S, Cudovic D, Jones J, Thomas C, Gillitzer R, Thüroff J. Diagnosis and surgical management of colovesical fistulas due to sigmoid diverticulitis. *J Urol.* 2009;182(3):978-982. doi: 10.1016/j.juro.2009.05.022