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Case Report

Successful Conservative Management of a Retroperitoneal Abscess With a Sinus to the Colon: A Case Report

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A sinus between the colon and a retroperitoneal abscess is a rare entity that usually occurs as a complication of a primary condition such as Crohn's disease, radiation enteritis, or diverticular disease. Herein, we report a 72-year-old woman with a retroperitoneal abscess and a sinus formation between the abscess and the colon after an iatrogenic injury to her left colon. The retroperitoneal abscess was detected 1 week after the patient had undergone a left nephroureterectomy for recurrent ureteral cancer. The patient's general performance status allowed conservative management with antibiotics and percutaneous drainage. The abscess resolved, and the sinus closed after 3 weeks of treatment. In the absence of surgical pathology in the colon, and if the patient's general condition is good enough to tolerate conservative management, treatment using antibiotics plus percutaneous drainage is effective for cases of retroperitoneal abscess with a sinus between the colon and abscess.

Key words: Colon – Retroperitoneum – Sinus – Conservative management

A sinus between the colon and a retroperitoneal abscess is a rare entity that is usually secondary to an underlying condition such as Crohn's disease or radiation enteritis, but spontaneous sinus formation between retroperitoneal abscess and the duodenum has also been reported.[1] In the presence of a primary disease that requires surgical intervention, a sinus between a retroperitoneal abscess and colon can be treated surgically. However, conservative management with percutaneous drainage and antibiotics has also been recommended in some cases.[1] Herein, we report a patient with a sinus between the colon and a retroperitoneal abscess that probably developed after a previous difficult procedure involving adhesiolysis of the left colon, who was successfully treated by conservative management.

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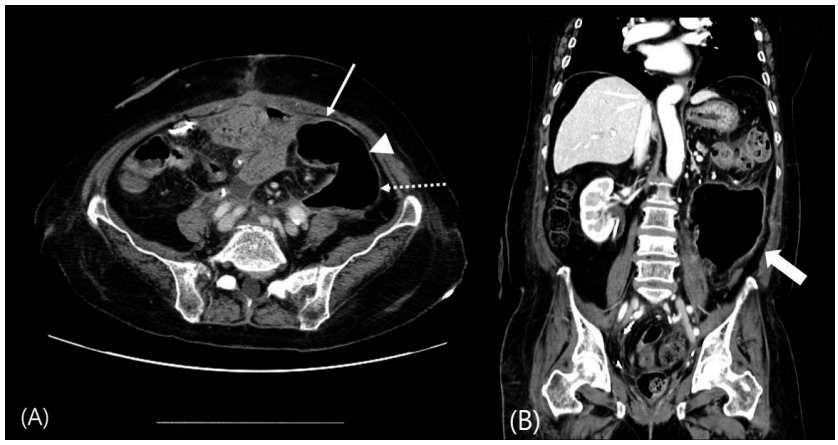

Fig. 1 (A) Initial abdominal computed tomography scan prior to insertion of the percutaneous drainage catheter. Colon (arrow) was communicating to abscess cavity (dotted arrow) by sinus (arrowhead), and (B) coronal scan showing huge abscess cavity with free air in the retroperitoneum.

Case Report

A 72-year-old woman presented with left flank pain and fever. She had undergone left nephroureterectomy 1 week previously for recurrent cancer of the ureter. This was her second operation for ureteral cancer after a total cystectomy with formation of an ileal conduit 1 year previously. A physical examination showed tenderness of her left flank, but there were no signs of peritoneal irritation. An abdominal computed tomography (ACT) scan revealed a large abscess cavity in the retroperitoneum, which communicated with a perforation in the distal descending colon (Fig. 1A and 1B). With the diagnosis of sinus between a retroperitoneal abscess and the colon, the patient underwent placement of a catheter for percutaneous drainage (16-Fr pigtail catheter; COOK Medical, Bloomington, Indiana) under fluoroscopic guidance (Fig. 2). The patient was maintained on parenteral nutrition and received nothing by mouth. The catheter was flushed with 5 mL saline every 8 hours to prevent occlusion. Serial ACT scans showed a gradual resolution of the abscess cavity, with spontaneous obliteration of the sinus (Fig. 3A–3C). The patient resumed a regular diet 3 weeks after placement of the drainage catheter, and the catheter was removed 1 week thereafter. Six months later, the patient died of recurrent ureter cancer, but there had been no evidence of recurrence of the sinus.

Discussion

We reported herein a case of a retroperitoneal abscess and a sinus between the abscess and the colon after an iatrogenic injury to the colon. Pathologic definition of a sinus is a narrow passage leading to an abscess or the like. A sinus between the colon and the retroperitoneum that is not associated with a common underlying condition has rarely been reported and is usually secondary to colorectal cancer, colonic tuberculosis, or untreated perinephric abscess.[2–4] The sinus noted in this case may have resulted from iatrogenic injury to the colon during difficult adhesiolysis. To manipulate the left ureter and create an ileal conduit, the left retroperitoneal space was entered during her first surgical procedure, and severe adhesions between the retroperitoneum and descending colon may have resulted. The patient described here presented 1 week after the second procedure (left nephrour-

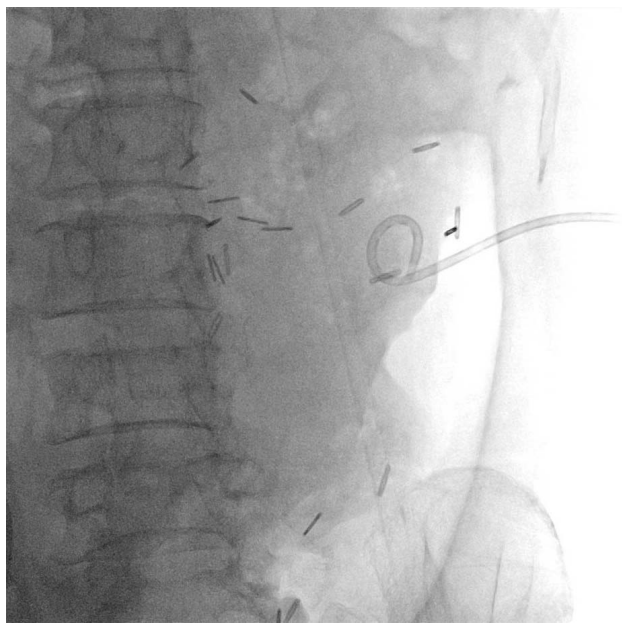

Fig. 2 Sixteen-French percutaneous drainage catheter was placed under fluoroscopic guidance.

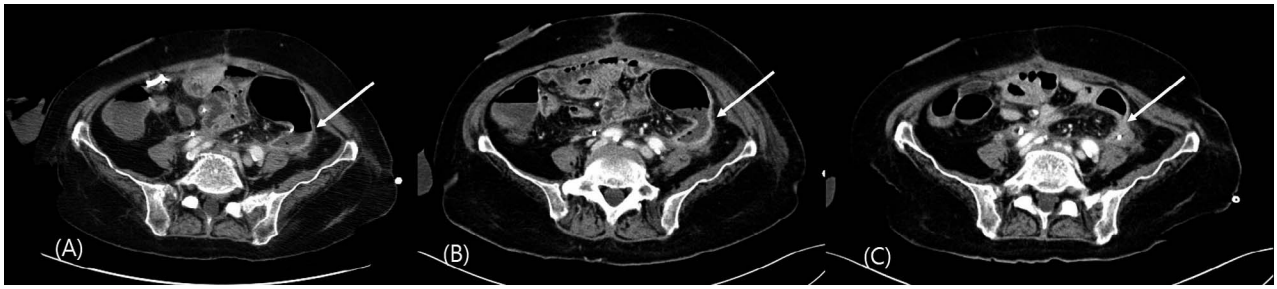

Fig. 3 Serial computed tomography scans acquired at (A) 1, (B) 2, and (C) 3 weeks after catheter placement. Note the gradual decrease in size of the abscess, with obliteration of the sinus.

eterectomy) without evidence of overt perforation during the procedure. Even if there is no obvious sign of bowel perforation in the operative field, the surgeon should take care to look for minor injury to the bowel wall during adhesiolysis and should undertake meticulous repair of any injury.

In contrast to sinus, a fistula is a transmural communication between 2 epithelialized surfaces. Fistulas involving the gastrointestinal (GI) tract are mostly external fistulas in the form of an enterocutaneous fistula. Internal fistulas are those that communicate with other regions of the GI tract or adjacent organ. Crohn's disease, radiation enteritis, and diverticulitis usually underlie most internal fistulas, which include enteroenteric, enterovesical, and colovaginal fistulas.[5,6] Although the connection between the retroperitoneal abscess and the colon seen in this case was not a sinus by definition, we regarded it as a fistula and applied conservative management, which had been useful for spontaneous fistula closure. There are 3 principles to management of a fistula involving the GI tract: (1) patient stabilization, (2) determination of the anatomy of the sinus, and (3) decision making for surgical intervention. The optimal time for surgical intervention and type of surgical procedure have not yet been clarified in the literature. However, surgical intervention should be delayed until the intra-abdominal and systemic conditions of the patient allow major surgery; emergent surgery should be considered if the patient's overall condition deteriorates despite supportive care.[7] When there are surgical indications that precede sinus formation, the authors of other case reports have performed bowel resections that included the fistula-bearing segment.[3,8] Despite of the anatomical differences between sinus and fistula, we applied sinus treatment and the sinus and abscess cavity closed spontaneously.

We could only find 2 case of fistula between a retroperitoneal abscess, left ureter, and the left colon that were treated by percutaneous drainage. The authors reported that less than 1 week of drainage was sufficient to evacuate the abscess and close the fistula.[1,9] However, the fistula tract in that case was minimally detectible and had a long tract, which are both favorable conditions for spontaneous closure. In our patient, the defect in the colon wall was almost 2 cm in diameter, and the tract was short. Consequently, a longer course of 3 weeks of drainage was required to close the sinus. We believe that in the absence of intracolonic pathologies that require surgical removal, retroperitoneal abscesses connected by a sinus to the colon should be initially managed by conservative treatment. Two main factors that allowed for the successful treatment of our patient were that she was never septic and effective drainage was maintained throughout the course of treatment. Unlike contents of the small bowel, feces tend to occlude the drainage catheter and hinder effective drainage. Regular flushing of the catheter with small amounts of saline solves the problem and might be advisable for future cases.

In summary, we successfully treated a retroperitoneal abscess connected by a large sinus to the colon, using conservative management that consisted of antibiotics and effective percutaneous drainage. The patient's general performance status should allow for conservative management, and there should be no other indication for surgery. Effective catheter drainage is essential for resolution of the abscess and closure of the sinus.

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