Spontaneous right-sided ureterocolic fistula: a rare complication of colonic diverticular disease

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DESCRIPTION

Fistulae can result from diverticulitis-associated abscesses perforating into surrounding structures. Diverticular ureterocolic fistulae are rare, with only nine previous cases reported.¹ They are usually related to previous operations and affect the left ureter due to its proximity to the sigmoid colon.² In the absence of a non-functioning infected kidney, it is recommended to resect the diseased colon with no manipulation of the urinary system (eg, nephroureterectomy).² Our case is the first to report a spontaneous right ureterocolic fistula secondary to diverticular disease in a patient with no previous abdominal operations.

A 68-year-old man presented with chronic lower abdominal discomfort associated with weight loss, erratic bowel habit and urinary symptoms including pneumaturia and recurrent urinary tract infections.

CT of the abdomen and pelvis showed an inflammatory diverticular mass of the sigmoid colon (figure 1) with complex fistulation to the right ureter (figure 2). Bilateral retrograde pyelograms revealed extravasation of contrast indicating the site of fistulation (figure 2).

Laparoscopic-converted-to-open anterior resection of the sigmoid mass with colorectal anastomosis and diverting loop ileostomy was performed. Bilateral ureteric stents were inserted at the start of the procedure. Intraoperatively, a large pelvic mass with extensively adherent small bowel was found. The challenging dissection of the mass was facilitated by palpating the stents to avoid injury to the ureters. The fistula was transected during the dissection and no urine leakage was observed. The ureteric stents were left for 8 weeks to prevent urine leakage and promote spontaneous closure of the fistula.

Figure 1 Series of images from a preoperative CT scan of the abdomen and pelvis. CT images are heavily distorted by the artefact from the metallic hip prosthesis (black arrow). On axial slices (A–C) a thickened and inflamed sigmoid colon (*) is seen containing diverticular disease surrounded by several complex fistulae. Multiple fistula tracks are seen (white arrows); (B) shows enhancing air filled fistula track between proximal and distal sigmoid colon, (C) red arrow shows fistula track heading towards ureter (red arrow) and coronal CT reformat (D) shows fistula track meeting the ureter (blue arrow).

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Figure 2 Series of images from a preoperative imaging of the ureter. On axial CT images, air is seen within the right renal collecting system (A) and right ureter (B). Air is not seen on the left. Retrograde ureterography (C) shows leak of contrast from the distal ureter into the sigmoid colon (red arrow).

Learning points

- ▶ Ureterocolic fistulas secondary to diverticular disease are rare, and present with urinary symptoms and lower abdominal pain.
- ▶ CT scans and retrograde pyelograms are important investigations to confirm the diagnosis and delineate the anatomy.
- ▶ Surgical resection of the diseased colonic segment can be very challenging, and ureteric stents help avoid injury to the ureters intraoperatively.

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Competing interests None declared.

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