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Colo-ovarian Fistula Complicating Sigmoid Diverticulitis: A Rare Complication of Colonic Diverticulitis

Abstract – Colonic fistula is a known complication of diverticulitis with communication mainly to the bladder, small bowel and uterus. Colo-ovarian fistulas, on the other hand, is a rare complication of colonic diverticulitis with only a few reported cases. Colo-ovarian fistulas are primarily associated with ovarian malignancy, ovarian abscess or Crohn's disease, hence there is a low index of suspicion for colo-ovarian fistulas in diverticulitis due to its rarity. We report a case of a menopausal woman with sigmoid colon diverticulitis complicated with colo-ovarian fistula.

Keywords – Colo-ovarian, fistula, colonic diverticulitis, sigmoid colon, right iliac fossa

1. INTRODUCTION

Acute diverticulitis is inflammation of the colonic diverticulum. The sigmoid colon is the commonest site for diverticulitis, which has known complications of fistula formation with the adjacent structures, seen in 10–20 % of the cases (1). Colovesical fistulas account for more than half of the fistulas associated with diverticulitis, at approximately 65%. This is followed by colovaginal (25%), coloenteric (6.5%) and colouterine (3%) fistulas (2). Colo-ovarian fistula complicating diverticulitis is considered rare with only a few reported cases. It is important to recognize cases of colonic fistula to adnexal structures as these patients may present with abdominal pain or genito-urinary symptoms if not intervened early (1). This case is reported to evaluate the CT features of this rare gynaecological complication of acute diverticulitis.

2. CASE REPORT

A 77-year-old postmenopausal woman presented to the emergency department with right iliac fossa pain for one week duration. It is cramping in nature and aggravated by movement. She has normal bowel and bladder habits and there was no history of fever. She sought medical attention at a private clinic twice and was given gastritis medication, which did not relieve her symptoms. There was no significant past surgical history. Physical examination revealed tenderness at the right iliac fossa. Gynaecology bedside transabdominal scan showed an atrophic uterus and bilateral ovaries. No free fluid was noted in the pelvis.

Urgent computed tomography (CT) of the abdomen was suggestive of sigmoid colonic diverticulitis complicated with right colo-ovarian fistula and early right tubo-ovarian abscess or oophoritis (Figure 2). Sealed perforation of diverticulitis was considered as a differential diagnosis. The patient underwent diagnostic laparotomy, Hartman's procedure with en-bloc right oophorectomy. Intraoperative findings showed multiple sigmoid colon diverticulum with the right ovary enlarged and closely adhered to the right lateral wall of the sigmoid colon. Adjacent right fallopian tube was inflamed. The right ovary and fallopian tube were then resected together with the sigmoid colon. The left ovary and uterus appeared grossly normal. Histopathological examination of the sigmoid colon, right ovary and the fallopian tube was reported as sigmoid colon diverticular disease with perforated diverticulitis with adhered right salphingo-oophoritis. No dysplastic or malignant cells were noted.

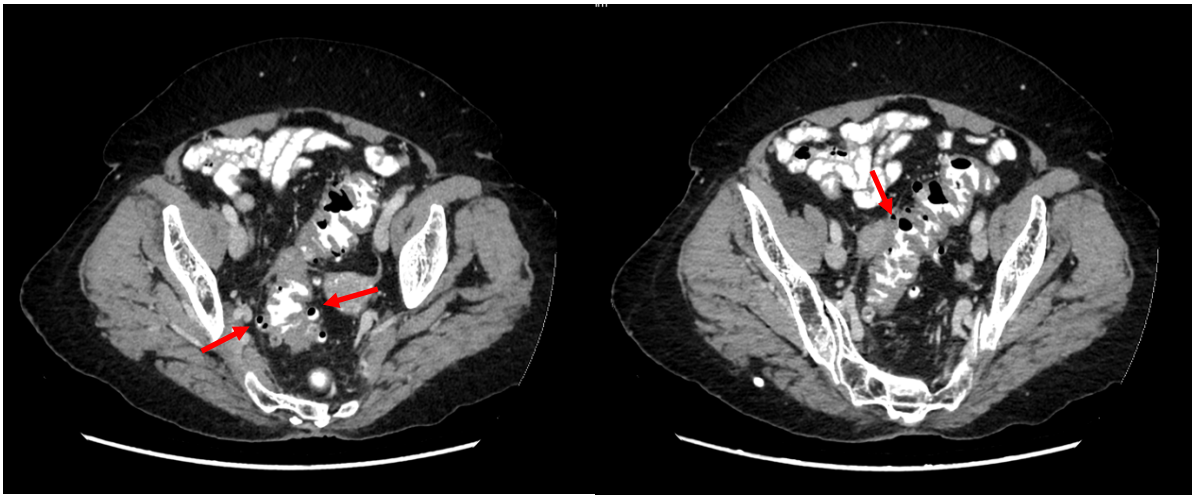

Figure 1. Post-contrast axial CT scan of the pelvis shows multiple diverticula (arrow) are seen along the sigmoid colon associated with circumferential sigmoid wall thickening

Figure 2. Post-contrast axial CT scan of pelvis shows enlarged right ovary (asterisk) which is adhered to the thickened sigmoid colonic wall (arrowhead). Tiny air pockets within the right ovary with minimal para-ovarian fat stranding were noted

3. DISCUSSION

Colonic diverticulitis complicated with colo-ovarian fistula is a rare entity, hence it has been least described in the literature. The most common colonic fistula is the colovesical fistula followed by colovaginal, coloenteric and colouterine fistulas. Pelvic inflammatory disease, appendicitis, Crohn's disease, and diverticulitis are amongst the contributors to this fistulous formation. In cases of diverticulitis, perforation of an inflamed diverticulum can lead to abscess or fistula formation between the colon and the ovary (3).

Patients with colo-ovarian fistula may have a variable clinical presentation that includes lower abdominal pain, fever, palpable masses in the pelvis, urinary tract infection and vaginal discharge. Radiological imaging plays a great role in the diagnosis of this condition. According to Rosenzweig et al., a combination of ultrasound abdomen, contrast-enhanced CT of the abdomen, colonoscopy or barium enema is essential in

diagnosing colo-ovarian fistula (2). In our case, the patient presented acutely with right-sided abdomen pain and proceeded with a contrasted CT scan of the abdomen which revealed sigmoid colon diverticulitis with fistulous communicating the right ovary.

CT imaging of the patient showed features of colonic diverticulitis, including colonic wall thickening and pericolonic fat stranding (Figure 1). Extraluminal gas adjacent to the diseased colon, suggestive of perforated diverticulitis is seen reported in some of the cases (3). This feature may not be apparent in all patients, especially in those with very small perforation or in asymptomatic patients. Pathological examination may reveal perforated diverticulitis that may have not been evident on CT. Enlarged adnexa with foci of gas and fluid within the ovary are demonstrated in cases of colo-ovarian fistula (4). Extensive pelvic inflammation may obscure the presence of colo-ovarian fistula on CT.

The mainstay of treatment in cases of diverticulitis with colo-ovarian fistula is surgical intervention. Conservative management with antibiotics will not help address the intrabdominal complications and may cause recurrence. However, in cases of acute diverticulitis, a preoperative medical treatment is essential to decrease the risk of postoperative complications. Surgical resection of the affected bowel segment and the involved adjacent adnexa with primary anastomosis of the bowel loop is recommended (5). Laparascopic approach will help with a quicker recovery period.

4. CONCLUSION

Computed tomography has a pivotal role in the diagnosis of diverticulitis and its complications, particularly colo-ovarian fistula, which is rarely seen. In patients that present with diverticulitis, a collection of gas with or without fluid at the ovary adjacent to the site of diverticulitis gives a high index of suspicion of the presence of a fistula between the colon and ovary. Therefore, early recognition of this gynaecological complication of diverticulitis would help in accurate surgical planning.

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COMPETING INTERESTS

The authors declare that no competing interests exist.

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