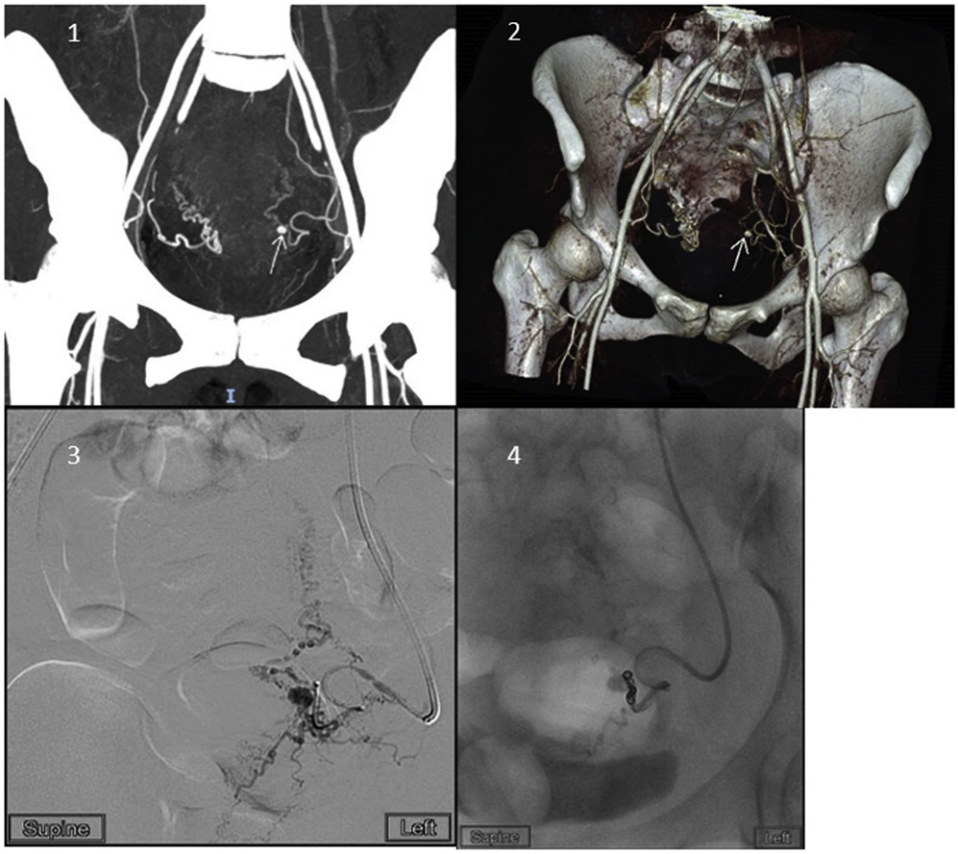

Fig. 1. CT Angiogram images of the patient pre and post-embolization.
Pictures 1–3 show the pseudoaneurysm arising from the left uterine artery prior to embolization whilst picture 4 shows the angiogram image after selective embolization using microcoils.

postpartum haemorrhage which does not respond to usual treatment, especially when bleeding is recurrent. A CT angiogram of the pelvic vessels is gold standard for diagnosing a pseudoaneurysm and allows mapping of the vasculature to plan for embolization. Whilst traditional treatment for uterine pseudoaneurysm include laparotomy bilateral internal iliac or uterine artery ligation and hysterectomy in refractory cases, successful treatment with minimally invasive treatments such as uterine artery embolization have proven to be effective with considerably lesser morbidity and preservation of fertility. Such intervention should be considered and discussed with the patient where the expertise is available.

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Received 12 May 2019

http://dx.doi.org/10.1016/j.ejogrb.2019.05.039

Sigmoido-uterine fistula: An uncommon communication!

Dear Editor,

Colouterine fistulas are extremely rare which may be attributed to the thick muscular structure of the uterus acting as a protective barrier. Though colonic diverticular disease is implicated as a common cause of such fistulae, neoplasia of the uterus/colon and iatrogenic trauma could be other etiological factors [1]. Most of these patients do have significant lower gastrointestinal symptoms, but also could be asymptomatic only to present with feculent discharge per vaginum (PV) that compromises patients' quality of life. Surgical management is the corner stone for these fistulae [2]. We describe a case of a 72-year-old woman, presented with fecal discharge PV. Abdominal examination was unremarkable. PV examination showed active feculent discharge through cervical os. Blood investigations and serum tumor markers (CA-125 and CEA) were normal. Pelvic MRI revealed thickened endometrium (16 mm) along with air foci within the uterine cavity. The sigmoid

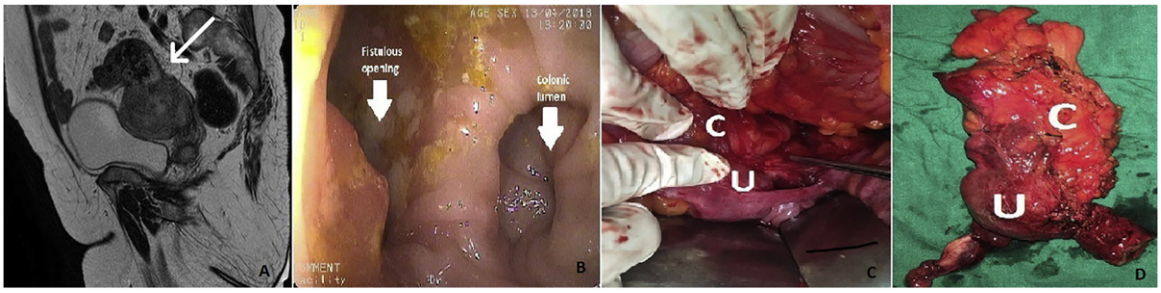

Fig. 1. A: MRI showing sigmoid colon adherent to the uterine fundus with a fistulous communication between the two viscera (white arrow); **B:** Colonoscopy showing a fistulous opening on the sigmoid colon mucosa; **C:** Intraoperative picture showing the colouterine fistula (instrument); **D:** Excised specimen (C, colon; U, Uterus).

colon was found to be adherent to the serosal surface of the uterine fundus with a fistulous communication between the two viscera (Fig. 1A). Colonoscopy showed a fistulous opening on the sigmoid colon mucosa located at 30 cm from the anal verge (Fig. 1B). At laparotomy, the sigmoid was densely stuck to the posterior surface of the uterus and the fistulous communication could be demonstrated (Fig. 1C). An *en bloc* sigmoid resection with TAH + BSO was done (Fig. 1D). Rest of the colon was normal with no diverticula. HPE showed a colouterine fistula of diverticular etiology with no evidence of malignancy. The uterine mucosa and muscularis was thickened with dense fibrosis. Postoperative period was uneventful and at the end of 6 months is doing fine. The occurrence of colouterine fistulas is an extremely rare entity. The earliest reported case of an enterouterine fistula was in 1909 and the first reported case of a colouterine fistula was in 1929. The reported incidence of complication in colonic diverticular disease is 12% and majority of the fistulas are colovesical (65%) and colovaginal (25%) in origin [3]. Others like colouterine, coloenteric and colocutaneous are extremely rare. Fistulas involving the reproductive tract may be caused by rupture of an abscess into the adjacent viscera, surgery, trauma, IBD, and malignancies (primary or recurrent) of the gynecologic tract or other pelvic organs or may be a complication of RT [4]. Identification of the cause, complexity, and location of a fistula is essential for optimal management planning [1]. Diverticulitis causes an inflammatory adhesion of the colon and uterus with subsequent necrosis leading to fistula formation or by a rupture of a pericolic abscess into the uterus. Usual presentation is passing feculent/purulent discharge per vaginum with history suggestive of previous episodes of acute diverticulitis: surprisingly, the latter was absent in our patient. The investigation of choice for diagnosis of diverticulitis and its complications is CECT that will pick up pericolic abscesses, thickened colonic segment adjacent to the uterus and air foci within the uterine cavity that is helpful in making a diagnosis of colouterine fistula [3]. MRI offers better delineation of fistula tracts on T1-weighted images. T2-weighted images show fluid collections within the fistula, localized fluid collections in extra intestinal tissues and inflammatory changes within muscles [2,4]. TVS, contrast hysterosalpingography, sonohysterography, colonoscopy and barium enema will also pick up colonic diverticulosis and fistulous openings that are present. Resection is the choice of treatment for colouterine fistulas with various procedures described over the years. Noecker in 1929 performed a staged Mikulicz procedure for a patient of colouterine fistula due to sigmoid diverticulitis. Chaikoff advocated performing Hartmann's procedure with hysterectomy, which might be ideal in patients presenting with abdominal sepsis and poor general condition. Clay and Tiernay in 1969 advocated *en bloc* sigmoid resection and uterus which has now become the surgery of choice especially in cases where malignancy is suspected. In a subset of patients where diverticular disease is strongly suspected to be the etiology and young women with desire for pregnancy and preservation of menstrual function, conservative surgery (colonic resection alone and drainage of the purulent uterine collection) may be sufficient as definitive treatment [2].

Source of funding

Nil for all the authors.

Declaration of interest statement

The authors declare that they have no conflicts of interest and nothing to disclose.

Compliance with ethical standards

Yes.

Ethical approval

This case report text was approved by Institutional Ethics Committee. An informed written consent was taken from the patient after explaining about the study.

Informed consent

An informed written consent was taken from the patient after explaining about the study.

Research involving human participants and/or animals

Nil.

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Received 19 May 2019

http://dx.doi.org/10.1016/j.ejogrb.2019.06.002