A left tubo-ovarian abscess caused by a complicated diverticulitis
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Clinical History:
A 37-year-old woman was admitted to hospital with acute pelvic pain in the left iliac fossa, that had begun 6 hours before, and fever (38.2°C). She had a past history of two caesarean sections. Laboratory investigations showed a C-reactive protein of 25.1 mg/dl and white blood cell count of 21.3x103/ml (neutrophils 84%).

Imaging Findings:
Transvaginal ultrasound detected a complex and painful mass in left pelvis; it was 8 cm in diameter with thickened peripheral wall and internal septa and a simil-fluid content with a lot of internal echoes (Fig. 1). Left ovary was not recognisable.
A CT examination performed with i.v. injection of contrast media confirmed the presence of a left tubo-adnexal multiloculated complex mass with solid-cystic components and contrast-enhanced peripheral wall and septa (Fig. 2a). Uterus was dislocated towards the right pelvis. The contralateral ovary appeared normal. No free peritoneal fluid was detected. Cranially the mass was adjacent to sigmoid colon and the sigmoid wall was thickened with hyperdense appearance of perivisceral fat (Fig. 2b). Diverticula were seen both in sigmoid and in descending colon (Fig. 2c).
The suggested diagnosis based on imaging findings was left Fallopian tube abscess caused by a sigmoid diverticulitis. The surgeons during laparotomy confirmed the diagnosis and performed Hartman procedure and hysteroannexiectomy.

Discussion:
The main cause of a tubo-ovarian abscess (TOA) is pelvic inflammatory disease, usually resulting from an ascending infection by Neisseria gonorrhoeae or Chlamydia trachomatis, although 30%–40% of cases are polymicrobial. Unusual causes of tubo-ovarian abscesses include actinomycosis, tubercolosis and xantogranulomatous inflammation [1] and infective disease originating from adjacent organs (sigmoid colon and appendix) [2].
Ultrasoundography (US) is the first-line imaging modality for the evaluation of diseases of the female pelvis [2]. TOA has various US features, usually appears as an adnexal complex mass and can be difficult to diagnose reliably on the basis of US alone. In these cases, clinical and laboratory findings must be integrated with other imaging
modalities like CT or MRI. CT characteristics of TOA are a low density pelvic mass with peripheral enhancement that determines a displacement of adjacent structures [2, 3]. In this case clinical and laboratory findings and the presence of diverticulitis suggest the diagnosis of an inflammatory disease. Approximately 20% of diverticulitis can be complicated by bleeding, perforation, abscesses, fistulas and bowel obstruction [4, 5]. Extension of inflammation to a neighbouring viscera or the abdomino-pelvic wall may lead to fistula formation. The commonest is colo-vesical, between the sigmoid colon and the bladder, and occurs more often in men because of the interposition of the uterus between the colon and bladder in women [6]. CT signs of diverticulitis are a thickening of the colonic wall (defined as a thickness of more than 4mm) and poorly marginated, hazy soft tissue attenuation within the adjacent pericolic fat indicating inflammation. The presence of diverticula in the involved segment is helpful in distinguishing diverticulitis from other inflammatory conditions [4]. Sometimes diverticulitis can involve female organs, particularly the left adnexa because of its proximity to the sigmoid colon [7]. This case represents a rare complication of a common condition. Early recognition and immediate treatment is important, to avoid complications, as stricture or fistula formation and free perforation. Recognition of a pelvic mass in the clinical setting of bowel symptoms should raise the suspicion of possible diverticulitis complicated with TOA formation. Detection of diverticula involving a thickened sigmoid loop in close proximity to a complex adnexal mass, as in this case should suggest possible diverticulitis as the cause of TOA.

**Differential Diagnosis List:** Left tubo-ovarian abscess caused by sigmoid diverticulitis., PID, Ascending salpingitis, Adnexal torsion, Ovarian malignancy

**Final Diagnosis:** Left tubo-ovarian abscess caused by sigmoid diverticulitis.

**References:**


Description: Transvaginal US detected a complex and painful pelvic mass reported as a tubarian flogosis. Left ovary was not recognisable with US. Origin: Dept. of Radiology, Sant'Andrea Hospital, Rome, Italy
Description: Contrast enhanced CT axial scan showed a multiloculated left adnexal mass, with contrast-enhancing wall and septa. Uterus (white arrow) was deviated to the right. Origin: Dept. of Radiology, Sant'Andrea Hospital, Rome, Italy
**Description:** A more cranial contrast enhanced CT axial scan showed sigmoid diverticula (white arrowhead) with hazy attenuation of the adjacent pericolic fat due to diverticulitis. **Origin:** Dept. of Radiology, Sant’Andrea Hospital, Rome, Italy

**Description:** Coronal CT reformation demonstrated the contiguity between diverticula and left tubo-ovarian abscess. **Origin:** Dept. of Radiology, Sant’Andrea Hospital, Rome, Italy