Case 10389

Sigmoid colon migration of a "forgotten" intrauterine contraceptive device (IUD)

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Section: Genital (female) imaging
Area of Interest: Colon Abdomen
Procedure: Diagnostic procedure
Procedure: Defecography
Imaging Technique: CT
Special Focus: Foreign bodies Case Type: Clinical Cases
Authors: Tonolini Massimo
Patient: 55 years, female

Clinical History:

A 55-year-old woman presented to emergency department with abdominal pain, predominant in the right lower quadrant, without accompanying symptoms. Her medical history recorded surgical treatment for rectal prolapse and haemorrhoids two years earlier, followed by progressive change in her bowel habits. Physical and laboratory findings were unremarkable.

Imaging Findings:

Plain radiographs (Fig. 1) did not detect abnormal signs suggesting acute abdomen. In the pelvis, the presence of a metallic intrauterine contraceptive device (IUD) was noted. Upon further questioning, the patient admitted the "forgotten" presence of the IUD. She had menopause three years earlier, and denied genital complaints. Consultant gynaecologist examination including transvaginal ultrasound yielded normal findings, and failed to detect the IUD in the uterine cavity.

Unenhanced multidetector CT (Fig. 2), performed to clarify IUD site, revealed its translocation to the sigmoid colon, indissociable from the intestinal wall, without missing parts. Abdomino-pelvic ultrasound (not shown) and CT excluded other abnormalities, particularly suggesting pelvic inflammatory disease. Endoscopically, the strongly embedded IUD could not be safely removed from the colonic wall. Because of her limited symptoms, the patient refused surgical exploration.

Discussion:

Since its introduction more than a century ago, intrauterine contraceptive device (IUD) has undergone design modifications and improvements that increased its effectiveness and safety. Currently IUD is the commonest, highly effective, economic, reversible, safe and usually well-tolerated contraceptive method [1].

IUD-related complications include expulsion, retraction to the cervix, bleeding, pelvic inflammatory disease (PID), and ectopic pregnancy. A relatively uncommon major complication, uterine perforation may occur through the uterine wall into the abdominal cavity or adjacent viscera such as the bladder, appendix, or rectosigmoid colon, with an estimated incidence of 1:350 to 1:2500 patients. The risk of IUD-related uterine perforation depends on several factors including device type, uterine size and position, timing of insertion to delivery or abortion, and operator experience [1-3].

Most usually occurring during the first six months following insertion, IUD dislocation may occasionally be diagnosed
several years later. Although uterine perforation is per se painless, complaints may develop months to years later, depending on the site of translocation. Symptoms are nonspecific such as abdominal or pelvic pain, vaginal or rectal bleeding, change in bowel habits, and fever, and often related to coexisting PID. Sometimes, IUD migration is an incidental finding, or is diagnosed after extensive workups of unclear abdominal symptoms. Whereas extrauterine dislocation is not exceptional, migration to the sigmoid colon is extremely rare as described in sporadic cases in literature [2-9].

Most usually, diagnostic assessment of device translocation follows a diagnosis of “missing” IUD strings or absent IUD in the uterine cavity. Plain abdominal radiographs may be useful as the first imaging tests, to confirm the presence and position of the radio-opaque IUD. As this case exemplifies, CT is useful for precise localisation and confirmation of IUD integrity [7, 10].

Treatment of IUD dislocation includes antibiotic therapy for pelvic inflammatory disease. In most cases, IUD removal is indicated to prevent PID or bowel perforation, and may be performed through an open laparotomic or laparoscopic approach [3, 6, 9]. Although less invasive compared to surgery, endoscopic removal may be challenging because of dense surrounding inflammation and wall adhesion [8].

**Differential Diagnosis List:**
- Sigmoid colon migration of intrauterine contraceptive device after uterine perforation,
- Correct uterine IUD positioning, IUD expulsion, IUD cervical retraction, Uterine perforation with peritoneal cavity dislocation, Pelvic inflammatory disease, Sigmoid colon diverticulitis

**Final Diagnosis:** Sigmoid colon migration of intrauterine contraceptive device after uterine perforation

**References:**


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Figure 2

Description: Axial (a..c) and coronal reformatted (d,e) images show metallic hyperdense IUD in the sigmoid colon, indissociable from the intestinal wall. Normal-sized uterus. Absence of ascites and adnexal abnormalities. Origin: Tonolini M, Department of Radiology, "Luigi Sacco" University Hospital – Milan (Italy)
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Description: Three-dimensional volume-rendered image confirm complete IUD without missing parts.
Origin: Tonolini M, Department of Radiology, “Luigi Sacco” University Hospital – Milan (Italy)