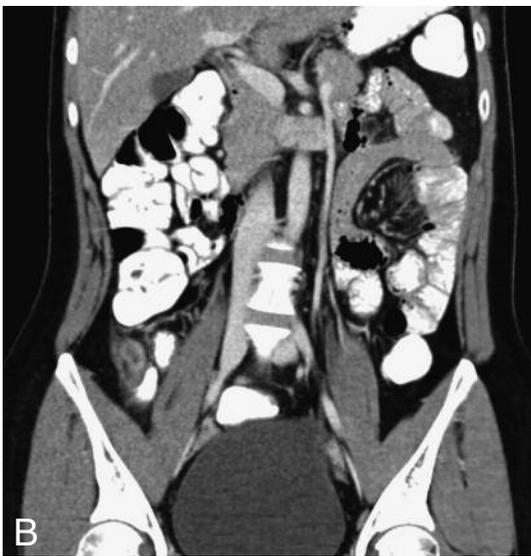


IMAGES IN CLINICAL RADIOLOGY



Appendicular endometriosis mimicking appendicitis

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A 31-year-old woman presented to the emergency department with right lower quadrant pain. The pain had started three days earlier with increasing intensity postprandially, when walking and in right decubitus position. Completion of her last menstruation was one week before admission. Clinical examination confirmed the right fossa pain with a negative psoas sign. Laboratory findings revealed normal white blood cell count ($6.4 \times 10^9/L$) and a mild elevation of the CRP (12.6 mg/L). Abdominal ultrasound and CT showed a pathological wall thickening of the appendix extending to the caecum and with infiltration of the peri-appendicular fat and a thickening of the adjacent peritoneal membrane (Fig. A, B). There was no free fluid. Based on the clinical and imaging findings, the tentative diagnosis of appendicitis was made, and a laparoscopic appendectomy and a partial caecal resection was performed. Microscopic examination of the appendix showed only minor signs of inflammation, but the presence of fibrous tissue intermixed with endometrial glandular tissue. The latter was confirmed by CK-7 and CD-10 positive staining. Delayed second-look laparoscopy showed adhesion of both ovaries towards the uterus and endometriosis sites in the rectovesical excavation and the recto-uterine pouch. Retrospective analysis of the CT-images depicts the close proximity of both ovaries to the uterine body (Fig. C).

Comment

Endometriosis is a condition in which endometrial tissue is found outside the uterine cavity. It is typically seen during the reproductive years and the estimated prevalence ranges between 5-10%. Endometriosis is a common finding in women with infertility and the main symptom is (pelvic) pain. Common sites of endometriosis are the ovaries, the recto-uterine pouch, the rectovesical excavation, the posterior broad and uterosacral ligaments, the fallopian tubes and the sigmoid. Appendicular endometriosis is rare with an estimated prevalence 0.05% in the general population and up to 5% in series with female patients presenting with chronic pelvic pain. In the absence of clinical suspicion, the pre-operative diagnosis of appendicular endometriosis is very difficult. Both symptoms and imaging findings are very similar to appendicitis, as illustrated in the case above. Therefore, in reproductive-age women presenting with right lower quadrant pain, no (or only minor) elevated inflammatory blood parameters and pathologic imaging findings of the appendix, endometriosis should be considered in the differential diagnosis. CT has a rather low accuracy in detecting endometriosis, but careful inspection of the pelvis for other implants (e.g. adnexal endometrioma) or adhesions can favour the diagnosis, which can then be confirmed by transvaginal ultrasound, MR imaging or laparoscopy.

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