Mucocele of the appendix: US and CT findings

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Section: Abdominal imaging
Imaging Technique: Ultrasound
Imaging Technique: CT
Case Type: Clinical Cases
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Patient: 70 years, male

Clinical History:

Right flank pain

Imaging Findings:

2 months history of abdominal pain in right lower quadrant. No other symptoms or biological alterations were associated. Physical examination showed a mass in the right flank. Previous abdominal US interpretation: a renal cyst. We repeated abdominal US and performed spiral CT.

Discussion:

Appendicular mucocele is a rare lesion (prevalence in appendectomy specimens at surgery is 0.2-0.3%) caused by abnormal accumulation of mucus: it is a descriptive term without implications as to its nature. By the histological classification we can distinguish three groups: focal or diffuse hyperplasia, mucinous cystadenoma and mucinous cystadenocarcinoma. Possible complications are intussusception or rupture causing pseudomixoma peritonei (it is thought that only a mucinous cystadenocarcinoma may be responsible for this complication). A correct preoperative diagnosis is very difficult, but is necessary in order to prevent rupture at laparotomy, or malignant transformation. Sonography shows differences in mucocele appearance based on the nature of cyst fluid: - Heterogeneous echogenic mass: it is due to gelatinous composition of mucus. - Anechoic cystic mass with posterior enhancement: it is due to homogeneous liquid composition. The most frequent sonographic appearance is a cystic mass with variable internal echoes and consistently excellent through-transmission. CT scans shows well-encapsulated cystic mass with enhanced smooth regular walls in the right lower quadrant. Curvilinear or punctate wall calcification may be present. Thick and irregular wall is suggestive for malignant nature of the lesion. The differential diagnosis includes peritoneal cyst, ileocecal duplication, pancreatic pseudocyst, renal cyst, abscess, old hematoma, ovarian cyst and normal fluid-filled terminal ileum loop.

Differential Diagnosis List: Appendicular mucocele (diffuse hyperplasia)

Final Diagnosis: Appendicular mucocele (diffuse hyperplasia)

References:


Description: Longitudinal sonogram of right lower quadrant shows a cystic mass with posterior enhancement measuring 81x53x50 mm. Heterogeneous echogenic material is present in the posterior region. Origin:
Figure 2

Description: Unenhanced axial scan. Well-encapsulated cystic mass. Origin:
Description: Axial scan after i.v. contrast injection. Cystic mass with regularly enhanced wall. Origin:
Description: Enhanced axial scan. The density of the material localized on lower portion of the cyst was not modified by intravenous injection of contrast medium. Origin:
Description: Multplanar reconstructions (MIP algorithm). The reconstruction illustrates the extent of cystic mass localized in the anatomical region of the appendix. Origin:
Description:  Multiplanar reconstruction (MIP algorithm). The caecum and ascendent colon are displaced, while the right kidney is well differentiated from the mass. Origin: