

Case 1307

Mesothelial cysts

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Section: Gastro-Intestinal Imaging

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Patient: 44 year(s), female

Clinical Summary

The patient presented with a pelvic mass found incidentally. US showed a large cystic lesion in the right adnexal region. CT revealed two smaller lesions in addition, also with fluid-density, in the mid-abdomen.

Clinical History and Imaging Procedures

This asymptomatic patient was referred for further evaluation of a mobile non-tender pelvic mass incidentally found on a routine gynaecological examination. US (not shown) revealed a 12 x 7, 6 x 6, 7 cm cystic lesion in the right adnexal region. Contrast-enhanced CT was then performed. Besides this pelvic lesion, CT demonstrated two smaller lesions also with fluid-density. One was located close to the third part of the duodenum; the other was adjacent to the splenic flexure.

Discussion

Mesothelial cysts are rare lesions of the peritoneum. Presumably, they result from incomplete fusion of mesothelial-lined peritoneal surfaces. The most common locations are the mesentery and the mesocolon, but these cysts may also arise from the omenta and, in woman, from the paraovary. The presence of mesothelial cells lining the inner surface of the cyst distinguishes them histologically from other types of mesenteric, omental and retroperitoneal cysts.

Mesothelial cysts occur mainly in children and in young adults as asymptomatic abdominal masses. However, they can cause chronic abdominal pain or acute pain secondary to torsion, rupture, haemorrhage, infection or GI obstruction.

Macroscopically, they are thin-walled, unilocular cysts, usually with a serous content. Thus, on US mesothelial cysts appear as anechoic rounded lesions with acoustic enhancement. CT and MR reveal fluid-filled masses without a perceptible wall, presenting a low T1 signal and a high T2 signal in relation to their serous nature. Although these imaging findings are fairly characteristic, they are unspecific. Other types of mesenteric and omental cysts, such as lymphangioma, enteric duplication cyst, enteric cyst and nonpancreatic pseudocyst, may exhibit similar aspects. This is also the case with cystic neoplasms of peritoneal origin such as cystic mesothelioma, cystic teratoma and cystic spindle cell tumour.

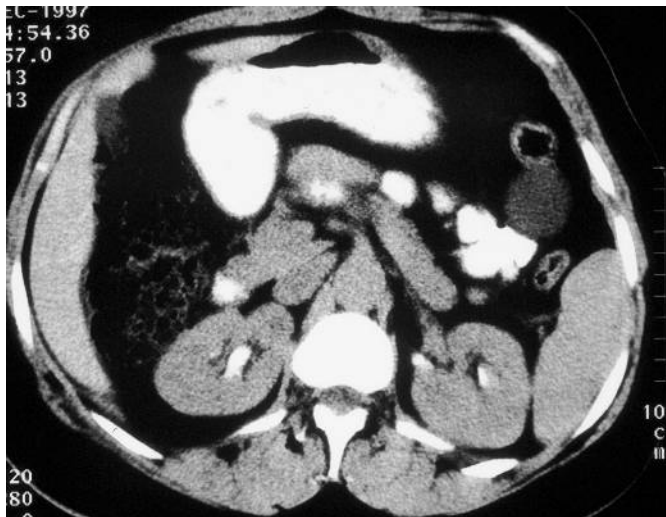
The differential diagnosis of the large abdominopelvic lesion described in this case includes ovarian cyst, cystadenoma, cystic teratoma and paraovarian cyst. However, the simultaneous occurrence of two other lesions with identical appearance close to the viscera, points to a single diagnostic entity with peritoneal origin. Owing to their benign nature and loose attachment to the surrounding tissues, the treatment of choice is enucleation. Recurrence is extremely rare.

Final Diagnosis

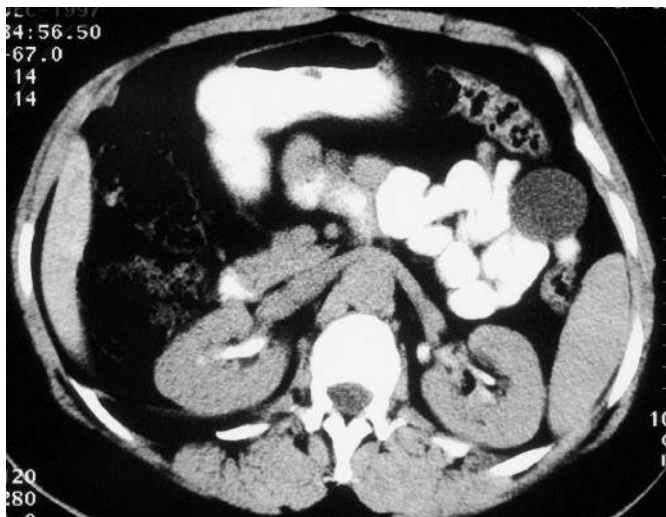
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Figures

Figure 1



Midabdominal scan at the level of the hilum of both kidneys. Below the splenic flexure of the colon and adjacent to the transverse colon we can see a fluid-density lesion. (Diameter 4cm).



CT section, 1cm below image 1a. The lesion is between the transverse colon and the spleen, adjacent to the opacified bowel loops.

Figure 2



Thin wall of a cyst.

Figure 3

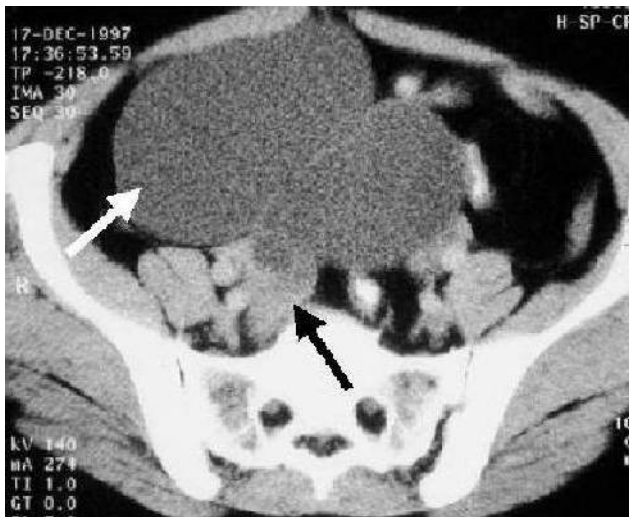


Abdominal scan at the level of the kidneys reveals a hypodense lesion, with fluid-density, close to the third part of the duodenum, in front of the abdominal aorta. (Diameter 3 cm). Note also a small cortical cyst in the right kidney.



CT section obtained 1cm below image 3a.

Figure 4

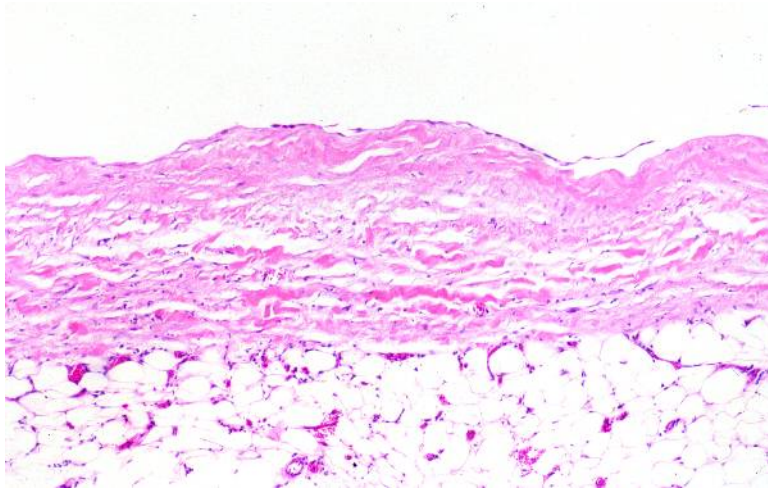


Pelvic scan at the level of the iliac crests demonstrates a large cystic lesion (white arrow) with no discernable wall, neither septations nor vegetations, displacing the bladder to the left. (Maximum diameter 11cm). Right ovary (black arrow) is visible with a follicle behind the mass.

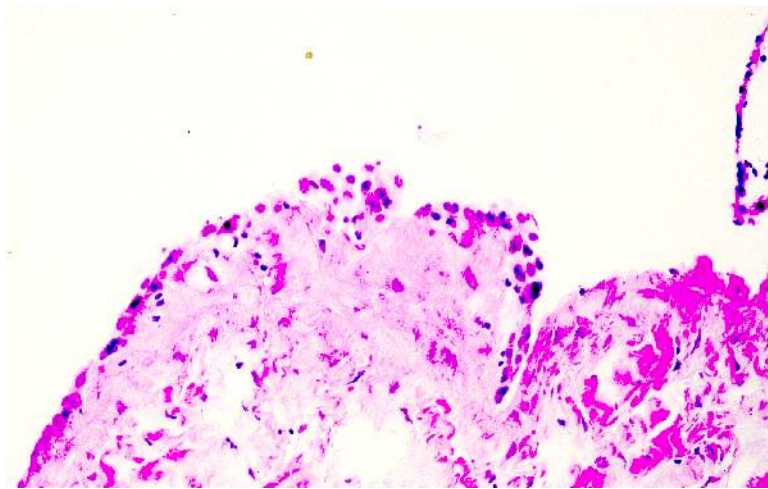


Pelvic scan at a more caudal level than image 4a (2cm below) shows the lower extension of the lesion and its proximity to the bladder.

Figure 5



Wall of a cyst in the peritoneal surface of the bladder (H&E 4x).



Mesothelial cells lining the inner surface of the cyst (H&E 4x).

References

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Citation

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