Diagnostic Images

Chronic abdominal pain

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The patient

A female aged 46 from the Middle East presented with abdominal pain and severe weight loss for 3 months. No abdominal mass was palpable.

Investigations

Computed tomography (CT).

Comment

Marked peritoneal thickening extending into the mesentery can occur with malignant infiltration but is usually very nodular and distributed irregularly. Pseudomyxoma peritonei can produce diffuse generalized infiltration in the mesentery and surrounding the liver and spleen, but on CT has a low attenuation similar to ascites.

Tuberculous peritonitis classically produces generalized, diffuse peritoneal and mesenteric thickening reflected in CT appearances as replacement of most of the mesenteric fat with higher attenuation substance within which there are fluid collections and residual compressed mesenteric fat.

The very low attenuation liver parenchyma within which the portal veins and inferior vena cava are clearly delineated on unenhanced CT is almost pathognomonic of fatty infiltration. Liver infiltration in glycogen storage disease (in children) may produce a similar appearance in the liver. Tuberculosis was confirmed and the patient was much improved on treatment.

Figure 1 Unenhanced CT through the superior aspect of the liver and at the lung bases shows the peritoneal thickening surrounding the low attenuation liver in which portal vein radicles appear as higher attenuation nodules. The normal pericardium is also visible (arrows). RLL = right lobe of liver. LLL = left lobe of liver.

Figure 2 In a lower section the spleen (Sp), aorta (A) and superior vena cava (SVC) are of normal attenuation contrasting with the fatty liver in which the portal veins are clearly visible. The irregularly thickened peritoneum has a smooth, well-defined inner margin.

Figure 3 The markedly thickened mesentery is demonstrated with compression of the residual fatty tissue at the root of the mesentery. Fluid-filled, small bowel loops (f) are visible as well as minimal gas within bowel (arrows).