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Intermittent fever in a patient with apparent fatty liver

Robin Spiller, Editor

Clinical presentation

A 41 year old female presented with non-specific abdominal pain and intermittent hyperpyrexia (38°C); she had been recently treated for apical granulomas with an otherwise negative medical history and clinical examination, including a normal body mass index. At presentation the patient had not received any medication for the past two weeks.

Laboratory investigations were within normal limits apart from: erythrocyte sedimentation rate 30 mm (normal range 5–20), aspartate aminotransferase/alanine aminotransferase 49/62 U/l (normal range 13–37/7–43), and serum alkaline phosphatase 168 U/l (normal range 44–132). Blood cultures were negative.

A chest x-ray revealed no lesion and liver sonography demonstrated a patchy hypo-hyper-echoic polycyclic area in the anterior-superior parenchyma compatible with segmental fatty liver. Thoracic abdominal contrastographic computed tomography confirmed a large regular polycyclic borders area, hypodense compared with the remaining parenchyma, with no mass effect and/or any displacement of the vessels, resembling focal fatty areas (fig 1A, B); no other pathological signs were found except for small lymphadenopathies adjacent to frenic pillars.

Question

Is it really fatty liver? What is your diagnosis?

See page 823 for answer

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Figure 1  Direct (A) and iodinated (B) spiral computed tomography scans revealed regular polycyclic borders area (white arrows), hypodense compared with remaining parenchyma, with no mass effect and/or any displacement of the parenchymal vessels.
Answer

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Answer

From question on page 774

Magnetic resonance examination confirmed liver alteration (fig 2A, B) but without features typical of a fatty area (usually showing high signal intensity at T1 and high-medium at T2 acquisitions). Full biopsy demonstrated diffuse homogeneous stromal lymphocytic infiltration of the parenchyma (fig 3).

In the case of primary hepatic lymphoma, the most probable finding is a single well defined homogeneous lesion, hypoechoic at ultrasound and low attenuation at computed tomography; however, no group of signs is specific for its diagnosis and biopsy is always required. Conversely, secondary liver lymphoma can have a greater variety of appearances and is more likely to be multiple/diffusely infiltrating lesions.

Nevertheless, the exclusive diffuse infiltration of the upper portions of the organ with regular borders and without vessel displacement constitutes a very unusual presentation. This is probable due to stromal infiltration by slow growth, soft tissue of small lymphomatous cells without great nodules; consequent ultrasound waves scattering could also explain the patchy hypo-hyper-echoic pattern.

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Figure 2  Magnetic resonance scans confirming the presence of ultrasound/computed tomography detected area (white arrows), which appears hypointense at T1 (A) and hyperintense at T2 (B) weighted acquisition.

Figure 3  Haematoxylin-eosin staining shows diffuse lymphomatous invasion of liver tissue (magnification ×10).