Multinodular fatty sparing
Zones d’épargne stéatosique multinodulaires

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A 46 year-old woman was admitted for right hypochondriac pain. Reported antecedents included obesity and non-insulin-dependent diabetes. She did not consume alcohol. Clinical examination showed no abnormality. Laboratory results, including hepatic tests and αFP, were normal.

Ultrasound revealed multiple hypoechoic hepatic nodules. On CT those nodules appeared with contrast enhancement during the arterial phase but did not wash out during the late phase (Fig. 1A and B). On MRI they were well delineated, homogeneous, without mass effect and enhancement was similar to that revealed on the CT. The opposed-phase sequence showed hepatic parenchyma with diffuse low signal intensity compared to the in-phase sequence (Fig. 2A and B). No other lesion was found. Biopsies were performed (Fig. 3).

Anatomopathological examination showed micro- and macrovesicular steatosis with hepatocytic distension and lymphocytic infiltration to the right, and normal hepatic parenchyma to the left. Neither fibrosis nor tumor cells were present. Those data, combined with the patient’s history of diabetes and obesity, and the absence of alcohol intoxication, led to a diagnosis of non-alcoholic steatohepatitis [1]. The hepatic nodules corresponded to fatty sparing areas. Control imaging at 6 months showed stability of the hepatic pseudo-lesions.

The diagnosis of fatty sparing in areas of multinodular appearance is difficult. Focal sparing can mimic metastases or conceal focal lesions [2]. MRI is the preferred option in these circumstances. Opposed-phase MRI can enable the diagnosis of fatty liver and the detection of focal lesions. It shows loss of signal in fatty liver compared to in-phase images. MRI characterization requires T2-weighted and dynamic sequences with gadolinium injection [3]. Focal spared areas have no mass effect and can contain vessels [2]. The only reliable diagnostic method is biopsy sample. MRI monitoring should be preferred over biopsy in patients with no known or suspected malignant lesions to avoid an invasive procedure [3].

Conflict of interest statement

None.

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Figure 1  Homogeneous, well-delineated hepatic nodules on scan, with no mass effect, enhanced in all phases after injection, without washout (A and B).

Figure 2  The nodules are difficult to visualize on MRI on the in-phase sequence (A), but are well visualized on the opposed-phase image (arrows) where the signal intensity of the liver parenchyma is globally lower (B).

Figure 3  Microscopic cross-section of biopsied hepatic nodule.

References