



Medical Imagery

Hepatic tuberculoma: A challenging diagnosis



Clinical case presentation

We present the case of a 32-year-old Tunisian woman living in Belgium with a 5-year history of liver lesions. Her medical history is marked by two pregnancies, and pleural tuberculosis at the age of 23, treated by antitubercular agents. The lesions were incidentally discovered in 2013 on a CT scan during a workout because of postpartum fever. They measured 8, 28, and 11 mm, respectively, at segments 7, 5, and 6; based on both MRI and ultrasound, they were considered atypical. She was asymptomatic and put under surveillance with no precise diagnosis.

An MRI in 2016, eight months after giving birth to her second child, showed no growth of the subcapsular lesions, however a change in signal intensity was noted for one of the lesions (Figure 1). This information, combined with her medical history of right pleural tuberculosis, led us to do an interferon-gamma release assay, that was positive. FDG-uptake on a complementary PET-CT was observed for the lesion at segment 6 (Figure 2). Laparoscopic resection was performed (Figure 3). The resection specimen consisted of a 2 cm cheesy white nodule with a fibrous cap (Figure 4). Histology revealed a caseating granuloma, with positive staining for acid-fast bacilli and a positive PCR for *Mycobacterium tuberculosis* (Figure 5). A diagnosis of hepatic tuberculoma was made, and quadruple antituberculous treatment was started.

Discussion

Hepatic tuberculosis, representing 1% of all cases of tuberculosis, is classified by Reed into (a) hepatic tuberculosis associated

with generalized miliary tuberculosis, (b) primary miliary hepatic tuberculosis, and (c) primary tuberculoma or liver abscess. The latter, as diagnosed in our patient, is rare, representing less than 1% of hepatic tuberculosis cases (Alvarez, 1998; Chaudhary, 2014). Diagnosis is often challenging; the clinical presentation of hepatobiliary tuberculosis is variable, with abdominal pain, weight loss, fever, and hepatosplenomegaly as conspicuous features. Abnormal liver tests are seen in 30 to 80% of the patients. Radiologic characteristics on echo, CT, and MRI are described, but differential diagnosis with other hepatic lesions is difficult (Karaosmanoglu et al., 2016). Non-invasive diagnostic methods

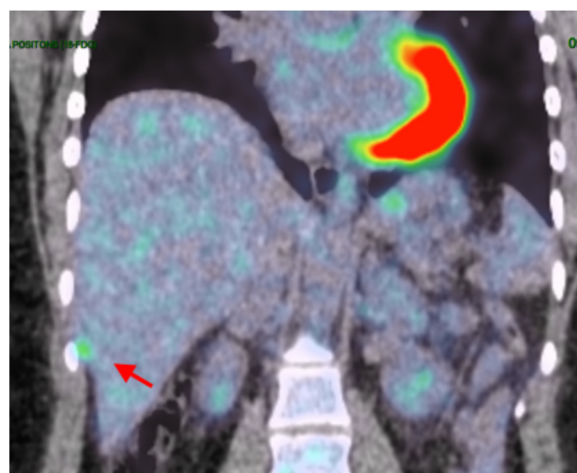


Figure 2. FDG-uptake of segment VI lesion.

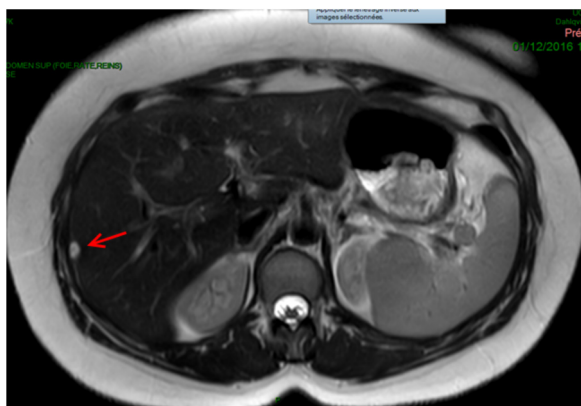


Figure 1. Liver lesion segment VI; MRI T2- weighted images.

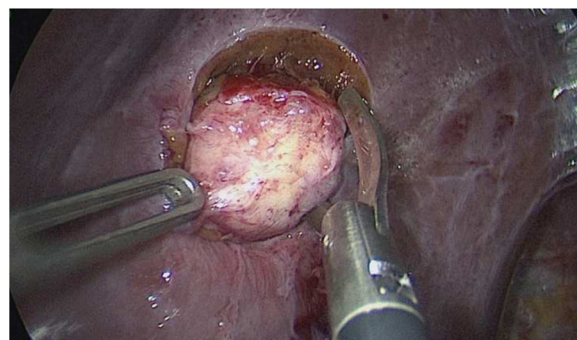


Figure 3. Per-operative laparoscopic-view of the liver.



Figure 4. Macroscopic specimen.

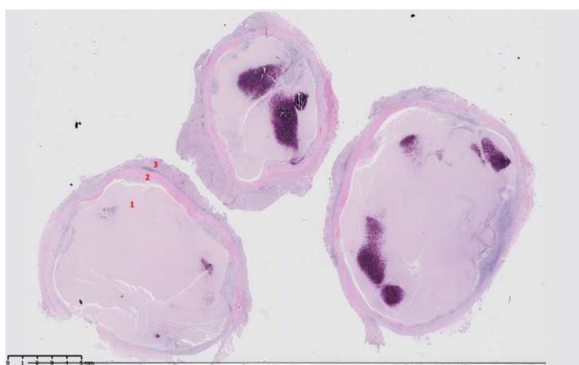


Figure 5. Histology of the liver tuberculoma.

are usually insufficient, and complementary biopsy is needed. Diagnosis is based on demonstration of caseating epithelioid granuloma, presence of acid-fast bacilli (sensitivity 7–59%), with diagnostic accuracy further increasing with a positive culture (+/– 10%) or PCR assay. Treatment consists of conventional quadruple antitubercular therapy.

Disclosures

The authors have no conflict of interest nor financial disclosures. The patient has given informed consent to publish the article.

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