Hepatic Tuberculoma Caused by *Mycobacterium fortuitum*: A rare case diagnosed by EUS-FNA

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Introduction

Mycobacterium fortuitum is a type of nontuberculous mycobacteria belonging to a group classified as Rapidly Growing Mycobacteria (RGM), along with *Mycobacterium abscessus* and *Mycobacterium chelonae*. *M. fortuitum* is predominantly associated with skin, soft tissue, and surgical-wound infections. Catheter-related sepsis and disseminated disease can also occur.[1] Isolated liver involvement by atypical mycobacterial infection is exceedingly rare. Here we describe a case of *M. fortuitum* presenting as an asymptomatic liver mass.

Case Description

A 67-year-old male was referred for endoscopic ultrasound (EUS) to evaluate a gastric body subepithelial lesion (SEL) and a 3 cm incidental liver mass described as a heterogenous enhancing liver lesion in the left liver lobe segment #2 and #3. He was asymptomatic. Percutaneous CT-guided biopsy was performed, but pathologic results were nondiagnostic. The patient was thus referred for EUS to evaluate the gastric SEL and determine if the liver mass represented metastasis. A 14 by 4 mm elongated intramural hypoechoic mass arising from the muscularis propria highly suggestive of a leiomyoma or GIST was identified. A heterogeneous mass with cystic spaces and echogenic foci in the left liver lobe measuring 27 by 20 mm was sampled using a 22g FNA needle. Pathology revealed granulomatous inflammation with necrosis. An AFB stain was positive for acid-fast bacilli. PCR analysis of the specimen detected *M. fortuitum* DNA. The patient was treated with levofloxacin 750 mg daily plus trimethoprim and sulfamethoxazole (Septra DS) 800 mg - 160 mg twice daily. Follow-up contrast-enhanced MRI revealed complete resolution of the liver lesion after 3 months of antibiotics.

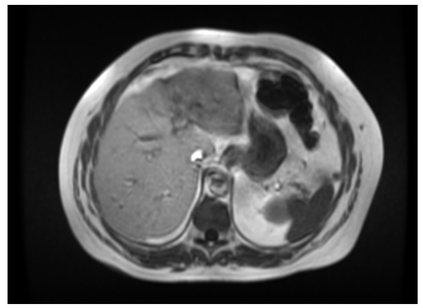

Figure 1. T1 W image of the liver mass

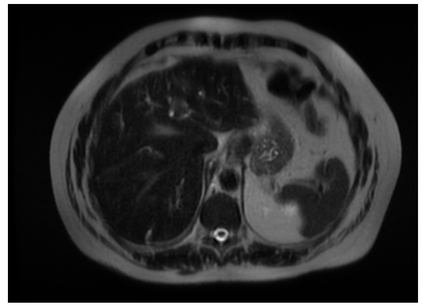

Figure 2. T2 W image of the liver mass

Figure 3. EUS of the liver mass

Figure 4. EUS-FNA of the liver mass

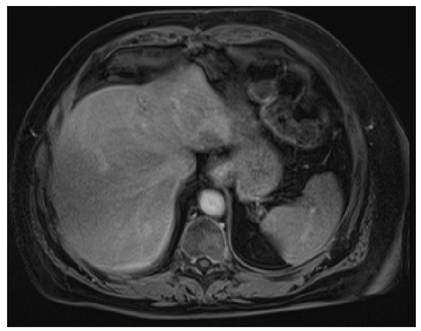

Figure 5. T1 W image of liver post-treatment of *M. fortuitum*

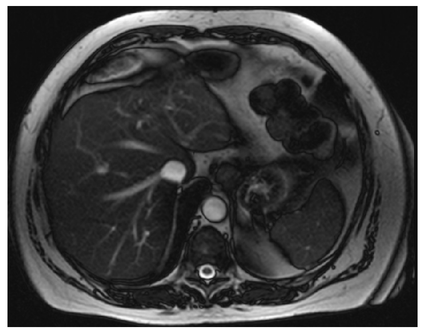

Figure 6. T2 W image of liver post-treatment of *M. fortuitum*

Discussion

Mycobacterium fortuitum has not been associated with liver involvement. In contrast, hepatic tuberculosis can emerge in a variety of presentations that include miliary TB, tuberculoma, pseudotumor, and abscess. Abdominal MRI showed hyperintensity on T2 weighted imaging sharing similarities with radiologic findings of a hepatic tuberculoma or abscess.[2] EUS showed no well-defined fluid collections but rather a hyperechoic mass in favor of a hepatic tuberculoma. Like a hepatic tuberculoma, this hepatic mass resolved with anti-microbial agents and did not require drainage. There are few publications describing isolated liver involvement by an atypical mycobacterial infection[3,4], but none associated with *M. fortuitum*.

Conclusions

Isolated liver involvement by nontuberculous mycobacteria is uncommon, usually asymptomatic, and its diagnosis can easily be missed or mistaken. We report the first case of a hepatic tuberculoma caused by *M. fortuitum* diagnosed by EUS-FNA. Precise and accurate recognition by a minimally invasive technique via EUS-FNA resulted in prompt treatment and resolution of the disease.

References

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