Inflammatory pseudotumour of the liver caused by a migrated fish bone

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Introduction

Inflammatory pseudotumours can form around migrated foreign bodies in the liver but fish bone migration with unresolving abscess and elevated serum alpha-fetoprotein (AFP) has not been previously reported.

Case report

A 59-year old woman presented to the surgical clinic with a history of persistent right hypochondrial pain. She had anorexia but never had fever, chills, rigors or jaundice. Abdominal examination revealed a vague, tender mass in the right hypochondrium. Initial blood counts and liver function tests were normal. Ultrasound scan of the abdomen showed a 4.5×2.8 cm mass in the left lobe of the liver, while another mass measuring 4.5×1.4 cm was found between the inferior border of the liver and anterior abdominal wall. What was initially thought to be a hepatic abscess on ultrasound examination proved wrong as repeated attempts of ultrasound guided percutaneous aspiration failed, yielding only scanty aspirate without

organisms. Cytology of the aspirate was unhelpful. Serum-AFP was marginally elevated (10.8ng/ml).

A repeat ultrasound scan after 3 weeks showed a residual mass with a calcified object in the centre of the lesion (figure). A contrast enhanced CT scan showed an abnormal soft tissue density in the left lobe of the liver, in continuity with a second focal lesion seen in the right anterior abdominal wall. A linear high density object seen within the focal liver lesion suggested a foreign body.

She was subjected to exploratory laparotomy. A dense fibrotic mass was found under segment III of the liver, in continuity with the falciform ligament, which was thickened by chronic inflammation and adherent to the anterior abdominal wall corresponding to the second focal lesion shown in the CT scan. A 4.5cm long object resembling a fish bone was retrieved from the focal lesion in segment III. There was no pus in either of the lesions. The stomach, duodenum and the hepatic flexure showed no evidence of healed perforation. Patient had an uneventful recovery, and histology confirmed chronic non-specific inflammation with fibrosis.

Figure. Ultrasonic image of the inflammatory pseudotumour in the liver with fish bone (arrow).

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Discussion

Gastrointestinal perforation following ingestion of sharp objects is usually at the pharynx or oesophagus with patients presenting as cutaneous neck masses [1,2] with occasional cases of acute mediastinitis or cardiac tamponade [3]. However, foreign body migration to the liver is rare, with fewer than 20 cases reported [4,5,6,7].

Inflammatory pseudotumour is a rare complication of migrated foreign bodies in the liver and only one case report is published [8]. Repeat imaging showed a calcified linear object at the centre of the mass in segment III of the liver, which raised the suspicion of a foreign body. Generally, inflammatory pseudotumours do not give rise to elevated AFP levels and this may be used to differentiate primary liver cancer from inflammatory pseudotumours [7]. Although it is not unusual to have elevated AFP in benign conditions of the liver, a combined picture of a mass and marginally elevated AFP may lead to misdiagnosis.

Several surgical approaches are described in the treatment of inflammatory pseudotumours, ranging from wedge resections to liver transplantation [8,9]. Early imaging is diagnostically accurate but serial imaging may be helpful in doubtful cases.

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SI base units

The SI is based on 7 fundamental units (*base units*) that refer to 7 basic quantities of measurement. These units are dimensionally independent and are the elements from which other measurement quantities are composed. Although not included among the 7 base units, the liter (the equivalent of 1000 cm³) is used in the SI as a fundamental measure of capacity or volume. The liter is the recommended unit for measurement of volume for liquids and gases, whereas the cubic meter is the SI unit of volume for solids. Although the kelvin is the SI unit for thermodynamic temperature, the degree Celsius is used with the SI for temperature measurement in biomedical settings.

SI base units

Quantity	Base unit name	SI unit symbol
Length	meter	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

(See page 147 for SI derived units.)