Hypodermic needles in the liver

Muddaiah M, Varghese GK

A 19-year-old college student, presented with history of recurrent episodes of chest pain for the past year. Chest pain was retrosternal, pricking to dull aching in nature, and sometimes radiating to the upper abdomen. He had about three to four such episodes a month and each episode lasted for an hour.

He was evaluated in various hospitals outside and no obvious cause for his symptoms was found. He was symptomatically treated; despite this patient continued to have chest pain.

On admission to our hospital, his vitals were normal and clinical examination was unremarkable. Laboratory tests showed high erythrocyte sedimentation rate (ESR-60mm/hr), high C-Reactive Protein (CRP-36units/dl), mild rise in liver enzymes alanine aminotransferase-60units/l, aspartate aminotransferase-55units/l) and the rest of the reports were within normal limits. Patient’s electrocardiogram and echocardiography were normal. Stress test for inducible ischemia was negative. Ultrasound abdomen done by radiologist was reported as normal and chest X-ray was normal.

At this point, there was no clear etiology for his chest pain and finally computerized tomography (CT) scan of thorax was done to look for mediastinal pathology. It showed two linear hyperactive dense opacities, one in the anterior abdominal wall penetrating the liver capsule and the other was partially penetrating the hepatic parenchyma [Figures 1 and 2]. Along with this, there were fatty liver changes. Mediastinum and the rest of the thorax were normal.

These foreign bodies were removed by laparoscopic approach and with fluoroscopic assistance. These foreign bodies were two hypodermic needles, 25 and 14 mm in length [Figure 3]. Following the surgery, the patient had an uneventful course. Retrospectively, we interviewed the patient about intravenous drug abuse or accidental injury to his abdomen, but he denied. On follow-up, his chest pain had subsided and acute phase reactants had normalized.

Discussion

Foreign bodies in the liver are rare and even rarer to find hypodermic needles in the liver.[1] Symptoms may be nonspecific and radiological investigations may come as a surprise to the clinician as history is difficult to obtain.[2] We present a case of hypodermic needles in the liver and there has been no case report of this type of foreign body found in the liver yet.

Patient’s presenting symptom was chest pain. Chest pain can be due to cardiac or noncardiac causes like hepatobiliary disease, esophageal, or pleural diseases. In this case, there was no obvious etiology for his symptoms. We did CT scan of chest to look for mediastinal pathology, but were surprised to
find foreign bodies in the liver. Patient’s acute phase reactants (CRP and ESR) were high, which suggested underlying inflammatory process.

These foreign bodies were found embedded superficially in the liver, and as we know, the liver capsule and anterior abdominal wall are pain-sensitive. The location of these foreign bodies could be the reason for recurrent chest pain.

We managed to retrieve the foreign bodies by laparoscopic approach\(^3\) and with fluoroscopic assistance. Following removal, patient’s chest pain subsided, which again suggests that these hypodermic needles were responsible for his symptoms. The unusual features of this case were atypical chest pain with hypodermic needles in the liver.

The CT scan helped us in rapid diagnosis and localization of the foreign bodies.\(^4\) Imaging and a high index of clinical suspicion are the only ways to diagnose these unusual presentations of the foreign bodies.

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References


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