

Videolaparoscopic Removal of a Foreign Body from the Liver

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INTRODUCTION

Penetration of the abdomen by foreign bodies, which then lodge there, is common. Sometimes it is the result of a more or less recent injury; at other times, it is discovered by chance in the course of radiological examination. Here we report briefly on the removal of a foreign body (a sewing needle) from the liver, to highlight the advantages of video-laparoscopy.

CASE REPORT

The patient was a woman, 65 years old, with a regular life style. In September 1990 and in December 1993, after episodes of diverticulitis, she underwent double-contrast barium enema; on both occasions she was noted to have diverticular disease of the sigmoid colon with no other abnormal signs. About a month before being referred to us she had complained of epigastric pain unaccompanied by other symptoms that had come on in the space of a few hours and had persisted on and off for 4–5 days. She first had an ultrasound scan of the upper abdomen that showed no abnormality and then, on 12 August 1997, a barium examination of the upper digestive tract that showed a radio-opaque foreign body (a sewing needle) apparently lodged in the soft tissues of the epigastric region (Fig. 1).

On 18 August she was referred to us, and told us that when she was sewing she was in the habit of sticking pins and needles into her bodice, and had done so for years. Her general conditions seemed good and clinical examination showed nothing of note. A computed tomogram confirmed the presence of a metallic foreign body (a sewing needle) lodging in the left lobe of liver (Fig. 2).

Having given informed consent, she underwent videolaparoscopic examination under general anaesthesia. The cannula of the first trocar was inserted into

the navel to admit the videolaparoscopic optics. Two more trocars were then positioned in the left and right hypochondrium, respectively. Videolaparoscopy did not itself enable us to see the foreign body, which was located during an operative investigation with a brilliance amplifier in the parenchyma of the left hepatic lobe. Combining videolaparoscopic and radio-scopic imaging and using the tip of a radio-opaque



Fig. 1. Barium examination of the upper digestive tract. A radio-opaque foreign body (sewing needle) can be seen apparently lodged in the soft tissues of the epigastric region.

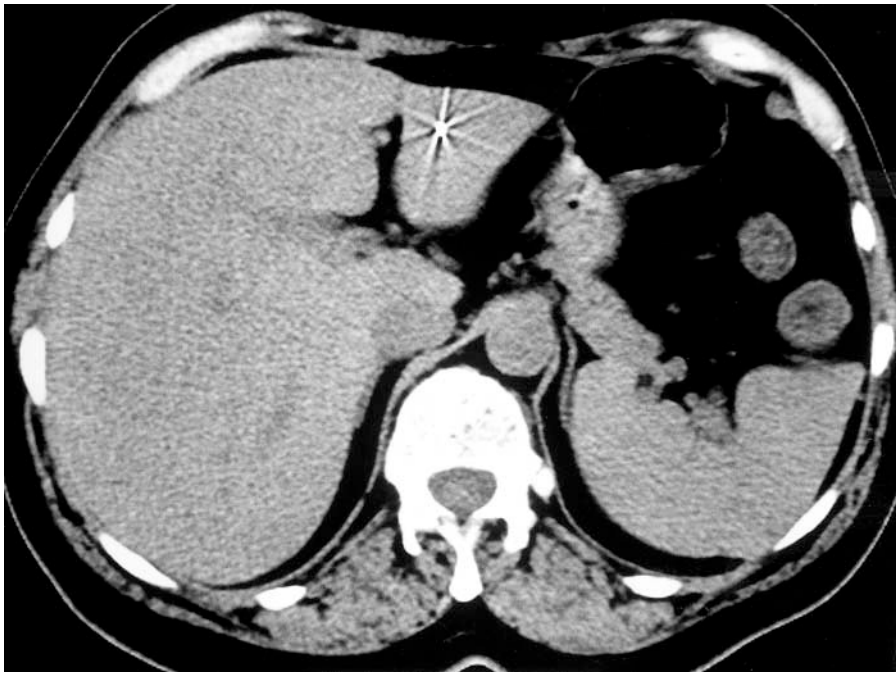


Fig. 2. Abdominal computed tomogram confirming the presence of a metallic foreign body in the left lobe of liver.

forceps as reference, we first incised Glisson's capsule and then dissected the underlying parenchyma for 2.5 cm until we reached the needle. We grasped it (3.8 cm long) firmly with the forceps, and extracted it without difficulty through one of the cannulae (Fig. 3). After careful haemostasis of the hepatotomy no other procedure was necessary. Her postoperative recovery

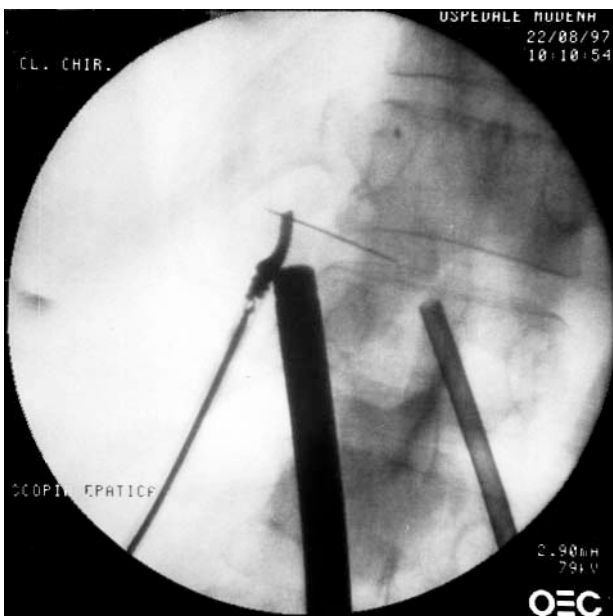


Fig. 3. Operative radiograph examination with image enhancement. The tip of a radio-opaque forceps is being used as a point of reference in dissecting the parenchyma to reach the needle.

was uneventful and she was discharged on the third postoperative day. At follow up a year later she was in good health, and had had no pain since the operation. Physical examination showed no abnormality.

DISCUSSION

It was not easy to work out exactly when and how the foreign body penetrated her abdomen. Because previous radiographs had never detected the foreign body, and exploratory surgery had showed no evidence of reaction in the liver, it seems likely that it had happened fairly recently. It is tempting to connect the epigastric pain that she had one month before with penetration of the needle into the abdomen. As to how it happened, it seems likely that it was accidental and went unnoticed, given her habit of sticking pins and needles into her bodice when sewing. As to how the needle arrived in the hepatic parenchyma, whether it went straight there having pierced the abdominal wall or whether it migrated subsequently through the peritoneum, cannot be established.

In any case, the minimally-invasive nature of videolaparoscopy seems to justify the removal of even small foreign bodies, as in this case—with the potential risk of infection, of lesions of adjacent structures or of secondary migrations—for forensic reasons as well. (1–9). We think that the site involved (the parenchyma) does not prejudice the videolaparoscopic approach; in the case of radio-opaque bodies, operative radiographs can be used with image enhancement to locate them accurately. We also think

that because it is minimally-invasive, and also affords an ample view of the peritoneal cavity and image magnification, videolaparoscopy is a valid therapeutic choice for the removal not only of intraperitoneal and retroperitoneal foreign bodies (7), but also of those lodged in the parenchyma.

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