FOREIGN BODY NEEDLES IN LIVER AND ABDOMINAL WALL

Sqn Ldr AMIT SURI^{*}, Maj KJ SINGH⁺,
Col BM NAGPAL^{VSM}[#], Lt Col L SATIJA^{**},
Maj J DEBNATH⁺⁺, Sqn Ldr H SAHNI^{##}

MJAFI 2000, 56 : 250-251

KEY WORDS : Foreign Body (FB), Intrahepatic foreign bodies.

Introduction

Needles are rare intrabdominal and intraperitoneal foreign bodies. Sometimes no history is forthcoming but the majority of them are ingested. The ileo-caecal junction and the duodenum because of their anatomical characteristics appear to be most predisposed to perforation by foreign bodies. Such patients require proper examination, investigations and careful & accurate localization in order to remove them at surgery. We report one such case where a young lady was found to harbour hypodermic needles in the liver and abdominal wall.

Case Report

A 26 year old lady presented with pain in the right lower abdomen of 6 hours duration along with anorexia and 2 episodes of vomiting. There was associated history of dysuria. Clinical examination revealed a temperature of 99°F and tachycardia. Abdomen showed tenderness in the right lumbar region and iliac fossa without any rebound tenderness. Per-rectal examination revealed tenderness in the right side. A clinical diagnosis of Acute appendicitis was made. However in view of the history of dysuria and the findings of pain and tenderness in the right lumbar region, an ultrasound was asked for. It confirmed the diagnosis of Acute Appendicitis. At the same time it revealed the interesting finding of linear hyperechoic lesions with posterior shadowing in the liver including one in the right lobe (Fig 1). The patient did not disclose the source or route of entry of the needles despite our best efforts but her relatives said that they had probably been ingested.

The patient underwent emergency appendectomy. At surgery, the appendix was inflamed; the patient made uneventful recovery and was discharged. Although asymptomatic, the patient was convinced to get herself operated for the needles which she agreed to. She underwent psychiatric examination which was normal. Localization of the needles was done with the help of plain X-rays of the abdomen in various views and an ultrasound (Figs 2 & 3). Accurate pre-operative marking over the abdomen was performed. A right kochers incision was used to extract the needles in the parities. The abdomen was then opened and liver surface searched for the other needle. There was a small granulomatous projection

over the liver surface which could be seen on careful examination under which the needle was lying. The area was carefully incised taking care of the hemostasis and the needle removed after meticulous dissection.

Discussion

Most ingested foreign bodies pass through the GIT without any complications[1,2]. Sharp metallic foreign bodies rarely perforate the gut as it has been postulated that ingested pins and needles tumble and turn till the blunt end assumes a forward direction, thereby reducing the risk of perforation [3]. The ileo-caecal region and in particular the appendix is the commonest site of perforation [4]. The duodenum, although a less common site, because of its anatomical characteristics, being an immobile rigid tube with sharp angulations appears to be predisposed to perforation by long pointed foreign body like needles [3]. Foreign

Fig. 1 : Ultrasound abdomen (axial section) using a 5 MHz probe revealing a needle in the right lobe of the liver depicted by the arrow. It is seen as a dense linear hyperechoic structure in the right lobe of the liver.

^{*}Graded Specialist in Radiodiagnosis, ^{**}Classified Specialist in Radiodiagnosis, ⁺⁺Graded Specialist in Radiodiagnosis, ^{##}Graded Specialist in Radiodiagnosis, Command Hospital, Southern Command, Pune. ⁺Clinical Tutor in Surgery, [#]Associate Professor in Surgery, AFMC, Pune 411 040.

Fig. 2: Plain x-ray oblique view of the abdomen showing two needles - one intraparietal and one intraabdominal

bodies especially needles and pins after perforation, may remain at the site of perforation, lie free in the peritoneal cavity or migrate to other organs. Ingested needles, pins and toothpicks migrating to the right kidney, the IVC, the portal vein, the right psoas muscle and the abdominal wall after perforating the duodenum have all been reported [5]. There are very few reports of such foreign bodies migrating to the liver and after a review by the authors only two such cases have been recorded in the English medical literature.[3,4].

The foreign bodies may lie asymptotically inside the abdomen or cause symptoms because of various factors. Needles lying in the anterior abdominal wall may remain asymptomatic, cause local pain or lead to adhesions resulting in subacute intestinal obstruction. Intra-abdominal abscess formation is also known. Foreign bodies perforating hollow viscus may present

Fig. 3: Ultrasound abdomen (5 MHz probe) oblique section showing the needles in the parietal wall and the liver as shown by the arrows.

with peritonitis or localised abscess formation. They are also known to have penetrated the rectum and passed in the stool.

Many of the patients undergo laparotomy because of signs and symptoms of acute abdomen secondary to perforation or lodgement of foreign body in a visceral organ. Finding a small foreign body inside the abdomen is like the proverbial 'needle in a haystack'. Similarly needles in the abdominal wall may be very difficult to localize unless accurately marked preoperatively with the help of X-ray over a wire mesh to identify a particular quadrant, ultrasound examination or CT scan. In a thin individual, foreign body needles may be directly palpable.

Lastly an effort should be made to identify any psychiatric problem or adjustment reaction which the patient may be suffering from. Some individuals hold needles, pins and toothpicks in their mouth habitually and hence may not recollect swallowing anything.

References

1. Swarbrucket A. Removal of darning needle with a fiberoptic gastroscope. *Br Med J*;1972; 3:470.
2. Spitz L. Management of ingested foreign bodies in childhood. *Br Med J* 1971; 4:469-72.
3. Warrd A, Ribchesher J. Migration into liver by ingested foreign bodies. *Br J Clin Pract* 1978; 32(9):263.
4. Lofti M. Foreign bodies in the liver. *Int Surgery*;1976; 61(4) : 228.
5. Ashby BS, Hunter, Craig ID, Foreign Body perforations of the Gut. *Br J Surg*;1967; 54 : 382-4.