



## Foreign body in liver: Sewing needle

Foreign body ingestion is a common problem in pediatric populations, and up to 75% of cases occur in patients <4 years of age (1). Children ingest a variety of foreign bodies, some of which are more harmful and life threatening than others. However, hepatic foreign bodies are rare. Foreign bodies can reach the liver by one of three routes: direct penetration through the abdominal or thoracic wall, migration from the gastrointestinal tract, or through the blood (2). Most hepatic foreign bodies enter the liver via transmigration from the gastrointestinal tract (stomach, duodenum, and transverse colon) (3). Rapid diagnosis and early intervention are important to avoid morbidity and mortality (4).

A 15-year-old female was admitted with abdominal pain that had persisted for 3 days. She was referred to our polyclinic after the detection of a foreign body (sewing needle) on an abdominal radiograph. Her history revealed that she ingested a sewing needle 3 years previously. A physical examination demonstrated tenderness on the right lower abdomen with palpation. Abdominal radiography demonstrated a linear metallic opacity on the right upper quadrant (Figure 1). Grayscale ultrasonography revealed a hyperechoic needle traversing the right lobe of the liver parenchyma (Figure 2). An axial unenhanced computed tomography image revealed a hyperdense needle (arrow) in the liver parenchyma and subcapsular hemorrhage (arrowhead) that had been caused by needle irritation (Figure 3).

Written informed consent was obtained from the parents prior to the surgery. During exploratory laparotomy a hepatic flexure of the colon was attached to the right lobe of the liver. The foreign body (sewing needle) was palpable from both edges of the liver. The corroded and embedded needle was extracted with electrocouter without complications. The position of the



**Figure 1.** Abdominal radiograph demonstrating a linear metallic opacity (arrow) in the right upper quadrant



**Figure 2.** Grayscale ultrasonography revealing a hyperechoic needle (arrow) traversing the liver parenchyma

needle in the liver and attachment to the colon to the liver suggested that the needle penetrated from the colon to the liver.

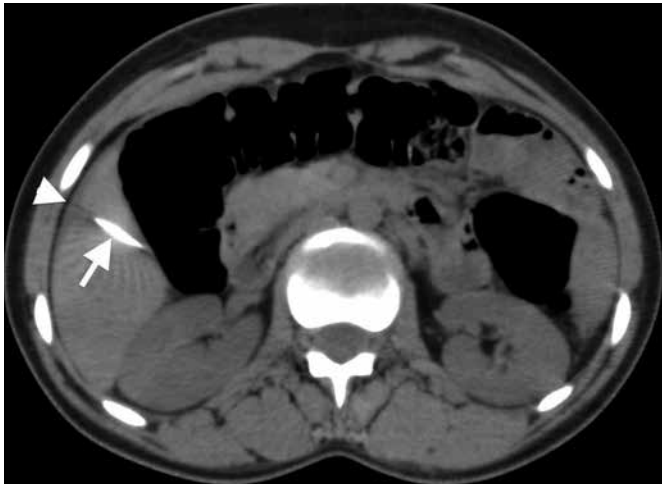
**Address for Correspondence:** Uğur Deveci, Department of Pediatric Gastroenterology, Hepatology and Nutrition, Firat University Hospital, Elazığ, Turkey

E-mail: ugurdevci23@myinet.com

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**Figure 3.** Axial unenhanced computed tomography demonstrating a hyperdense needle (arrow) in the liver parenchyma and subcapsular hemorrhage (arrowhead) caused by needle irritation

Patients who swallow blunt, radiopaque objects are usually followed using weekly radiographs, and parents are instructed to watch for the passage of the object in stool. Most objects pass frequently within 4-6 days of ingestion, but some might take up to 4 weeks. Endoscopic or surgical intervention is recommended when significant symptoms develop or if the object fails to pass through the gastrointestinal tract in 3-4 weeks (5). Uncomplicated liver foreign bodies can be followed without surgical intervention. Patients with complicated liver foreign bodies should be treated with surgical removal via laparoscopy or laparotomy. In addition, drainage of the abscess secondary to the foreign body and hepatic segmentectomy might be required as complementary treatment procedures (6).

In conclusion, foreign body ingestion necessitates close follow-up to prevent serious complications such as bowel perforation, obstruction, or erosion into adjacent organs.

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**Informed Consent:** Written informed consent was obtained from patient who participated in this case.

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**Uğur Deveci<sup>1</sup>, Ünal Bakal<sup>2</sup>, Yaşar Doğan<sup>1</sup>, Mehmet Ruhi Onur<sup>3</sup>**

<sup>1</sup>Department of Pediatric Gastroenterology, Hepatology and Nutrition, Fırat University Hospital, Elazığ, Turkey

<sup>2</sup>Department of Pediatric Surgery, Fırat University Hospital, Elazığ, Turkey

<sup>3</sup>Department of Radiology, Fırat University Hospital, Elazığ, Turkey

## REFERENCES

1. Sperry SL, Crockett SD, Miller CB, Shaheen NJ, Dellon ES. Epidemiology and management of oesophageal coin impaction in children. *Dig liver Dis* 2012; 44: 482-6. [\[CrossRef\]](#)
2. Lotfi M. Foreign body in the liver. *Int Surg* 1976; 61: 228.
3. Nishimoto Y, Suita S, Taguchi T, Noguchi SI, Ieire S. Hepatic foreign body- a sewing needle- in a child. *Asian J Surg* 2003; 26: 231-3. [\[CrossRef\]](#)
4. Lee KF, Chu W, Wong SW, Lai PB. Hepatic abscess secondary to foreign body perforation of stomach. *Asian J surg* 2005; 28:297-300. [\[CrossRef\]](#)
5. Jeckovic M, Anupindi SA, Barbir SB, Lovrenski J. Is ultrasound useful in detection and follow-up of gastric foreign bodies in children? *Clinical Imaging* 2013; 37: 1043-7. [\[CrossRef\]](#)
6. Bulaşıkçı M, Agayev A, Yanar F, Sharifov R, Taviloğlu K, Uçar A. Final destination of an ingested needle: the liver. *Diagn Interv Radiol* 2011; 17: 64-6.