

Swallowed nail perforating the anterior surface of the stomach and penetrating the abdominal wall from the inside

Case report

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Abstract

Foreign body ingestion is a problem generally found in children, some psychological diseases, and people with mental retardation. In most cases, they pass through the gastrointestinal tract, come out with faeces and rarely cause infection, local reaction, migration, or perforation. A CT scan is the ideal choice for complicated cases diagnosis. We report a case of a pointed rusty nail, perforating the stomach from inside, passing through the skin of the abdomen, outward from the left upper quadrant, and successfully extracted by open surgery in a patient with mental retardation. We recommend that we can care for those with mental retardation or who have foreign body ingestion habits by checking them regularly.

Introduction

Swallowing foreign bodies is a problem generally found in children, some psychological diseases, and people with mental retardation. In the majority of cases, foreign bodies are small and come out with faeces without damaging the gastrointestinal tract. Sometimes endoscopic (10–20%) or surgical interventions (1%) are used. (1–3)

Patients or their relatives often apply to health institutions before symptoms begin at the time of the incident. In random cases, swallowed objects are held silent. When they cause infection, local reaction, migration, or perforation, patients apply to the emergency department with abdominal pain, nausea, vomiting, fever, or acute abdomen. Foreign bodies are detected in radiological examinations and surgical procedures are often applied. (4–6)

Case Presentation

A 31-year-old mentally retarded male patient was admitted to the hospital with complaints of a foreign body presenting from the abdomen, abdominal pain, nausea, and fatigue. The patient came standing up and there were no acute abdomen findings. A pointed rusty nail passing through the skin of the abdomen outward from the upper left quadrant was seen.

Abscess material is actively flowing around the nail. In anamnesis, there was a painful swelling on the abdominal wall that lasted for nearly one month. It was perforated in the last few hours and the nail appeared (picture 1).

In the examinations, blood pressure was found to be 105/60 mmHg, fever at 36.6 °C, WBC at 21.95 $10^3/\text{mm}^3$, HGB at 11.2 g/dl, PLT at 578 $10^3/\text{mm}^3$ and CRP at 153.3 mg/L were found.

A nail was seen in the standing direct abdominal X-ray (picture 2). The FAST ultrasound reported 8x4 cm of a loculated fluid collection in the upper left quadrant of the anterior abdomen with a dense septum and air echogenicity, and the intra-abdominal relationship could not be evaluated. On the CT scan, it was reported as a metallic structure extending from the stomach region to the outside of the skin on the left side of the epigastrium (picture 3).

After the necessary preparations were made, the patient was taken to the operation immediately. The abdomen was entered with an upper median umbilical incision. A 25 cm nail perforating the anterior surface of the stomach, peritoneum, skin, and subcutaneous layers was extracted (picture 4).

The inside of the stomach was checked, there were no other foreign bodies. There was an abscess cavity under the skin. The stomach was repaired by wedge resection. The abscess was drained. Subcutaneous and peritoneal necrotic areas were debrided. E. coli was grown in the abscess culture. Appropriate antibiotics were given. The patient was discharged seven days after the operation. No complications developed in routine follow-up.

Discussion

Foreign body ingestion is usually seen in children, alcoholics, and those with mental retardation. In 80% of the cases, they pass the GIS without causing serious problems. Endoscopic procedures can be applied in noticed cases (7, 8). Cases of complicated foreign bodies are often detected in radiological examinations of patients with chronic complaints. Metallic and hard objects are seen on standing radiographs. Even if the reactions caused by the foreign body are seen on the ultrasound, it is difficult to detect them (1–5). A CT scan is the ideal choice for detecting foreign bodies, visualizing inflammation, and changes in the environment (9). Swallowed foreign bodies are usually small, do not disrupt body integrity, and do not penetrate the body outward. Cases of large and pointed foreign bodies are extremely rare. Complicated cases cause internal perforation or the same reactions. A case of a swallowed foreign body perforating the abdomen from the inside has not been reported in the literature. Interestingly, a long pointed foreign body which has been swallowed before was leaning on the back of the stomach and its pointed part was perforating the front.

Conclusion

In this case, we thought that people with mental retardation don't receive the care or attention they may need, that pointed foreign bodies, such as in our case, could have caused more mortal consequences. For this reason, it is recommended that those who cannot express themselves, those with mental retardation, and especially those who have foreign body ingestion habits, should be checked regularly, and if there are repeated abdominal pain complaints, they should be examined in detail. We may need to inform the public about this.

Declarations

Funding

There is no specific funding related to this research.

Competing interests

The author declares that he has no competing interests.

Consent

All necessary consent documents were obtained from the patient's relatives written in Turkish.

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Figures



Figure 1

picture 1

Legend not included with this version

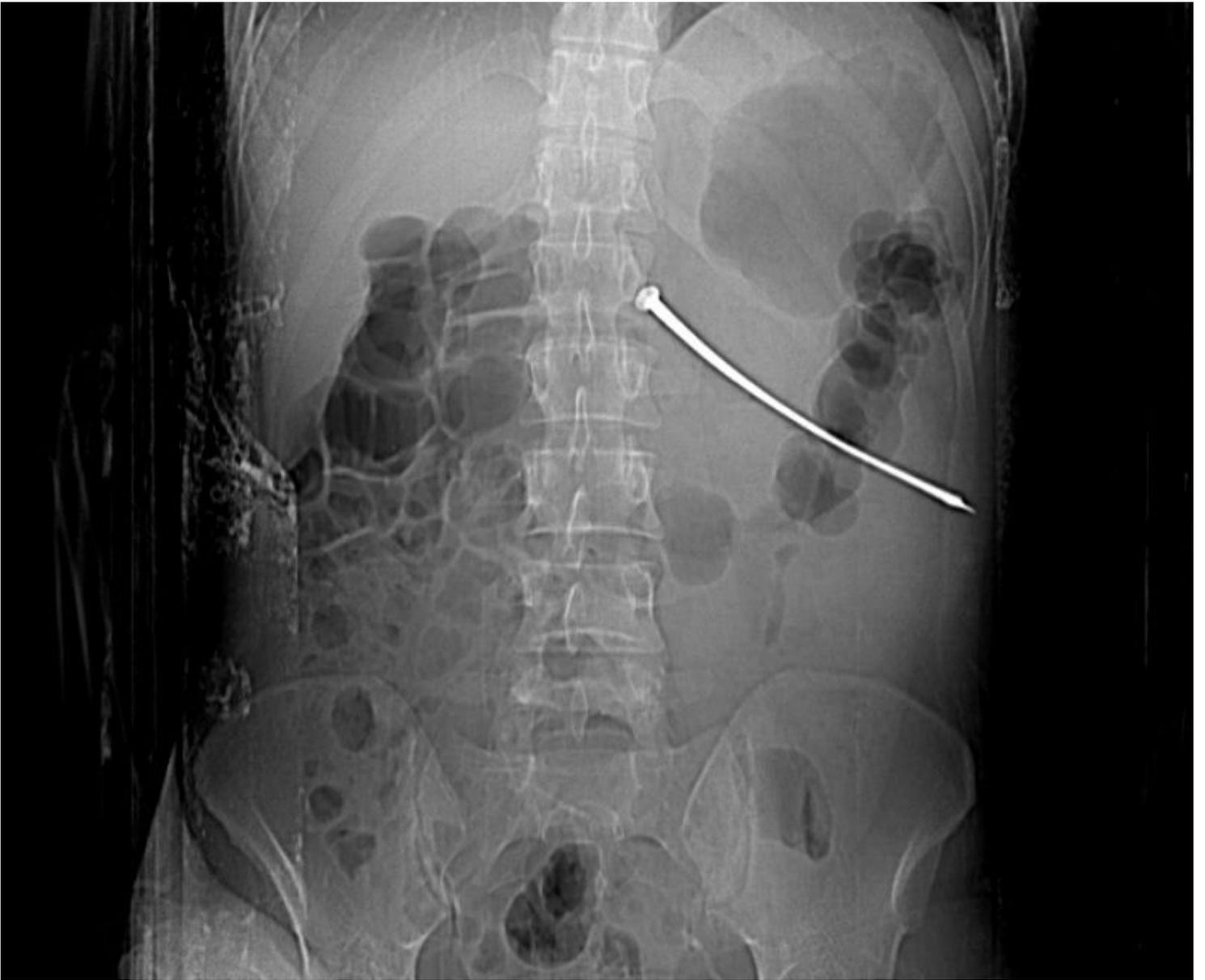


Figure 2

picture 2

Legend not included with this version

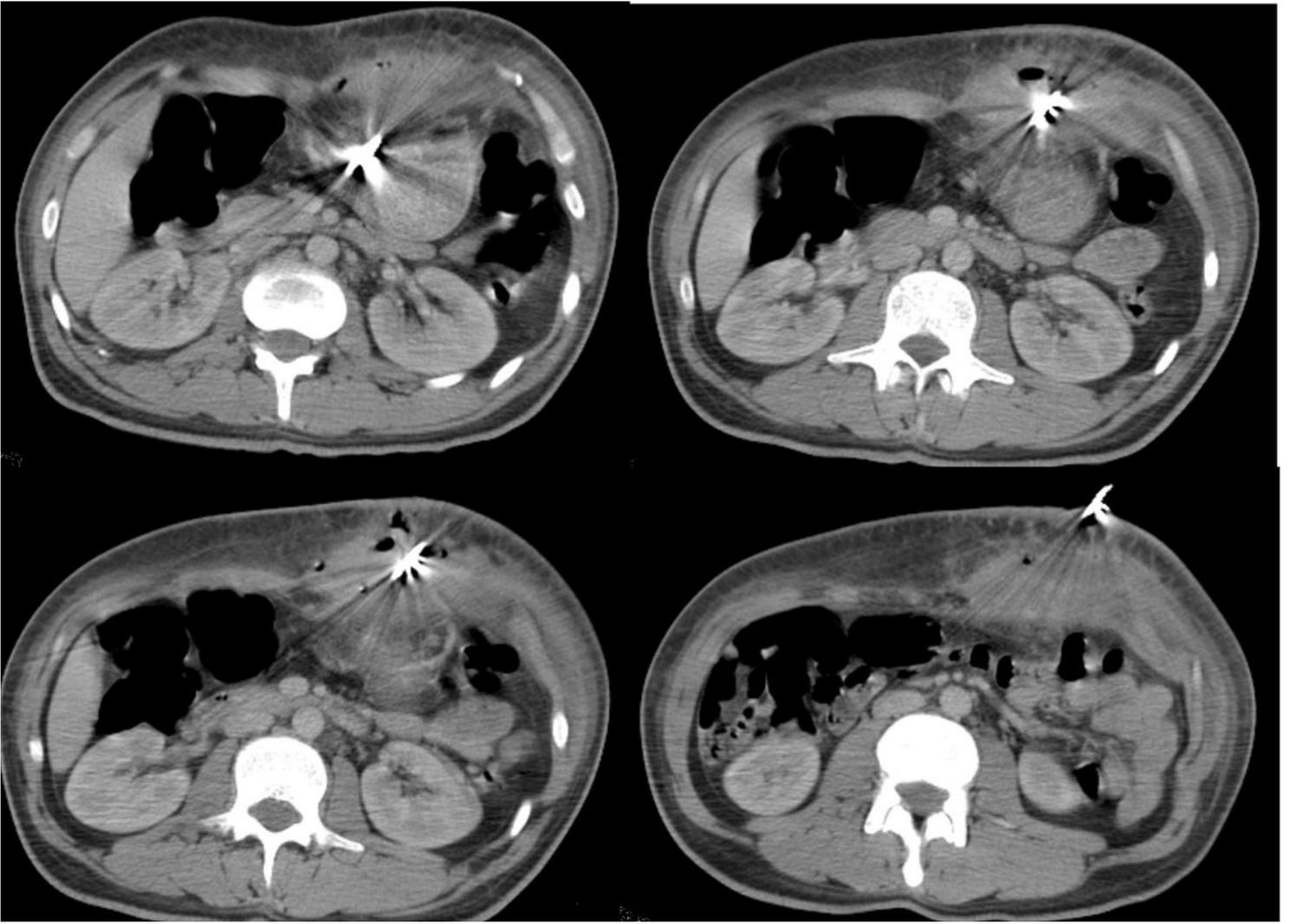


Figure 3

picture 3

Legend not included with this version

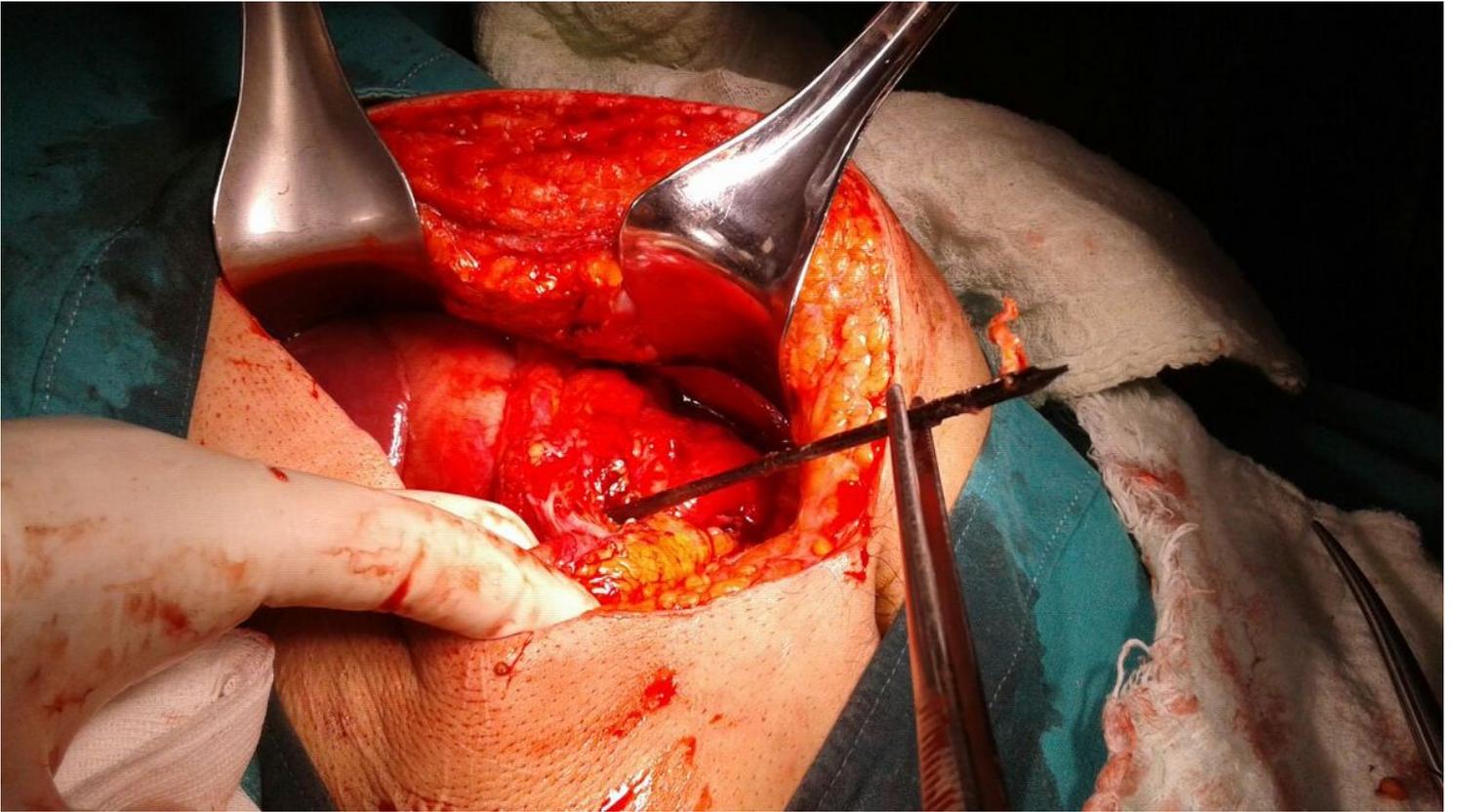


Figure 4

picture 4

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