



# Treatment of a Patient Who Attempted Suicide by Swallowing a Razor Blade: A Case Report

## Jilet Yutarak İntihar Girişiminde Bulunan Hastanın Tedavisi: Olgu Sunumu

Tamer Akay

Bandırma State Hospital, Clinic of General Surgery, Balıkesir, Turkey

### ABSTRACT

Intentional ingestion of foreign bodies is a common phenomenon among psychiatric patients and prisoners. In this report, we present a 34-year-old male prisoner who stated that he swallowed a razor blade to commit suicide. The patient was hospitalized and underwent upper gastrointestinal system endoscopy for observation. The patient developed acute abdominal pain while being monitored; an exploratory laparotomy was performed and two razor blades were removed from the patient's small intestine. The patient's symptoms regressed in the postoperative period and he was discharged. In conclusion, intentional ingestion of foreign bodies is a common phenomenon; patients should be closely monitored and cases that may require surgical intervention should not be overlooked.

**Keywords:** Foreign bodies, diagnosis, laparotomy

### ÖZ

Psikiyatrik hastalar ve mahkumlar arasında kasten yabancı cisim yutulması yaygın görülebilen bir durumdur. Çalışmamızda, intihar girişimi nedeni ile jilet yuttuğunu ifade eden 34 yaşında bir erkek mahkum hasta sunulmuştur. Gözlem amacıyla servise yatırılan hastaya üst gastrointestinal sistem endoskopisi uygulandı. Hastanın takiplerinde akut karın tablosu gelişmesi üzerine eksploratif laparotomi yapılarak iki adet jilet ince barsaktan çıkarıldı. Ameliyattan sonraki dönemde şikayetleri gerileyen hasta cerrahi şifa ile taburcu edildi. Sonuç olarak, mahkumlar arasında kasten yabancı cisim yutulması yaygın görülebilen bir durum olduğundan hastalar yakın takip edilmeli, cerrahi girişim gerektirebilecek olgular gözden kaçırılmamalıdır.

**Anahtar Kelimeler:** Yabancı cisimler, tanı, laparotomi

## Introduction

Intentional ingestion of foreign bodies is a clinical condition with significant morbidity and mortality. It is most commonly seen among psychiatric patients and prisoners. There are three main treatment modalities for patients who intentionally ingest foreign bodies: endoscopic methods, conservative follow-up, and surgical intervention.<sup>1,2,3</sup> If a patient presents at the early stage, most of the objects are endoscopically removed from the stomach. If the object cannot be removed endoscopically or if it is a delayed case, then the patient is monitored with the conservative method. In approximately 60-90% of cases, swallowed objects are eliminated spontaneously. In the presence of complications such as perforation, bleeding, enteric fistula or mechanical intestinal obstruction, surgical treatment is inevitable.<sup>4</sup> The purpose of this article was

to present a patient who intentionally ingested a foreign body and underwent endoscopic intervention, conservative monitoring, and surgical intervention in accordance with the relevant literature.

## Case Report

A 34-year-old male patient who stated that he swallowed a razor blade in a suicide attempt was evaluated in the emergency department. Physical examination of the patient revealed abdominal tenderness in the epigastric region. In a direct abdominal X-ray taken with the patient in the standing position, a radiopaque foreign body was detected on the second lumbar vertebra (Figure 1).

Blood count and biochemical parameters were normal in the laboratory tests. Posteroanterior chest X-ray and abdominal



Address for Correspondence/Yazışma Adresi: Tamer Akay MD

Bandırma State Hospital, Clinic of General Surgery, Balıkesir, Turkey

Phone: +90 266 738 00 22 E-mail: op.dr.tamerakay@gmail.com ORCID ID: orcid.org/0000-0001-8137-3658

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ultrasound examination showed no signs. The patient was admitted to the general surgery department for monitoring, and a fiber-rich, soft food diet was started. In a psychiatric consultation, the patient's mental condition was reported as normal, but with adjustment disorder due to being imprisoned.

In the abdominal computerized tomography (CT) scan, a dense image was detected in the intestinal lumen at the jejunal segment level (Figure 2).



Figure 1. Image of a foreign body in the direct abdominal X-ray

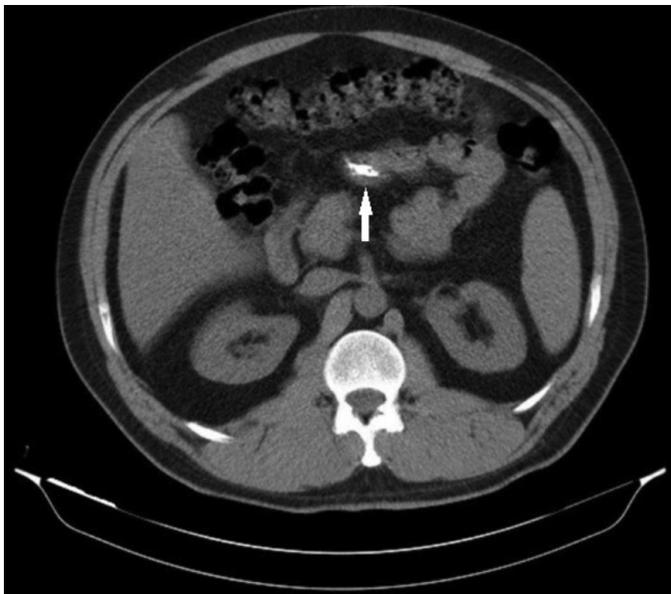


Figure 2. A dense image in the abdominal computerized tomography scan

Upper gastrointestinal system endoscopy revealed nothing except minimal erosions in the gastric antrum.

On the third day of admission, the patient underwent exploratory laparotomy due to abdominal pain, nausea, vomiting, and leukocytosis ( $14.800/\text{mm}^3$ ).

The small intestine was dilated and edematous 120 cm from the Treitz ligament. Two 3x1 cm razor blades wrapped in soft paper were removed through enterotomy (Figure 3).

The small intestine was closed using a double-layer suture. The patient's symptoms regressed and he was discharged on the fifth postoperative day.

## Discussion

Swallowing foreign bodies generally has no specific symptoms and yields no physical examination findings.<sup>5</sup> Therefore, patients who state that they have swallowed a radiopaque object should be investigated with direct X-ray after having a physical examination, which enables health professionals to determine the number and shape of the foreign bodies, and their location in the gastrointestinal system.<sup>6,7,8</sup> If the foreign body is radiolucent, images can be obtained using advanced imaging techniques such as CT.<sup>9</sup> In our case, a radiopaque foreign body was detected in the direct X-ray, and thoracic and abdominal tomography was performed to exclude the possibility of perforation due to the penetrating nature of the foreign object.

Velitchkov et al.<sup>1</sup> conducted the study with the largest series in the literature. In their 20-year study, they investigated 542 patients who swallowed foreign bodies. Although foreign bodies were spontaneously removed in 75.6% of the cases, 19.5% underwent endoscopic retrieval and 4.8% had a surgical intervention.<sup>1</sup> In our case, the decision for a surgical intervention was made after the patient developed acute abdominal pain while he was under conservative follow-up.



Figure 3. Two razor blades removed from the intestinal lumen

If the ingested foreign body is blunt and stays in the upper gastrointestinal tract, the first method to be tried for its removal is endoscopy. If the physician cannot perform endoscopy, if the foreign body is small or sharp and penetrating, or is considered to have passed into the small intestine, conservative follow-up should be performed. Conservative follow-up is especially required if the object is sharp and penetrating.<sup>1,2,3</sup> In our case, the foreign body was detected in the jejunal segment through abdominal tomography. The purpose of conducting the upper gastrointestinal endoscopy was to detect whether there was any organ damage. Conservative follow-up was considered as a treatment plan because the foreign object was sharp and penetrating and had stayed in the small intestine.

If a foreign body has passed through the pylorus but cannot pass the ileocecal valve, surgical intervention should be performed after a 48-hour observation because foreign bodies retained here are likely to cause complications.<sup>4</sup> In our case, the conservative follow-up lasted 72 hours. During this time, the foreign body did not pass through the gastrointestinal tract spontaneously. Abdominal X-rays of the patient were taken, a hemogram (complete blood count) was performed and his vital signs were observed. The decision was made for a surgical intervention during follow-up because the patient developed acute abdominal pain.

If the foreign body is in the stomach, gastrotomy is performed to remove the foreign body. If the foreign body is in the small intestine, either an enterotomy is performed or the object is moved to the colon through milking and then colotomy is performed.<sup>1,3,7,8</sup> Milking was not considered in our case because the foreign object was sharp and penetrating; enterotomy was performed. The foreign body was accepted as a sharp and penetrating object and treated accordingly because the patient did not state that the razor blade was wrapped in paper.

In conclusion, endoscopic removal, conservative follow-up, and surgical intervention are the three main treatment

modalities in patients with intentionally ingested foreign bodies. Apart from ingested foreign bodies that pass through the gastrointestinal tract spontaneously, endoscopic removal of other ingested foreign bodies is successfully performed under appropriate conditions in many centers. It should be kept in mind that close conservative follow-up should be performed especially for sharp and penetrating objects. Laparotomy is indispensable for patients in whom surgical complications develop.

### Ethics

**Informed Consent:** Consent form was filled out by the participant.

**Peer-review:** Internally peer-reviewed.

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### References

1. Velitchkov NG, Grigorov GI, Losanoff JE, Kjossev KT. Ingested foreign bodies of the gastrointestinal tract: retrospective analysis of 542 cases. *World J Surg* 1996;20:1001-1005.
2. Vagner EA, Subbotin VM, Davidov MI, Repin VN, Titlianova ZA, Vorontsov AP. Surgical policy in gastrointestinal tract foreign bodies. *Khirurgiia (Mosk)* 1999;24-28.
3. Park JH, Park CH, Park JH, Lee SJ, Lee WS, Joo YE, Kim HS, Choi SK, Rew JS, Kim SJ. Review of 209 cases of foreign bodies in the upper gastrointestinal tract and clinical factors for successful endoscopic removal. *Korean J Gastroenterol* 2004;43:226-233.
4. Başpınar İ, Şahin S, Erdoğan G. Yabancı cisim yutma sonucu gelişen akut mekanik bağırsak tıkanıklığı: Olgu sunumu. *Ulusal Travma Acil Cerrahi Derg* 2010;16:92-94.
5. Midi A, Doğusoy G, Şad O, Gür E. Kayısı Çekirdeğine Bağlı Mekanik Kalın Barsak Obstruksiyonu: İntestinal Obstruksiyonun Ender Nedeni. *Olgu Sunumu. Marmara Medical Journal* 2008;21:247-251.
6. Bakaleinik M. Foreign bodies of the gastrointestinal tract, surgical considerations. *Mil Med* 1989;154:11-14.
7. Losanoff JE, Kjossev KT. Gastrointestinal "crosses": an indication for surgery. *J Clin Gastroenterol* 2001;33:310-314.
8. Clarkston WK. Gastrointestinal foreign bodies. When to remove them, when to watch and wait. *Postgrad Med* 1992;92:46-48.
9. Guirgis M, Nguyen R, Pokorny C. Accidental ingestion of plastic from takeaway containers--food for thought. *Med J Aust* 2011;7:194:245-246.