

## Conservative Management of Unusual Foreign Body Ingestion in a Young Prisoner

Genç Bir Mahkumda Konservatif Olarak Tedavi Edilen Sıradışı Yabancı  
Cisim Yutulması  
Genel Cerrahi

Başvuru: 03.12.2017  
Kabul: 29.04.2018  
Yayın: 06.06.2018

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### Özet

Gastrointestinal sistemde yabancı cisimler, genellikle psikiyatrik bozukluğu olan, mental retarde ve sekonder kazanç sağlamak isteyen bireylerde bilinçli olarak, çocuklarda ise sıklıkla kazayla cismin yutulması sonucu karşımıza çıkmaktadırlar. Yutulan cisimlerin çoğu herhangi bir sağlık problemine yol açmadan defekasyon yoluyla vücuttan atılır. Komplikasyon gelişmeyen olgular konservatif takip edilirler. Bazı yabancı cisimler endoskopik olarak çıkarılırlar. Kanama, tıkanma ya da perforasyona yol açanlar ise acil ameliyat gerektirirler. Bu yazıda, hastaneye başvurudan 24 saat önce arka arkaya 9 adet kalem pil yutan erkek bir hasta sunuldu. Cerrahi uygulanmayan ve konservatif takip edilen hasta, komplikasyonsuz taburcu edildi.

**Anahtar kelimeler:** *Gastrointestinal sistem, yabancı cisim, konservatif*

### Abstract

Foreign bodies in the gastrointestinal system are encountered consciously in individuals who have psychiatric disorders, mental retardation and seeking to have secondary gain in general and often as a result of accidental swallowing of foreign matters by children. Most of the foreign bodies that are swallowed are removed from the body by defecation without causing any health problems. Cases without complication are followed up conservatively. Some foreign bodies are removed endoscopically. Those who lead to hemorrhage, obstruction or perforation require immediate surgery. In this article, we presented a male patient who swallowed 9 AA-batteries successively 24 hours before admission to the hospital. The patient without any surgery and followed up conservatively was discharged without any complication.

**Keywords:** *Gastrointestinal tract, foreign body, conservative*

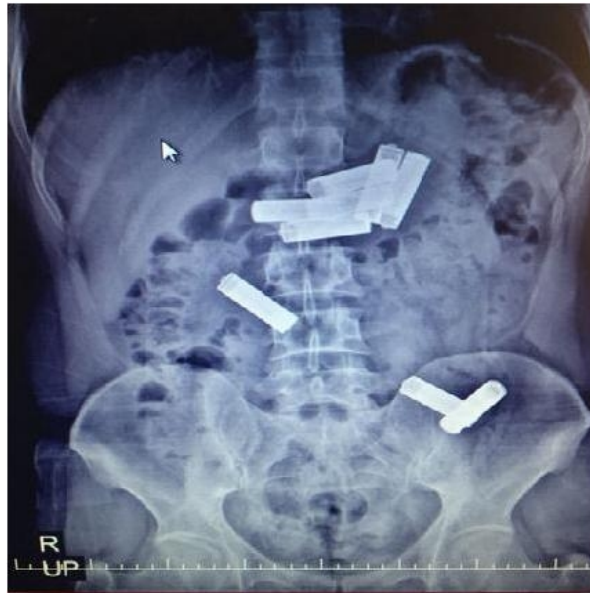
### Introduction

Foreign body swallowing is among the common clinical problems. Although it is more common in childhood, it can cause serious complications in the adult age group. In the United States, about 1500 people lose their lives each year due to complications secondary to foreign body swallowing. While majority of swallowed foreign bodies can pass spontaneously through the gastrointestinal tract, approximately 10-20% of patients undergo endoscopic intervention or emergency surgery<sup>1</sup>.

### Case Report

A 29-year-old male prisoner was brought to the emergency department of our hospital with a 1-day abdominal pain complaint. According to the medical history, it was found out that the patient is in prison for 2 years. The patient had no history of any surgical operation or psychiatric disease. Physical examination revealed tenderness in the epigastric region. There was no rebound or defense. Intestinal peristalsism was normal, and gas and feces

discharge were present. Laboratory findings were within normal ranges. Multiple radiopaque foreign bodies (Nine AA-batteries) were seen in the intestines on direct abdominal X-ray. The patient was being followed up conservatively because of the present examination findings. Oral intake was discontinued, hydration was provided. No any laxative was administered. Since, no surgical intervention was planned, no abdominal computed tomographic scan was done. The patient was followed-up with daily radiographs and, depending on direct abdominal X-ray done on day 3 of follow-up for control purpose, it was seen that all the foreign bodies he swallowed were defecated and the patient was discharged in a healthy condition. The patient was referred to psychiatry outpatient clinic. The diagnosis of the psychiatrist was factitious disorder and the patient was given psychotherapy.



**Figure 1.** Abdominal radiograph image of the foreign bodies

**Figure 1**

Abdominal radiograph image of the foreign bodies



**Figure 2.** Abdominal radiograph image of the patient after conservative treatment

**Figure 2**

Abdominal radiograph image of the patient after conservative management

## Case Discussion

Foreign bodies of the gastrointestinal tract are a condition that can cause serious morbidity and mortality in both children and adults. Its incidence is increasing all over the world. Foreign body ingestion is most commonly seen in children (80%), in the elderly, and in psychiatric patients<sup>2</sup>. In the study conducted by Kelly et al.<sup>3</sup> on cases swallowed foreign body, it has been reported that 67% of the patients were around 3 years of age.

A clinician should not ignore this condition for psychiatric and convicted patients who have abdominal pain and nausea. Most foreign bodies reaching stomach are able to cross the digestive tract. Sharp or pointed foreign bodies in the gastric and duodenal regions having a size of 4 cm in length and 2 cm in diameter and remained immobilized for longer periods than three days must be removed endoscopically or surgically<sup>4</sup>. It has been reported that the duration of their passage through the digestive tract is between 3.6 and 5.1 days. It cannot be predicted how long a foreign body will pass this way. A coin stuck in stomach for two weeks after being swallowed has been reported. While 85% of foreign bodies are spontaneously removed, 20% are removed with endoscopy, and 1% requires surgical treatment<sup>5</sup>. Ambe et al.<sup>6</sup> reported that foreign bodies smaller than 6 cm, narrower than 2.5 cm and have blunt edges could leave the system within 4-6 days passing the stenotic areas of the gastrointestinal tract during conservative follow-up.

Considering the possibility of migration in cases of foreign body ingestion, body scanning and patient follow-up should be done very carefully and meticulously. During diagnosis and follow-up, direct abdominal radiographs are frequently used. Even if contrast-enhanced radiographs are helpful in terms of determining localization, they are insufficient for identifying foreign bodies. Therefore, contrast-enhanced radiographs and direct radiographs should be interpreted together. Opaque foreign bodies can be seen on direct radiographs, but non-opaque foreign bodies can be visualized by forming a filling defect on contrast-enhanced radiographs<sup>7</sup>. Mosca et al.<sup>8</sup> reported that 144 of 414 patients who were followed up for foreign body ingestion demonstrated radiologically positive findings. While the radiograph visualizes the localization of the foreign body, they ensure also a significant predictability for the treatment to be applied by providing information on the shape, margin order, sharpness and size of the foreign body. Radiolucent foreign bodies contain plastic, wood or thin metals, and their absence on the radiograph does not exclude the presence of the foreign body in the patient with a history of foreign body ingestion. The use of contrast agent in the imaging of swallowed radiolucent bodies is limited to selected cases. Tomographic imaging is recommended in some publications<sup>4</sup>. According to the study of Coulier et al.<sup>9</sup>, it is reported that the tomography to visualize the localization of a foreign body ingested has 100% sensitivity and 91% specificity. We did not do a tomographic scan because we did not plan surgery for our case. Opinions about that the use of ultrasonography (USG) is not required in cases with swallowed foreign body are widespread. Only a few case reports mention the use of USG<sup>10</sup>. Also Sacchetti et al.<sup>11</sup> stated that metal detectors can be used easily and safely, especially in the pediatric population, because they do not contain radiation and are easily repeatable.

Endoscopy remains as the most reliable method today for the removal of foreign body. Foreign bodies are removed by flexible endoscopy in many cases without requiring general anesthesia. Sharp foreign bodies can be removed more safely using rigid gastroscopy. Foreign body cases that cannot be removed by endoscopy are referred to the surgery<sup>12</sup>. We did not plan to perform endoscopy because we consider that foreign bodies passed the upper gastrointestinal system of our case during follow-up. Zhang et al.<sup>13</sup> reported that they immediately performed endoscopy on 561 patients who applied after foreign body swallowing.

In the presence of a foreign body in the gastrointestinal system, immediate surgical indications are hemorrhage, perforation or obstruction. Follow-up is usually primarily done in cases other than those. Localization, number and characteristic of foreign bodies should be determined and foreign bodies believed to be able to come out through defecation should be followed regularly with radiographs. It is also important that patients comply with follow-up. For cases with psychotic disorders, long-term follow-up may be difficult<sup>14,15</sup>. We consider, because of the blunt foreign bodies in our case, they moved across the gastrointestinal tract without getting stuck in the

mucous membrane.

In conclusion, foreign bodies with gastrointestinal tract localization rarely lead to complications and require surgical intervention. These foreign bodies can be removed spontaneously or can be extracted by an endoscope. However, it should be kept in mind that surgical intervention may be required, considering the type, localization, length of stay, number and symptoms of foreign bodies.

## References

1. Ayantunde AA, Oke T. A review of gastrointestinal foreign bodies. *Int J Clin Pract.* 2006;60:735-9.
2. Islam MS, et al. Exceptional multiple foreign-body ingestion by a patient with schizophrenia. *Mymensingh Med J.* 2017;26:194-7.
3. Kelley JE, Leech MH, Carr MG. A safe and cost effective protocol for the management of oesophageal coins in children. *J Pediatr Surg.* 1993;28:898-900.
4. Sheth P, Finkelstein E, Campbell D, Danton GH. Imaging of foreign bodies in prisoners. *Semin Ultrasound CT MR.* 2015;36:28-38.
5. Kim SY, Park B, Kong IG, Choi HG. Analysis of ingested foreign bodies according to age, type and location: a retrospective observational study. *Clin Otolaryngol.* 2016;41:640-5.
6. Ambe P, Weber SA, Schauer M, Knoefel WT. Swallowed foreign bodies in adults. *Dtsch Arztebl Int.* 2012;109:869-75.
7. Evans DC, et al. Intentional ingestions of foreign objects among prisoners: A review. *World J Gastrointest Endosc.* 2015;7:162-8.
8. Mosca S, et al. Endoscopic management of foreign bodies in the upper gastrointestinal tract: report on a series of 414 adult patients. *Endoscopy.* 2001;33:692-6.
9. Coulier B, Tancredi MH, Ramboux A. Spiral CT and multidetector-row CT diagnosis of perforation of the small intestine caused by ingested foreign bodies. *Eur Radiol.* 2004;14:1918-25.
10. Piotto L, Gent R, Kirby CP, Morris LL. Preoperative use of ultrasonography to localize an ingested foreign body. *Pediatr Radiol.* 2009;39:299-301.
11. Sacchetti A, Carraccio C, Lichenstein R. Hand-held metal detector identification of ingested foreign bodies. *Pediatr Emerg Care.* 1994;10:204-7.
12. Bekkerman M, . Endoscopic Management of Foreign Bodies in the Gastrointestinal Tract: A Review of the Literature. *Gastroenterol Res Pract.* 2016;2016:8520767.
13. Zhang S, et al. Endoscopic management of foreign bodies in the upper gastrointestinal tract in South China: a retrospective study of 561 cases. *Dig Dis Sci.* 2010;55:1305-12.
14. Volpi A, et al. Ingestion of foreign bodies among prisoners: a ten year retrospective study at University Hospital of Southern Italy. *G Chir.* 2017;38:80-3.
15. Abdullah M, Cui J, Hendaheva R. Sigmoid perforation caused by dentures-A rare case report. *Int J Surg Case Rep.* 2017;41:280-2.