

# Endoscopic Retrieval of an Ingested Mobile Phone From the Stomach of a Prisoner: When Gastroenterologists Answer the Call

Review began 12/22/2022  
Review ended 12/26/2022  
Published 12/28/2022

© Copyright 2022

Ali et al. This is an open access article distributed under the terms of the Creative Commons Attribution License CC-BY 4.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Ahmed Ali <sup>1</sup>, Ali M. Mahgoub <sup>2</sup>, Samar Emad <sup>1</sup>, Ahmed H. Abdelfattah <sup>3</sup>

1. Internal Medicine, Mansoura International Hospital, Mansoura, EGY 2. Internal Medicine Department, Gastroenterology and Hepatology Unit, Mansoura University Specialized Internal Medicine Hospital, Mansoura, EGY 3. Internal Medicine, University of Kentucky College of Medicine, Lexington, USA

**Corresponding author:** Ahmed H. Abdelfattah, ahmedhishamabdefattah@gmail.com

## Abstract

Foreign body ingestion (FBI) is a common problem among the pediatric population. The intentional ingestion of foreign bodies in the adult population is common among psychiatric patients, patients with developmental delay, alcohol use disorder, and prisoners. The management of complex FBI cases like mobile phones is not standardized in the literature. The care was discussed in a few case reports, and till the end of 2020, there were only four cases reported. We present this rare case of mobile phone ingestion, which was successfully managed by upper esophagogastrroduodenoscopy (EGD) without the need for surgical intervention.

**Categories:** Internal Medicine, Gastroenterology

**Keywords:** intentional ingestion, mobile phone ingestion, esophagogastrroduodenoscopy (egd), foreign body retrieval, foreign body ingestion

## Introduction

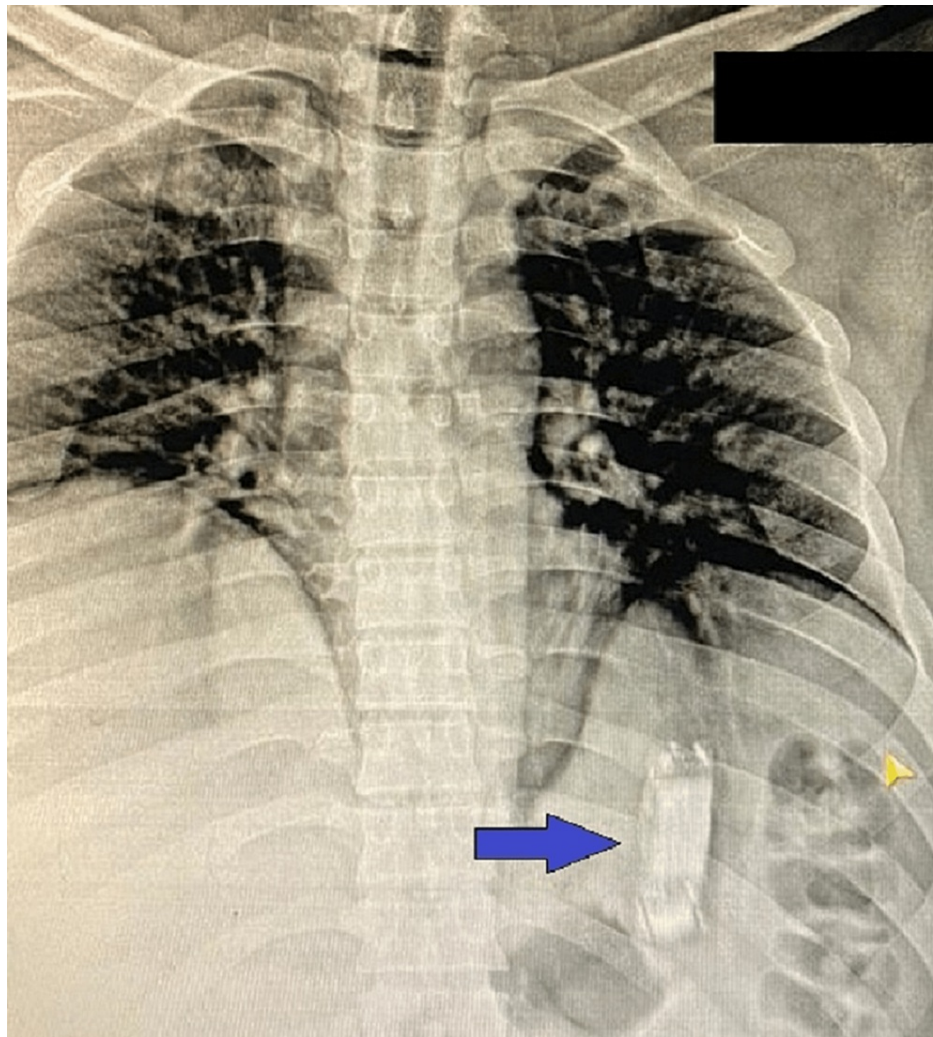
Foreign body ingestion (FBI) is a common emergency in the gastrointestinal (GI) practice. Most foreign body ingestions are reported in the pediatric population (around 80% of the cases). FBI in adult patients is not very common and it is usually reported in psychiatric patients and prisoners [1]. Intentional FBI among prisoners can be seen commonly for secondary gain, for example, it was reported that 1 out of 1900 inmates in the Ohio state had FBI [2]. Most of FBI cases can be managed conservatively without intervention, only 10 to 20% of the cases would need endoscopic retrieval [1]. Complex foreign bodies like mobile phones don't have a standardized approach, therefore the importance of reporting the individual experience in such rare cases. Here we report a case of successful retrieval of a mobile phone after 40 days of intentional ingestion.

## Case Presentation

We present a case of a 35-year-old male prisoner who was presented to our emergency department (ED) with intentional mobile phone ingestion 40 days before. The patient did not have a significant past medical history, he did not have any chronic disease or chronic medications needed. Social history was significant for smoking and cannabis usage. On presentation, he did not have any symptoms or signs like abdominal pain, discomfort, nausea, or vomiting. Physical examination was completely normal with stable vital signs. . We did an erect chest and abdominal X-ray in the ED to confirm the site of the mobile phone. The stomach looked distended but there was no free gas under the diaphragm to suggest perforation (Figure 1).

### How to cite this article

Ali A, Mahgoub A M, Emad S, et al. (December 28, 2022) Endoscopic Retrieval of an Ingested Mobile Phone From the Stomach of a Prisoner: When Gastroenterologists Answer the Call. Cureus 14(12): e33053. DOI 10.7759/cureus.33053



**FIGURE 1: X-ray of chest and upper abdomen, with a blue arrow pointing to the mobile phone in the stomach**

It measured about 5.7 cm x 2.5 cm on the X-ray. The discussion was made with the patient about the need for endoscopic retrieval and the possibility of surgical intervention in case of endoscopic approach failure. The patient gave consent for both. Upper esophagogastroduodenoscopy (EGD) was done with the help of general anesthesia. First, the patient was in the left lateral position, but the retrieval was not successful using this position. So, the patient was put on his back, and Boston 33 mm oval snare was used to grip it (Figure 2). The phone was retrieved successfully in this position by snaring the tip of the phone plastic packet (Figure 3). The patient recovered in a very good way without any post-procedure complications. Psychiatric help was offered to the patient, but the patient declined it. The patient was discharged later in the evening successfully after a short period of observation in the ED.



**FIGURE 2: Endoscopic view of the mobile phone in a plastic packet**



**FIGURE 3: The mobile phone in a plastic packet after successful retrieval.**

## Discussion

Foreign body ingestion is a common problem encountered by gastroenterologists everywhere. It can be seen in all age groups with most cases being reported among children [1]. Whether it's a child who finds a coin interesting, so he puts it in his mouth out of curiosity and accidentally swallows it, or an elderly ingesting his own dentures by mistake, most of the time FBI is unintentional. However, intentional FBI is still seen especially in psychiatric patients and prisoners. About 90% of foreign bodies pass through the GI tract without complications and don't necessarily require intervention to remove them [1]. The rule is that if the object passes successfully through the esophagus, it will negotiate its way easily through the rest of the GI tract without causing harm. There are some exceptions where an emergent/urgent endoscopic or even surgical intervention may be required to retrieve these objects as in the case of sharp, large, or long objects, or longstanding FBI more than 24 hours [3]. In such cases, there's a risk of perforation, fistula formation, abscess, mediastinitis, or peritonitis, and intervention is needed [4].

Some cases of the FBI may require plain radiography assessment for the neck, chest, and abdomen to localize the foreign body, in case of a radio-opaque foreign body further follow-up assessment may be needed to detect its movement and follow up its exit from the body [4].

Gastric foreign bodies can be managed conservatively by serial physical examinations, watchful monitoring, and sometimes radiological assessments in most cases without the need for hospital admission [5]. The notable exceptions are objects longer than 5 cm or wider than 2.5 cm as such objects are unlikely to pass through the pylorus and require endoscopic retrieval [1,5]. Large foreign bodies can be complicated by impaction at the cricopharyngeal, gastro-esophageal junction, pylorus, and the ileocecal valve or bowel obstruction which requires surgical laparotomy [4].

In our case, the patient intentionally ingested a mobile phone trying to smuggle it but because it was 5.7 cm x 2.5 cm the phone didn't pass through the pylorus and remained in the stomach for nearly six weeks. Given the patient's circumstances being a prisoner making the arrangement for an elective endoscopy a harder task than usual, the decision was made to carry out upper GI endoscopy without delay and the mobile phone was successfully retrieved without complications. A mobile phone is a complex foreign body as it contains a battery inside it which can cause multiple complications like gastric irritation, ulceration, or perforation [6]. Our patient wrapped it in multiple plastic layers which prevented those possible complications.

We could only find very few case reports of mobile phone ingestion which were managed endoscopically during the review of available literature; some other patients needed surgical intervention [7]. To the best of our knowledge, this is the first case to be reported in Egypt.

## Conclusions

Mobile phone ingestion is a very rare encounter in clinical practice without a standardized approach. It can be managed endoscopically with an expert endoscopist, with the need for surgical intervention in some cases. It is important to know the size and dimensions of the ingested foreign body before endoscopic intervention to avoid complications like viscous rupture or perforation.

## Additional Information

### Disclosures

**Human subjects:** Consent was obtained or waived by all participants in this study. **Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

## References

1. Pawar A, Dalal A, Dahale A, Sachdeva S, Puri AS: Mobile phone in stomach—is endoscopic trial worthwhile?: a case report. *J Dig Endosc*. 2020, 11:165-7. [10.1055/s-0039-3401455](https://doi.org/10.1055/s-0039-3401455)
2. Kumar M, Sachdeva S, Kumar A, et al.: Gastric foreign bodies in prison inmates. *J Dig Endosc*. 2021, 12:67-70. [10.1055/s-0041-1731963](https://doi.org/10.1055/s-0041-1731963)
3. Uyemura MC: Foreign body ingestion in children. *Am Fam Physician*. 2005, 15:287-91.
4. Qureshi NA, Cherian N, Ben-Hamida A, Solkar MH: Endoscopic retrieval of an intentionally ingested mobile phone in an adult: first case report of its kind. *Ann Clin Case Rep*. 2016, 1:1172.
5. Evans DC, Wojda TR, Jones CD, Otey AJ, Stawicki SP: Intentional ingestions of foreign objects among prisoners: a review. *World J Gastrointest Endosc*. 2015, 7:162-8. [10.4253/wjge.v7.i3.162](https://doi.org/10.4253/wjge.v7.i3.162)
6. Kappagantu V, Mishra PR, Ranjan AK, Aggarwal P, Agarwal A, G B: Mobile phone ingestion requiring endoscopic retrieval. *Am J Emerg Med*. 2021, 42:265.e1-2. [10.1016/j.ajem.2020.08.102](https://doi.org/10.1016/j.ajem.2020.08.102)
7. Obinwa O, Cooper D, O'Riordan JM: An ingested mobile phone in the stomach may not be amenable to safe endoscopic removal using current therapeutic devices: a case report. *Int J Surg Case Rep*. 2016, 22:86-9.

