

Voluntary ingestion of metallic objects in prisons patients-A report of two cases

A. Ait Errami, Y. Elgamrani, S. Oubaha, Z. Samlani, K. Krati

Department of Gastroenterology and Hepatology, 4400 Chu Mohammed Vi, Marrakech, Morocco

*Corresponding author

A. Ait Errami

Email: adil.ae@hotmail.fr

Abstract: Voluntary ingestion of metallic materials is a phenomenon rarely reported in the literature especially in our context. We report two cases of young prisoners who submitted multiple metal body ingestions and we draw intentions on the importance of psychological support for patients.

Keywords: Voluntary ingestion, prisoners, endoscopy, psychological support

INTRODUCTION

Ingestion of foreign bodies is relatively common; it can be potentially serious and achieve a real emergency. It can be voluntary or accidental. Voluntary ingestion of foreign bodies is mainly described in the context of severe psychiatric disorders associated with significant impulsivity. We report two cases of young prisoners who voluntarily ingested multiple foreign bodies collected in Gastroenterology department of University hospital of Mohammed VI in Marrakech, and we draw attention to the importance of psychological support to inmates in our context.

OBSERVATIONS

Case 1

A prisoner aged 28, with no particular history consulted the emergency department for epigastric pain occurred two days after the voluntary ingestion of a teaspoon in addition to four batteries. The abdominal examination was normal. The abdomen without preparation shows the existence of the spoon in the regions corresponding to the gastric area and batteries in the intestine (figure 1). The upper gastrointestinal endoscopy with general anesthesia allowed the endoscopic extraction of the spoon (Figure 2), subsequently, control of abdomen without preparation showed the progression of batteries along the digestive tract until their expulsion in the stool.



Fig 1: abdomen without preparation cliché showing the spoon in intragastric position in addition to 4 batteries.

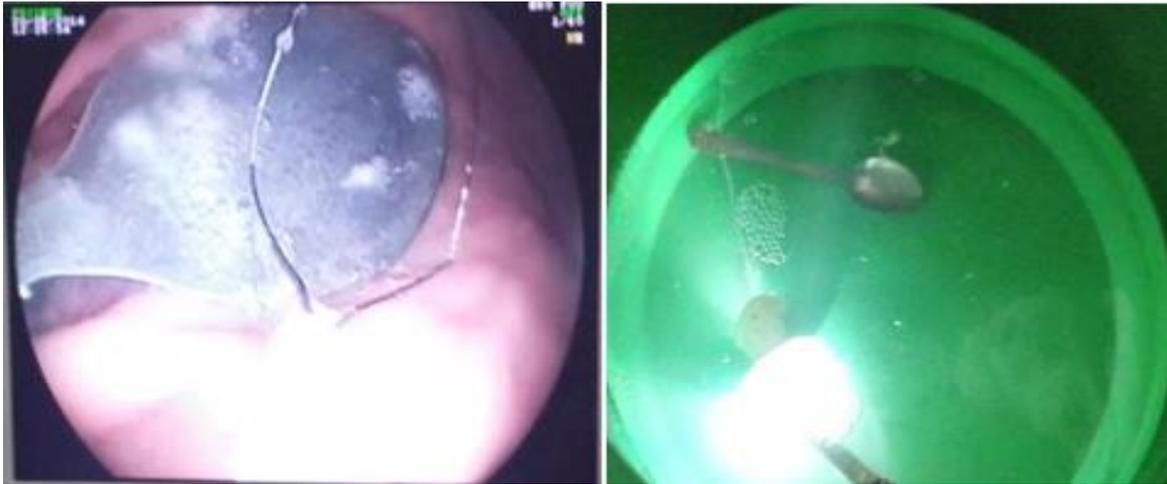


Fig 2 Extraction of the spoon through the diathermic snare successfully

Case 2

A young prisoner of 19 years was examined in the emergency service for epigastric pain occurred 24 hours after voluntary ingestion of a razor blade wrapped in plastic and electric battery. The abdominal examination was normal. The abdomen without preparation showed the existence of blade in the region

corresponding to the gastric area in addition to a battery (Figure 3). The upper gastrointestinal endoscopy allowed the endoscopic extraction with a diathermic snare of the blade without complications. The abdomen without preparation control showed the progression of the electric battery along the digestive tract until their expulsion in the stool.



Fig 3: abdomen without preparation cliché showing the razor blade in intragastric position in addition to a battery



Fig 4: Extraction of coiled razor blade in plastic with a diathermic snare

DISCUSSION

Ingestion of foreign bodies is common, but its real incidence is difficult to determine. In the United States, 1500 deaths annually are attributed to ingestion of foreign bodies, underlining the high frequency of this type of ingestion. [1]. Ingestion of foreign bodies may be voluntary, but in 52-97% it is accidental [1]. She interested in 80% of cases children in oral phase with a peak frequency between six months and three years [2]. Psychotic or alcoholic patients are at risk patients as well as prisoners, Voluntary ingestion of metallic objects is an accident reported regularly in prisons and the prevalence reported by the work varies and remains undetermined. European studies have reported 261 cases and American studies have reported 167 cases [3]. in their studies realized between 2006 and 2010 about the admissions to the medical service of a penitentiary center in Ohio, DC Evans et al. found that between 249 911 prisoners for 5 years, 132 one have filed a voluntary ingestion of foreign bodies [4]. In most cases, the razor blade was the ingested object. Other objects were used: glass, toothbrush, battery, watch, coins, sharp and pointed metal objects (nails, pins, needles, thumbtacks) [5, 6]. Ingestion of these foreign bodies is often hidden. It can be found following the appearance of symptoms of high variability: abdominal pain, fever, vomiting, constipation, haematemesis, and melena [7]. Sullivan et al. found in their study that the symptoms are often severe among prisoners, compared to other patients. [5]. The ingestion of metal objects in these patients usually falls within the framework of severe

psychiatric disorders with a significant impulsivity [7]. Foreign body ingestions are often repetitive, and performed to relieve anxiety without suicidal intent. They are nevertheless considered suicidal equivalents. In prison, a large majority of patients had not realized an ingestion of foreign bodies before their first incarceration. [7]. In published series and in the majority of cases (67% to 80%) foreign bodies, ingested among prisoners once in the stomach level, can be eliminated spontaneously [8] and the need for hospitalization is not indicated except in 7% to 33% of cases. digestive endoscopy has revolutionized the management of gastrointestinal foreign bodies especially their endoscopic extractions. the rate of success is reported by 19.5% to 53.9% of cases [9-10]. However, the surgery is necessary sometimes up to 30% cases [1.2, 3.8.] although more recent series reports lower rates (<15%) of operational response in this population [1, 2]. Several recent studies insist on preventing the ingestion of foreign bodies mainly repetitions in detention establishment, hence the importance of a psychiatric support for these people [11]

CONCLUSION:

Ingestion of foreign bodies voluntarily is rare, but remains grave and complex in detention centers, surgical management should be avoided, a strategy of surveillance and prevention should be developed at these centers especially to prevent recurrences

REFERENCES

1. Nicksa GA, Pigula FA, Giuffrida MJ, Buchmiller TL; Removal of a sewing needle from an occult esophageal ingestion in a 9-month-old. *J Pediatr Surg* 2009;44:1450–3.
2. Palta R, Sahota A, Bemarki A, Salama P, Simpson N, Laine L; Foreign-body ingestion: characteristics and outcomes in a lower socioeconomic population with predominantly intentional ingestion. *Gastrointest Endosc* 2009;69:426–33.
3. Bisharat M, O'Donnell ME, Gibson N, Mitchell M, Refsum SR, Carey PD *et al.*; Foreign body ingestion in prisoners – the Belfast experience *Ulster Med J* 2008; 77 (2): 110-114.
4. 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(3): 162-168.
5. O'Sullivan ST, Reardon CM, McGreal GT, Hehir DJ, Kirwan WO, Brady MP; Deliberate ingestion of foreign bodies by institutionalised psychiatric hospital patients and prison inmates. *Ir J Med Sci* 1996; 165: 294-296.
6. Dalal PP, Otey AJ, McGonagle EA, Whitmill ML, Levine EJ, McKimmie RL, *et al.*; Intentional foreign object ingestions: need for endoscopy and surgery. *J Surg Res* 2013; 184: 145-149.
7. Karp JG, Whitman L, Convit A; Intentional ingestion of foreign objects by male prisoners in inmates *Hosp Community Psychiatry* 1991; 42(5): 533-535.
8. Selivanov V, Sheldon GF, Cello JP, Crass RA; Management of foreign body ingestion. *Ann Surg* 1984; 199: 187-191.
9. Blaho KE, Merigian KS, Winbery SL, Park LJ, Cockrell M; Foreign body ingestions in the Emergency Department: case reports and review of treatment. *J Emerg Med* 1998; 16: 21-26.
10. 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.
11. Grimes IC, Spier BJ, Swize LR, Lindstrom MJ, Pfau PR; Predictors of recurrent ingestion of gastrointestinal foreign bodies. *Can J Gastroenterol* 2013; 27: e1-e4.