CASE REPORT

PUBLIC HEALTH AND POTENTIAL COMPLICATIONS OF NOVEL FASHION ACCESSORIES: AN UNUSUAL FOREIGN BODY IN THE UPPER GASTROINTESTINAL TRACT OF AN ADOLESCENT

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SUMMARY

Various foreign bodies (FB) may be ingested. Most of them harmlessly pass through the anus but sharp or pointed ones are likely to cause complications. Although FB's ingestion is commonly seen by the emergency room personnel, a case of an ingested tongue-ring in the stomach of a female adolescent has not been reported. A 16-year-old female was referred to us for swallowing a tongue-ring while eating, a day after she had swallowed its clip. After finishing her meal, she had replaced the ingested tongue-ring with a similar one! She had a history of accidental swollowing the clip during breakfast a day before as well. She had no history of mental illness, alcohol or drug abuse. An abdominal X-ray confirmed their presence in the gastrointestinal tract. On endoscopy, an intact esophagus' mucosa, a stomach filled with food, her tongue-ring in its greater curvature and a patulous pyloric channel were observed. She was turned in the right lateral position and small amounts of water were carefully used in order to shift the food residues to the antrum. The slippery object was grasped by a biopsy forceps and it was pulled out gently. The procedure was uneventful and she was discharged home on the same day. Our case of a tongue-ring ingested by an adolescent demonstrates a troublesome and possibly dangerous consequence of certain fashion accessories' easy adoption especially by younger subjects. It does not only send a social message, but it also might represent the first example of a potentially emerging medical condition.

Key words: foreign bodies, stomach, ingestion, endoscopy, piercing

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INTRODUCTION

The great majority (80–90%) of small foreign bodies (FB), which enter the gastrointestinal (GI) tract, spontaneously transit through it. FB ingestion, however, may represent a potentially serious medical condition (1). In United States, approximately 1500 deaths per year are ascribed to FB ingestion. In 1999, the American Association of Poison Control recorded 182,105 FB ingestion cases in persons younger than 20 (2). Here, we present the first case of a tongue-ring ingested by a Greek adolescent.

CASE REPORT

A 16-year-old female referred to our surgical emergency department for swallowing a tongue-ring, while eating two hours before. Information about its form and size was easily accessible because after finishing her meal, she had replaced the ingested ring with a similar one! She told us that she had accidentally ingested its clip during breakfast a day before as well. She had no history of mental illness, alcohol or drug abuse. Her abdominal X-ray confirmed the objects' presence in the stomach and gut, respectively (Fig 1). On upper GI endoscopy, the mucosa of the esophagus was intact and the stomach was filled with food. She was turned to the right lateral position in order to shift the food residues to the antrum (Fig 2). Only small amounts of water were used with a lot of cautious to clear the greater curvature where the ring was found, because the pyloric channel was patulous. A biopsy forceps grasped the slippery object and the ring was extracted carefully through the cardia and the lumen of the esophagus (Fig 3). The procedure was uneventful and she was discharged home on the same day.

DISCUSSION

Although most of FB in the GI tract are swallowed accidentally, other conditions such as imprisonment, mental illness or

Fig. 1. *The tongue-ring and the clip in the stomach and gut respectively.*

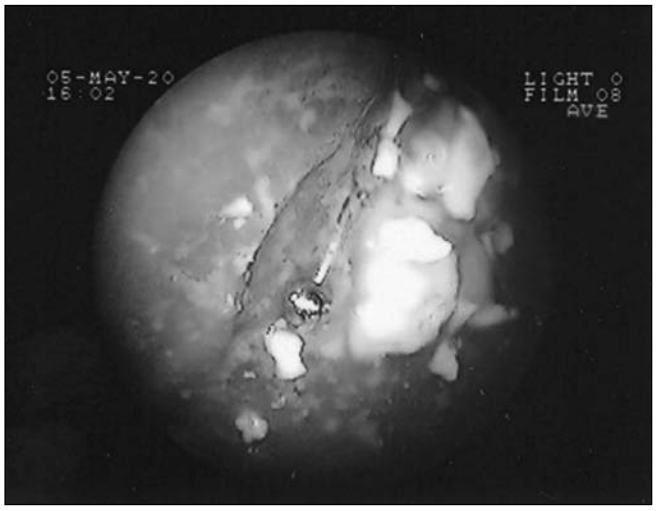

Fig. 2. *The tongue-ring among food residues in the stomach.*

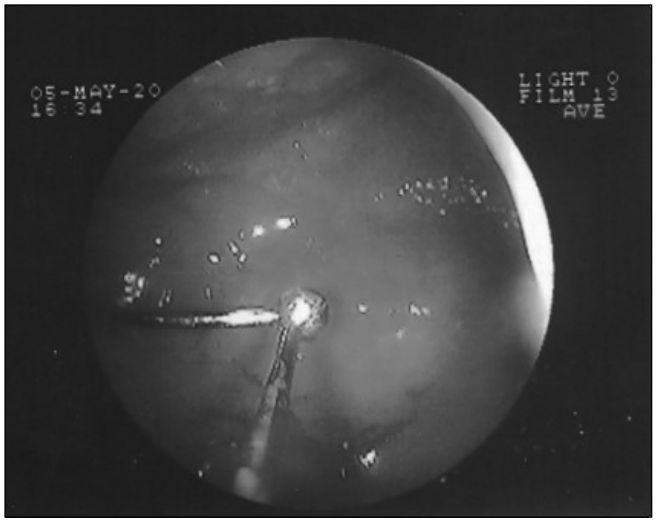

Fig. 3. *The tongue-ring grasped by the biopsy forceps.*

retardation, bulimia, alcohol consumption or drug abuse may also be involved, particularly in Western countries (3). Intentional ingestion of sharp metal objects is more prone to result in complications. Up to 30–35% of sharp and pointed ingestible objects may penetrate the wall of the GI tract and they may be endoscopically managed (1). When passing distally through the intestinal tract, they can lead to entrapment in the bowel and perforation, obstruction or hemorrhage may occur (4). In case of complications or unsuccessful endoscopic extraction, immediate surgical treatment is the treatment of choice (1, 5).

A retrospective study of 501 cases demonstrated that 38,9% of them had an underlying disease and especially peptic stenosis (6). Dysphagia (92%) and tenderness in the neck (60%) were the most common clinical features among 103 esophageal FB cases. X-ray of the neck in lateral position was the most useful investigation and presence of air in the esophagus was the most significant abnormal finding. Post-cricoid region was the main site of impaction (94%). Endoscopic removal was ineffective in 3% of patients and presence of air in the mediastinum was the most serious complication (7). Another study of 400 FB cases reported one case with an aortoesophageal fistula and perioperative mortal outcome as well as another one with a successfully treated empyema thoracis, as a consequence of iatrogenous esophageal perforation (8). Contrary to the esophageal FB, gastric and duodenal ones are usually asymptomatic. In case of sharp or pointed FB lodged in the stomach or duodenum, immediate endoscopic retrieval is recommended in order to avoid intestinal perforation, even in the absence of symptoms compatible (1). The most commonly ingested FB are food boluses, coins, dentures, bones, needles, pins, razor blades and button batteries (4). Meat boluses are primarily reported in Western countries whereas fish bones in Asian countries. They are most usually found at medium ages as well as in females (3). Coins are the mainly swallowed objects by children, despite the frequent ingestion of various small toys (10). More than half of them are under 5 years, with a peak between 6 months and 3 years. A study from Belgium reported that the most frequent FB in children under 15 are in descending order: coins (27%), needles-pins (16%), buttons (13%), fish/chicken bones (12%), large food boluses (12%) and jewels (6%) and that the higher frequency is observed in boys (11). Among ingested objects lodged in the esophagus, coins are almost two thirds, followed by meat boluses and some dentures. Adults present complications more frequent than children and they particularly result from dentures and bones (6).

Although jewels' ingestion has been previously reported at ages under 15, a tongue-ring in the stomach of a female adolescent has not yet been recorded (11). Our case had no previous history of mental disorder and she swallowed the tongue-ring unintentionally, such as the majority of these cases (3). She had no symptoms, such as frequently reported in other gastric FB cases (1). Its endoscopic removal was decided upon its potentially dangerous shape and its metallic consistency as well (4). She was turned to the right lateral position and the stomach was cautiously cleared from food residues with small amounts of water, due to the presence of a patulous pyloric channel, in order the tongue-ring could be found (9). Despite its slippery surface, it was effectively grasped with a simple biopsy forceps and it did not require any specific method for its safe extraction, owing to its convenient shape and size, unlike other cases described in literature (4).

In conclusion, our case demonstrates a troublesome and potentially dangerous consequence of certain easily adopted fashion accessories, such as tongue-rings, especially by younger ages. From the clinical point of view, it might represent the first example of a potentially emerging medical condition.

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