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CASE REPORT

Case Report: Swallowed toothbrush in the stomach of a 56 year female at St Mary's Hospital Lacor, Uganda [version 1; referees: awaiting peer review]

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Abstract

Toothbrush swallowing is a rare occurrence. Toothbrush swallowing presents a risk of impaction and perforation along the gastrointestinal tract. This case report describes a 56 year old female that presented to the emergency unit of St Mary's Hospital Lacor with a 1 day history of chest pain after a toothbrush was pushed down her throat by a traditional healer who was managing her for pharyngitis. The chest pain was associated with difficulty in breathing. She also reported dull abdominal pain. There was no history of vomiting or drooling of saliva. On examination, we found that she was in pain and had respiratory distress with a respiratory rate of 32 breath/ min and was using accessory muscles. There was no oedema, anaemia or jaundice. Blood pressure of 120/80 mmHg and pulse rate of 87 beats/ min. The abdominal findings were normal, but ultrasound scan suggested that the toothbrush was in the stomach. The plain erect abdominal x-ray was inconclusive. She was admitted to the ward for conservative management. After 2 weeks we decided to do exploratory laparotomy and we found the toothbrush in the stomach, that we removed and closed the abdomen in layers. Post-operatively the patient recovered uneventfully on the ward. Toothbrush swallowing is a rare occurrence. The commonest foreign bodies ingested by adults are bones, spoons and dentures. Toothbrush ingestion occurs commonly among patients with psychiatric conditions like bulimia or anorexia nervosa, schizophrenia and bezoar. Most swallowed toothbrushes have been found in the esophagus or the stomach of affected patients. Most people who swallowed their toothbrushes did so entirely without erotic intent, as with this case where the patient had the brush pushed down her throat by a traditional healer. This is the first case of toothbrush swallowing in this hospital.

Keywords

swallowed, toothbrush

Open Peer Review

Referee Status: *AWAITING PEER*

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Introduction

Toothbrush swallowing is a rare occurrence¹⁻³. The most common foreign bodies ingested by adults are bones of fish or chicken, spoons, and dentures which occurs during meals^{3,4}. Toothbrush ingestion most commonly occurs in patients with psychiatric conditions like bulimia or anorexia nervosa, schizophrenia and bezoar¹⁻³. Those with bulimia try to induce emesis via manual pharyngeal stimulation using the toothbrush. Most swallowed toothbrushes have been found in the esophagus or the stomach of affected patients^{1,3}.

Case description

The patient was a 56 year old female, peasant farmer from Tobora village in Oyam District, Northern Uganda presented to the emergency unit with 1 day history of chest pain after a toothbrush was pushed down the throat by a traditional healer who was managing her for pharyngitis. The traditional healer was scrapping the slough that was found on the walls of the oropharynx. When the traditional healer realized she had pushed the toothbrush far down and she could not retrieve it, she told her to come to hospital. She came to hospital the next day with complains of chest pain with associated difficulty in breathing. She also complained of mild abdominal pain that was dull in nature. There was no history of vomiting or drooling of saliva. On examination, the middle aged woman was in pain and distress, she did not have oedema, anaemia or jaundice. Her blood pressure was 120/80 mmHg and pulse rate of 87 beats/min. In regards to the respiratory system, we found that she was in distress, with a respiratory rate of 32 breath/min and she was using accessory muscles. There was no stridor, trachea was centrally located and she did not have any tenderness on the chest wall. There was normal and equal air entry on auscultation. The laboratory blood results were normal with white blood cell count 3.8×10^9 /l, hemoglobin 14.1 g/dl, hematocrit test 40.96% and platelet count 176×10^9 /l. We found normal abdominal findings. An abdominal ultrasound scan suggested that the foreign body was in the stomach (Figure 1) but the erect abdominal x-ray was not conclusive (Figure 2).

She was admitted to the ward and given paracetamol for the pain and omeprazole (PPI) for the dyspepsia. Our endoscopy machine had broken down so we were unable to do upper GI endoscopy. After close observation for about 2 weeks, a decision to perform an exploratory laparotomy was made. We made a midline supra-umbilical incision about 8 cm, deepened it into the abdominal cavity. Palpated the stomach and found the foreign body. We made a transverse incision of about 2 cm on the fundus and delivered the toothbrush through the incision (Figure 3). The incision was then close in 2 layers using vicryl 2.0. We then irrigated the abdominal cavity with 1 litre of warm normal saline and closed the abdomen in layers. The toothbrush was about 20cm long (Figure 4)

Post operatively the patient recovered well on the ward and she was discharged from hospital. There were no adverse and unanticipated events.

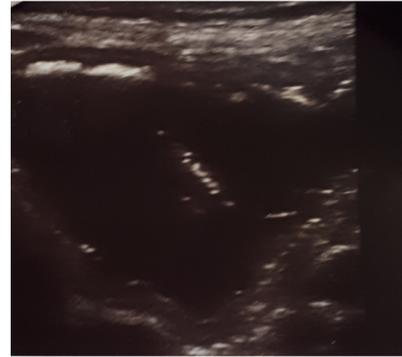


Figure 1. Abdominal ultrasound scan of patient. Results suggested that the foreign body was in the stomach.



Figure 2. Erect abdominal x-ray of patient. X-ray did not identify the foreign body.

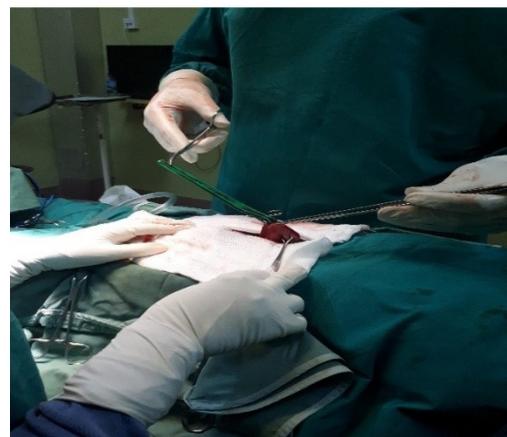


Figure 3. Image of toothbrush being removed via the fundus during surgery.



Figure 4. Image of toothbrush removed from the patient.

Discussion

Toothbrush swallowing is a rare occurrence^{1,3}. Most people who swallowed their toothbrushes did so entirely without erotic intent^{1,3} as with this case, and no literature has shown that a traditional healer has previously caused such morbidity to their client. This case demonstrates a very unusual cause of toothbrush ingestion, unlike any that have been reported previously, especially in patients without psychiatric problems. There has been no previously reported case of a toothbrush swallowed in this hospital.

Toothbrushes usually show a characteristic radiographic image with parallel rows of short metallic radiodensities due to the metallic plates that hold the bristles in place but this was not the case in our patient probably because the toothbrush was lying sideways¹. Because no cases of spontaneous passage have been reported, early endoscopy and prompt removal is recommended to minimize morbidity and to avoid prolonged hospitalization¹⁻⁵.

Ethics and consent

Written informed consent was obtained from the patient for teaching and publication of this case report and accompanying images.

Data availability

All data underlying the results are available as part of the article and no additional source data are required.

Competing interests

No competing interests were disclosed.

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That the funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

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