

A swallowed toothbrush causing perforation 2 years after ingestion

Discussion

Ingestion of toothbrushes is relatively rare with approximately 45 cases reported since 1988. Most cases are found in bulimics (Riddlesberger et al, 1991). The ingested foreign body may cause pressure necrosis leading to gastritis, ulceration and perforation and is usually removed endoscopically as a matter of urgency (Kaye et al, 2000).

There are no reports of swallowed toothbrushes having passed spontaneously and only one of a toothbrush passing through the pylorus (Lee et al, 2006). It is noted that when the toothbrush lies horizontally in the gastric body and outlet, attempts at endoscopic removal often fail, requiring gastrotomy to remove the toothbrush (Wilcox et al, 1994). **BJHM**

Kaye WH, Klump KL, Frank GK, Strober M (2000) Anorexia and bulimia nervosa. *Annu Rev Med* **51**: 299–313

Lee MR, Hwang Y, Kim JH (2006) A case of colohepatic penetration by a swallowed toothbrush. *World J Gastroenterol* **12**(15): 2464–5

Riddlesberger MM Jr, Cohen HL, Glick PL (1991) The swallowed toothbrush: a radiographic clue of bulimia. *Pediatr Radiol* **21**: 262–4

Wilcox DT, Karamanoukian HL, Glick PL (1994) Toothbrush ingestion by bulimics may require laparotomy. *J Pediatr Surg* **29**: 1596

Case Report

A 33-year-old woman presented with a 3-day history of abdominal distension, ten-out-of-ten abdominal pain and rigors. She had had her bowels open every day since the onset of the pain, and her stools were normal. She had vomited once on the day of presentation. She mentioned she had been in a tussle with another person 3 days previous, and her pain had come on after this.

She looked unwell, and was found to be hypotensive and tachycardic. Abdominal examination showed generalized tenderness and a tightly distended abdomen. There was no overt guarding and bowel sounds were normal. There was a palpable hardness in the right upper quadrant, which the patient identified as a toothbrush which she had swallowed 2 years previously as a suicide attempt. She said that it often gave her some discomfort but never anything like the pain she was experiencing at presentation. She had refused intervention to remove it at the time of ingestion and ever since.

Erect chest radiography (Figure 1) revealed a large amount of free gas under both hemidiaphragms, and the bristles of a toothbrush to the right of the midline below the diaphragm. Arterial blood gas sampling showed a profound acute metabolic acidosis.

The patient was taken to emergency theatre for a laparotomy. In theatre a 1.5 cm prepyloric anterior ulcer was found, and the toothbrush was removed, head-first, having been lying transversely in the stomach.

The patient made a slow recovery and was discharged from hospital a month after initial admission, having suffered episodes of adult respiratory distress syndrome and hypoalbuminaemia-related pleural effusion before discharge.

Figure 1. Close-up of chest radiograph showing radio-opaque toothbrush bristles just lateral to the spine.



Dr David Cox is Locum Staff Grade, **Mr Peter Donohue** is Staff Nurse, and **Miss Vanda Costa** is Senior Staff Nurse in the Emergency Department, Charing Cross Hospital, London W6 8RF

Correspondence to: Dr D Cox

Forthcoming case reports in BJHM

Pneumothorax following acupuncture

Lung abscess following accidental kerosene ingestion

Giant coronary artery aneurysms and myocardial infarction: aetiology and management

Coronary angiography in chronic aortic dissection

An unusual cause of an upper gastrointestinal bleed

Varicella pericarditis mimicking myocardial infarction

Aortic regurgitation associated with cabergoline therapy