A case of colohepatic penetration by a swallowed toothbrush

Min Ro Lee, Yong Hwang, Jong Hun Kim

INTRODUCTION

Toothbrush ingestion is uncommon, but requires prompt medical attention. Although 80% of ingested foreign bodies pass spontaneously [1], there are no reports regarding swallowed toothbrushes passing through the pylorus [2]. Here we present an unusual case of a toothbrush swallowing which passed through the ileocecal valve and perforated the proximal transverse colon, then penetrated the liver. To our knowledge, this is the first case to be reported.

CASE REPORT

A 31 year-old man was admitted to the Surgical Department of Surgery, Chonbuk National University Medical School, San 2-20 Geumam-dong, Deokjin-gu, Jeonju, Jeonbuk 561-180, South Korea. Min Ro Lee, Research Institute of Clinical Medicine, Chonbuk National University Medical School, San 2-20 Geumam-dong, Deokjin-gu, Jeonju, Jeonbuk 561-180, South Korea. Supported by research funds of Chonbuk National University in 2005. Correspondence to: Jong Hun Kim, MD, PhD Professor, Department of Surgery, Chonbuk National University Medical School, San 2-20 Geumam-dong, Deokjin-gu, Jeonju, Jeonbuk 561-180, South Korea. kimjhun@chonbuk.ac.kr

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Abstract

Although foreign body ingestion is relatively common, toothbrush swallowing is rare. We report a case of a swallowed toothbrush which passed through the ileocecal valve and perforated the proximal transverse colon, then the liver. To our knowledge, this is the first case to be reported.

Key words: Toothbrush; Colohepatic penetration

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DISCUSSION

Ingestion of a foreign body is commonly encountered in the clinic among children, adults with intellectual impairment, psychiatric illness or alcoholism, and dental prosthetic-wearing elderly subjects [1, 3]. However, toothbrush swallowing is rare, with only approximately 40 reported cases [2]. It was reported that a toothbrush shows a characteristic radiographic image with parallel rows of short metallic radiodensities due to the metallic plates that hold the bristles in place [4]. Unlike most other foreign bodies, there are no reports of swallowed toothbrushes passing spontaneously [5]. Thus, prompt intervention is required in order to avoid complications such as pressure necrosis causing gastritis, ulceration and perforation [6]. An initial extraction strategy to consider is endoscopy by a skilled technician, and the first successful performance of this procedure has been reported by Ertan et al [7]. If endoscopic removal is not possible and particular complications are not present, a laparoscopic approach may be an alternative to laparotomy [8].

To our knowledge, this is the first report of a swallo-
lowed toothbrush passing through the ileocecal valve and penetrating the colon and liver. Similar to the present case, there are reports of toothpicks penetrating the pyloroduodenal region and migrating to the liver [8]. A Medline search indicates that other similar reports involving toothbrushes are found only in the esophagus and stomach. In the present case, it is highly remarkable that a 20 cm toothbrush could pass through the pylorus and duodenal loop.

REFERENCES

1 Selivanov V, Sheldon GF, Cello JP, Crass RA. Management of foreign body ingestion. Ann Surg 1984; 199: 187-191
2 Kirk AD, Bowers BA, Moylan JA, Meyers WC. Toothbrush swallowing. Arch Surg 1988; 123: 382-384
3 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
4 Riddlesberger MM Jr, Cohen HL, Glick PL. The swallowed toothbrush: a radiographic clue of bulimia. Pediatr Radiol 1991; 21: 262-264
5 Kaye WH, Klump KL, Frank GK, Strober M. Anorexia and bulimia nervosa. Annu Rev Med 2000; 51: 299-313
6 Ertan A, Kedia SM, Agrawal NM, Akdamar K. Endoscopic removal of a toothbrush. Gastrointest Endosc 1983; 29: 144-145
7 Wishner JD, Rogers AM. Laparoscopic removal of a swallowed toothbrush. Surg Endosc 1997; 11: 472-473
8 Kanazawa S, Ishigaki K, Miyake T, Ishida A, Tabuchi A, Tanemoto K, Tsunoda T. A granulomatous liver abscess which developed after a toothpick penetrated the gastrointestinal tract: report of a case. Surg Today 2003; 33: 312-314

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