



Inadvertent swallowing of toothbrush

Dinesh Lal

A 15-year-old physically and mentally healthy Caucasian female presented to Middlemore Hospital's Emergency Department (Auckland, New Zealand) after swallowing a standard 19cm toothbrush. She was running up some steps with the toothbrush in her mouth when she suddenly tripped and fell pushing most of the toothbrush into her oesophagus.

She immediately started choking and her younger brother came to help. Part of the toothbrush was still in the mouth but with apparently a very strong gag reflex she swallowed this down before it could be pulled out. On arrival in Emergency Department she was well, apart from describing a sensation of the toothbrush churning around in her stomach

An abdominal X-ray could not visualise the brush as it was radio-opaque. She underwent a flexible gastroscopy under general anaesthesia. Minimal erythema of interarytenoid notch was seen on the left side.

The toothbrush was located in the stomach with the head end lying proximally buried into the gastric mucosa. The very proximal end of the head of the toothbrush was grabbed with a snare and pulled out with the gastroscope via the oropharynx. Moderate traction force was applied to negotiate the esophago-oro-pharyngeal angle due to the length of the toothbrush.

A relook endoscopy did not reveal any signs of trauma. A repeat chest X-ray did not reveal any pneumomediastinum and she was discharged home the same night a few hours later.

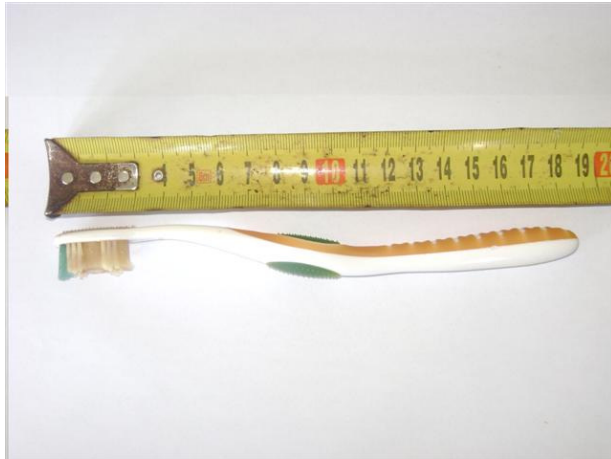
Discussion

It is generally recommended that objects longer than 6–10cm should be removed as they will have difficulty in passing the duodenal sweep.^{1–3} Using an overtube in assisting removal can be helpful by grabbing the object with a snare, manoeuvring into the overtube and withdrawing the entire apparatus with foreign body, overtube and endoscope in one motion.⁴ However in this patient an overtube was not used.

Use of an overtube itself can cause oesophageal mucosal damage especially in a younger patient. The ends of the toothbrush were relatively smooth and the shaft relatively bendable. The greatest resistance encountered was at the oropharyngo-oesophageal angle and this can be minimised by hyperextending the neck when the brush reaches this level.

In summary, walking or running around with a toothbrush in the mouth is potentially dangerous. A similar swallowed toothbrush (Figure 1) can be fairly safely removed via flexible gastroscopy under general anaesthetic without the aid of an overtube.

Figure 1. Toothbrush removed from stomach



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