

## Chewing gum: a potential cause of airway obstruction

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*To the editor:* Obstruction of the airway by a foreign body is life-threatening, especially when the cause is unrecognized. We report an unusual case involving a piece of chewing gum, found wrapped around the outside of an endotracheal tube, above the cuff, after extubation.

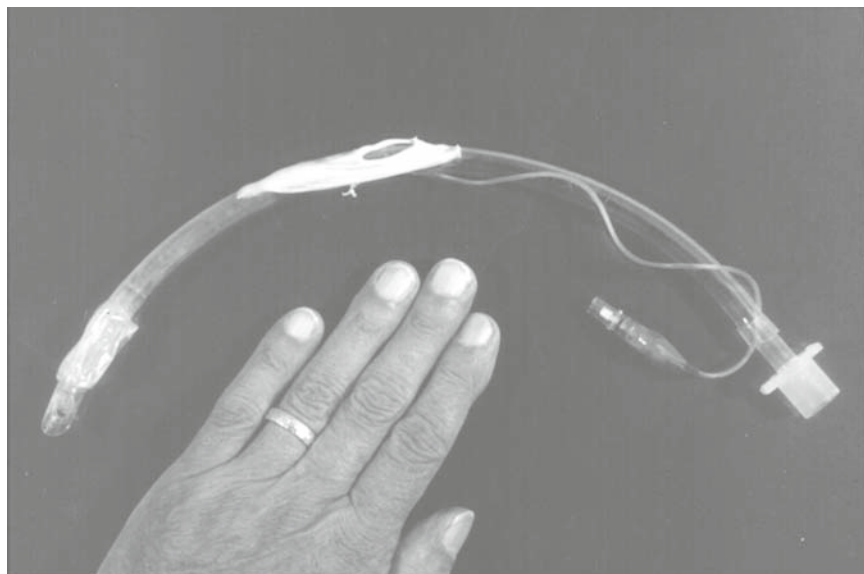
A 25-year-old woman, American Society of Anesthesiologists (ASA) physical status class I, weighing 60 kg, underwent elective surgery for excision of a left periurethral Skene's duct cyst. Midazolam 2 mg and fentanyl 50 µg were given intravenously as premedication. Standard ASA monitors were connected in the operating room. Anesthesia was induced with 2 mg·kg<sup>-1</sup> propofol and 1.5 mg·kg<sup>-1</sup> succinylcholine. After full relaxation, oral intubation was easily accomplished using a 7.0-mm endotracheal tube. Cricoid pressure was not applied. Anesthesia was maintained with N<sub>2</sub>O (70%), O<sub>2</sub> (30%), and sevoflurane. An orogastric tube was placed intraoperatively, and was suctioned at the end of surgery. A small amount of liquid gastric content was removed.

During emergence, the patient became confused and combative, attempting to pull out the endotracheal tube. While

she was coughing and bucking, a small amount of gastric content present in the pharynx was quickly suctioned and the tube remained in place. Extubation was delayed for 5–10 min, until the patient became more alert, and could properly respond to verbal commands with a sustained head lift. Upon inspection of the tube, a piece of gum was found attached to the outside, above the cuff (Fig. 1). On questioning, the patient admitted to having swallowed chewing gum before being wheeled into the operating room.

Chewing gum presents two problems for anesthesiologists: increased production of gastric fluid volume, risking *aspiration*, and the risk of mechanical airway *obstruction* [1–3]. Gum in a tracheal tube or the upper airway is potentially life-threatening. In our patient, silent regurgitation of the swallowed gum into the oral cavity from the esophagus or stomach during induction, rather than vomiting at emergence, was the most likely scenario. The chewing gum could have attached itself to the endotracheal tube upon intubation (more likely than upon extubation).

The use of chewing gum before surgery should be prohibited. Although anesthesiologists readily accept that it must be included in the nil per os (NPO) rules [1], no clear preanesthetic guidelines currently exist. Patients will usually spit out gum before entering the operating room, but some, not aware of its risks and clinical implications, may swallow it. Patients should be asked specific questions, and care providers educated to the dangers.



**Fig. 1.** A piece of chewing gum is shown attached to the outside of the endotracheal tube, above the cuff

**References**

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3. Soreide E, Holst-Larsen H, Veel T, Steen PA. The effects of chewing gum on gastric content prior to induction of general anesthesia. *Anesth Analg.* 1995;80:985-9.

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