

Aspiration of a small bowel video capsule: a rare complication

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DESCRIPTION

Video capsule endoscopy (VCE) is a non-invasive tool for the direct visualisation of the small bowel mucosa with a reported complication rate of 1%–3%.^{1,2} Capsule retention is the most common complication, accounting for 1.5%–2%.¹

We present the case of a 72-year-old man with a medical history of inflammatory bowel disease, previous small bowel perforation and ileostomy, undergoing investigation for a high output stoma. Comorbidities included type 2 diabetes.

He had no history of dysphagia and reported no swallowing problems.

The patient underwent VCE after passing a patency capsule of identical dimensions, which exited the stoma 13 hours after ingestion. Following ingestion of the capsule (PillCam SB2, Given Imaging, Yokneam, Israel), the images received on the real-time viewer suggested initial location of the capsule in the oropharynx (see figure 1). Reinspection after 30 min suggested persistent pharyngeal retention. The capsule was located in the oropharynx via gastroscopy and placed endoscopically in the duodenum. This endoscopy demonstrated a structurally normal oesophagus without evidence of tracheoesophageal fistula, nor any stenosis of the upper gastrointestinal tract.

On review of the capsule images, it was apparent that the capsule had been aspirated to the level of the tracheal bifurcation (see figure 2) before its passage back into the oropharynx.

The patient remained asymptomatic throughout, reporting no problems swallowing the capsule.

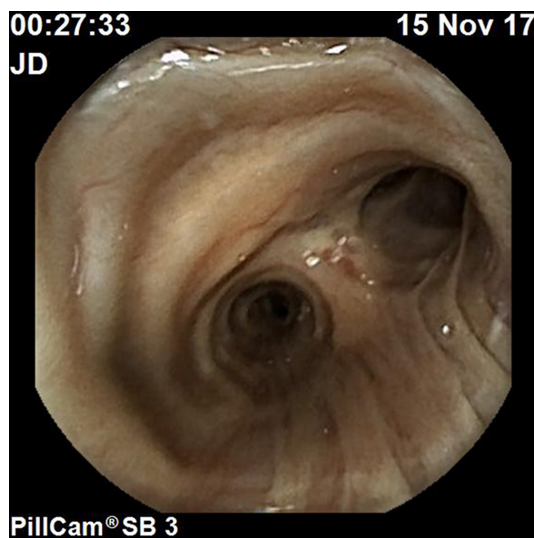


Figure 1 Vocal cords.

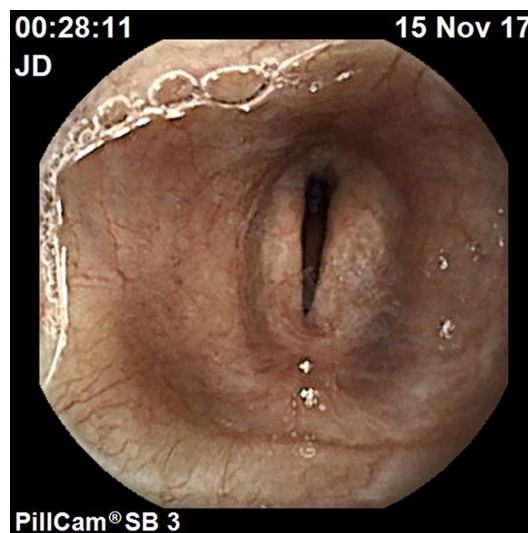


Figure 2 Carina of the trachea.

Capsule aspiration into the lungs is very rare. In our institution, we have performed 1647 VCEs to date, and this is the first occurrence of capsule aspiration. Thirty-seven cases of aspiration of a small bowel capsule have been reported in the literature with an estimated overall aspiration rate of 0.1%.¹ The pathophysiology of the process is unknown in those without diagnosed neuromuscular dysfunction. Fifteen of the 37 patients reviewed were asymptomatic of aspiration. Dysphagia was uncommon (4 of 37), and all but two cases occurred in elderly men. Half of the reported cases required an intervention, such as bronchoscopy, to retrieve the device. The remaining patients either coughed the capsule out or eventually swallowed it into their stomach. In our case, the capsule was retrieved from the oropharynx before either could occur.

No directly linked fatalities have been noted in the literature, although one patient required antibiotics for an associated pneumonia.¹ Our patient had no complications following this event.

High-risk individuals for VCE aspiration include those with compromised swallow due to neuromuscular or structural impairments of the oropharynx and oesophagus.³ Screening is based on clinical history and appropriate investigations. Alternative investigative modalities or endoscopic postpyloric placement should be considered. Appropriate consent procedures, including discussion of aspiration risk, assiduous identification of high-risk individuals and routine monitoring of capsule position in real-time, mitigate this risk. Nonetheless, this complication cannot always be excluded.

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Learning points

- ▶ Careful screening for those at risk of capsule aspiration should be performed at the time of referral and endoscopic postpyloric placement used where indicated.
- ▶ Routine inclusion of aspiration risk (approximately 0.1%) within the consent process.
- ▶ Routine monitoring of the postingestion position should be undertaken to confirm passage into the small bowel.

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