A safe treatment option for esophageal bezoars

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\section*{A B S T R A C T}

\textit{INTRODUCTION:} Bezoar in the esophagus is a rare condition and associated with structural or functional abnormalities of the esophagus. Endoscopy is the main tool for diagnosis and treatment for bezoar in the esophagus.

\textit{PRESENTATION OF CASE:} Here we present a case where an endoscopic evacuation of an esophageal bezoar was unsuccessful. We treated the bezoar through a nasogastric tube using a cocktail composed of pancreatic enzymes dissolved in Coca-Cola.

\textit{DISCUSSION:} Endoscopy is regarded as the mainstay for the diagnosis and treatment of esophageal bezoars. However, when this approach fails, other treatment options include dissolution therapy, and surgical exploration and removal of the bezoar. Surgical removal of an esophageal bezoar is associated with a high risk of morbidity and mortality. We advocate that dissolving therapy should be the first choice of treatment when endoscopic evacuation is not possible.

\textit{CONCLUSION:} This is the first report describing a successful treatment of an esophageal bezoar with a cocktail of Coca-Cola and pancreatic enzymes. It is an effective, inexpensive, and worldwide available treatment and should be considered when endoscopic evacuation fails.

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\section*{1. Introduction}

Bezoars are concretions or hard masses of indigestible matter, usually containing food, hair or tablets. Bezoars are more commonly seen in the stomach, but can be found anywhere in the gastrointestinal tract. Esophageal bezoars are rare and only a few cases have been published in the literature.\textsuperscript{1,2} These bezoars are described to occur in patients with structural or functional abnormalities of the esophagus. Endoscopy is regarded as the mainstay for the diagnosis and treatment, and can be used to fragment and evacuate bezoars using a number of different endoscopic tools. Other treatment options include dissolution therapy with proteolytic enzymes, and surgical exploration and evacuation.

\section*{2. Case presentation}

We report a case of a 74-year-old man with Parkinsons disease who presented with severe dysphagia. He could not swallow fluids and had odynophagia. A detailed history was not possible because of dysphasia due to his Parkinsons disease. There were no symptoms of aspiration of swallowed food. Direct laryngoscopic examination was normal. Esophageal endoscopy revealed a hard yellow-whitish concretion causing a complete obstruction of the esophagus at 27 cm from the incisors. Repeated attempts were made to disrupt the bezoar by using both flexible and rigid esophagoscopes with a wide range of instruments such as biopsy and rat-tooth forceps, balloons, and loops without success. Attempts to push it into the stomach also failed. Due to the size and consistency of the bezoar, further endoscopic intervention was considered dangerous with a risk of perforation thus additional attempts were aborted.

Surgical removal of an esophageal bezoar is also associated with a high risk of morbidity and mortality. Recently, several reports have described Coca-Cola as an effective and safe treatment option for dissolution of gastric phytozoa,\textsuperscript{3–5} One report has described successful elimination of esophageal bezoar with pancreatic enzyme extract.\textsuperscript{5}

We placed a nasogastric (NG) feeding tube in the esophagus just proximal to the bezoar and decided to make a dissolving cocktail. One capsule of pancreatic enzyme Creon\textsuperscript{®} 10,000 (Solvay Pharmaceauticals, Hannover, Germany) which contains 10,000 U lipase, 8000 U amylase, and 600 U protease, was dissolved in 30 ml of Coca-Cola. The cocktail was instilled 4 times daily to the NG tube for four consecutive days. The head of the bed was elevated during the treatment sessions and a cuffed endotracheal tube was kept in place to
There was a long-time history of severe dysphagia and severe distal esophageal dilatation. The patient was anaesthetised and intubated, the airways were secured with a thick NG tube in order to ensure enteral nutrition. A CT scan of the esophagus (Fig. 1) revealed a moderately dilated esophagus with a bezoar. Repeated endoscopy on day five, revealed no evidence of the bezoar in the esophagus. The stomach and proximal duodenum were also empty and normal. However, there were mucosal edema, a longitudinal fissure, and erosions in the esophagus that was attributed to the pressure effect of the bezoar and long-time instrumentation the first day of endoscopy (Fig. 2).

A barium swallow esophagography demonstrated a dysmotility and delay of passage. Further investigation with esophageal manometry was unsuccessful due to the patient’s co-morbidity and lack of compliance. Peristaltic abnormality of the esophagus is associated with an advanced stage of Parkinsons disease and may explain why our patient developed a bezoar. Furthermore, he had a poor dental status which could have resulted in suboptimal chewing of the food. He was relieved from severe dysphagia and was discharged with the recommendation to drink a glass of Coca-Cola with larger meals.

3. Conclusion

Treatment of esophageal bezoars with a dissolving cocktail of Coca-Cola and pancreatic enzymes is effective, inexpensive, and worldwide available treatment that should be considered when endoscopic evacuation is unsuccessful.

Conflict of interest statement

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Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

SY conducted the literature search, completed the chart review and authored the manuscript. MS, EK, YT, ESL, VD, and OR provided input to the manuscript, edited the manuscript and treated the patient with SY. NB provided the CT scan assessment and provided input to the manuscript. All authors have read and approved the final manuscript.

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