Large gastric wood bezoar: Anesthesia implications

Sir,

Bezoars are collections or concretions of indigestible foreign material that accumulate and coalesce in the gastrointestinal tract, most commonly in the stomach. Gastric bezoar formation occurs in patients with altered gastric physiology, impaired gastric emptying and other co-existing illness affecting gastrointestinal motility. It is also commonly seen in patients with psychiatric illnesses and history of pica. In the pediatric population, common types of bezoar seen are lactobezoars, phytobezoars, and trichobezoars. We report the case of a 7-year-old child with a large gastric wood bezoar.

A 7-year-old male child weighing 20 kg presented with a history of pica, mostly wooden scrapings since 2½ years, pain in abdomen and vomiting. Upper gastrointestinal (UGI) endoscopy revealed a large gastric bezoar. The patient underwent endoscopy twice during which general endotracheal anesthesia was given but the attempts to remove the bezoar piecemeal were unsuccessful. Five days following the third endoscopy, the patient developed constipation, abdominal tenderness and guarding, and was scheduled for a laparotomy. The biochemical investigations of the patient were normal, except for hemoglobin level of 92 g%. Preoperative optimization of fluid status was done.

Rapid sequence induction (RSI) was done using 40 mg of propofol and 20 mg of rocuronium intravenously, and the patient was intubated using 5.5 mm ID cuffed endotracheal tube. A 24 G lumbar epidural catheter was inserted postinduction for analgesia. Gastric perforation was seen on laparotomy caused either by the bezoar itself or the attempted endoscopic removal. After extending the incision, a phytobezoar measuring 13 cm × 11 cm (200 g) was removed, and the gastric perforation was closed [Figure 1]. Anesthesia was reversed, and recovery was uneventful.

The anesthesiologist must be aware of the perioperative complications of a large gastric bezoar. The complication rate of endoscopy is 0.1% for UGI procedures with cardiopulmonary events predominating (50%) which include dysrhythmias, hypoxemia from respiratory depression, and cardiac arrest. Bleeding, aspiration, and perforation are other complications. There is a reported case of respiratory arrest due to airway obstruction following the endoscopic removal of trichobezoar. Certain co-morbid conditions such as cystic...
fibrosis, diabetes mellitus, hypothyroidism, Guillain–Barre syndrome, and renal failure, etc., have been associated with an increased risk of bezoar formation. Bezoars are also associated with failure to thrive and iron deficiency anemia. Patients with protracted obstructive symptoms and vomiting are likely to be hypovolemic and have electrolyte disturbances. Preprocedure resuscitation may be required. RSI is indicated as these patients are at high risk of aspiration. In pediatric patients, the cricoid pressure given during RSI can distort the airway and interfere with smooth induction. Furthermore, there are more chances of hypoxemia in the period between induction and reestablishment of ventilation. Hence, we avoided the “classic” RSI and used gentle pressure limited mask ventilation with 100% oxygen following induction. The close psychiatric follow-up is recommended to diminish the chances of recurrence. Laparoscopic removal of gastric bezoar is associated with less postoperative morbidity and pain but is technically challenging.

Our patient had borderline hemoglobin with a picture of iron deficiency anemia with normal electrolytes. The risk of aspiration was present as the patient had developed obstructive symptoms. Due to the large size of bezoar and risk of aspiration, RSI was done. As the patient was clinically stable, propofol was used for induction, and epidural anesthesia was also given. The patient was referred for psychiatric evaluation postoperatively.

To conclude, the anesthetic plan to manage a gastric bezoar should include complications associated with preoperative fluid and electrolyte imbalance, the need for RSI and intubation, and issues associated with the procedure or surgery itself.

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Conflicts of interest
There are no conflicts of interest.

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