Pharyngeal tear during gastric calibration tube insertion for laparoscopic sleeve gastrectomy

Sir,

Iatrogenic injuries to the upper digestive tract under anesthesia are rare and under reported. If left undiagnosed, it can lead to serious problems and long-term morbidity. Early recognition and treatment is the key to the good outcome.

A 40-year-old lady was listed for laparoscopic sleeve gastrectomy. She was obese with weight 167 kg, height 175 cm, and body mass index 54.5 kg/m². She had no other comorbidities. Airway examination was normal. Intubation was done easily. The gastric calibration tube 38 Fr (Ethicon Endosurgery, Germany) was inserted orally after applying adequate jelly. There was some resistance initially for the passage of the tube. The tube was pulled back and reinserted. This time, the sufficient length of the tube went in with some difficulty. After port insertion, the surgeon informed that he could not see the calibration tube in esophagus. Then the calibration tube was removed from the oral cavity planning for reinsertion. Blood stain was noticed at the tip of the calibration tube. There was no crepitus in the neck. Immediately, the surgeon was informed. Endoscopy by the gastroenterologist showed a linear tear in the left side of the posterior pharyngeal wall involving the mucosa and submucosa as shown in left half of Figure 1. After

Figure 1: Endoscopic image of pharyngeal tear
consultation with the surgeon and gastroenterologist, the surgery was postponed. She was normal postoperatively but complained of neck pain. X-rays of the neck and chest were normal. She was kept nil oral and was advised povidone iodine gargling.

Repeat endoscopy done 3 days later showed healing wound. Subsequently, 2 days later laparoscopic sleeve gastrectomy was done. This time, the calibration tube was inserted meticulously on the right side under direct laryngoscopic view. Patient was comfortable postoperatively. Endoscopy done a week later showed healed pharyngeal wound as shown in right half of Figure 1.

Laparoscopic sleeve gastrectomy is considered the gold standard in the treatment of morbid obesity in selected patients.[2] Orogastric calibration tube is routinely used for the calibration of the gastric sleeve during laparoscopic sleeve gastrectomy, which protects the patient from excessive gastrectomy and stenosis. The intraoperative tightness of the stapled suture line is checked with the instillation of blue dye or air through the calibration tube.[2]

Despite its rare occurrence as compared to other airway injuries, iatrogenic pharyngesophageal perforations under anesthesia leads to disastrous consequences if left untreated.[3] Early warning signs of pharyngesophageal perforation are neck pain, crepitus, dysphagia, and cervical subcutaneous emphysema. Late features include retropharyngeal abscess, pneumonia, pneumothorax, and mediastinitis.[4] In patients with multiple attempts of endotracheal or nasogastric or orogastric tube insertion with early warning signs as above, pharyngesophageal perforation should be suspected.

Confirmatory investigations include chest X-ray, endoscopic evaluation, and computerized tomographic scan. The mainstay of treatment is conservative for the most of the cases with keeping the patient nil oral and administering broad spectrum antibiotics. For complicated cases, intravenous antibiotics, drainage of retropharyngeal abscess, and surgical repair may be necessary.[5] In our case, the pharyngeal tear was superficial, and hence, managed conservatively.

Thus, the calibration tube has to be inserted gently under direct laryngoscopic view and its placement confirmed before any infusion through it. Close communication between anesthesiologist and surgical team is necessary for successful management of these iatrogenic pharyngesophageal injuries.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

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