Post-oesophagectomy chylothorax: An unusual cause of postoperative stridor

Sir,

Thoracic duct injury after an oesophagectomy is a relatively rare complication with an incidence rate of around 0%–8%.[1] Post-operative airway obstruction in such patients can add to the diagnostic dilemma and may even be fatal. We hereby, present a case of thoracic duct injury after laparoscopic oesophagectomy which developed stridor due to tracheal compression and subsequently required intubation.

A 44-years-old female (60 kg) who was a known case of carcinoma of the oesophagus involving the middle one-third of the oesophagus was posted for minimally invasive oesophagectomy. Intra-operatively, adhesions were encountered at the level of the carina; however, en bloc oesophagectomy with safeguarding of the azygous vein with gastric pull-up was performed successfully. Her immediate post-operative period was

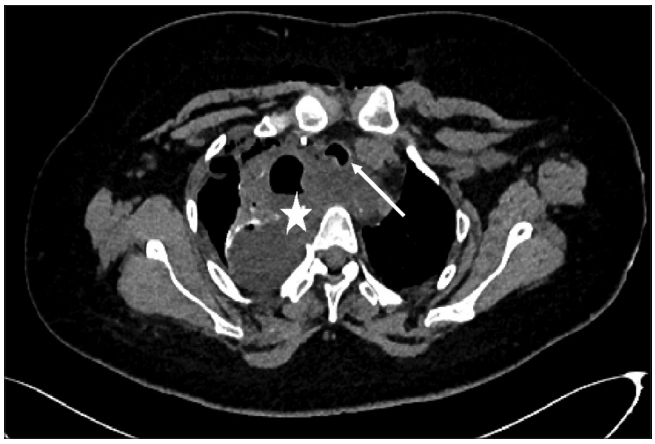

Figure 1: The computed tomography (CT) scan axial image at the level of the upper thorax, after oesophagectomy showing hypodense fluid collection (asterix) in the posterior mediastinum causing anterior displacement of the trachea (white arrow) with partial luminal narrowing

uneventful; however, on the 2nd post-operative day, after commencing feed through jejunostomy tube, there was increased intercostal drain tube (ICDT) output with milky texture. Iatrogenic injury to the thoracic duct was suspected and was confirmed with increased triglycerides in the pleural drain fluid (250 mg/100 mL) as well as by the presence of chylomicrons. Another ICDT was also placed on the left side in view of increasing pleural effusion. The total output through both the tubes was approximately 800 mL/day. Nutrition through feeding jejunostomy was completely stopped, and parenteral nutrition was started. Despite adequate conservative measures, ICDT output did not decrease. On the post-operative day 4, the patient complained of difficulty in breathing. On examination, prominent use of the accessory muscles was noted, and auscultation revealed decreased air entry on the right side with the presence of rhonchi. The patient was intermittently nebulised with levosalbutamol, and injection hydrocortisone 100 mg was given, after which she had symptomatic relief. Subsequently, urgent lymphangiography and computed tomography (CT) chest were planned. Anomalous course of the thoracic duct and a leak from the left posterior segment of the mid-thoracic duct at the level of the carina were visualised during lymphangiography. The CT of the patient revealed fluid collection in the posterior mediastinum causing anterior displacement of the trachea with partial luminal narrowing [Figure 1]. A CT-guided percutaneous embolisation of the thoracic duct was attempted but was not successful. The patient was thereafter shifted to the intensive care unit for meticulous monitoring. The next day, the patient developed acute respiratory stridor. The neck sutures were immediately opened to drain the collection; however, symptoms did not improve, and the patient was thereafter intubated, and urgent surgical intervention was planned. Thoracoscopic-guided drainage of the collection was done followed by thoracic duct ligation. The patient was extubated after few hours of monitoring. Her further post-operative course was uneventful with the saturation of 98%–100% on room air, and feeding jejunostomy was started.

Although most of the patients with traumatic thoracic duct injury can be managed conservatively, timely diagnosis is important. Surgical intervention is indicated in excessive leak >500 mL/day for greater than 5 days or any volume of output persisting for greater than 14 days.[2] Chylothorax after oesophagectomy leading to severe stridor has been rarely reported and is an important differential diagnosis for timely management. Acute gastric dilatation as a cause of respiratory distress after oesophagectomy has been described by Nair *et al*.[3] Allen *et al*.[4] described traumatic thoracic duct injury after mechanical chest trauma which led to upper airway obstruction while Theaker *et al*.[5] described two post-oesophagectomy patients with mediastinal chylothorax who were misdiagnosed with asthma.

Our experience highlights the significance of early diagnosis, vigilant monitoring, and timely intervention in successfully managing the iatrogenic thoracic duct injury causing upper airway obstruction, which can otherwise be fatal.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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