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**BJAN-D-21-00117 - Clinical Image**

**Dilated esophagus on a preoperative chest radiograph: an easily missed risk factor for aspiration**

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Chest radiography, used as a preoperative screening tool for COVID-19 in high-risk children during the COVID-19 pandemic,[1] is relatively less sensitive for detecting esophageal anomalies due to the lack of contrast observed when the esophagus is empty and close. The images from a girl for tonsillectomy revealed an abnormal distension of the esophagus, indicating a potential narrowing of the lower esophagus prompting further examination (Fig. 1 A-B). However, the diagnosis of dilated esophagus was initially overlooked due to no specific clinical manifestations. Reflux and aspiration

during anesthesia induction were observed. Esophageal achalasia, a rare disease in children,[2] was postoperatively diagnosed (Fig. 1C).

Emptying of the esophagus prior to intervention is essential to prevent aspiration during anesthesia induction in patients with esophageal achalasia.[3] Diagnosis of esophageal achalasia may easily be missed if symptoms are not evaluated by well-trained clinicians. Furthermore, the gas-filled esophagus shaded in the mediastinum can be neglected on chest radiograph if unsuspected, particularly in the postero-anterior view. Normally, gas-like low density in the mediastinum is only found in the trachea on chest radiograph. It is important for an anesthesiologist to understand the various differential diagnoses on a chest radiograph if another gas-like density in the mediastinum is seen.

### **Conflicts of interest**

The authors declare no conflicts of interest.

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**Figure 1** – A, Lateral view shows abnormal dilated esophagus with air (arrow) behind the trachea in the posterior mediastinum; B, Postero-anterior view shows an easily missed distension of the esophagus (arrow) in the upper mediastinum and lower esophagus is covered by heart and great vessels; C, Upper gastrointestinal radiography using iohexol on postoperative day 1 shows distal funnel-like narrowing and proximal dilation of the esophagus.

