

## CLINICAL IMAGES

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



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Received 24 February 2021; accepted 10 April 2021

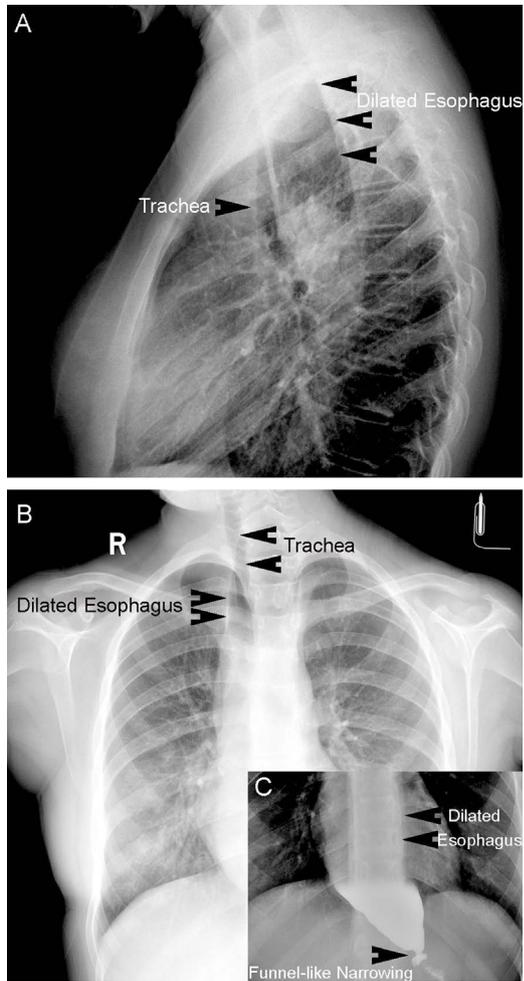
Available online 28 April 2021

Chest radiography, used as a preoperative screening tool for COVID-19 in high-risk children during the COVID-19 pandemic,<sup>1</sup> 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. 1A-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,<sup>2</sup> was post-operatively diagnosed (Fig. 1C).

Emptying of the esophagus prior to intervention is essential to prevent aspiration during anesthesia induction in patients with esophageal achalasia.<sup>3</sup> 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.

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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.

## Conflicts of interest

The authors declare no conflicts of interest.

## Funding

This work was funded by the Natural Science Foundation of Shandong Province (ZR2020QH291 and ZR2020MH126), the Key Research and Development Plan of Shandong Province (2019GSF108228), the Qingdao Key Health Discipline Development Fund (2019), and the Qingdao Outstanding Health Professional Development Fund (2019).

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