

## CLINICAL IMAGE

# Esophageal perforation with orogastric tube malposition in low-birth-weight infant

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**Abstract**

Esophageal perforation is an uncommon, but serious complication which can be caused with gastric tube placement. Physicians should suspect the malposition of the gastric tube when there is a straight course of the lower segment of the tube.

**KEYWORDS**

esophageal perforation, gastric tube, low-birthweight infant, straight course of the lower segment of the tube

A male newborn weighing 1950 g was delivered by cesarean section at 32 weeks of gestation. The patient was treated with nasal continuous positive pressure for respiratory distress, and an orogastric tube (OGT) was inserted without any resistance. Subsequent frontal chest radiograph, which revealed OGT terminating with a straight tip, suggested OGT misplacement (Figure 1). A lateral chest radiograph revealed that OGT directed posteriorly instead of anteriorly toward the stomach (Figure 2). Accordingly, the OGT was removed, and an esophagram study demonstrated a leakage from the gastroesophageal junction to the posterior mediastinum (Figure 3). For 14 days, the patient received nothing orally but received total parental nutrition and antibiotics. The second esophagram on postnatal day 15 revealed improvement of esophageal fistula and no morphological abnormality in the esophagus. Enteral nutrition was started, and the patient was discharged on postnatal day 40 without any complication. Esophageal perforation is a rare, but serious complication that can be caused by gastric placement,<sup>1</sup> and it is imperative to confirm the precise location before starting nutrition. Although there are several typical findings suggesting esophageal perforation in newborn, findings of this case are rare and the most difficult to diagnose radiographically.<sup>2</sup> Physicians should suspect the malposition of the gastric tube when there is a straight course of the lower segment of the

tube, and lateral chest radiograph could be useful for confirming the position of tip.



**FIGURE 1** Frontal chest radiograph revealed OGT terminating with a straight tip



**FIGURE 2** Orogastric tube (OGT) directed posteriorly instead of anteriorly



**FIGURE 3** Esophagram study demonstrated a leak from the gastroesophageal junction to the posterior mediastinum

## CONFLICT OF INTEREST

No potential conflict of interest to disclose.

## AUTHOR CONTRIBUTIONS

TM: contributed to this report as a physician in charge of the treatment of this case and drafted this report. TT: assisted in the preparation of the manuscript. TH: performed esophagram and suggested treatment strategy.

## INFORMED CONSENT

The signed consent was obtained from caregiver (mother) in writing.

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