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A Case of Iatrogenic Esophageal Perforation in an Extremely Low Birth Weight Neonate

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Abstract : Blind oro-/naso-pharyngeal suction and feeding tube placement are very common practices in neonatal intensive care unit. Though esophageal perforation is a rare complication of these instrumentations, its prevalence is highest in extremely premature neonates. Due to its association with significant morbidity (including respiratory deterioration, pneumothorax, and sepsis) and even mortality, it is an important issue to prevent this iatrogenic complication in the field of premature care. We demonstrate an esophageal perforation in an extreme-low-birth-weight neonate after oro-gastric tube placement. This female baby weighing 680 grams was delivered by caesarean section at 25 weeks of gestational age. She initially received oro-tracheal intubation with mechanical ventilation which was smoothly weaned to non-invasive positive-pressure ventilation at 7-day-old. However, after insertion of a 5-French oro-gastric tube, the baby's condition suddenly worsened with apnea requiring mechanical ventilation. Her chest radiogram showed the oro-gastric tube in right pleural space, and thus another oro-gastric tube was replaced, and its position was radiographically confirmed. The malpositioned tube was then removed. The baby received 2-week course of intravenous antibiotics for her esophageal perforation. Feeding was then reintroduced and increased to full feeds in a smooth course. She was discharged at 107-day-old. Esophageal perforation in newborn is very rare. Sudden respiratory deterioration in a neonate after naso-/oro-gastric tube placement should alarm us to consider esophageal perforation, and further radiological investigation is required for the diagnosis. Tube materials, patient condition, and age are major risk factors of esophageal perforation. The use of softer tube material, such as silicone, in extreme premature baby might prevent this fetal complication.

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