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Esophageal Atresia with Double Tracheoesophageal Fistula

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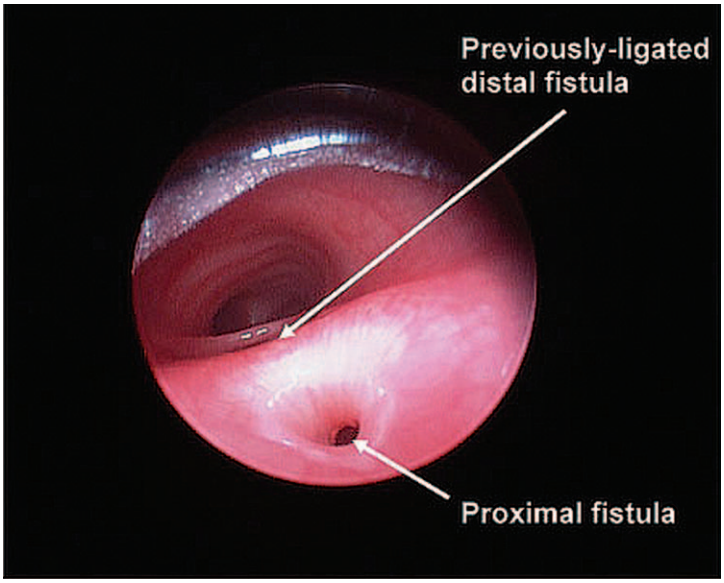

We report a 31-week gestational age neonate (2.1 kg) with esophageal atresia and a distal tracheoesophageal fistulae (TEF). After a bronchoscopy with a zero angle scope, the fistula was ligated and the esophagus reconstructed. A postligation esophagogram revealed a second, proximal TEF. Bronchoscopy with a 30° bronchoscope, positive pressure ventilation, and probing confirmed the presence of the proximal fistula (fig).

Of the five variants of TEF (incidence, 1:3500 live births),[1] esophageal atresia with a distal TEF is the most common (85%)[2]; less than 1% have a double TEF. The diagnosis of esophageal atresia is confirmed by the inability to pass a catheter into the stomach, oral secretions, and coughing, choking, and cyanosis after feedings. Plain x-ray with an orogastric or nasogastric tube *in situ* can be confirmative. Failure to ligate a TEF can lead to chronic aspiration and pneumonitis.[3]

Anesthesia concerns include prematurity, congenital anomalies, and aspiration. The trachea can be intubated either awake or after an inhalational induction, avoiding paralysis and positive pressure ventilation. With the bevel facing anterior, the tube should be advanced into a bronchus and then withdrawn until breath sounds are equal. Spontaneous respiration is maintained until the chest is opened, after which respiration is assisted until the fistula is ligated. Without positive pressure ventilation, the fistula can be difficult to locate during bronchoscopy because the mucosa often collapses. A 30° bronchoscope may be helpful. Early extubation is preferred to reduce stress on suture lines, although reintubation due to tracheomalacia remains a risk. Postoperative analgesia may be achieved using regional anesthesia, parenteral opioids, or the combination.

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Presented in part as a poster in Medically Challenging Cases at the annual meeting of the American Society of Anesthesiologists, San Diego, October 17, 2010, and as an online abstract at the F1000 Medicine abstract Web site: F1000 Medicine Poster 2010, 1: 620.

 Anesthesiology 2013; 118:1207