**Esophageal Atresia & Tracheoesophageal Fistulas**

**What is it?**
- Esophageal atresia is a congenital condition where there is discontinuity in the esophagus that results in obstruction.
- A tracheoesophageal fistula is an abnormal communication between the esophagus and trachea.
- Esophageal atresia and tracheoesophageal fistulas can occur either alone or in combination.

**Background**
- Incidence of having either of these anomalies either alone or in combination is about 1 in 3000 live births.
- There is a very slight male predominance and up to 60% will have an associated abnormality.
- During the 4th week of gestation the esophagotracheal diverticulum from the foregut fails to divide completely.
- Major cardiac abnormalities are present in approximately 25% of fetuses and up to 10% will have one or more VACTERL anomalies (Vertebral, Anorectal, Cardiac, Tracheal, Esophageal, Renal, and Limb), additionally 5% have aneuploidies, most commonly trisomy 13 and 18.

**Types & Prevalence**

<table>
<thead>
<tr>
<th>Type</th>
<th>Prevalence</th>
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<tbody>
<tr>
<td>A – Esophageal atresia</td>
<td>7%</td>
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<tr>
<td>B – Proximal esophageal fistula</td>
<td>2%</td>
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<tr>
<td>C – Proximal esophageal atresia with lower fistula</td>
<td>86%</td>
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<td>D – Proximal &amp; distal fistulas without esophageal communication</td>
<td>1%</td>
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<td>E/H-Type – Continuous esophagus with fistula</td>
<td>4%</td>
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**Presentation & Diagnosis**
- The diagnosis may be suspected from polyhydramnios; however, the condition is often diagnosed post-natally.
- Signs in infancy include excessive salivation along with coughing or choking during the first oral feeding. Gastric reflux spilling into the trachea can also cause immediate respiratory distress.
- The inability to pass a nasogastric tube into the stomach is a cardinal sign of tracheoesophageal fistulas in addition to absence of a gastric bubble on X-Ray.

**Treatment & Prognosis**
- Broad spectrum IV antibiotics should be started empirically. Surgical repair involves an open thoracotomy normally through the right 4th intercostal space along with bronchoscopy to determine the site of the fistula. The fistula is taken down and the esophageal ends are anastomosed together. Significant mobilization of the lower esophagus is typically avoided due to the tenuous blood supply of this area.
- Complications include esophageal motility disorders, GERD, strictures, anastomotic leak, and tracheomalacia.
- Over 95% of patients are expected to survive, however the mortality rate is intimately related to any cardiac, or chromosomal abnormalities present.
- It is also paramount to screen these patients with an echocardiogram and a renal ultrasound.