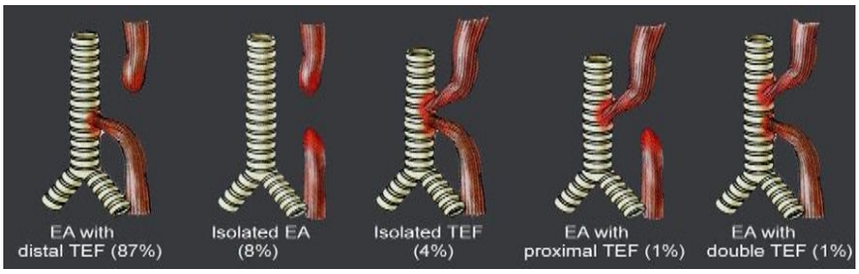
Management of Tracheo-oesophageal Fistula and Oesophageal Atresia (TOF/OA)

Refer EARLY to KIDS NTS for advice - 0300 200 1100

Incidence: 1 in 3500 live births; more than half will have additional malformations including VACTERL associations.
History: Antenatal US scans can show Polyhydramnios and/or absent stomach bubble, and/or associated congenital anomalies.
Clinical Features: > Prematurity (secondary to Polyhydramnios); excessive production of frothy saliva; episodes of choking and cyanosis exacerbated by attempts to feed; failure to pass NGT (unable to pass 9-11cm at the gums in term infants).
> Choking and abdominal distension predominate in infants with an isolated trachea-oesophageal fistula.
> Respiratory compromise with TOF/OA = SURGICAL EMERGENCY.
> Morbidity and Mortality is increased in VLBW babies and those with associated cardiac defects.

Key Questions:
1) Referral Unit Level?
2) Antenatal Diagnosis (Yes/No?)
3) Preterm or Term?
4) Respiratory Distress – Intubated?
5) CXR/AXR findings?



Key Features: **X-ray the whole abdomen with NGT/Replogle in situ**
- **NGT is seen coiling or tenting in the upper oesophageal pouch?**; presence of air in the abdomen indicates a distal fistula; a gasless abdomen indicates a pure Oesophageal Atresia; Proximal fistula and H-types are more difficult to diagnose.

Ventilated TOF/OA is a time critical transfer and requires immediate dispatch.

Discuss early with KIDS NTS and seek surgical advice.

Non Ventilated TOF/OA:
> Nurse 30 degrees head turned to facilitate drainage of secretions.
> Insert Replogle tube 10 Fr (9-11cm in a term infant)
> Keep Oropharynx clear of secretions to prevent aspiration.
> Attach Replogle to low flow suction 5-10 kPa and Flush with 0.9% sodium chloride every 15 minutes to ensure patency.
> Avoid mask ventilation and non-invasive ventilation if possible - monitor for abdominal distension and signs of respiratory compromise - 02 sats, RR, work of breathing, blood gas.
> If considering intubation and ventilation please discuss with KIDS NTS early.

Ventilated TOF/OA:
> Preterm/RDS complicates management due to low resistance preferential flow of air through the fistula– poor respiratory gases/abdominal distension.
> Emergency Ligation of Fistula is indicated.
> Position ETT just above Carina (past the fistula) and ventilate with low pressure strategies.
> Consider HFOV as a strategy.
> Obtain a CrUSS and a Cardiac ECHO if possible - do not delay departure.
> Send Chromosomes and perform a NIPE to assess for other anomalies (Clefts/Anorectal malformations/Cardiac murmurs).
> Evidence of Syndromic Children with trisomy 13 or 18 should be discussed with Consultants.

Author - BG. Sept 2020.