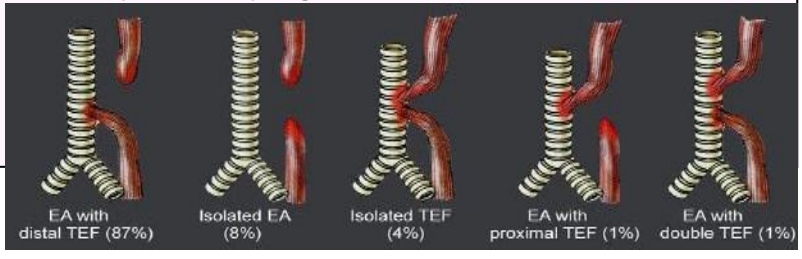
Management of Tracheo-oesophageal Fistula and Oesophageal Atresia (TOF/OA)

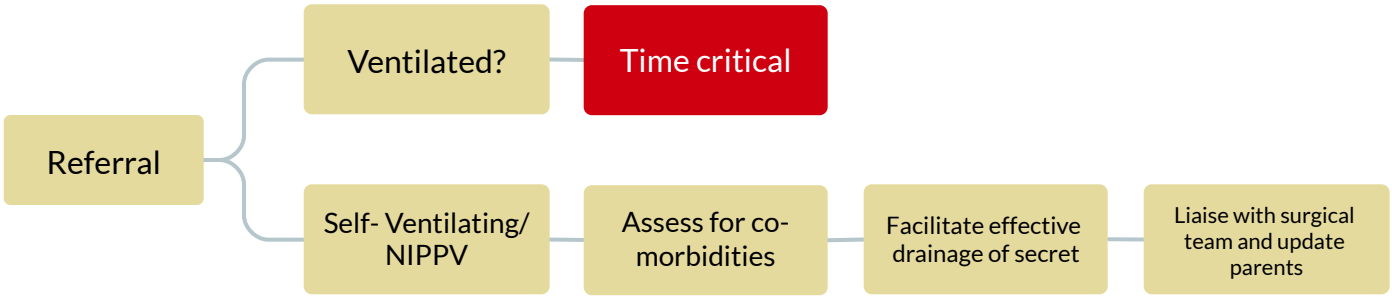
Refer EARLY to KIDS NTS for advice - 0300 200 1100

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).
> Respiratory compromise with TOF/OA = SURGICAL EMERGENCY.
> Morbidity and Mortality is increased in VLBW babies and those with associated cardiac defects.

Radiographical features: >NGT is seen coiling or tenting in the upper oesophageal pouch?The presence of air in the abdomen indicates a distal fistula; a gasless abdomen indicates a pure oesophageal atresia

Associations:
> Intestinal atresia and anorectal malformation
> VACTERL/CHARGE syndrome





Key Questions: 1) Referral Unit Level? 2) Antenatal Diagnosis? 3) Gestation/weight? 4) Respiratory status 5) CXR findings?

Ventilated TOF/OA is a time critical transfer and requires immediate dispatch.
Discuss early with KIDS NTS and seek surgical advice.

Non invasive ventilation/Self ventilating patient

> 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.
> Keep baby calm- avoid excessive crying which can exacerbate abdominal distension
> IV fluids due to NBM- ideally 2 x cannula for transport

Invasively ventilated patient

> 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.
>Insert Reploge *(manage as per Non invasive ventilation box)*
> 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. Oct 2024. Review Oct'27