OESOPHAGEAL ATRESIA/ TRACHEO-OESOPHAGEAL FISTULA (OA/TOF)

Disclaimer

Paediatric surgical clinical guidelines are guides to treatment for junior staff. They are not protocols. Management of each patient is at the discretion of the consultant surgeon.

Pre-operative Management

Assessment and initial classification according to Spitz [5]

1. BW>1.5kg, without major cardiac disease
2. BW<1.5kg OR major cardiac disease
3. BW<1.5kg AND major cardiac disease

Clinical examination

- Associated anomalies (up to 50%) (cardiac – genitourinary – vertebral – anal (VACTERL, etc.)
- Respiratory status (atelectasis – RDS – degree of ventilatory support)

Imaging

- Chest x-ray (tip of NG-tube, aspiration, etc.)
- Abdominal x-ray (signs of obstruction – air in stomach (fistula)
- Spine x-ray
- ECHO (cardiac problem – left or/and right aortic arch) (if in doubt about aortic arch CT/MRI)
- Renal US (can be post-op if passed urine – otherwise pre-op to exclude bilateral renal agenesis, a contraindication to surgery)

Initial management

- Suction of upper pouch (Reploggle tube or intermittent – Consultant dependent)
- Consider elevation of head in order to prevent aspiration
- Consider antibiotics (Consultant dependent)
- O2-monitoring
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**Operation**

**Goal**

Primary repair (There may be major co-morbidities (e.g. cardiac or respiratory) that preclude early primary repair)

- Bronchoscopy
- Standard approach: Right extra-pleural thoracotomy (aim for left side in rare case of right aortic arch)
- Normally no gastrostomy required (except in cases where a primary anastomosis is not possible)
- One layer end-to-end anastomosis (+ ligation of fistula)
- Chest drain depends on surgeon’s preference (recommended in cases of intra-operative difficulties eg long gap, increased tension)
- Insert transanastomotic NG-tube (Consultant dependent)

**Post-operative management**

Observation on ward or PICU (dependent on respiratory/cardiac condition)

- Continue with antibiotics (Consultant dependent)
- Chest x-ray post-OP
- Start feeding via NG-tube
- Introduction of oral feeds is Consultant dependent (some Consultants would perform a contrast study on day 5-7 before introducing oral feeds)
- Anastomosis under tension – consider PICU for ventilation and paralysis with head flexed for 5 days

**Complications**

**Early**

- Sepsis
- Respiratory problems (aspiration, lung collapse, tracheomalacia)
- Leak
- Pneumothorax

**Late**

- Re-fistula
- Stricture
- Gastro-oesophageal Reflux
- Dysmotility problems / swallowing disorders
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References


