**Esophageal Atresia**

Clinical Practice Guidelines

**Diagnosis**:

* A nasogastric tube 10 Fr or larger (modified for preterm infants) should be routinely inserted as a diagnostic procedure in cases with suspected EA
* Contrast study – 0,5ml Gastrografin
* Thoracoabdominal X-ray
* Intermittent (on demand) low pressure suction from the upper pouch.

Spontaneous breathing should routinely be favored. If assisted ventilation is required, preference should be given to intubation rather than to noninvasive ventilation.

**Preop:**

* Parents counseling & agreement (information material)
* Lab. test: blood count, blood gas, coagulogram, glucose, Na, K, blood group + reserve
* ECHO
* Abdominal US
* Cranial US
* Book a place in NICU
* Antibiotic prophylaxis

A stable neonate with EA should preferably be operated during working hours during the week.

**Operation:**

* A central venous line should be placed before the operation
* Tracheoscopy should be routinely performed before the operation to evaluate the fistula(s) and other tracheolaryngeal pathology

The maximum insufflation pressure of CO2 during thoracoscopy should not exceed 5 mm Hg

Maximum duration of thoracoscopic operation should be 3 h

* The tracheoesophageal fistula should preferably be closed by ligation or clips
* The esophageal anastomosis should be preferably performed with absorbable sutures
* A transanastomotic tube (8Fr) should be routinely inserted

In short-gap unstable patients stage thoracoscopic treatment is possible (1. TEF ligation; 2. anastomosis).

In LGEA – internal traction (reop every ~5 days; no gastrostomy). If failed – individual treatment (e. g. gastric transposition, gastrostomy).

There is no place for routine fundoplication in patients with EA during the initial operation.

**Postop:**

Postoperative ventilation and relaxation should not be routine and should be reserved for selected patients, such as those with tension anastomosis.

Routine postoperative antibiotic treatment for longer than 24 hours should not be recommended.

Feeding via the transanastomotic tube may be routinely initiated at 24 hours postoperatively .

A postoperative contrast study of the esophagus should be routinely performed before the initiation of oral feeding at day 5-7.

Oral feeding may be routinely initiated after favourable contrast study.

**Complications:**

An anastomotic leakage should be routinely managed with a chest drain.

A contrast study, tracheoscopy and esophagoscopy are necessary to exclude a refistula, or missed upper pouch fistula, if suspected.

A refistula may be initially managed by either endoscopic or surgical approach.

**At discharge:**

* omeprazole 0,6-1g/kg/d (at least 1 year)
* gastroenterology – follow-up
* information material

**Follow-up:**

Routine endoscopy in asymptomatic EA patients is recommended. The expert panel recommends 3 endoscopies throughout childhood (1 after stopping PPI therapy, 1 before the age of 10 years, and 1 at transition to adulthood).

Based on:

R. Baird, D.R. Lal, R.L. Ricca, et al., Management of Long Gap Esophageal Atresia: a Systematic Review and Evidence-Based Guidelines from the APSA Outcomes and Evidence Based Practice Committee, Journal of Pediatric Surgery, https://doi.org/10.1016/j.jpedsurg.2018.12.019

Dingemann C, Eaton S, Aksnes G, et al., ERNICA Consensus Conference on the Management of Patients with Esophageal Atresia and Tracheoesophageal Fistula: Diagnostics, Preoperative, Operative, and Postoperative Management. Eur J Pediatr Surg. 2019 Jul 2. doi:10.1055/s-0039-1693116.

Krishnan U, Mousa H, Dall'Oglio L et al., ESPGHAN-NASPGHAN Guidelines for the Evaluation and Treatment of Gastrointestinal and Nutritional Complications in Children With Esophageal Atresia-Tracheoesophageal Fistula. J Pediatr Gastroenterol Nutr. 2016 Nov;63(5):550-570.

Literature review.

Own experience and expertise.

Patients’ parents consultation (in-person, forum, conferences).

To be reviewed every January.