

SVIII9: TITANIUM ENDOCLIPS FOR TRACHEO-ESOPHAGEAL FISTULA CLOSURE IN THORACOSCOPIC CORRECTION OF ESOPHAGEAL ATRESIA: ADVANTAGES OR COMPLICATIONS?

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Background Thoracoscopic correction of esophageal atresia (EA) and tracheo-esophageal fistula (TEF) is considered one of the more advanced pediatric surgical procedure and has a challenging learning curve. Experience in endocorporeal knotting is mandatory to optimize this technique. A series of technical skills, including the use of titanium endoclips for TEF closure, are useful to reduce operative time that sometimes can be longer than in open procedures.

Materials and methods First thoracoscopic correction of EA/TEF was successfully performed at our center in 2008, since then we have treated with this approach 26 neonates. All patients had an esophago-esophageal anastomosis in separate stitches (5-0 pds or vicryl). In all type C EA, TEF was closed with two 5 mm titanium endoclips (length 1 cm). In four patients (initial experience, excessive width of TEF) TEF was sutured by stitches (silk or pds).

Results We had only an intraoperative complication: after the positioning of the second clip we noticed a small laceration of the inferior part of TEF, that was precautionally secured by a stitch. All patients underwent chest X-ray during immediate postoperative time, and some of them also for EA/TEF follow up or because of other medical reasons: all radiographs demonstrated that endoclips were still properly positioned, even after 45 months from intervention. We only had a tardive dislocation of a clip (at 1 year standard chest x-ray) without any complication. All patients had an overall success rate after clips TEF closure of 100%.

Conclusions Thoracoscopic correction of EA/TEF was first performed in 1999, since then this approach has become more widespread and, in our opinion, is expected to become the standard technique. Limits to a wider application are technical difficulties also due to small operative space and intracorporeal knotting, this increase operative time. On our experience TEF closure by titanium endoclips (above all in the first series) is fast, with immediate benefit of the patient because of reduced operative time, and safe, with no risk of perioperative clips dislocation: overall success rate after clips TEF closure is in our series 100%.

Key words esophageal atresia, tracheo-esophageal fistula, thoracoscopy, endoclips