

The Hierarchy of Evidence

The Hierarchy of evidence is based on summaries from the National Health and Medical Research Council (2009), the Oxford Centre for Evidence-based Medicine Levels of Evidence (2011) and Melynyk and Fineout-Overholt (2011).

- I Evidence obtained from a systematic review of all relevant randomised control trials.
- II Evidence obtained from at least one well designed randomised control trial.
- III Evidence obtained from well-designed controlled trials without randomisation.
- IV Evidence obtained from well designed cohort studies, case control studies, interrupted time series with a control group, historically controlled studies, interrupted time series without a control group or with case- series
- V Evidence obtained from systematic reviews of descriptive and qualitative studies
- VI Evidence obtained from single descriptive and qualitative studies
- VII Expert opinion from clinicians, authorities and/or reports of expert committees or based on physiology

Melynyk, B. & Fineout-Overholt, E. (2011). *Evidence-based practice in nursing & healthcare: A guide to best practice (2nd ed.)*. Philadelphia: Wolters Kluwer, Lippincott Williams & Wilkins.

National Health and Medical Research Council (2009). *NHMRC levels of evidence and grades for recommendations for developers of guidelines* (2009). Australian Government: NHMRC.
http://www.nhmrc.gov.au/files_nhmrc/file/guidelines/evidence_statement_form.pdf

OCEBM Levels of Evidence Working Group Oxford (2011). *The Oxford 2011 Levels of Evidence*. Oxford Centre for Evidence-Based Medicine. <http://www.cebm.net/index.aspx?o=1025>

Intermittent oesophageal pouch suction for the neonate/infant with unrepaired oesophageal atresia (including long-gap)

| Reference (include title, author, journal title, year of publication, volume and issue, pages) | Evidence level (I-VII) | Key findings, outcomes or recommendations |
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| Al-Rawi, O., & Booker, P.D. (2007). Oesophageal atresia and trachea-oesophageal fistula. <i>Continuing Education in Anaesthesia, Critical Care & Pain</i> . 7(1): 15-19 | VII | “The upper oesophageal pouch should be cleared by continuous suction applied to a Replogle tube or repeated suctioning of the upper pouch and oropharynx.” |
| Hawley, AD & Harrison D. (2003). Suctioning Practices for the upper oesophageal pouch in infants with unrepaired oesophageal atresia in Australia and New Zealand. P105. <i>Perinatal Society of Australia and New Zealand Annual Congress</i> March 2003, Hobart, Australia. | VI | <p>“Intermittent suctioning of the upper oesophageal pouch was used in 15% of NICUs. 23% of NICUs used a combination of intermittent and Replogle suction.”</p> <p>“There are varied practices throughout Australian and New Zealand NICUs with regards to suctioning of the upper oesophageal pouch in infants with unrepaired oesophageal atresia.”</p> <p>“There is no evidence available in the literature outlining which method results in the best outcomes (short and long term) to infants and children with this condition.”</p> <p>“Further research needs to be undertaken to establish the most appropriate method for providing suction of the proximal oesophageal pouch.”</p> |
| Ho T & Mok, J. (2006). An infant with long gap oesophageal atresia: A case report. <i>Journal of Neonatal Nursing</i> . 12: 103-109. | VII | Discussed: Initially use Replogle tube suction & changed to intermittent oesophageal pouch suction. |

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| <p>Johnson PRV. (2005). Oesophageal Atresia. <i>Infant</i>. 1 (5); 163-167.</p> | <p>VII</p> | <p>“The most important elements of the preoperative management of the non-ventilated baby with OA/TOF are prevention of aspiration of pharyngeal secretions and gastric contents through the TOF. The former is treated either by regular intermittent suctioning or continuous aspiration of the upper pouch using a double-lumen lower pressure catheter, the Replogle tube.”</p> |
| <p>Newborn Services Clinical Guideline: Neonatal Surgery - Oesophageal Atresia with a distal Tracheo-oesophageal Fistula. (2012). http://www.adhb.govt.nz/newborn/guidelines/Surgery/SurgeryTOF.htm</p> | <p>VII</p> | <p>“Adequate drainage of the upper pouch is essential. This can be either by intermittent suction every 15 minutes or via insertion of a Replogle tube as far as it will go and placed on continuous low pressure suction. Flush with 0.9% NaCl usually Q15-30 minutes.”</p> |
| <p>Safer Care Victoria. (2018). Oesophageal atresia and tracheo-oesophageal fistula in neonates. <i>Victorian Agency for Health Information Safer Care Victoria</i>, Victoria, Australia. Retrieved 24th April, 2020 from https://www.bettersafecare.vic.gov.au/resources/clinical-guidance/maternity-and-newborn-clinical-network/oesophageal-atresia-and-tracheo-oesophageal-fistula-in-neonates</p> | <p>VII</p> | <p>“The upper pouch must be kept clear of secretions by frequent oral suctioning to 1cm above the distal end of the oesophageal pouch (every 15 minutes or more frequently as required). Time between suctioning should not exceed 30 minutes due to the risk of aspiration of saliva.”</p> |
| <p>Scott, JE, Hawley, A, & Brooks, J-A. (2020). Delayed diagnosis in esophageal atresia and tracheoesophageal fistula. <i>Advances in Neonatal Care</i>. DOI: 10.1097/ANC.0000000000000763</p> | <p>VII</p> | <p>“Intermittent oral suctioning was then commenced to 1 cm less than the pouch length (9.5 cm) every 10 minutes (no greater than 30-minute intervals) to prevent the pooling of secretions and to prevent aspiration. The depth of suctioning is extremely important in the preservation of pouch integrity preoperatively.”</p> |

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| <p>Starship Child Health Newborn Intensive Care. (2018). <i>Clinical Guideline: Surgery – Management of oesophageal atresia with a distal TOF in the neonate</i>. Starship Child Health, NZ. Retrieved 22nd April, 2020 from https://www.starship.org.nz/guidelines/surgery-management-of-oesophageal-atresia-with-a-distal-tof-in-the-neonate/</p> | VII | “Adequate drainage of the upper pouch is essential. This can be either by intermittent suction every 15 minutes or via insertion of a Replogle tube as far as it will go and placed on continuous low pressure suction. Flush with 0.9% NaCl usually Q15-30 minutes. The baby will also need frequent oral suction.” |
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