

Article de l'Année

« Œsophage et nouveau-né »

CRACMO
June 13, 2023



Centre de référence des affections chroniques
et malformatives de l'œsophage



Alain Beuchée
Édouard Habonimana
Alexis Arnaud

Stratégie de recherche

"2022"[dp]

N

1,771,236

AND ("esophageal atresia" OR "oesophageal atresia" OR "tracheo esophag*" OR "tracheoesophag*")

449

**AND (clinical trial OR meta-analysis OR systematic review OR randomized controlled trial
OR clinicaltrial[Filter] OR meta-analysis[Filter] OR systematicreview[Filter] OR randomizedcontrolledtrial[Filter])**

23



AND (neonate OR newborn)

7

Stratégie de recherche

"2022"[dp]

N

1,771,236

AND ("esophageal atresia" OR "oesophageal atresia" OR "tracheo esophag*" OR "tracheoesophag*")

449

AND (clinical trial OR meta-analysis OR systematic review OR randomized controlled trial OR clinicaltrial[Filter] OR meta-analysis[Filter] OR systematicreview[Filter] OR randomizedcontrolledtrial[Filter])

23



AND (neonate OR newborn)

7

> [Pediatr Surg Int.](#) 2022 Feb;38(2):331-335. doi: 10.1007/s00383-021-05036-4. Epub 2021 Nov 6.

Congenital oesophageal stenosis in oesophageal atresia: underrecognised and often missed?

Sarah Braungart ¹, Robert Thomas Peters ¹, Nick Lansdale ^{1, 2}, David John Wilkinson ³

Affiliations + expand

PMID: 34741643 [DOI: 10.1016/j.jpedsurg.2021.06.005](#)
> [J Pediatr Surg.](#) 2022 Apr;57(4):655-660. doi: 10.1016/j.jpedsurg.2021.06.005. Epub 2021 Jun 18.

Abstract

Purpose: Congenital narrowing that is associated with CO₂ usually appreciate delayed. This risk postoperative upper systematic review COS and OA and

Should all babies with oesophageal atresia have routine screening for midgut malrotation anomalies? A systematic review in search of evidence

Patrick A Green ¹, Cezar D Nicora ¹, Paul D Losty ²

Affiliations + expand

PMID: 34217510 DOI: 10.1016/j.jpedsurg.2021.06.005

Methods:

Abstract

Background/Purpose Oesophageal Atresia (OA) is associated with co-existent anomalies. There is a controversy of literature pertaining to the risk level of intestinal malrotation. In order to guide anomalies in OA newborns. Design keywords "(O)Esophageal Atresia and anomalies". Full texts of articles were screened if manuscripts exclusively reported patients with OA malrotation and/or associated anomalies. Larger case series (> 10patients) were included if abstract (s) showed that associated anomalies were systematically assessed. Full eligibility criteria required at least one

[Randomized Controlled Trial](#) > [Comput Intell Neurosci.](#) 2022 Apr 10;2022:4147217. doi: 10.1155/2022/4147217. eCollection 2022.

Study of Nursing Models by Machine Learning in Children with Congenital Esophageal Atresia

Yu Zhang ¹, [Randomized Controlled Trial](#) > [Surg Endosc.](#) 2022 Aug;36(8):6035-6048.

Affiliations + doi: 10.1007/s00464-022-09185-y. Epub 2022 Mar 21. PMID: 35444

Free PMC article **Evaluation of minimally invasive surgical skills training: comparing a neonatal esophageal atresia/tracheoesophageal fistula model with a dry box**

> [Indian J Anaesth.](#) 2022 Sep;66(9):651-656. doi: 10.4103/ijana.ijana_1065_21. Epub 2022 Sep 20.

Abstract
This research care and pati this purpose, admitted to c control group routine nursi care. The intr CEA quickly i
Kyoichi Deie **Effect of different mechanical ventilation modes on cerebral blood flow during thoracoscopic surgery in neonates: A randomised controlled trial**

Affiliations + expand
PMID: 3531; **Nasr M Abdallah** ¹, **Amel H Abo Elela** ¹, **Hossam H Maghawry** ², **Ramy M Alknaiesy** ¹

Affiliations + expand
PMID: 36388436 PMCID: PMC9662094 DOI: 10.4103/ijana.ijana_1065_21

Abstract

Free PMC article

Background: perform rare

Abstract

esophageal

evalu

3 RCTs
Abstract
Background: **Abstract**
Purpose: Infants exposed to major surgery are at risk of injuries to the immature if reduced arterial oxygen saturation. This study compared the effect of ed ventilation (VCV) versus pressure-controlled ventilation (PCV) on cerebral oxygenation in neonates subjected to repair of tracheoesophageal fistula (TEF) under video-assisted thoracoscopic surgery (VATS).

Methods: This randomised controlled study included 30 full-term neonates scheduled for VATS for managing TEF under general anaesthesia. They were randomised to either VC group

[Review](#) > [J Pediatr Surg.](#) 2022 Aug;57(8):1554-1560. doi: 10.1016/j.jpedsurg.2021.06.015. Epub 2021 Jul 8.

Whether prophylactic intraoperative chest drain insertion in esophageal atresia-tracheoesophageal fistula is an evidence-based practice or just a prejudice: A systematic review and meta-analysis

Sachit Anand ¹, Apoi > [Front Pediatr.](#) 2022 Mar 18;10:849992. doi: 10.3389/fped.2022.849992. eCollection 2022.

Affiliations + expand

PMID: 34284871 DOI: 10.3389/fped.2022.849992

Abstract

Background: Variou: **Martin Riis Ladefoged** ^{1, 2}, **Steven Kwasi Korang** ^{1, 3}, **Simone Engmann Hildorf** ⁴, **tracheoesophageal fi** **Jacob Oehlenschläger** ⁴, **Susanne Poulsen** ⁵, **Magdalena Fossum** ^{2, 4, 6}, **intraoperative chest** **Ulrik Lausten-Thomsen** ⁵

This meta-analysis a without IOCD insertio
Affiliations + expand
PMID: 35372168 PMCID: PMC8971748 DOI: 10.3389/fped.2022.849992

Free PMC article

2 Meta-analysis

corrected surgically by anastomosing and recreating esophageal continuity. To allow the removal of excess fluid and air from the anastomosis, a prophylactic and temporary intraoperative chest tube (IOCT) has traditionally been placed in this area during surgery. However, whether the potential benefits of this prophylactic IOCT outweigh the potential harms is unclear.

Stratégie de recherche

"2022"[dp]

N

1,771,236

AND ("esophageal atresia" OR "oesophageal atresia" OR "tracheo esophag*" OR "tracheoesophag*")

449

AND (clinical trial OR meta-analysis OR systematic review OR randomized controlled trial
OR clinicaltrial[Filter] OR meta-analysis[Filter] OR systematicreview[Filter] OR randomizedcontrolledtrial[Filter])

23

AND (neonate OR newborn)

7



n = 0



> [Front Pediatr](#) (IF: [3.42](#); Q1). 2022 Mar 18;10:849992. doi: 10.3389/fped.2022.849992. eCollection 2022.

Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1 2}, Steven Kwasi Korang^{1 3}, Simone Engmann Hildorf⁴, Jacob Oehenschläeger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2 4 6}, Ulrik Lausten-Thomsen⁵



Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴, Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and Ulrik Lausten-Thomsen⁵*



Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴, Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and Ulrik Lausten-Thomsen⁵

Drain – Intra Operative Chest Tube (IOCT)

Pose d'un drain simple proche de l'anastomose

rapportée > 50% des praticiens *études 2013-2017 (UK, Belgique, ...)*

De plus en plus questionnée

- 4 des 19 experts ERNICA (21,4%) étaient en faveur d'une pose de drain prophylactique
- Conférence de consensus ERNICA, Dingemann C, et al. Eur J Pediatr Surg. 2020*

Risque associés :

- ISO, lâchage de suture, douleur, diminution de respiration spontanée avec atélectasie, pneumonie
- inefficacité nécessitant repose d'un drain

Objectif : analyser avantages et inconvénients de la pose prophylactique d'un drain (IOCT) lors de la chirurgie initiale de l'atrésie de l'oesophage.



Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴, Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and Ulrik Lausten-Thomsen⁵

Recherche systématique au 3 déc. 2021

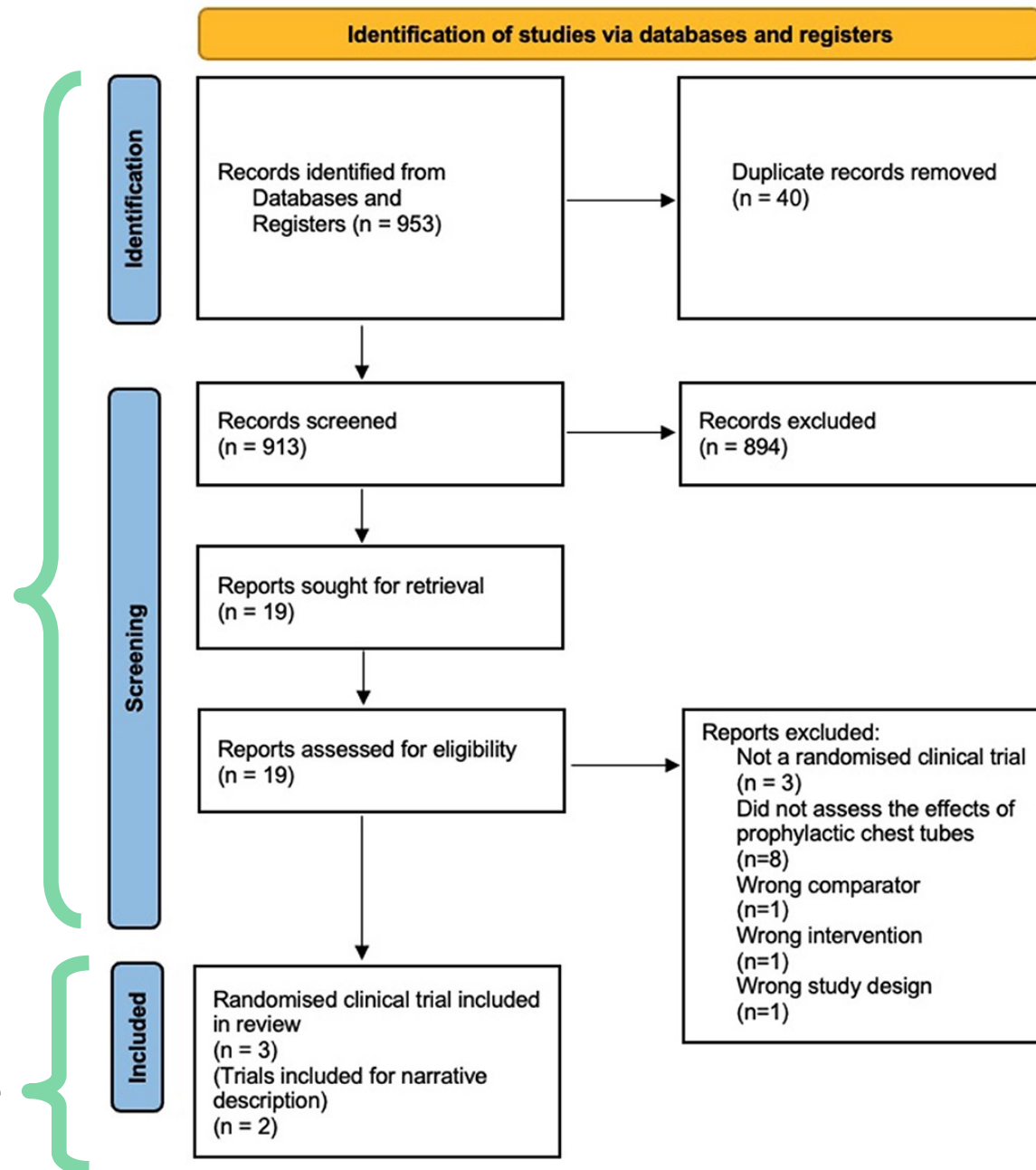
953 articles identifiés

894 exclus sur le titre et le résumé

19 articles éligibles analysés en entier

5 études incluses :

- 3 RCTs pour la méta-analyse
- 2 études cas-contrôles pour l'analyse narrative





Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴, Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and Ulrik Lausten-Thomsen⁵

N = 14

Études Exclues

Study id	Reason for exclusion	The authors's conclusion on IOCT (if any)
Brohi et al. (67)	Not a randomized clinical trial	NA
Castilloux et al. (68)	Did not assess the effects of prophylactic chest tubes	NA
Donoso et al. (69)	Did not assess the effects of prophylactic chest tubes	NA
Esteves et al. (70)	Did not assess the effects of prophylactic chest tubes	NA
Fasting and Winther (71)	Did not assess the effects of prophylactic chest tubes	NA
Grebe et al. (72)	Wrong intervention	NA
Johnson and Wright (57)	Wrong study design	An IOCT can perforate esophagus after primary repair.
Kay and Shaw (73)	Wrong comparator	An IOCT may not be necessary.
McCallion et al. (40)	Not a randomized clinical trial	IOCT unable to drain major leaks sufficiently, requiring placement of an additional drain.
Paramalingam et al. (74)	Not a randomized clinical trial	Drain appears not to be needed in all cases.
Vazquez et al. (75)	Did not assess the effects of prophylactic chest tubes	NA
Vercauteren et al. (76) Vol 8	Did not assess the effects of prophylactic chest tubes	NA
Zhang et al. (77)	Did not assess the effects of prophylactic chest tubes	NA
Zhang et al. (78)	Did not assess the effects of prophylactic chest tubes	NA

NA, not applicable.



Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴, Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and Ulrik Lausten-Thomsen⁵

Études Inclues

3 RCTs

162 nouveau-nés

avec atrésie de l'œsophage et fistule trachéo oesophagienne

Risque de biais:

Toutes les études avait un risque de biais global.

Aucune n'a décrit le processus de randomisation de façon adéquate

Risk of bias domains

	D1	D2	D3	D4	D5	Overall
Study Aslanabadi 2009	-	+	+	+	-	-
Sharma 2016	-	+	+	+	-	-
Gangopadhyay 2003	-	+	+	+	-	-

Domains:

D1: Bias arising from the randomization process.

D2: Bias due to deviations from intended intervention.

D3: Bias due to missing outcome data.

D4: Bias in measurement of the outcome.

D5: Bias in selection of the reported result.

Judgement

- Some concerns

+ Low

Comparaisons :

- mortalité,
- effet indésirable grave
- pneumothorax nécessitant intervention
- fuite anastomotique

Necessity of Prophylactic Extraleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴,
Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and
Ulrik Lausten-Thomsen⁵



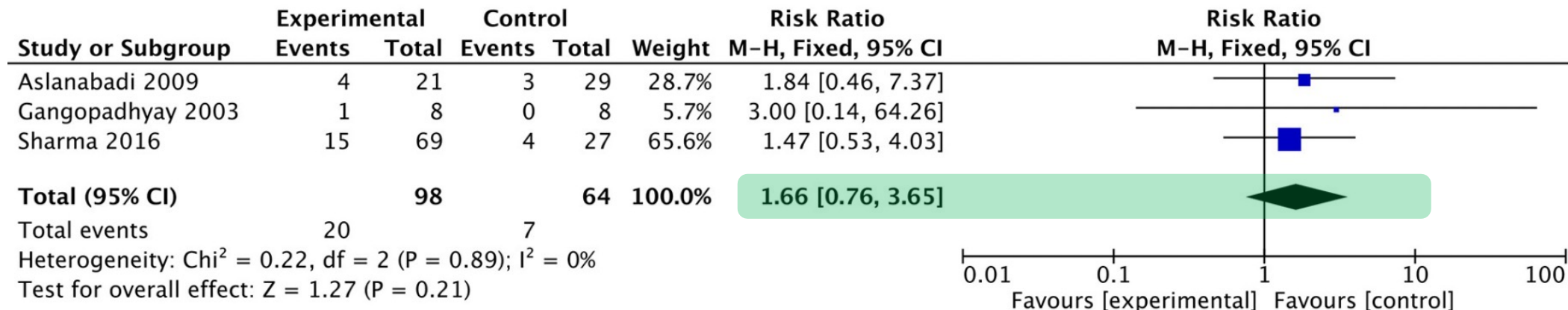
Effets de l'intervention – Critère de Jugement principal

Mortalité – toute cause confondue

Méta-analyse de 3 études - 162 patients - 3% du nombre de sujets nécessaires (optimal information size = OIS)

Tendance non significative à l'augmentation du risque dans le groupe IOCT ($p = 0.2$)

> Très faible niveau de preuve





Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴,
Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and
Ulrik Lausten-Thomsen⁵

Effets de l'intervention – Critère de Jugement principal

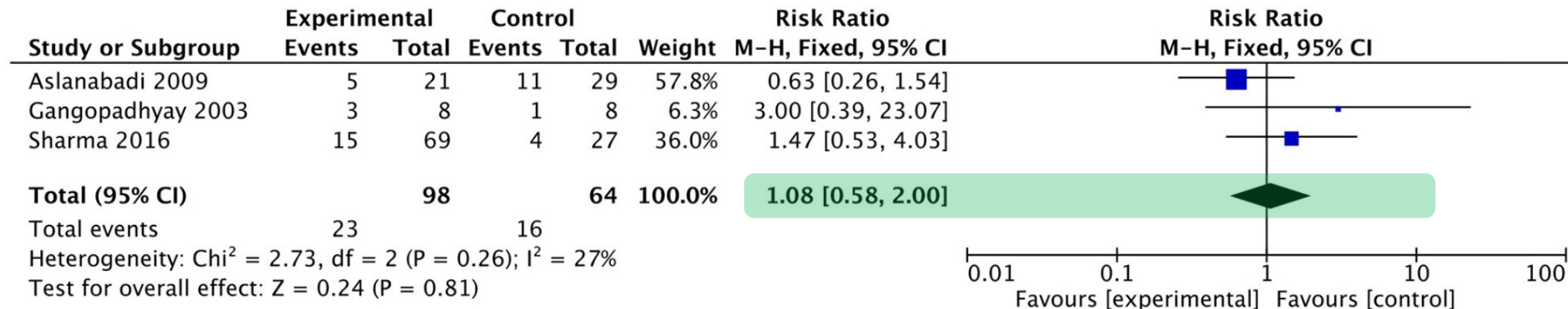
Au moins un événement indésirable grave

Méta-analyse de 3 études - 162 patients - 7% du nombre de sujets nécessaires (OIS)

Pas de différence significative entre les deux groupes IOCT ($p = 0.8$)

> Très faible niveau de preuve

Détresse respiratoire
Pneumonie,
Pneumothorax,
Atélectasie
Apnées
Mortalité





Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴, Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and Ulrik Lausten-Thomsen⁵

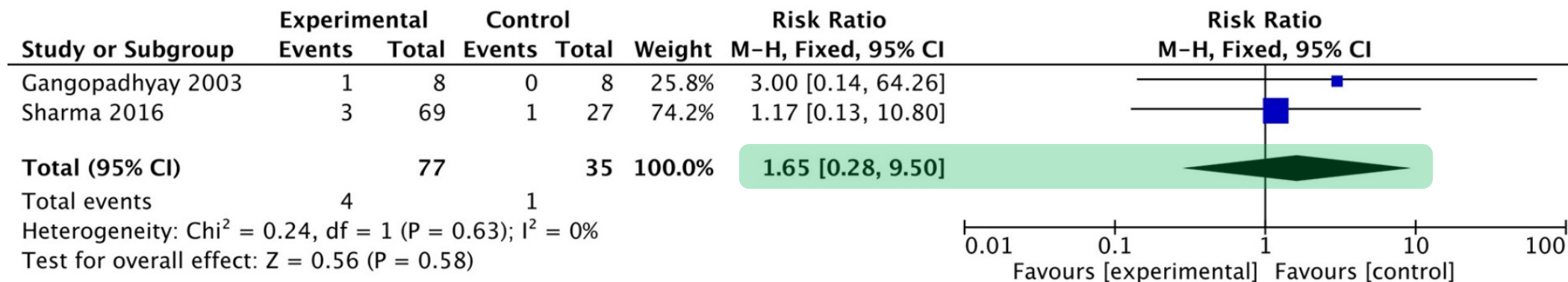
Effets de l'intervention – Critère de Jugement principal

Pneumothorax nécessitant intervention

Méta-analyse de 2 études - 112 patients - 0,5% du nombre de sujets nécessaires

Légère tendance non significative à l'augmentation du risque dans le groupe IOCT ($p = 0.6$)

> Très faible niveau de preuve





Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴,
Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and
Ulrik Lausten-Thomsen⁵

Effets de l'intervention – Critères de Jugement secondaires

Médiastinite

1 RCT : RR 3 ; IC_{95%} 0,14–64

Fuite anastomotique

3 RCTs : RR 1,7 - IC_{95%} 0,6–4,4; p = 0,3; 2% de l'OIS; très faible niveau de preuve

Sténose œsophagienne

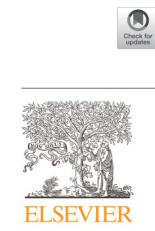
Non rapporté

Douleur

Pas évalué

Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴, Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and Ulrik Lausten-Thomsen⁵



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Journal of Pediatric Surgery

journal homepage: www.elsevier.com/locate/jped surg.org

Review Article

Whether prophylactic intraoperative chest drain insertion in esophageal atresia-tracheoesophageal fistula is an evidence-based practice or just a prejudice: A systematic review and meta-analysis

Sachit Anand^{a,*}, Apoorv Singh^b, Nellai Krishnan^b, Devendra Kumar Yadav^b

^a Department of Pediatric Surgery, Kokilaben Dhirubhai Ambani Hospitals, Mumbai, India
^b Department of Pediatric Surgery, All India Institute of Medical Sciences, New Delhi, India

Discussion

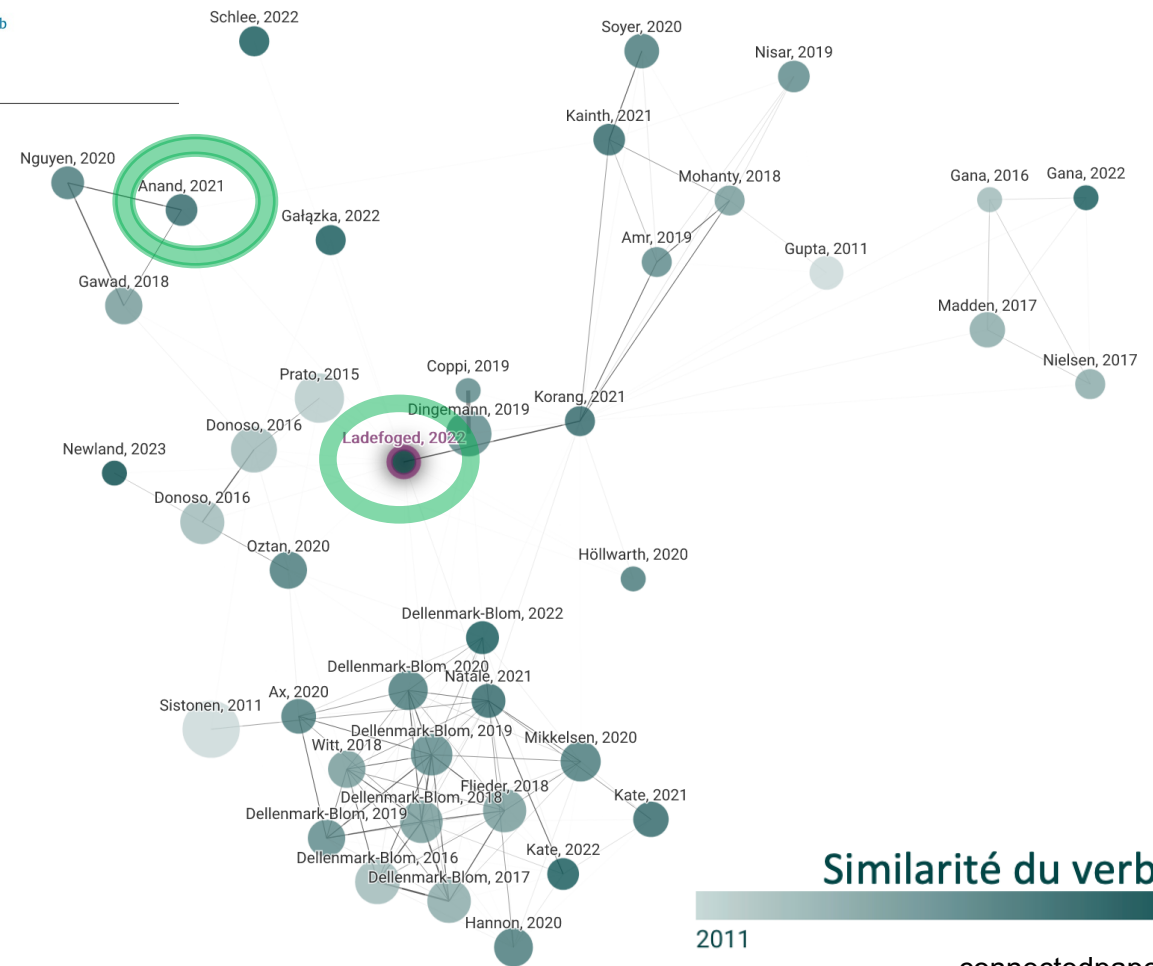
Méta-analyse similaire par Anand *et al.* publiée en 2021

Différente car

- ajout de l'évaluation GRADE des études incluses
- exclusion des études observationnelles de la méta-analyse
- pas de mélange entre chirurgies trans et extra pleurales
- drain toujours prophylactique dans groupe intervention

Conclusion proche (pas de bénéfice...)

Moins de risque de biais par inclusion stricte de RCTs



Similarité du verbatim

2011

2023



Necessity of Prophylactic Extrapleural Chest Tube During Primary Surgical Repair of Esophageal Atresia: A Systematic Review and Meta-Analysis

Martin Riis Ladefoged^{1,2*}, Steven Kwasi Korang^{1,3}, Simone Engmann Hildorf⁴,
Jacob Oehlenschläger⁴, Susanne Poulsen⁵, Magdalena Fossum^{2,4,6} and
Ulrik Lausten-Thomsen⁵

Conclusion

Peu d'études

Aucune méta-analyse n'a atteint l'effectif optimal « optimal information size »
> *absence de différence observée peut être due à effectif insuffisant*

Pas d'évaluation de la **douleur**

Pas d'évaluation du risque de **sténose secondaire**

Toutes les patients inclus avaient un fistule trachéo-œsophagienne distale
mais grande **hétérogénéité des conditions initiales** (longueur du gap, malfo. associées...)
> *limite la généralisation aux sous-groupes*

Pas de données suffisantes pour soutenir la poursuite ou l'arrêt de
pose prophylactique de drain au cours d'une chirurgie initiale d'atrésie de l'œsophage.

merci...