Supplementary Table 1. Table of the excluded studies

First Author	Publication year	Journal	Reasons for exclusion
Ahn K[1]	2005	Korean J Anesthesiol.	Compared with different IV PCA dose
Choudhry[2]	2016	Paediatr Anesth	Retrospective study
Cray SH [3]	2012	Pediatr Child Health	Review
Dekonenko[4]	2019	J Pediatr Surg.	Data duplication of Sujka[5] 2019
Gasior[6]	2013	J Surg Res	Telephone survey after RCT
Harbaugh[7]	2018	J Surg Res	Retrospective study, and compared with intercostal nerve cryoablation
Kabagambe[8]	2018	Pain Manag	Retrospective, and compared with subcutaneous infusion of local anesthetics
Kolvekar[9]	2016	J Vis Surg	Retrospective study, no comparator
Luo[10]	2017	Clin J Pain	Compared with intercostal nerve blocks
Neustein SM[11]	2011	Can J Anaesth	Review
McBride[12]	1996	J Pediatr Surg.	Observational study
Reinoso-Barbero[13]	2010	Rev Esp Anestesiol Reanim	Retrospective study
Schlatter[14]	2019	J Pediatr Surg.	Retrospective study
Shah[15]	2017	Saudi J Anesth	Review
Siddiqui[16]	2016	Local Reg Anesth	Retrospective study, compared between epidural regimens
Singhal[17]	2016	J Pediatr Surg.	Retrospective study
Soliman[18]	2009	Am J Ther	Retrospective study
Sujka[19]	2018	J Laparoendosc Adv Surg Tech A	Retrospective study
Walaszczyk[20]	2011	Med Sci Monit	Not RCT

RCT, Randomized control trial.

1. Ahn K, Chung J, Kwon J, Kang K, Lee J, Yoo S. Intravenous Patient-Controlled Analgesia Using Fentanyl after Nuss Procedure in Pediatric Patients Undergoing Pectus Excavatum Repair. Korean J Anesthesiol. 2005;49(5):624-629.

2. Choudhry DK, Brenn BR, Sacks K, Reichard K. Continuous chest wall ropivacaine infusion for analgesia in children undergoing Nuss procedure: a comparison with thoracic epidural. *Paediatr Anaesth* 2016; 26: 582-9.

3. Cray SH. Post-operative pain control. Pediatr Child Health. 22(6):253-4.

4. Dekonenko C, Dorman RM, Duran Y, *et al.* Postoperative pain control modalities for pectus excavatum repair: A prospective observational study of cryoablation compared to results of a randomized trial of epidural vs patient-controlled analgesia. *J Pediatr Surg* 2020; 55: 1444-7.

5. Sujka JA, Dekonenko C, Millspaugh DL, *et al.* Epidural versus PCA Pain Management after Pectus Excavatum Repair: A Multi-Institutional Prospective Randomized Trial. *Eur J Pediatr Surg* 2020; 30: 465-71.

6. Gasior AC, Weesner KA, Knott EM, Poola A, St Peter SD. Long-term patient perception of pain control experience after participating in a trial between patient-controlled analgesia and epidural after pectus excavatum repair with bar placement. *J Surg Res* 2013; 185: 12-4.

7. Harbaugh CM, Johnson KN, Kein CE, *et al.* Comparing outcomes with thoracic epidural and intercostal nerve cryoablation after Nuss procedure. *J Surg Res* 2018; 231: 217-23.

8. Kabagambe SK, Goodman LF, Chen YJ, *et al.* Subcutaneous local anesthetic infusion could eliminate use of epidural analgesia after the Nuss procedure. *Pain Manag* 2018; 8: 9-13.

9. Kolvekar S, Pilegaard H, Ashley E, Simon N, Grant J. Pain management using patient controlled anaesthesia in adults post Nuss procedure: an analysis with respect to patient satisfaction. *J Vis Surg* 2016; 2: 37.

10. Luo M, Liu X, Ning L, Sun Y, Cai Y, Shen S. Comparison of Ultrasonography-guided Bilateral Intercostal Nerve Blocks and Conventional Patient-controlled Intravenous Analgesia for Pain Control After the Nuss Procedure in Children: A Prospective Randomized Study. *Clin J Pain* 2017; 33: 604-10.

11. McBride WJ, Dicker R, Abajian JC, Vane DW. Continuous thoracic epidural infusions for postoperative analgesia after pectus deformity repair. *J Pediatr Surg* 1996; 31: 105–7; discussion 107-108.

12. Neustein SM, McCormick PJ. Postoperative analgesia after minimally invasive thoracoscopy: what should we do? Can J Anaesth. 2011;58:423-5, 425-7.

13. Reinoso-Barbero F, Fernández A, Durán P, Castro LE, Campo G, Melo MM. [Thoracic epidural analgesia vs patient-controlled analgesia with intravenous fentanyl in children treated for pectus excavatum with the Nuss procedure]. *Rev Esp Anestesiol Reanim* 2010; 57: 214-9.

14. Schlatter MG, Nguyen LV, Tecos M, Kalbfell EL, Gonzalez-Vega O, Vlahu T. Progressive reduction of hospital length of stay following minimally invasive repair of pectus excavatum: A retrospective comparison of three analgesia modalities, the role of addressing patient anxiety, and reframing patient expectations. *J Pediatr Surg* 2019; 54: 663-9.

15. Shah SB, Hariharan U, Bhargava AK, Darlong LM. Anesthesia for minimally invasive chest wall reconstructive surgeries: Our experience and review of literature. *Saudi J Anaesth* 2017; 11: 319-26.

16. Siddiqui A, Tse A, Paul JE, Fitzgerald P, Teh B. Postoperative epidural analgesia for patients undergoing pectus excavatum corrective surgery: a 10-year retrospective analysis. *Local Reg Anesth* 2016; 9: 25-33.

17. Singhal NR, Jones J, Semenova J, *et al.* Multimodal anesthesia with the addition of methadone is superior to epidural analgesia: A retrospective comparison of intraoperative anesthetic techniques and pain management for 124 pediatric patients undergoing the Nuss

procedure. *J Pediatr Surg* 2016; 51: 612-6.

18. Soliman IE, Apuya JS, Fertal KM, Simpson PM, Tobias JD. Intravenous versus epidural analgesia after surgical repair of pectus excavatum. *Am J Ther* 2009; 16: 398-403.

19. Sujka J, Benedict LA, Fraser JD, Aguayo P, Millspaugh DL, St Peter SD. Outcomes Using Cryoablation for Postoperative Pain Control in Children Following Minimally Invasive Pectus Excavatum Repair. *J Laparoendosc Adv Surg Tech A* 2018; 28: 1383-6.

20. Walaszczyk M, Knapik P, Misiolek H, Korlacki W. Epidural and opioid analgesia following the Nuss procedure. *Med Sci Monit* 2011; 17: PH81-6.