Simultaneous Bilateral Thoracoscopy During the Nuss Procedure is Safe, Effective and May Reduce the Risk of Cardiac Injury

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Abstract

Purpose: Cardiac injury during the Nuss procedure is a rare risk that can lead to a catastrophic outcome. The specific aim of this pilot study was to evaluate the safety and efficacy of simultaneous bilateral thoracoscopy (SBT) compared to standard unilateral right thoracoscopy (RT) in children undergoing the Nuss procedure in order to mitigate that risk.

Methods: IRB approval was obtained to analyze data on children who underwent SBT and RT during the Nuss procedure. Data retrieval included age, gender, Haller index (HI), operative time (OT), length of stay (LOS), complications and follow up.

Results: From August 2022 to August 2023, 10 children underwent SBT were compared to 10 children who underwent RT. Both groups underwent intercostal nerve cryoablation. Following completion of cryoablation, SBT or RT was carried out during the Nuss procedure. SBT allowed for the tip of the bar passer to be visualized during the entire dissection in both thoraces. There was no significant difference in either group with respect to age, HI, OT, LOS. There were no anesthetic or surgical complications in either group (1 year follow up, Table 1).

Conclusion: We found that SBT is safe, effective and allows for 100% visualization of the tip of the bar passer during the entire critical phase of the Nuss procedure. It does not impact on OT or LOS compared to children who underwent only RT. SBT may benefit children who undergo the Nuss procedure by reducing the risk of cardiac injury.

Categories

Thoracic