

SIX15: CHALLENGING COMPLICATIONS IN NUSS PROCEDURE

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Background Minimally invasive repair of pectus excavatum (MIRPE, Nuss procedure) has become the method of choice in funnel chest correction for paediatric and young adult patients. The aim of this study is to present challenging complications - i.e., complications requiring extensive and/or re-do surgery following Nuss procedure and Nuss bar removal and evaluate them.

Materials and methods A retrospective study of major complications following Nuss procedure was performed in patients treated between 2004-2016. Minor complications such as pneumothorax after bar insertion, fluidothorax and wound complications were not included in the study.

Results The majority of our patients with pectus excavatum underwent successful repair with MIRPE. Although Nuss procedure and subsequent bar removal 3 years after MIRPE is generally believed to be safe, serious perioperative complications can occur.

Conclusions During the study period MIRPE was performed on 386 patients. The incidence of major complications was 1.2%. The most serious complication was cardiac perforation when inserting the Lorenz introducer. The patient required urgent sternotomy with right atrial repair, recovering well. The second case of life threatening bleeding which required an urgent thoracotomy occurred at the time of bar removal. One patient required a thoracoscopy and blood transfusion for a significant hemothorax 3 months after Nuss procedure. Another patient presented with spontaneous pneumothorax at the time of bar removal and he underwent thoracoscopic apical lung resection simultaneously. One patient required bar removal and the use of VAC system for the healing of wound defects following serious bacterial infection with pyothorax. There were no deaths in the study group.

Key words MIRPE, Nuss procedure, bar removal, complications