Abstract Group: 8.1. Thoracic Surgery
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Title: May the Nuss operation be minimally invasive procedure in adults

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Body: The repair of pectus excavatum with Nuss procedure (group N) is well established among pediatric surgeons. It named minimally invasive surgery. Studies on adult patients are rare. We compared Nuss procedures and Ravitch procedures (group R) on adult patients, which of them minimally invasive in respect to scar incisions. We retrospectively analysed 35 adult patients (16 Nuss procedures, 19 Ravitch procedures) from 2007 to 2011. In two groups all patients aged older than 20. Ravitch procedures performed midsternal vertical incision and substernal metal bar. For Nuss procedures three scar incisions was performed, a 10-mm blunt-tip trocar was introduced into the chest. A subcutaneous tunnel was created by blunt dissection to the highest point of the funnel. A long steel introducer was inserted into the chest and pushed behind the sternum anterior to the pericardium. Finally, the bar was rotated 180°, and the sternum was tilted upward. A stabilizer was placed on the left side of the bar. In group R 12.5 cm (10-17 cm) scar incision was performed. Non-steroidal anti-inflamatuar analgesic used for post-operative pain. We did not observe any relaps and major complication. In group N 8.5 cm (7-12.5cm) scar incision was performed. Opioid derived was used for post-operative pain. We observed early bar dislocation at four patients, two haemothoraces, three pneumothoraces and one severe post-operative pain. In Nuss procedures should not require chest wall resection and it may do small scar incisions. But Nuss procedure have lots of complications. In Ravitch procedure, much more effective and less invasive and have little complication. We have lots of question marks.