

# The simultaneous and staged surgery outcomes of pectus excavatum concomitant with congenital lung malformation

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## Abstract

**Purpose** There are children having pectus excavatum(PE) accompanied with congenital lung malformation(CLM). However, the simultaneous surgery or staged surgery outcomes of the PE and CLM is unclear. This study was aimed to demonstrate the outcomes of simultaneous or staged surgery of PE and CLM in children. **Methods** From December 2015 to December 2020, we include 11 patients who got PE accompanied with CLM or with lung malformation resection before in Department of Pediatric Thoracic Surgery, Guangzhou Women and Children's Medical Center. Six patients underwent NUSS procedure and lung malformation resection simultaneously. Four patients conducted NUSS procedure after lung malformation resection. One patient conducted congenital lung malformation resection after NUSS procedure. The staged surgery group of pectus excavatum concomitant with lung malformation is control group. The perioperative condition and postoperative follow-up were respectively evaluated. **Results** The age,gender and weight were no difference in study group and control group (  $P>0.05$ ). The intraoperative operation time, blood loss volume and postoperative hospital stay of control group were no significantly different study group, respectively ( $181.67 \pm 61.05$  min VS  $125.00 \pm 105.00$  min;  $271.67 \pm 302.53$  ml VS  $105.00 \pm 220.82$  ml;  $10.83 \pm 5.88$  days VS  $9.80 \pm 4.82$  days). All patients are follow-up at least 24 months in clinic department by X-ray. There were no statistical differences in these data. **Conclusions** The simultaneous or staged surgery of PE and CLM in children was feasible and safe. The children age beyond 3 year-old-age, the simultaneous surgery is advocated to recover. Additionally, large number of prospective study results are necessary to further invest the consequence of the simultaneous and staged surgery.

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