

## THE RISK OF MIDGUT VOLVULUS FOLLOWING REPAIR OF CONGENITAL DIAPHRAGMATIC HERNIA

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**Aim of the Study:** Bochdalek congenital diaphragmatic hernia (CDH) is thought to predispose to mesenteric rotational abnormalities. The risk of midgut volvulus (MGV) following CDH repair has previously been reported at 2.9%. The practice of assessing for rotational abnormalities and performing Ladd's procedure at the time of CDH repair varies between surgeons. Our aim is to assess the risk of MGV in children after CDH repair to determine if undergoing a concurrent Ladd's procedure at the time of CDH repair is warranted.

**Methods:** A retrospective review of the medical records of all children born with CDH between January 2006 and December 2015 and treated at two tertiary referral paediatric surgical centers was performed. Assessment of midgut rotation or concurrent Ladd's procedure at the time of CDH repair was recorded. Patient charts were reviewed through January 2017 for the occurrence of MGV.

**Main Results:** Records were available for 138 patients at our institutions who survived to CDH repair during the study period. The orientation of the mesentery at time of initial CDH repair was documented in 66/138 (48.9%) patients. 20/138 (14.5%) patients underwent Ladd's procedure at the time of initial CDH repair. Of 118 patients who did not have an initial Ladd's procedure, 4 (3.4%) underwent metachronous Ladd's procedure; 1 with suspected volvulus on contrast study but no volvulus at laparotomy, 2 at the time of CDH recurrence repair and 1 at the time of adhesiolysis for small bowel obstruction. 27 of these 118 (22.9%) patients had a documented rotational abnormality at initial CDH repair. No patient developed MGV during the study period.

**Conclusions:** No patient developed MGV following CDH repair in our series. Ladd's procedure may not be warranted in patients with CDH, regardless of the orientation of their mesentery.