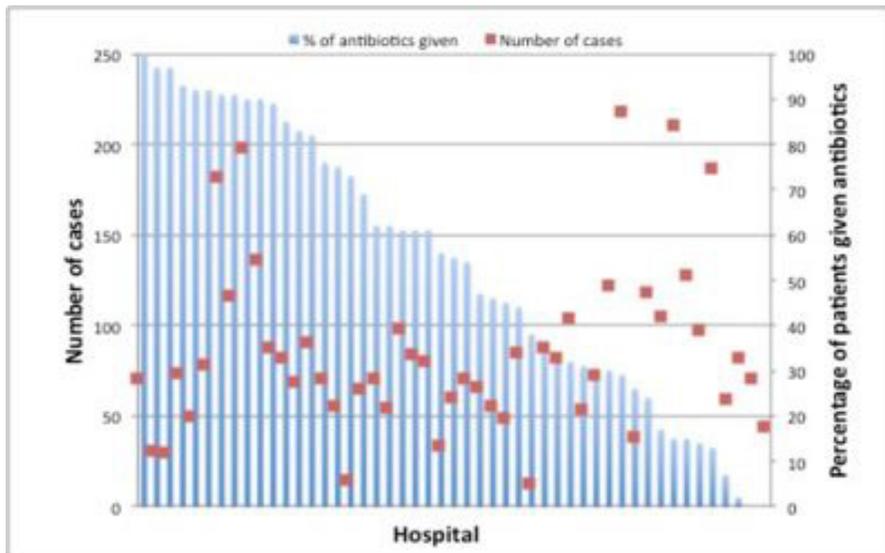


# QuickShots

day of the procedure in 2153 (51%) patients with significant variation among hospitals. Only 2 of 49 hospitals gave no antibiotic prophylaxis with 92% of hospitals administering antibiotics to more than 10% of patients. No infectious complications were identified whether antibiotics were given or not.

**Conclusions:** We have shown that among tertiary level pediatric institutions, prophylactic antibiotics are being inappropriately administered for a clean procedure in more than 10% of cases at more than 92% of hospitals. This represents a need for standardization of care and better antibiotic stewardship in pediatric surgery.



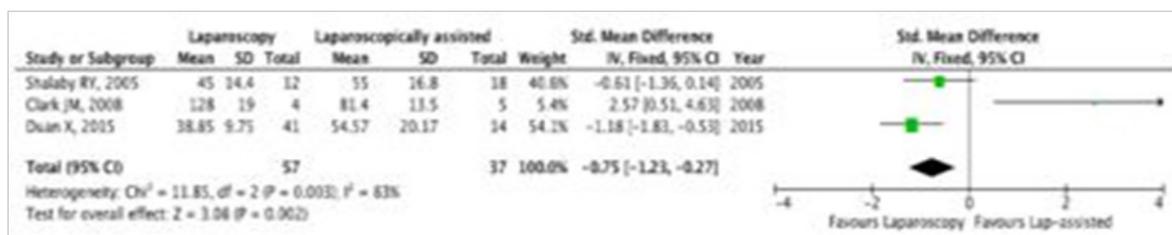
## (QS011) LAPAROSCOPIC VERSUS LAPAROSCOPIC-ASSISTED EXCISION OF MECKEL'S DIVERTICULUM IN CHILDREN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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**AIM OF THE STUDY:** Meckel's diverticulum (MD) is the most common congenital anomaly of the gastrointestinal tract. Laparoscopy is considered safe and effective in the management of MD in children. However, there is an ongoing debate whether the intracorporeal laparoscopic excision of MD is superior to the laparoscopic-assisted excision. The aim of our study was to determine whether the type of laparoscopic approach for the treatment of MD had an impact on patient outcome.

**METHODS:** Using a defined search strategy (PubMed, Medline, OVID, Embase, Cochrane databases), two investigators independently identified all comparative studies reporting data on MD excision either through laparoscopy or laparoscopic-assisted procedure in patients <18 years old. Case reports and opinion articles were excluded. The meta-analysis was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and analyzed using RevMan 5.3. Data are expressed as mean±SD. The present study was registered on PROSPERO – international prospective register of systematic reviews.

**MAIN RESULTS:** Systematic review – Of 1359 titles or abstracts screened, 28 full-text articles were analyzed. Five comparative studies were included, none of which was a randomized controlled trial. All selected papers were retrospective and reported the outcome of 106 patients with MD. The surgical approach was laparoscopy in 68 (63%) and laparoscopic-assisted in 40 (27%). Meta-analysis – Laparoscopy was associated with shorter length of procedure (46.4±58.8min) in comparison to laparoscopic-assisted excision (58.4±15.4min, p=0.002, Standardized Mean Difference -0.75, 95% confidence interval (CI) -1.23 to -0.27, I<sup>2</sup>=83%; Figure). The length of the hospital stay was reported in only one paper and it was longer in the laparoscopic group (4.3±1.5 days) than in the laparoscopic-assisted one (3.7±0.75 days; p=0.49). Although there was no significant difference in the prevalence of post-operative complications between the two groups (laparoscopy: 1.5%, laparoscopic-assisted: 6%; p=0.08, odds ratio (OR) 0.20, 95% CI 0.03 to 1.22, I<sup>2</sup>=57%), post-operative small bowel obstruction was more frequent in the laparoscopic-assisted group (12%) than in the laparoscopy group (0%; p<0.05, OR 0.03, 95% CI 0.00 to 0.85, I<sup>2</sup>=not applicable).



**CONCLUSION:** This study shows that the evidence in support to the type of laparoscopic approach (intracorporeal or laparoscopic-assisted) remains poor. Laparoscopic-assisted excision of MD is associated with an increased risk of post-operative small bowel obstruction, probably because of bowel manipulation. Prospective studies with long-term follow-up are needed to confirm these outcome data and determine which is the best laparoscopic approach in children.

### (QS012) MAGNETIC COMPRESSION ANASTOMOSIS (MAGNAMOSIS) FOR FUNCTIONAL UNDIVERSION OF ILEOSTOMY IN PEDI- ATRIC PATIENTS.

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**Introduction:** Magnamosis forms a compression anastomosis using a pair of self-aligning magnetic Harrison rings. The device has been approved by the Food and Drug Administration for first-in-human testing and has been applied in adults for intestinal anastomosis during urologic reconstructions. We now report the first two cases of Magnamosis to functionally undivert the fecal stream from a previously created loop ileostomy in pediatric patients.

**Materials and Methods:** Case 1: A four year old male underwent a diverting loop ileostomy for bowel obstruction from metastatic hepatoblastoma. Although the obstruction gradually resolved with chemotherapy, high stomal output and malnutrition persisted, prompting undiversion. Case 2: A sixteen year old female with ileocolonic polyposis underwent ileoproctectomy with J Pouch and diverting loop ileostomy. She was expected to have perineal skin problems after refunctionalization.

Parental and institutional approval was obtained after detailed description of the procedure. The Magnamosis Undiversion technique involves introducing a Harrison ring through each stomal limb 5 cm deep from the skin under general anesthesia with Xray guidance. Magnets are each tied with silk sutures that exit the stoma and are then tied to each other externally. (Figure). The device is removed when patency is detected.

**Results:** In both cases, the introduction procedure took less than twenty minutes and there were no complications. Enteral feeding was initiated 24 and six hours postoperatively, and passage of stool through the anus occurred by the fourth and fifth days, respectively. Magnets were removed 14 and 15 days postop, with no evidence of leak or any other complication.

**Conclusion:** We conclude that the Magnamosis Undiversion procedure is a safe, minimally invasive way to gradually refunctionalize the excluded distal bowel after previous diverting ostomy that could in the future be accomplished without general anesthesia.

