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#### LAPAROSCOPIC VERSUS OPEN ILEOSTOMY REVERSAL: IS THERE AN ADVANTAGE TO A MINIMALLY INVASIVE APPROACH?

(P275)

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**Purpose:** Ileostomy reversal is a commonly performed procedure after colon and rectal operations. Laparoscopic assistance with lysis of adhesions is an increasingly used modality, with potential benefits over conventional open surgery. The aim of this study was to compare outcomes of laparoscopic and open ileostomy reversal.

**Methods:** 133 consecutive patients undergoing ileostomy reversal between June 2009 and August 2013 were analyzed using a retrospective database. The cohort was comprised of 79 laparoscopic and 54 open cases, performed by 4 surgeons at a single institution. Data was analyzed for operative characteristics, postoperative outcomes and 30-day morbidity and mortality.

**Results:** Both groups had comparable ASA scores, BMI and gender distribution. Operative parameters studied included duration of surgery, estimated blood loss, repair of coexistent hernia, whether lysis of adhesions was performed, duration of lysis of adhesions, type of intestinal anastomosis and technique of ostomy site closure. The laparoscopic group had a significantly longer duration of surgery (109 versus 93 minutes, p=0.03); however performed more lysis of adhesions (59% versus 26.5%, p=0.0001) and completed more hernia repairs (32.7% versus 7.6%, p=0.0002). The laparoscopic group included 43 (79.6%) extra-corporeal and 11 (20.4%) intra-corporeal anastomoses. The majority of wounds were closed by purse string in both open and laparoscopic cohorts (86% and 85% respectively). There was no significant difference in estimated blood loss (31 versus 39 ml) or median length of stay (4.0 versus 4.0 days). Post-operative outcomes studied included readmission rates, urinary retention, urinary tract infections, bleeding, ileus, sepsis, cardiac complications, surgical site infections (SSI) and overall mortality and morbidity. Superficial and deep SSI together were significantly higher in the open cohort (8.8% versus 0%, p=0.04). No significant difference was noted in any other variables and no mortality was noted in either group.

**Conclusions:** Laparoscopy is safe and effective in ileostomy reversal, with potential benefits in terms of concomitant hernia repair, lysis of adhesions and lower wound infection rate.