

THE IMPACT OF MESENTERIC WINDOW CLOSURE AFTER HARVESTING ILEUM FOR GENITOURINARY RECONSTRUCTIVE SURGERY

Hypothesis / aims of study

Classic surgical teaching is that the mesenteric window (MW), created when one isolates and harvests a segment of small intestine (ileum) for urinary tract reconstruction, should be closed in order to prevent internal herniation. However, there is a paucity of actual evidence supporting this tenet in the literature. We assessed the importance of MW closure at the time of ileal harvest for genitourinary reconstructive surgery (GURS) by comparing the incidence of gastrointestinal adverse events (GIAE) in patients with and without MW closure.

Study design, materials and methods

This is a retrospective chart review of patients older than 16 years of age undergoing GURS with ileum. The operative reports were reviewed to determine whether or not MW closure was performed (decision to close based on surgeon preference) and the charts were reviewed to identify any postoperative GIAE (e.g. ileus, small bowel obstruction, fistula and stoma complications). Patients with MW closure were then compared to those without MW closure to see if variables other than MW closure (e.g. body mass index [BMI], Charlson Co-morbidity Index [CCI], prior intraperitoneal surgery and radiation) had any effect on GIAE as well.

Results

Two-hundred and eighty eight patients were reviewed. The indications for GURS included urinary diversion for bladder cancer (with cystectomy) in 225 patients, neurogenic bladder dysfunction in 29 patients, complications of pelvic radiation in 7 patients and other (including ureteral stricture) in 24 patients. Table 1 lists the type of GURS performed. MW was closed in 194 cases (67%) and median follow up was 19 months. Early (<30 day) GIAE rates were 25.4% (n = 49) and 33.7% (n = 32) in the closure and non-closure groups ($p=0.14$). Increasing BMI, CCI, history of prior intraperitoneal surgery and prior pelvic radiotherapy were not associated with early GIAE.

The late (>30 days) GIAE rates were 5.7% and 6.3% in the closure and non-closure groups ($p=0.83$). There were no cases of small bowel obstruction due to internal herniation in either cohort. Following multivariate analysis, late GIAE were associated with a history of pelvic radiotherapy [RR 2.9, CI 1.4-6.0] and increasing BMI [RR 1.1, CI 1.1-1.2]. There was no association between late GIAE and closure of MW, CCI, prior intraperitoneal surgery or the indication for surgery.

Table 1

Type of GURS	n
Ileovesicostomy	1
Ileal ureter	4
Ileal conduit (no cystectomy)	6
Augmentation cystoplasty - ileum	9
Simple cystectomy, ileal conduit	36
Radical Cystectomy, ileal neobladder	69
Radical cystectomy, ileal conduit	164

Interpretation of results

Within the limitations of a retrospective review, it appears that leaving the mesenteric window open at the time of ileal harvesting for GURS does not increase the risk of GIAE, and specifically does not increase the risk of bowel obstruction due to internal herniation. When the MW were left open, they were of large size (could easily accept a clenched fist) and this may have contributed to the lack of a difference in GIAE when compared to cases that had MW closure.

Concluding message

After harvesting ileum for GURS, the mesenteric window can safely be left open.

Disclosures

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