PD-019  THE 2005 REPORT FROM THE INTERNATIONAL STEP DATA REGISTRY: INDICATIONS, EFFICACY, AND COMPLICATIONS - A GOOD FIRST STEP

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Purpose: The International STEP Data Registry was created in 2003 for multi-center assessment of the serial transverse enteroplasty (STEP) operation. This first report of the International STEP Data Registry describes the diagnoses, indications, complications, and outcomes of the STEP operation.

Methods: After IRB approval, surgeons enrolled their patients in the International STEP Data Registry via online data entry and telephone contact, with ongoing follow-up. Statistical analyses were performed using paired t-tests with significance set at p<0.05.

Results: Sixteen centers enrolled 28 patients. The primary diagnoses were intestinal atresia (n=11), gastroschisis (n=8), necrotizing enterocolitis (n=4), volvulus (n=3), and other (n=2). Indications for STEP were short bowel syndrome (SBS) (n=20), bacterial overgrowth (n=5), and atresia with marginal bowel length in neonates (n=3). The STEP operation significantly increased mean small intestinal length in all groups (66 ± 43 cm vs. 112 ± 77 cm, p<0.001, n=18). Two patients required intraoperative repair for leak at the apex of a staple line. Early postoperative complications were bowel obstruction (n=1), abscess (n=1), and hematoma (n=1). Late complications included progression to transplantation (n=2) and mortality from preexisting liver failure (n=1). For the SBS cohort, excluding patients with incomplete data or progression to transplant or death, mean enteral tolerance was significantly increased from 35 ± 34 % to 74 ± 35 % of calories (p<0.005, n=14), with 13.5 month median follow-up. The STEP operation eliminated symptoms in all bacterial overgrowth patients. The three neonates each currently tolerate 100 %, 80 %, and 70 % of calories enterally.

Conclusions: Serial transverse enteroplasty has been performed at multiple centers with minimal complications and encouraging outcomes. Indications for the procedure have broadened beyond short bowel syndrome to include bacterial overgrowth and intestinal atresias with dilated proximal intestine. Continued accrual and follow-up of patients in the International STEP Data Registry will further elucidate the long term safety and efficacy of the serial transverse enteroplasty operation.