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Laparoscopic Gastrostomy During an Open Abdominal Procedure

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Laparoscopic Gastrostomy During an Open Abdominal Procedure

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IRB Number: 17080493

Describe role of Submitting/Presenting Trainee in this project (limit 150 words):

Submitting Trainee: Pediatric Surgical Scholar (research fellow in department of surgery) and primary author

Presenting Trainee: Pediatric Surgical Scholar (research fellow in department of surgery)

Background, Objectives/Goal, Methods/Design, Results, Conclusions limited to 500 words

Background: Infants with intra-abdominal pathology necessitating open abdominal surgery may require a gastrostomy tube (g-tube) for inadequate oral intake. A Stamm gastrostomy is often performed during an open abdominal procedure. However, laparoscopic g-tube done during the open procedure can provide superior visualization with a more straightforward and familiar approach compared to open gastrostomy. We describe a series of patients who underwent laparoscopic gastrostomy at the time of an open abdominal procedure.

Objectives/Goal:

To determine if laparoscopic gastrostomy can be performed in combination with an open abdominal procedure.

Methods/Design: After IRB approval, we performed a retrospective review of patients who underwent an open abdominal procedure with a concurrent laparoscopic gastrostomy from January 2010-December 2017. Patients who underwent laparoscopic gastrostomy before the open procedure were excluded. The technique involves either placement of the camera port between sutures of a partially closed open abdominal incision, or through a separate umbilical incision after the open incision

is closed. Descriptive statistics were performed with categorical variables reported as proportions and continuous variables reported as medians with interquartile range [IQR].

Results: Nine patients were included with a median age of 8 weeks [IQR 6,12], a median weight of 4.3kg [IQR 3.6,4.6], and 67% were male. Patient diagnoses, prior operations, and the open procedure performed concurrent with the laparoscopic gastrostomy are described in Table 1. Seven patients had the camera placed through the same incision and 2 had the camera placed through a separate incision. Median total operative time was 101 minutes [IQR 97,111]. There were no intra-operative complications. Postoperative complications included surgical site infection in 5, leaking around the g-tube in 2, and malfunction of the tube in 1 patient who ultimately required reoperation. Seven patients eventually had their g-tube removed at a median of 36 weeks [IQR 21,196] after placement, of which five required operative closure at a median of 11 weeks [IQR 11,29] following tube removal.

Conclusions: Laparoscopic gastrostomy can effectively be performed during an open abdominal procedure, allowing good visualization and a more straightforward approach for gastrostomy tube placement.