

Major stoma-related morbidity in infants after stoma formation and closure

A retrospective cohort study into incidences and risk factors

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Aim

To assess major stoma-related morbidity and its associated risk factors after stoma formation and stoma closure.

Methods

All infants (\leq three years) who received a stoma between 1998 and 2018 were retrospectively reviewed. The incidence of major stoma related morbidity (Clavien-Dindo grade \geq III) at stoma formation and stoma closure was the primary outcome. Risk factors for complications were identified using multivariate logistic regression.

Results

In total 336 infants were included with a median follow-up of 6 (IQR 2-11) years. Following stoma formation, 27% ($n=92/336$) of the infants experienced major stoma related morbidity whilst this occurred in 23% ($n=66/292$) following stoma closure. High output stoma, prolapse and stoma stenosis were most common following formation whilst anastomotic leakage/stenosis, incisional hernia and adhesive obstructions were most common following closure. Infants with an ileostomy have a higher risk of developing major morbidity following stoma formation (OR:2.5; 95%-CI:1.3-4.7) as well as following closure (OR:2.7; 95%-CI:1.3-5.8).

Discussion

Major stoma related morbidity is a frequent and severe clinical problem. The risk of morbidity should be considered when deliberating stoma formation.

Overall **39%** of the patients with a stoma experienced a **Clavien-Dindo \geq III**.

Ileostomies are more at risk of complications than colostomies



Baseline characteristic	Total = 336 N (%)
Male gender, n (%)	205 (61)
Premature, n (%)	137 (41)
Underlying disease	
Necrotising enterocolitis	109 (32)
Meconium peritonitis	9 (3)
Anorectal malformation	88 (26)
Hirschsprung disease	37 (11)
Intestinal atresia	29 (9)
Meconium ileus	20 (6)
Complex gastroschisis	12 (3)
Other	32 (10)
Type of stoma, n (%)	
Jejunostomy	17 (5)
Ileostomy	192 (57)
Colostomy	127 (38)