

# Treatment of Jejunoileal Atresia (JIA) by primary anastomosis or enterostomy: Double the operations, double the risk of complications

Laurens D. Eeftinck Schattenkerk<sup>ab</sup>, M. Backes<sup>a</sup>, Prof. WJ De Jonge<sup>b</sup>, Prof. LWE van Heurn<sup>a</sup>, JPM Derikx<sup>a</sup>

<sup>a</sup> Department of Paediatric Surgery, Emma Children's Hospital, Amsterdam UMC, University of Amsterdam, Amsterdam, The Netherlands.  
<sup>b</sup> Tytgat Institute for Liver and Intestinal Research, Amsterdam UMC, University of Amsterdam, the Netherlands

## Aim

- Compare the risk of complications comparing both (creation + reversal) enterostomy operations to primary anastomosis.

## Methods

- Retrospective cohort study of all patients with JIA treated between 1998-2021
- Severity of complications is classified by Clavien-Dindo

## Results

- N= 80 (48 primary anastomosis; 32 enterostomy).
- More ( $p \leq 0.01$ ) CD  $\geq$ III following enterostomy.
- Both short-term (surgical site infection, wound dehiscence) and long-term (short bowel syndrome, adhesive bowel obstruction) complications occurred significantly more in those treated by enterostomy.
- No significant difference in anastomotic leakage/stenosis and mortality rates between both treatment strategies.

## Discussion

- The previously assumed risk factors low birthweight, prematurity, ASA score, cystic fibrosis, size of resection & type of atresia were equally distributed in our cohort.
- More gastroschisis patients (7 vs 1) in enterostomy group
- Other risk factors were equally distributed between groups.
- Due to high complication risk following enterostomies, we advise a lower threshold for performing primary anastomosis.

**Clavien-Dindo  $\geq$ III occurred significantly more often following enterostomy.**

**Anastomotic stenosis and leakage occurrence did not differ between both treatments.**

**We advise a lower threshold for primary anastomosis in patients treated for JIA.**



Complication	Primary anastomosis (N=48)	Combined risk enterostomy (N=31)	Statistics <sup>1</sup>
	(N=missing)	(N=missing)	
<b>Early complications</b>			
Clavien-Dindo $\geq$ III	15 (31%)	19 (61%) (N=1)	$P \leq 0.01$
Surgical site infection	1 (2%)	6 (19%) (N=1)	$F = 0.01$
Wound dehiscence	1 (2%)	7 (23%) (N=1)	$F \leq 0.01$
Central venous catheter infection	18 (38%)	14 (45%) (N=1)	$P = 0.63$
Cholestasis	19 (40%) (N=4)	16 (52%) (N=1)	$P = 0.14$
<b>Late complications</b>			
Short bowel syndrome	11 (25%) (N=4)	14 (48%) (N=3)	$P = 0.03$
Anastomotic leakage	4 (9%)	3 (10%) (N=1)	$F = 1$
Anastomotic stenosis	8 (17%)	9 (30%)	$P = 0.19$
Adhesive bowel obstruction	4 (8%)	8 (25%)	$P = 0.03$
Incisional hernia	1 (2%)	3 (9%)	$F = 0.30$
Mortality	2 (4%)	3 (10%)	$F = 0.38$