

IMPERIAL



**CLOSURE OF MESENTERIC DEFECTS DURING
ROUX-EN-Y GASTRIC BYPASS USING
CYANOACRYLATE GLUE**

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I have no potential conflict of interest to report

Objectives

- Assess the safety and feasibility of cyanoacrylate glue for mesenteric window closure.
- Compare it to non-absorbable sutures for mesenteric window closure during RYGB.
- Primary outcome: Emergency reoperation for internal hernia with small bowel
- Secondary outcomes: Operative time and other complications

Methods

- Retrospective analysis of 482 patients (2015-2021)
- Data from NBSR and EHR
- Primary RYGB surgery
 - Ante-colic, ante-gastric
 - 50-70cm BP limb, 100cm Roux Limb
- Single centre with multiple surgeons
- 2-year follow-up.
- Data collection: Reoperation rates, operative time, complication rates

Ifabond[®] surgical glue.

Results

- 482 patients included
- 324 patients received glue closure; 158 received sutures.
- Mean age of cohort was 47.4
- Mean BMI was 44.2
- Median Follow Up
 - Glue 743 days
 - Sutures 794 days

Baseline characteristics	Glue		Sutures	
	n	%	n	%
Sex				
Female	241	74.38	124	78.48
Male	83	25.62	34	21.52
Age (mean)	48.03		46.24	
Co-morbidities				
T2DM	146	45.06	55	34.81
HTN	146	45.06	79	50.00
OSA	47	14.51	32	20.25
Asthma	45	13.89	23	14.56
Previous VTE	16	4.94	9	5.70
Reflux	72	22.22	34	21.52
Liver disease	16	4.94	3	1.90
Depression	43	13.27	34	21.52
ASA 1	3	0.93	2	1.27
ASA 2	170	52.47	97	61.39
ASA 3	148	45.68	59	37.34
ASA 4	3	0.93	0	0.00
Smoking				
Active	19	5.86	10	6.33
Ex-smoker	40	12.35	28	17.72
BMI, (mean)	44.02		44.68	

Primary Outcome

Emergency reoperation for bowel obstruction

	Day 0-30			After day 30		
Causes	Sutures	Glue	p Value	Sutures	Glue	P value
Kinking of JJ	3 (1.9%)	1 (0.3%)	0.07	0	0	NA
Internal hernia						
All	0	0	NA	7 (4.4%)	7 (2.2%)	0.15
JJ	0	0	NA	2 (1.3%)	2 (0.6%)	0.46
Peterson	0	0	NA	4 (2.5%)	5 (1.5%)	0.45
Combined	0	0	NA	1 (0.6%)	0	NA
Adhesions	0	0	NA	1 (0.6%)	2 (0.6%)	0.98
Incisional hernia	0	2 (0.6%)	NA	0	0	NA
Intussuception	0	0	NA	0	1 (0.3%)	NA
Other	1 (0.6%)	1 (0.3%)	0.6	0	0	NA
Total	4 (2.5%)	4 (1.2%)	0.3	15 (9.5%)	17 (5.2%)	0.07

Secondary Outcomes

Operative Time (mean)

- Glue 118 mins
- Sutures 145 mins
- $P < 0.001$

Complication Rates:

- No significant differences in length of stay, readmissions or other post-operative complications

Conclusions

- Use of cyanoacrylate glue is safe and feasible for mesenteric window closure in RYGB surgery
- No significant differences in reoperations for internal hernia between the two methods
- Faster operative time and simple method

- Further randomized studies required to determine long term safety and efficacy versus other methods of mesenteric closure
- Trials of different biological glues and applicators

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Thank you

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04/09/2024