

Robotic-Assisted Roux-en-Y Gastric Bypass: Minimizing Morbidity and Mortality

Snyder BE, Wilson T, Leong BY, Klein C, Wilson EB. *Obes Surg.* 2010 Mar;20(3):265-70. Epub 2009 Nov 3.

This retrospective study compares the complication rates and outcomes of 320 *da Vinci*-assisted and 356 laparoscopic gastric bypass patients. The *da Vinci* cohort had 0% gastrointestinal leak rate—a major complication in gastric bypass surgery—compared to 1.7% leak rate in the laparoscopic cohort ($p=0.05$).

This study also highlights the superior suturing dexterity and unique surgical ergonomics provided by the *da Vinci* System, which allows the standardization of the surgical technique for a wide spectrum of BMI and abdominal wall thicknesses.

Outcomes

Clinical Data	<i>da Vinci</i>	Laparoscopy	p-value
Patients	320	356	-
Average Age (yrs)	45	42	-
Mean BMI (kg/m ²)	49.1	50.4	-
Length of Stay (days)	2.7	2.9	NS
Major Complication Rates			
Wound Infection	0.3%	1.1%	0.44
Stricture	0.9%	2.2%	0.3
Gastrointestinal Leak	0.0%	1.7%	0.05

Key Takeaways

- *da Vinci* technology enables a meticulous two-layer hand-sewn gastrojejunal (GJ) anastomosis with superior precision and 3D visualization.¹
- *da Vinci*-assisted Gastric Bypass (Roux-En-Y) with a hand-sewn GJ anastomosis results in reduced gastrointestinal leak rates compared to laparoscopic approach (0.0% vs 1.7%, $p=0.05$).
- There were fewer reported wound infections and strictures in the *da Vinci* group compared to the laparoscopic group (0.3% vs 1.1%, 0.9% vs 2.2%, respectively, p-values are NS).
- Furthermore, *da Vinci* technology enables surgeons to operate in small spaces and seamlessly work with thick abdominal walls with decreased distractions at the console.

Conclusion

da Vinci Gastric Bypass provides patients a lower threat of gastrointestinal leaks (0%) compared to the current literature (1%-3%), with the same long-term, postoperative benefits of losing the excessive weight and resolution of co-morbid disease.

Compared to laparoscopy, lower morbidity with equivalent weight loss and quality of life associated with *da Vinci* represents a proper clinical advantage and profit of robotic-assisted gastric bypass.



¹Snyder BE, Wilson T, Scarborough T, Yu S, Wilson EB. Lowering gastrointestinal leak rates: a comparative analysis of robotic and laparoscopic gastric bypass. *J Robotic Surg.* 2008. DOI 10.1007/s11701-008-0104-8.

While clinical studies support the use of the *da Vinci* Surgical System as an effective tool for minimally invasive surgery, individual results may vary. Before performing any clinical procedure utilizing the System, physicians are responsible for receiving sufficient training and proctoring to ensure that they have the requisite training, skill, and experience necessary to protect the health and safety of the patient. For technical information, including full cautions and warnings on using the *da Vinci* System, please refer to the System User Manual. Read all instructions carefully. Failure to properly follow instructions, notes, cautions, warnings, and danger messages associated with this equipment may lead to serious injury or complications for the patient. © 2011 Intuitive Surgical. All rights reserved. *Intuitive, Intuitive Surgical, da Vinci, da Vinci S, da Vinci Si, Single-Site, InSite, TilePro and EndoWrist* are trademarks or registered trademarks of Intuitive Surgical. All other product names are trademarks or registered trademarks of their respective holders. PN 874709 Rev A 06/11