



Staple line reinforcement during Sleeve Gastrectomy with SeamGuard: single center retrospective case-control study over a 5-year period.

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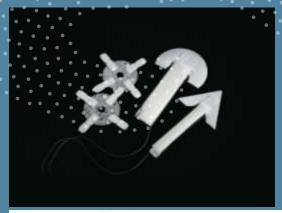


GORE® SEAMGUARD® staple line reinforcement

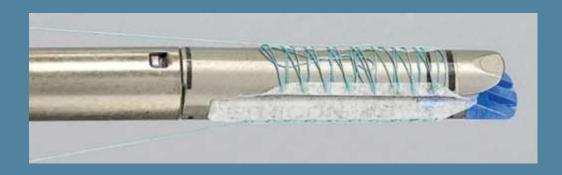
It is specifically engineered to reduce the incidence of perioperative leaks and bleeding in a variety of minimally invasive surgeries.

Stapling Applications

- Bariatric
- Thoracic
- Colorectal
- Solid organ







Mechanics of Staple Line Reinforcement

GORE® SEAMGUARD® Reinforcement mechanically increases the strength of the resection line; it "evenly redistributes the staple pressure exerted on the tissue over a wider surface area and thereby reduces staple-line bleeding" and leakage.

Unreinforced Staple Line Reinforced Staple Line



STAPLE LINE REINFORCEMENT

Nguyen NT, Longoria M, Welbourne S, Sabio A, Wilson SE. Glycolide copolymer staple-line reinforcement reduces staple site bleeding during laparoscopic gastric bypass. A prospective ranc Archives of Surgery 2005;140(8):773-778.

^{*} Baker, R.S. et al. The Science of Stapling and Leaks. Obesity Surgery, 14, 2004. 1290-1298.





Sleeve gastrectomy papers (% leaks)

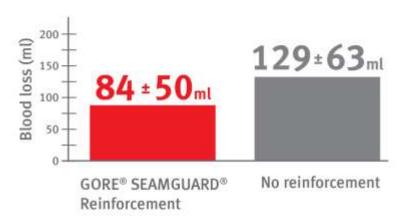
Systematic review data*					Contemporary studies**					
2002 -	- 2004 	– 2008 –––	— 2009 ——	– 2010 –	– 2011 –––	– 2012 –––	2013 —	—2014 —	- 2015	- 2016
	Consten ECJ et al. ¹ 0.0% n=10	Moy J et al. ² 1.0% n = 135	Lewis CE et al.4 0.0% n=42	Gentileschi P et al. ⁷ 0.0% n=8	Simon T et al. ¹³ 3.0% n = 59	Chopra A et al. ¹⁹ 2.0% n = 174	Vidal P et al.25 2.0% n=114	Noel P et al. ²⁹ 0.0% n=10	Pedroso FE et al.35 0.0% n=37	Lemaître F et al.42 2.0% n = 289
		Saber A et al.3 0.0% n=7	Saber AA et al.5 0.0% n=6	Chowbey PK et al.8 0.0% n=75	Ayloo S et al. ¹⁴ 0.0% n=69	Albanopoulos K et al.20 4.0% n = 48	lannelli et al. ²⁶ 4.0% n=110	D'Ugo et al. ³⁰ 3.0% n=63	El Chaar M et al.36 0.0% n = 338	Ruscio S et al. ⁴³ 1.0% n=96
			Kockerling F et al. ⁶ 0.0% n=38	Diamantis T et al.9 0.0% n = 25	Gluck B et al. ¹⁵ 0.0% n = 204	Nguyen NT et al. ²¹ 2.0% n = 50	Uffort E et al.27 3.0% n=78	Lopez J et al.31 0.0% n=11	Barreto TW et al. ³⁷ 0.0% n=860	Gayrel X et al.44 2.0% n=86
				Jacobs M et al. ¹⁰ 1.0% n = 157	Diamantis T et al.16 0.0% n = 19	Gentileschi P et al. ²² 0.0% n = 40	Sucandy I et al. ²⁸ 0.0% n=100	Young JA et al. ³² 0.0% n=14	Luppi CR et al.38 2.0% n=120	Noel P et al.45 0.0% n=800
				Dapri G et al. ¹¹ 8.0% n = 25	Zhang F et al.17 0.0% n=45	Saul D et al. ²³ 0.0% n = 10		Schraibman V et al. ³³ 0.0% n=48	Elli E et al. ³⁹ 0.0% n=409	
				Nath A et al. ¹² 1.0% n=100	Slater BJ et al. ¹⁸ 1.0% n = 165	Yaghoubian A et al. ²⁴ 1.0% n = 192		Gomberawalla A et al. ³⁴ 0.0% n=113	Andreas A et al.40 0.0% n = 25	
									Toro JP et al.41 0.0% n=84	

46 studies • 5,598 patients

^{*} Gagner, Michel, and Jane N. Buchwald. "Comparison of laparoscopic sleeve gastrectomy leak rates in four staple-line reinforcement options: a systematic review." Surgery for Obesity and Related Diseases 10.4 (2014): 713-723.

^{**} Includes published sleeve gastrectomy papers through July 2016 that identifies adult patients reinforced with GORE® SEAMGUARD® Reinforcement.

Decreased blood loss⁴⁶ (p>.01)



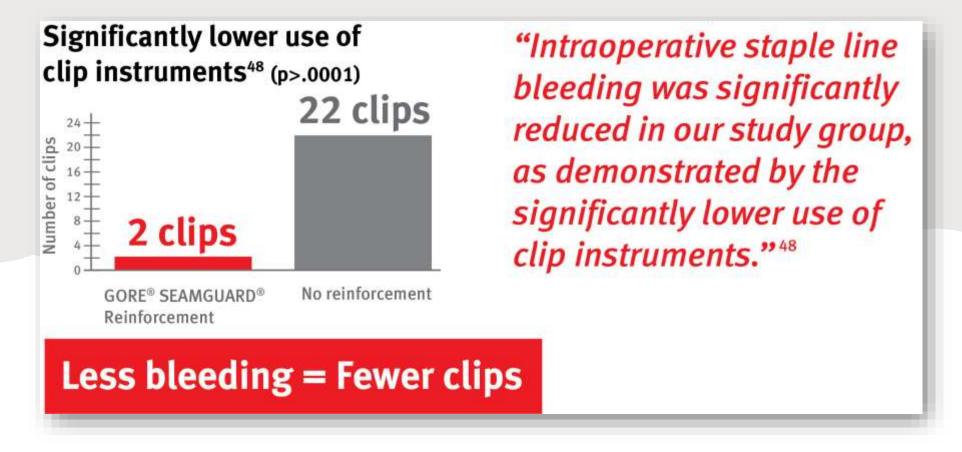
"Staple line reinforcement will reduce bleeding along

staple line."47

No reinforcement = 54% more bleeding on average⁴⁶

• Rosenthal, Raul J. International Sleeve Gastrectomy Expert Panel Consensus Statement: best practice guidelines based on experience of > 12,000 cases. Surgery for Obesity and Related Diseases 8.1 (2012): 8-19.

Reduces bleeding complications
Randomized prospective clinical data



• Miller KA, Pump A. Use of bioabsorbable staple reinforcement material in gastric bypass: a prospective randomized clinical trial. Surgery for Obesity & Related Diseases 2007;3(4):417-422





SURGERY FOR OBESITY AND RELATED DISEASES

Surgery for Obesity and Related Diseases 10 (2014) 713-724

Review article

Comparison of laparoscopic sleeve gastrectomy leak rates in four staple-line reinforcement options: a systematic review

Michel Gagner, M.D.a,*, Jane N. Buchwald, B.A.b

Surgical Endoscopy (2020) 34:396–407 https://doi.org/10.1007/s00464-019-06782-2





Comparison of laparoscopic sleeve gastrectomy leak rates in five staple-line reinforcement options: a systematic review

Michel Gagner 1,2,3 . Paul Kemmeter 4

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Obesity Surgery (2022) 32:1466-1478 https://doi.org/10.1007/s11695-022-05950-z

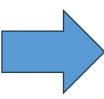


ORIGINAL CONTRIBUTIONS

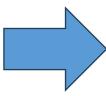


Staple Line Reinforcement During Laparoscopic Sleeve Gastrectomy: Systematic Review and Network Meta-analysis of Randomized Controlled Trials

Alberto Aiolfi¹ • Michel Gagner² • Marco Antonio Zappa³ • Caterina Lastraioli¹ • Francesca Lombardo¹ • Valerio Panizzo¹ • Gianluca Bonitta¹ • Marta Cavalli¹ • Giampiero Campanelli¹ • Davide Bona¹

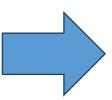


leak rate in LSG was significantly lower using APM staple-line reinforcement than oversewing, BPS reinforcement, or no reinforcement.



significantly lower rate using APM

staple-line reinforcement as compared to oversewing, use of sealants, BPS reinforcement, or no reinforcement



SR seems associated with a reduced risk of bleeding, leak, and overall complications compared to NR while no differences were found vs. GR, GoR, and CR.

Obesity Surgery (2023) 33:2237-2245 https://doi.org/10.1007/s11695-023-06649-5



REVIEW



Seamguard Buttressing of the Staple Line During Laparoscopic Sleeve Gastrectomy Appears to Decrease the Incidence of Postoperative Bleeding, Leaks, and Reoperations. A Systematic Review and Meta-Analysis of Non-Randomized Comparative Studies

Abdul-Rahman F. Diab¹ · Sarah Alfieri² · William Doyle² · Bilal Koussayer² · Salvatore Docimo¹ · Joseph A. Sujka¹ · Christopher G. DuCoin¹



SeamGuard buttressing appears to decrease the incidence of postoperative bleeding, postoperative leaks, and reoperations.



Staple line reinforcement during Sleeve Gastrectomy with SeamGuard: single center retrospective case-control study over a 5-year period.



- ➤ Five years: Jan 2014 Jan 2019
- ➤ Total number of primary Laparoscopic Sleeve Gastrectomy (LSG): **626**
 - > Reinforced with SeamGuard: 450

➤ Surgeon 1: 216

➤ Surgeon 2: 119

➤ Surgeon 3: 115

> Not reinforced with SeamGuard: 176

➤ Surgeon 4: 34

➤ Surgeon 5: 142

Mr. Marco Adamo, Mr. Mohamed ElKalaawy, Mr. Andrew Jenkinson



Table 2. Preoperative demographics.

	Group GoR+ (n=450)	Group GoR- (n=176)	P value
Age (years)	41.5 ± 11.6	43.1 ± 9.9	0.09
BMI (Kg/m²)	44.2 ± 7.6	45.1 ± 6.5	0.13
Preoperative weight (Kg)	123.7± 16.4	127.8 ± 17	0.006
Sex (F/M)	338/112	132/44	0.9
Previous abdominal surgery (YES/NO)	139/311	66/110	0.11
Patients with BMI>50	31/399	51/145	0.03



Table 3. Comparison of Staple Line Complications between the two groups.

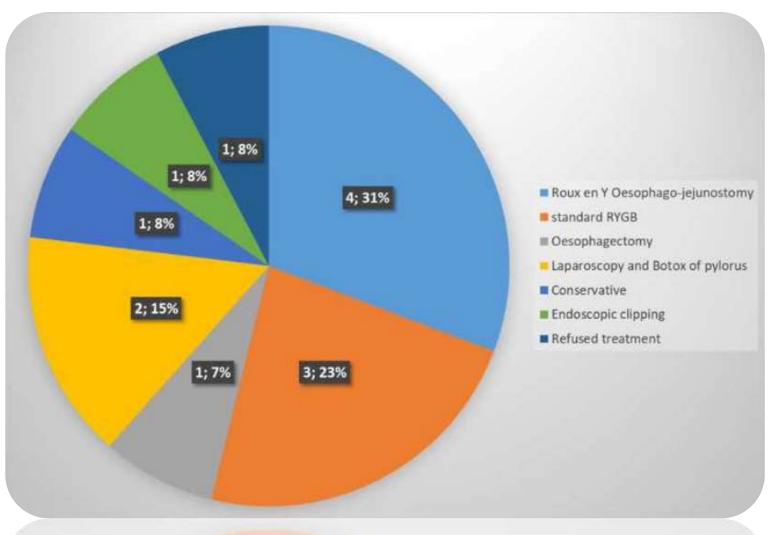
	Group GoR+ (n=450)	Group GoR- (n=176)	P value
Staple line leak	0	2 (1.13%)	0.02
Staple line bleed	0	2 (1.13%)	0.02
Total staple line complications	0	4 (2.26%)	0.001



Table 4. Staple Line Complications coming from other centers.

	Reinforcement	No Reinforcement
Staple line leak	0	11
Staple line bleed	0	2
Total staple line complications	0	13

University College London Hospitals NHS Foundation Trust





Conclusions

SeamGuard appeard to reduce leak and **bleeding** after LSG (Systematic Reviews)

UCLH experience shows that SeamGuard is associated with a lower rate of staple line reinforcement





Thank You!!

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