

AEON™ ENDOSTAPLER

INNOVATING
MINIMALLY INVASIVE
SURGERY WITH
S3 ENGINEERING™



Superior staple lines



Smooth articulation



Multi-speed gear



AEON WITH S3 ENGINEERING™

Superior staple lines. Smooth articulation. Multi-speed gear.

Advanced reload architecture

Integrated I-beam assembly,
fixed anvil and teardrop shape
anvil buckets

High tech manufacturing

Proprietary manufacturing
equipment incorporating AI

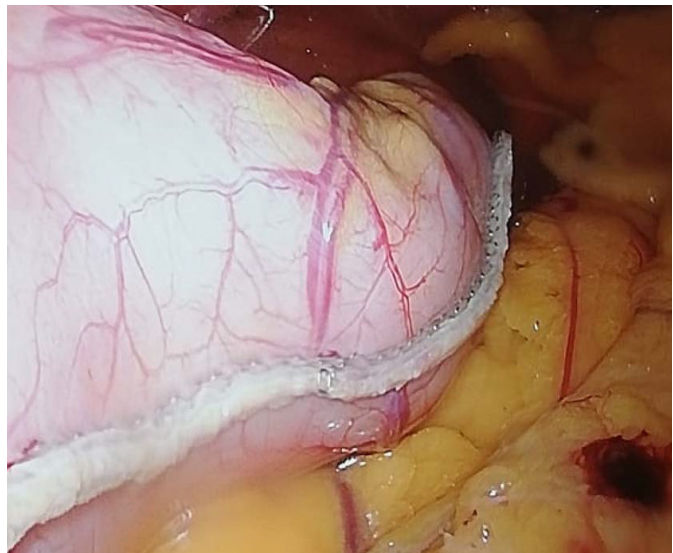
Cross compatibility

Cross compatible with Endo GIA™
and Signia™ powered handles



BETTER STAPLE FORMATION IN THICK TISSUE¹

AEON™ staple lines from
a laparoscopic sleeve
gastrectomy procedure



SMOOTH RANGE OF MOTION WITH PRECISE ARTICULATION



Precise articulation

Freedom to articulate effortlessly
for a more controlled firing



Multi-speed gear

Reduced trigger pull force
for thicker tissue

Single-handed grasper

Quick, easy tissue grasping
for increased efficiency



50%

LOWER FIRING FORCE WITH MULTI-SPEED GEAR¹

for controlled firing in thick tissue

1. Data on file

Improving Hemostasis in Sleeve Gastrectomy With Alternative Stapler

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ABSTRACT

Background: Staple line bleeding can be a major intra-operative complication during laparoscopic sleeve gastrectomy, requiring reinforcing interventions that may diminish the integrity of the staple line and put patients at risk for postoperative hemorrhage or leak. To improve outcomes associated with surgery, surgeons may benefit from an alternative stapler that produces a drier staple line and requires less staple line manipulation.

Methods: Sixty consecutive laparoscopic sleeve gastrectomy procedures were performed by three surgeons, 30 sleeves using the AEON™ Endostapler on THICK MODE and 30 using the Echelon Flex™ Powered Stapler with pulse technique. Stapler performance was measured by incidence and degree of staple line bleeding. Images of the first firing and fundus were taken with the laparoscope 10 seconds after the final firing. Images were evaluated by a third-party blinded evaluator and given a "bleeding score," a qualitative measure of intra-operative staple-line bleeding (1 = no bleeding to 5 = profuse bleeding).

Results: The AEON™ Endostapler demonstrated a lower mean (\pm standard error) "bleeding score" versus the Echelon Flex™ (2.1 \pm 0.1 vs. 2.6 \pm 0.1; $p = 0.01$). The AEON™ Endostapler had 15 cases (50%) with no bleeding at the fundus; the Echelon Flex™ had 7 cases (23%) with no bleeding at the fundus. The AEON™ Endostapler had 0 cases (0%) with profuse bleeding; the Echelon Flex™ had 2 cases (7%) with profuse bleeding.

Conclusion: The AEON™ Endostapler is a significantly drier alternative to the Echelon Flex™ Powered Stapler, producing a much drier staple line and decreasing the need for other bleeding control methods.

Key Words: Surgical stapler, Complications, Hemostasis, Sleeve gastrectomy.

INTRODUCTION

The laparoscopic sleeve gastrectomy (LSG) is an effective primary bariatric procedure for weight loss and the treatment of associated comorbidities. Compared with Roux-en-Y gastric bypass, LSG requires less operative time, is easier to perform, and has 50% fewer complications.¹⁻³ Its success has rendered it the most common surgical procedure to treat morbid obesity and type-2 diabetes, representing 47% of bariatric procedures worldwide in 2019.⁴

Although recognized for its high efficacy and acceptably low complication rate, LSG is not performed without inherent risk. Intra-operative bleeding can occur when dividing the transverse branches of the lesser curvature arteries during stapling, which is associated with a longer length of stay⁵ and a small but non-zero risk of mortality.⁶ Bleeding may additionally precipitate the need for transfusion or re-operation and increase the cost of surgery.⁷⁻⁸

The dryness of the staple line is indicative of its compressional reliability and may influence the surgeon's confidence during surgery. To mitigate the risk of bleeding, surgeons commonly employ suturing, buttressing, clipping, and/or gluing to reinforce the staple line. However,

The AEON™ Endostapler is a significantly drier alternative to the Echelon Flex™ Powered Stapler, producing a much drier staple line and decreasing the need for other bleeding control methods.

- Staple lines from sixty sleeve gastrectomy surgeries evaluated by blinded 3rd party evaluator
- 20% reduction in overall bleeding score comparing Echelon Flex to AEON (p-value = 0.01)
- Investigators reported consistent satisfaction with AEON staple lines

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Disclosure: none.

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Conflicts of Interest: The study investigators received a grant for their institution to cover administrative and data collection costs and received no personal compensation. The third-party primary outcome evaluator was paid for the time as a blinded scorer. An additional author was paid for background research and editorial contributions.

Informed consent: Dr. James G. Redmann declares that written informed consent was obtained from the patient's for publication of this study/report and any accompanying images.

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Reload Type	Cartridge Lengths	Product Codes	Open Height	Closed Height	Handle Type	Shaft Length	Product Code
Gray	30, 45mm	AESR30G, AESR45G	2.0mm	0.75mm	Short	60mm	AESH060
White	30, 45, 60mm	AESR30W, AESR45W, AESR60W	2.5mm	1.0mm	Medium	160mm	AESH160
Orange	30, 45, 60mm	AESR30R, AESR45R, AESR60R	3.25mm	1.5mm	Long	260mm	AESH260
Purple	30, 45, 60mm	AESR30P, AESR45P, AESR60P	4.0mm	1.8mm			
Black	60mm	AESR60B	5.0mm	2.2mm			
Gray Curved Tip	30, 45mm	ASR30GC, AESC45G	2.0mm	0.75mm			
White Curved Tip	30, 45, 60mm	ASR30WC, AESC45W, AESC60W	2.5mm	1.0mm			
Orange Curved Tip	30, 45, 60mm	ASR30RC, AESC45R, AESC60R	3.25mm	1.5mm			
Purple Curved Tip	30, 45, 60mm	ASR30PC, AESC45P, AESC60P	4.0mm	1.8mm			
White Short Tip	60mm	ASR60WS	2.5mm	1.0mm			
Orange Short Tip	60mm	ASR60RS	3.25mm	1.5mm			
Purple Short Tip	60mm	ASR60PS	4.0mm	1.8mm			

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