



AirSeal[®]

Clinical Publications & Summary Statements

General Surgery

Summary Statements:

1. 4 General Surgery studies found that operating at a lower IAP with AirSeal® resulted in a clinically significant reduction in both OR time and length of stay for procedures including lap choles, hernia repairs, and gastric bypasses. 16, 17, 21, 28

2. In 5 General Surgery studies, Airseal®'s outcome-driven technology has been proven to reduce cost of care for patients by allowing surgeons to safely operate at a lower IAP, which reduces post-op pain and leads to a shorter length of stay. 1, 16,17, 21, 28

Author	Journal	Publication Type	Focus of Study	Study Design	# of Subjects	Key Metrics	Key Findings
N de'Angelis, Brunetti	Surgical Endoscopy	Consecutive, Prospective	Lap Cholecystectomy	AirSeal® at 8 mmHg vs. SI at 12mmHg	35 Patients	Post-op Morbidity, Return to Baseline	1. Low stable pneumoperitoneum pressure with AirSeal® insickle cell disease (SCD) patients is associated with asignificantly reduced incidence of post-operative SCD-related morbidity 2. AirSeal® allowed for rapid ambulation/ return to regulardiet without increasing the total cost per patient
Needleman	SAGES Publication	Retrospective, Randomized	Roux-en-Y (Gastric Bypass)	AirSeal® 10mm Trocar vs. VersaStep 12mm Trocar	200 Patients (100 with 10mm AirSeal® Trocar vs. 100 with 12mm VersaStep Trocar)	Operative Time, Blood Loss, Hemodynamic Values, End-tidal CO2	The AirSeal® group: 1. Saved 12.3 minutes on average, which saves about \$345per case on OR time 2. Had a mean EBL of 34.6cc compared to the VersaStepgroup which had a mean EBL of 45cc

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Author	Journal	Publication Type	Focus of Study	Study Design	# of Subjects	Key Metrics	Key Findings
Ramshaw	Surgical Technology International XXIX	CQI	Lap Ventral Hernia	AirSeal® at 8-10mmHg with Exparel vs. SI at 15mmHg with and without Exparel	120 Patients (53 with SI at 15mmHg, 37 with SI at 15mmHg + Exparel, 30 with AirSeal® at 8-10mmHg+ Exparel)	Length of PACU and Hospital Stay, Procedure Time	<ol style="list-style-type: none"> 1. Patients in AirSeal® + Exparel group had a shorter length of stay in hospital 2. Procedures in AirSeal® + Exparel group were 25% shorter in duration (101 minutes vs. 135 minutes)
Ramshaw	Surgical Endoscopy	CQI Process Improvement	Lap Inguinal Hernia	SI at 15mmHg vs. AirSeal® at LP with Exparel	93 Patients (35 with AirSeal® at LP and Exparel, 59 with SI at Standard Pressure without Exparel)	Pain, Same Day Discharge	<p>Patients in the group with AirSeal® at low-pressure and Exparel:</p> <ol style="list-style-type: none"> 1. Were 7.81 times more likely to be discharged on the day of surgery 2. Were 80.5% less likely to develop a new type of groin pain after surgery
Richards	The American Surgeon	Consecutive, Prospective	Lap General & Bariatric Surgery	AirSeal® at 8-12mmHg vs. SI at 15mmHg	83 Patients (41 with AirSeal®, 42 with SI)	Post-op Pain, Anesthesia Metrics	<p>AirSeal® group showed:</p> <ol style="list-style-type: none"> 1. Trends toward lower pain scores at discharge or 24 hours 2. Statistically lower PIP (peak inspiratory pressure) 3. Statistically lower etCO2
Telem	SAGES Publication	CQI	Lap Cholecystectomy	AirSeal® at 10mmHg vs. SI at 10mmHg	51 Patients (26 AirSeal®, 25 SI)	Length of Stay	<ol style="list-style-type: none"> 1. Patients in the AirSeal® group had a LOS that was 34.7% shorter (19.6 vs 30 hours) than patients in the SI group

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