

EXPOSURE

SurgiQuest Quarterly Newsletter

Volume 1, Issue 2, June 2014

Most Efficient Smoke Filter

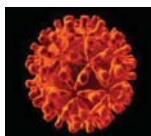


AIRSEALSystem 0.01µ Filtered Automatic Smoke Evacuation

Hazards of Surgical Smoke



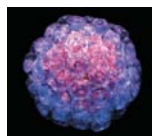
| Acronym | Name | Size |
|------------|------------------------------|---------------|
| HAV | Hepatitis A Virus | 0.029µ |
| HEV | Hepatitis E Virus | 0.039µ |
| HCV | Hepatitis C Virus | 0.039µ |
| HBV | Hepatitis B Virus | 0.042µ |
| HPV | Human Papilloma Virus | 0.055µ |
| HIV | Human Immunodeficiency Virus | 0.150µ |
| BAC | Bacteria | 0.30+µ |



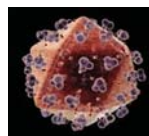
HCV



HBV



HPV



HIV

Continued on page 4

OR Savings

During this year's Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) meeting, held in Salt Lake City, Utah, Dr. Bradley J. Needleman from Ohio State University presented his abstract, Retrospective Study Of The AirSeal System For Laparoscopic Bariatric Surgery.

See page 2 for further details.

AirSeal at AUA

The AirSeal System was highlighted on multiple occasions during the Annual Meeting of the American Urological Association in Orlando, Florida.

See page 2 for further details.

Interview with an Expert

Dr. Alexandre Mottre compares previous challenges in laparoscopic and robotic surgery, and discusses his experience with the AirSeal System.

See page 3 for further details.

- Over 135,000 AirSeal procedures have been performed to date.
- SurgiQuest products are now SOLD in 31 countries across the world.
- To support the significant demand for its products, SurgiQuest has DOUBLED the size of its domestic sales organization to cover the growing demand for the AirSeal System.



SURGIQUEST
Laparoscopy Without Limits



Savings in the Operating Room Utilizing the **AirSeal® System** - Presented at SAGES Meeting

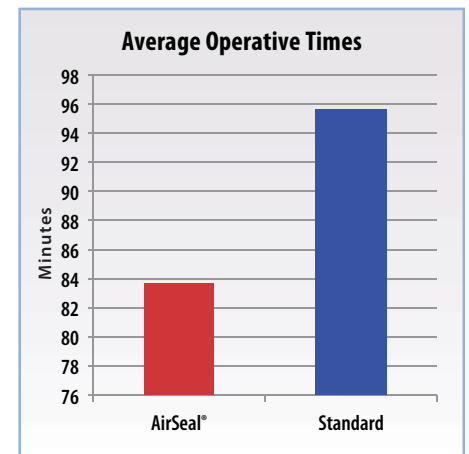
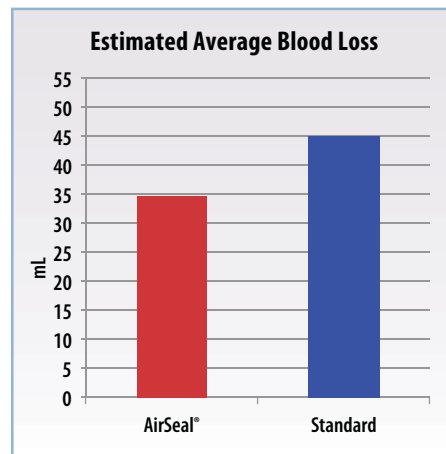
In this retrospective chart review from Ohio State University, 200 randomly selected charts were reviewed for patients who underwent laparoscopic Roux-en-Y gastric bypass surgery during an eight-year period. Two cohorts of patients with either a 12mm AirSeal Access Port or a 12mm Standard VersaStep trocar were retrospectively evaluated (100 in each cohort).

Operative times, blood loss, hemodynamic values, and end tidal CO₂ were analyzed. Both cohorts had statistically similar age, body mass index, and surgical technique. Results showed The AirSeal system group saved 12.3 mins in the operating room on average. Using a conservative calculation of \$28 per minute of OR time*, this saved the center about \$345 per case. Furthermore, the cohort in the AirSeal group experienced a mean

estimated blood loss that is ~30% less than that of the VersaStep port group.

The group at OSU concluded that: "The AirSeal system in laparoscopic bariatric surgery is safe and leads to decreased operative times. This potentially has cost saving measures by decreasing the operating room time costs."

| | AirSeal (n=100) | Standard Trocar (n=100) |
|------------------|----------------------------|----------------------------|
| Age | 45 ± 11 yrs | 47 ± 10 yrs |
| BMI | 50.0 ± 8 kg/m ² | 48.7 ± 8 kg/m ² |
| Complications | 3 | 9 |
| Wound Infection | 0 | 0 |
| Bleeding | 3 | 7 |
| Anastomotic Leak | 0 | 2 |
| EBL | 34.6 ± 16 mL | 45.0 ± 34 mL p < 0.003 |
| Operative Times | 83.6 ± 19 mins | 95.9 ± 27 mins p < 0.0001 |



* Other studies have shown an estimated cost of OR minute to be around \$75.

AUA Annual Meeting - Orlando, FL



Three live surgical procedures featuring AirSeal were broadcasted before a large audience in The Orange County Convention Center's Chapin Theater

on Saturday, May 17th, including a Robotic Sacrocolpopexy by Wesley White, MD at the University of Tennessee Medical Center, a Robotic Partial Nephrectomy by Dipen Parekh, MD at the University of Miami Hospital, and a Robotic Ureteral Reimplantation performed by Michael Stifelman, MD at the NYU Langone Medical Center in New York, NY. This was the second consecutive year that AirSeal was highlighted in live surgical procedures during AUA's Annual Meeting.

In addition to the live surgical procedures, data from the University of California, Irvine Medical Center's prospective, randomized AirSeal trial was presented on Sunday, May 18th. Data from the study entitled "Prospective Randomized Study

Comparing the Physiologic Effects of Valveless Insufflation and Conventional Laparoscopic Insufflator" demonstrated statistically significant improvements in both the stability of pneumoperitoneum and key respiratory and hemodynamic parameters.

"We were excited to present our study data as it clearly demonstrated several of the clinical advantages of the AirSeal System," said Jaime Landman, MD, who is the Chairman of the Department of Urology and Professor at the University of California, Irvine. "It was also great to see that our data was so very consistent with the wonderful outcomes seen in the live cases here at this year's AUA meeting."



Clinician's Corner - Interview with an Expert



Dr. Ph.D. Alexandre MOTTRIE

Department of Urology, OLV Hospital Aalst, Belgium; Asst. Prof. Saarland University, Homburg-Saar, Germany; Asst. Prof. Ghent University, Ghent, Belgium; CEO OLV Vattikuti Robotic Surgery Institute (ORSI); President, EAU Robotic Urology Section (ERUS); President, Society of Robotic Surgeons

Dr. Mottrie is well published and one of the world's prominent experts in urological and robotic surgery, often providing master classes at his training center and abroad. He is a regularly invited faculty to many global live surgery events where he routinely cites the many benefits of the AirSeal System while performing surgery in front of large audiences.

ORSI has achieved global recognition of providing outstanding multidisciplinary training in robotic surgery as well as conducting scientific research.

Early on, O.L.V. Clinic as well as ORSI acquired multiple AirSeal Systems for their state-of-the-art training facilities which has the ability to customize training for individual robotic surgeons or groups that wish to enhance their educational experience and level of robotic expertise.

Stable Pneumoperitoneum, Better Visibility and Surgery at Lower Pressure

SurgiQuest recently caught up with Dr. MOTTRIE for an interview:

SQ: Thank you for taking the time to answer a few questions for us, Dr. MOTTRIE. As a Master Trainer at the world renowned ORSI as well as being an experienced, highly skilled surgeon and invited faculty to many global training events, you have developed unique abilities that enable you to deal with just about any situation in surgery. Prior to adopting the AirSeal System, what were some of the challenges you and some of your colleagues faced in laparoscopic and robotic surgery?

AM: I have the wonderful opportunity to observe and work with excellent surgeons from all over the world. Many of them are either guest lecturers or students who come to hone their skills at ORSI. Regardless of aptitudes, intraoperative loss of pneumoperitoneum, whether it is caused by trocar leaks or use of suction, is a source of frustration for surgeons and can be challenging to the patient, particularly in more advanced procedures such as partial nephrectomies. I have stated to live audiences on several occasions that NOT using AirSeal during these procedures can put the patient in harm's way. To compensate for loss of intra-abdominal working space, surgeons often operate at higher intra-abdominal pressures than needed. Newer energy-based (radiofrequency/ harmonic) devices improve operative efficiency but create surgical smoke, which limits our ability to see the operative site and adds delay. When aspirating smoke, we train our teams to use suction sparingly though this is not always practical in situations when aggressive suction is required. Together, these two issues compromise surgical exposure and visibility, adding risk to robotic and laparoscopic procedures.

SQ: How has the AirSeal System changed this for you?

AM: I use AirSeal for every procedure. It has eliminated the issue of pneumoperitoneum loss for me, even with the use of aggressive suction. In addition, AirSeal is an excellent smoke evacuator. Because it recirculates and filters the insufflated gas, it protects both the patient and operating room staff from the pathogens of smoke while keeping the operative site crystal clear. Combined, these two performance capabilities result in fewer procedural delays, improving overall efficiency.

SQ: What else have you noticed about your procedures since adopting the AirSeal System?

AM: We have been able to significantly reduce our intra-abdominal pressure due to the stability of AirSeal pneumoperitoneum. We now routinely use 8mm Hg for intra-abdominal pressure. This is important for several reasons: First, our anesthesiologists find that they can more easily manage patient ventilation at lower pressures, as peak airway pressure and end-tidal carbon dioxide levels are substantially lower. Second, a number of studies have shown that lowering intra-abdominal pressure reduces post-operative shoulder pain and medication use, both of which are good for patients. We are planning to validate this in our own clinical study in the coming months.



Most Efficient Smoke Filter - continued from front page

The Threat is Real!

28-year-old operating room nurse stricken with laryngeal papillomatosis from surgical smoke

Laryngeal papillomatosis – first recognition in Germany as an occupational disease in an operating room nurse. Calero L and Brusis T. 2003. Laryngo-Rhino-Otol. 82: 790-793



44-year-old surgeon developed laryngeal papillomatosis from surgical smoke

Laryngeal papillomatosis with human papillomavirus DNA contracted by a laser surgeon. Hallmo P and Naess O. 1991. Eur Arch Otorhinolaryngol. 248: 425-42



See AirSeal in Action

Upcoming Conferences, Courses and Live Webcast:

IFSO International Federation for the Surgery of Obesity

Montreal, Canada

August 26th - August 30th

Florida Urological Society Meeting

Loews Miami Beach, Miami, FL

August 28th - August 31st

ERUS European Robotic Urology Symposium

Amsterdam, The Netherlands

September 17th - September 19th

Robotic Gynecologic Surgery: Patient Safety and Advanced Techniques

Boston, MA

September 20th - 21st

Robotic Partial Nephrectomy (Live Webcast)

www.globalcastmd.com

September 26th

ASMBS - Boston, MA

November 2nd - November 7th

AAGL - Vancouver, British Columbia

November 17th - November 21st

Training Sites: Intuitive Surgical, Sunnyvale, CA • Intuitive Surgical, Norcross, GA • IRCAD, France
Nicholson Center, Celebration, FL • Methodist MITIE Lab – Houston, TX • Surgical Innovation and Robotics
Institute at Memorial Hermann (SIRI) – Houston, TX • C.A.S.E. (Center of Advanced Simulation Education) at
Acibadem University, Istanbul • ORSI, Belgium

If you have suggestions about something you'd like to see in future newsletters, please send us an email at exposure@surgiquest.com and we will do our best to accommodate your request.



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