

PRESS RELEASE

***LESS* – Laparo-Endoscopic Single-Site surgery An evolution in minimally invasive surgery?**

Florence, October 29, 2009. At this year's Congress of the European Society for Gynaecological Endoscopy (ESGE) in Florence, Olympus Medical Systems Europa GmbH invited leading gynaecologists to participate in a symposium titled "Laparo-Endoscopic Single-Site (*LESS*) surgery – An evolution in laparoscopy?" chaired by Professor Giovanni Scambia, MD, PhD, Catholic University of the Sacred Heart, Rome, Italy and Dr. Francisco Carmona, MD, Hospital Clinic, Barcelona, Spain. In the course of the event, international speakers shared their insights into the status quo and future perspectives of this promising technology. They explained the technical equipment required to perform laparoscopy through only a single umbilical incision and presented case reports detailing their broad experiences in *LESS* surgery on a wide range of gynaecologic *LESS* procedures. It rapidly became clear that *LESS* surgery offers great advantages in the field of gynaecology. Not only can *LESS* surgery improve postoperative cosmesis, but may also lower complications caused by injury to inner organs, infections and postoperative hernias. These persuasive benefits will boost patient demand for *LESS* surgery once the innovative surgical procedure has reached the public press.

The future of *LESS* surgery as an advanced laparoscopic procedure seems promising. Throughout the entire event, the consensus was that *LESS* surgery is a surgical evolution that will open up new horizons in minimally invasive surgery.

Conventional laparoscopy has developed rapidly in the last decades to become a standard procedure for various applications. However, progress has not stood still and there has always been the aim to decrease incisional morbidity even further and achieve even better cosmesis.

These aims were inherent to the development of Laparo-Endoscopic Single-Site (*LESS*) surgery as an innovative and groundbreaking surgical technique. Whilst contemporary laparoscopic interventions require several cuts in the abdominal wall – usually between 3 and 5 incisions – *LESS* surgery enables surgeons to perform complicated procedures through a single incision. If appropriate, the incision is made in the umbilicus so that the residual scar is hidden and a better, virtually scar-free cosmesis is achieved. A better cosmetic result is probably one of the most important benefits from the patient's perspective. This is not only because of the aesthetic result, but also "because of the physiological impact of a scar or rather what a scar means to a woman," noted Professor Scambia.

"Whenever a patient looks at the scar, she has to think of the surgical procedure and maybe the pain and tense times associated with it."

Beyond the obvious cosmetic advantages, surgeons anticipate that *LESS* surgery will be associated with even further benefits.

Analogous to the benefits gained through the paradigm shift from laparotomy to multi-site laparoscopy^{1,2}, *LESS* surgery has moved minimal invasiveness up to the next level, generating additionally synergies like pain-reduction, reduced morbidity and faster recovery times. For now, however, the potential of this promise remains to be proven by studies comparing *LESS* surgery directly with conventional multiport laparoscopy.

***LESS* surgery – The wave of success has reached gynaecology**

So far, *LESS* surgery has been used frequently in urology, general surgery and gynaecology. The documented case numbers surge into the thousands. In Europe, the first cases of *LESS* surgery were documented in

¹ Bell MC et al. Gynecol Oncol 2008;111:407.

² Payne TN et al. J Minim Invasive Gynecol 2005;12:480.

urology and general surgery, but recently *LESS* surgery also has successfully found its place in gynaecology. At present, the number of gynaecological case reports is increasing by the day.

Technological advances dictate progress in *LESS* surgery

The successful breakthrough of *LESS* surgery would not have been possible without advances in technology. Manufacturers like Olympus, who leverage research into progress, have made a major contribution to this by developing their own *LESS* surgery set.

Multi-channel ports like the TriPort and the QuadPort that allow the insertion of multiple instruments simultaneously through one incision into the patient's abdomen were the keys that opened the door to *LESS* surgery. Nevertheless, the new way of access through one single incision required that surgical tools like optics and hand-held instruments also had to be modified to the new approach. Surgeons found that conventional straight instruments encumbered the new technique with a lack of mobility and triangulation.

So, Olympus, in cooperation with the surgeons, found solutions to overcome these ergonomic obstacles – the EndoEYE and HiQ LS curved hand instruments that will be on the market very soon. The first workshops, initial experiences, tests, and studies³ are proving that these instruments effectively facilitate surgeons' work by giving them more intraoperative freedom of movement and flexibility.

A broad application range that will expand with progress

In principle, *LESS* surgery can be employed for every standard laparoscopic approach in gynaecology since surgeons use the same surgical procedure as with the standard conventional laparoscopic approach. To date, many examples of indications for *LESS* surgery have emerged from the field of gynaecology.

³ Kleemann R et al. SAGES, Hand instruments with a curved shaft are suitable for *LESS* surgery, Olympus Winter & Ibe GmbH, Hamburg, Germany.

At present, gynaecological *LESS* surgery is focused on ovarian cyst removal, ovariectomy, sacrocolpopexy, salpingectomy and hysterectomy. With increasing experience and the use of newly developed instrumentation, the application range will expand even further. Professor Scambia is confident in saying, “Right now *LESS* surgery is very successful for all the adnexal diseases, but in the future we probably will be able to use *LESS* surgery even for the treatment of early oncological diseases.”

Case reports and studies prove feasibility and safety

The speakers at the symposium were among the most experienced practitioners of *LESS* surgery in gynaecology. The lecturers shared their experiences by presenting various case reports and giving the audience helpful and practical tips.

Dr. Anna Fagotti, Rome, Italy was one expert to report her experiences with adnexal *LESS* surgeries, whilst Dr. Anton Langebrenke, Ullevål University Hospital, Oslo, Norway, presented data on total *LESS* hysterectomies. These cases are just a few examples of the many scientific reports and studies published so far on *LESS* surgery and which prove the feasibility and safety of the *LESS* approach.

To conclude, the symposium revealed that *LESS* surgery has successfully made its initial foray into clinical practice. The initial surgical data are highly promising and predict a brilliant future for *LESS* surgery.

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