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REAL HEROES, REAL LEADERS

Have you ever met a real hero? No, we are not talking about celluloid heroes who play knights in shining armor and rescue damsels in distress, but “real” people who actually save the lives of others.

People who practice what they preach: Real Heroes, Real Leaders.

Meet Lalitha Raghuram and K. Raghuram

The year 2002: the Raghurams started the Hyderabad branch of MOHAN Foundation, a Chennai-based NGO that was established in 1997 to popularize the concept of deceased donor organ donation. Lalitha who was associated with the eye donation movement for 20 years decided to take up the new challenge of promoting multi-organ donation. Mr. Raghuram had a wealth of experience behind him as a hospital administrator. With the two of them at the helm of affairs in Hyderabad, the future looked promising for the organ donation programme there. The next couple of years were filled with working out the logistics of networking with hospitals for organ sharing, awareness initiatives and counseling. It was an extremely demanding exercise, but one that the Raghurams were definitely up to.

But, in 2004, there came a challenge for the Raghurams that tested their commitment to the cause of organ donation in the most tragic manner possible. Their 19-year-old son, Swaminarayan, who was studying in Chennai, to be an engineer, came home to Hyderabad for the Sankranti holidays. Appu, as he was fondly known, was a quiet but affable and friendly teenager. In a cruel twist of fate, he met with a car accident in Hyderabad on 13

January 2004 – it was his birthday. He suffered massive head injury and was declared brain dead shortly thereafter.

The Raghurams were asked whether they would give their consent to donating their son’s organs. And, yes, so committed were they to the concept of organ donation that they donated all their son’s organs on 15 January 2004. Mr. Raghuram said, “I now have five sons and daughters who have benefited from my son’s liver, kidneys, and corneas. Let us pass on life; it is the most wonderful gift we can give when we leave.”

In March 5, 2009 was a day of celebration for MOHAN Foundation when the Raghurams received the Real Heroes award instituted by CNN-IBN. Mr Yash Chopra, esteemed film director handed over the Real Heroes trophy and a cheque of Rs.5 lakhs to them, which they donated to MOHAN Foundation. This was in recognition of the fact that the Raghurams actually “walked the talk” when they donated their son’s organs when he passed away. Speaking on the occasion Lalitha said that it was her son’s award and that it was an award for all the donors and their families who had converted their grief and sorrow to something good for society by saying “Yes” to organ donation.

Meet Jochem Hoyer the German transplant surgeon

Until 1996 living donor organ transplantation had been neglected in Germany as an alternative source of organ procurement. Only 1% to 4% of living kidneys came from live donors and this was in spite of the fact that some German centers were so

impressed by the results from Scandinavia that they already focused their attention on live donation.

Most patients feared that live donation was not as safe as pointed out in literature. Jochem was so upset about this that he decided to set an example.

He reasoned that if survival tables and spoken affirmations could not convince people, it could possibly be done by the deed itself. Furthermore the practical demonstration by a transplant surgeon, who would be most aware of the risks of live organ donation, could be a very strong statement.

Jochem was convinced that the donation should be non-directed i.e. the kidney should be given to the best matched recipient and had to be anonymous to exclude any emotional influence.

When Dr Hoyer first broke the news to his wife she exclaimed “ You are crazy” but he was able to convince her and she fully supported his decision.

On July 18th 1996 Dr Hoyer underwent a non directed donor nephrectomy. He made an uneventful recovery. The donation raised huge ethical debates in Germany but did succeed in raising the percentage of living donors in Germany from 4% to 20% of renal transplants.

These are the “Real Heroes.” “Real Leaders”. Don’t take your organs to heaven, Heaven knows we need them here.

Dr. Sandeep Guleria,
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“Good judgment comes from experience, and often experience comes from bad judgment.” Rita Mae Brown

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Single Incision Laparoscopic Surgery (SILS): Optimising Minimalism!

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- **Single incision laparoscopic surgery (SILS)** also known as
- **Laparo endoscopic single-site surgery (LESS)** or
- **Single port access (SPA) surgery** or
- **One port umbilical surgery (OPUS)** or
- **Single port incisionless conventional equipment - utilizing surgery (SPICES)** or
- **Natural orifice transumbilical surgery (NOTUS)**

An advanced minimally invasive surgical procedure in which the surgeon operates almost exclusively through a single entry point, typically the patient's navel.

HISTORY OF SILS

Reportedly SILS was first performed for the treatment of appendicitis in 2005. Single port/single incision surgery has evolved rather quickly. Adoption of the approach is occurring at a remarkably fast pace. A number of general surgeons, gynaecologists and urologists have started performing SILS. To date, a total of 30 different types of single port procedures have been performed which include various surgeries like laparoscopic appendectomy, cholecystectomy, nephrectomy, hysterectomy, oophorectomy, adrenalectomy, gastric bypass, sleeve gastrectomy, hernia repair, splenectomy, colon resection, liver resection, and more.

EQUIPMENT

Although specialized articulating or bent instruments are used for SILS, it's possible to perform SILS, especially in simpler cases, without them. The articulating instruments make surgery easier and simpler. These instruments are called Real Hand instruments.



Roticulator Endo Dissect 5mm

These instruments differ from the standard rigid, straight instruments used for minimally invasive surgery. They are curved and articulating to accommodate for the space restriction and the range of motion.

Real Hand instruments uniquely enable the surgeon to reduce the number of trocars for surgery. These instruments facilitate single port laparoscopy by allowing triangulation of instruments even after they are introduced in the same point of entry. Real Hand instruments provide the 7 degrees of freedom of movement to enable these procedures.

In addition to the surgical instruments, there are specialized ports for SILS.



SILS port with cannulae

The SILS port is a unique device, especially designed to enable single incision laparoscopic surgery. It consists of a blue flexible soft foam port, with access channels for three cannulae. The 5mm cannula may be interchanged at any time during the procedure with a 5mm to 12mm cannula. The SILS Port will adapt its configuration to the size of the cannulae and maintains pneumoperitoneum.



Flexible soft foam port



Telescope and instruments via the SILS port

TECHNIQUE

A transumbilical insertion is ideal to prevent any visible scar. Following basic surgical principles, we first inject some local anesthetic agent in the umbilical and periumbilical areas. Then the deepest point of umbilicus is identified and an artery forceps, held in left hand, is kept at that point. Opening of the artery forceps stretches out the whole of the umbilicus. With opened artery forceps still in position, No.-11 surgical blade is used to give a vertical incision of about 1.5cm long in the umbilicus. We prefer a transumbilical vertical incision as this allows us to even extend the incision if required. Now the artery forceps is removed and 'S' shaped retractors are introduced on either side which further

widens the visibility. To make it all the more convenient, camera can be focussed on the incision site. Rectus sheath is identified and cut under direct vision. This is the ideal time to place fascial sutures which prove to be quite helpful at the end of the case by facilitating easy identification of the fascial edges for closure of abdomen. 'S' shaped retractors are then introduced beneath the rectus sheath and peritoneum opened, again under direct vision.

Alternative technique is to evert the umbilicus using pick-ups or atraumatic graspers and incising the skin within the confines of the umbilical folds.



Intra umbilical incision is given

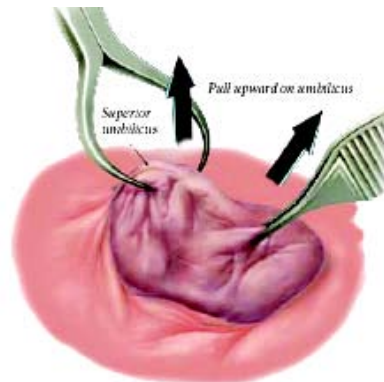


Incised umbilicus stretched out

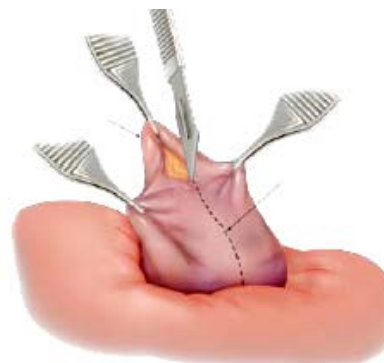


S-shaped retractors introduced and rectus sheath cut under vision

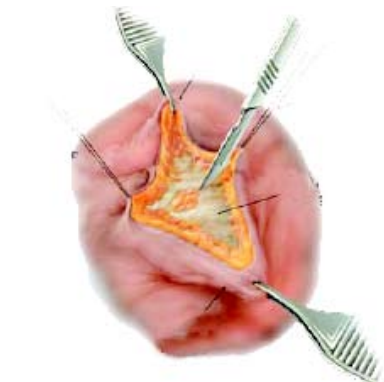
ALTERNATIVE TECHNIQUE



Eversion of umbilicus



Trans umbilical incision



Rectus sheath incised

This open technique allows the surgeon to extend the skin and fascia opening to an ideal length of 2 centimeters. Most times, such length should be sufficient to accommodate the SILS Port. One must be careful not to create a much larger incision, especially at the fascia, otherwise the port may be too loose, resulting in an inadequate pneumoperitoneum due to gas leak around the blue flexible port.



Port insertion

Next, the flexible SILS port is folded at its lower edge (contralateral to the insufflation system) using a clamp, and is advanced under direct vision into the abdomen. Only the bottom half of the port is introduced, making sure that the complete lower edge is inside. Once the bottom part of the port is inside the abdomen, the port is released from the clamp and then properly positioned.





Single Incision Laparoscopic
Cholecystectomy

PORT CLOSURE

At the end of procedure after removing all the instruments, the SILS port is held with a clamp and removed in the same manner.

The sutures applied to the rectus sheath in the beginning of surgery are now approximated to each other, thus preventing any chance of ventral hernia. The umbilicus automatically inverts back.



Port closure



Scar less surgery

WHY A SINGLE PORT/ SINGLE INCISION APPROACH?

Potential advantages for the patient:

1. Less post-op pain: fewer painful abdominal sutures.
2. Quicker recovery: less pain and fewer incisions.
3. Better cosmetic results: scar is hidden in the umbilicus.

Potential advantages for the surgeon:

1. Enhanced approach.
2. Reduce chance of port-site infection.
3. Reduce incidence of ventral hernia.

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4. Reduce incidence of blind veress needle and trocar-related injury.
5. A more comfortable and ergonomic approach as less arm movements required.
6. Removal of specimen is easy as the port is around 1.5-2 cm.
7. Hidden scar surgery is attractive to patients.

Potential advantages for the hospital:

1. Cost savings.
2. Progressive profile of the hospital.

Factors influencing the future of SILS will be professional enthusiasm, success of training programs, social acceptance, instrument innovation/modification, versatility in the usability of standard/articulating instruments including the access port utilised, native surgical skills, instrument cost (articulating instruments are significantly more expensive than standard instruments), learning curve issues and needless to mention, medico-legal implications. SILS has scored over NOTES (natural orifice transluminal endoscopic surgery) in its acceptability to surgeons. Interestingly Desai, Gill and colleagues report that about 15% of all laparoscopic operations are SILS at the Dept of Urology, Glickman Urological and Kidney Institute, Cleveland Clinic, Cleveland, Ohio, USA. The future holds rich promise with the possibility of the progressive platforms of SILS and Robotic surgery coming together to give rise to versatile and yet powerful hybrid technologies. Further studies with long-term outcomes will go a long way to decide the future of SILS.

With proper patient selection, conversion and complication rates are low. Improvement in instrumentation and technology is likely to expand the role of SILS in minimally access surgery. Meanwhile the future is here – SILS!