

## NEWS IN BRIEF

**Taiwan launches metabolic and bariatric surgery society**

In February 2012, the Taiwan Society for Metabolic and Bariatric Surgery (TSMBS) was officially launched, at a launch ceremony in Taipei. According to Dr Lee Wei-jei, President of the TSMBS, "The Association will serve as a platform where doctors exchange views and share experiences in performing bariatric and metabolic surgeries, as well as promote the benefits of surgery."

He added that bariatric surgery in the country is successful and extremely safe with a success rate of 90% and a fatality rate of less than 1%. The Association said that compared with the 200-300 procedures performed a few years ago, in 2011 there were 1,300 bariatric procedures.

The TSMBS currently has more than 100 members and hopes to expand its membership over the next year to some 150 members.

**Surgery improves menstrual dysfunction**

According to a study presented at the annual clinical meeting of the American College of Obstetricians and Gynecologists, there is a noticeable improvement seen in menstrual dysfunction and signs of hyperandrogenism following bariatric surgery.

Researchers from St Luke's-Roosevelt Hospital Center in New York City investigated the effect of bariatric surgery on menstrual irregularity and signs of hyperandrogenism in 295 women who underwent surgery. Before surgery, the researchers found that 52.4, 38.9, and 22.4% of women had regular menses, irregular menses, and amenorrhea, respectively. At 12-month follow-up, 98.5% of women with regular menses experienced no change. Regular menses began in 94% of those with previously irregular menses and in 81.8% of those with previous amenorrhea.

For 86.9% of women, the change from irregular or absent menses to regular menses occurred within six months. Before surgery, 31.7% of women reported acanthosis nigricans and 33% reported excess hair growth. At 12 months, these symptoms improved for 87.5 and 40.5% of women, respectively. Complaints of alopecia and acne improved for 52 and 66.7% of women, respectively.

"Results show that there is marked improvement in menstrual dysfunction and hyperandrogenism after bariatric surgery," the authors noted. "This gives direction for further evaluation of bariatric surgery as a treatment option for menstrual dysfunction, hyperandrogenism, and infertility associated with obesity."

## CONTROVERSIAL ISSUES ♦ CONTROVERSIAL ISSUES ♦

# Single Port Access for bariatric surgery

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**THE ULTIMATE GOAL** of laparoscopic surgery is to reduce the amount of tissue damage compared to open surgery and thus enhance post-operative recovery and return to daily activities. The laparoscopic approach remains the gold standard approach for metabolic/bariatric surgery procedures today. Single Port Access (SPA) is still a laparoscopic modality, with one incision centred on the umbilicus thus further amplifying the known benefits of laparoscopy.

**Single Port Access (SPA) Surgery: Advantages and Risks**

The perceived benefits of SPA surgery include a decreased risk of access related visceral/vascular injury (we use an open cut down method), less port site bleeding/ herniae as there are no supplemental trocars, the ease of specimen retrieval, reduction in post-operative pain and a shorter hospital stay. The approach also confers privacy and thus a psychological benefit especially in the younger patient.

Critics of SPA bariatric surgery argue it is unnecessary and makes a challenging operation in the morbidly obese even harder and is associated with a higher incidence of incisional hernias. Other physicians suggest that bariatric patients are not worried about multiple small scars. They argue that if they were worried these patients would not have become obese in the first place. This view of the obese individual is unfounded and in my experience they have the same concerns about their body image as lean people. The SPA approach is also not a rigid one – the option of conversion to conventional laparoscopy is always available – indeed, at times, it is a brave and clever decision for the operating surgeon.

**Understanding the Achilles Heel of Single Port Access (SPA) Bariatric Surgery**

The uptake of SPA surgery in the bariatric surgery community has been slow and reflects exaggerated misunderstandings of the inherent difficulties of the technique compared to the multi-port approach. This may be related to the violation of the basic principles all laparoscopic surgeons are taught in their training. Indeed in SPA surgery there is no instrumental triangulation and a loss of reverse triangulation (i.e. when we see our right hand on the left part of the screen) thus resulting in the need to dissect with our non-preferential hand. At times the SPA surgeon has to cross hands and of course instrument clashing makes it hard to be a slick operator.

**Logistics of Single Port Access Bariatric Surgery**

Although some SPA procedures are feasible without any special devices there is currently a plethora of Single Port Access Surgery devices/instruments available that facilitate this technique. Multiple SPA surgery platforms such as the Covidien SILS™ port, flexible 5mm "Chip on the tip" cameras (e.g. Olympus Endoeye™), flexible/articulating laparoscopic forceps, special traction needles and magnetic retractors have revolutionised SPA surgery (Figure 1). I believe robotic surgery may eventually prove to be instrumental in SPA surgery of the future through its' flexibility in ergonomics, overcoming abdominal wall torque, increased degrees of freedom of the laparoscopic instruments and a tri-dimensional image.

**Our Experience**

In September 2008 we performed our first SPA gastric band followed in 2009 by the commencement of our SPA Sleeve program. In December 2010 we performed our first omega loop mini-gastric bypass. Table 1 summarises our experience of SPA bariatric surgery

We had three conversions to conventional multi-port laparoscopy in the SPA sleeve series to date. All patients had a BMI > 45kg/m<sup>2</sup>. In two cases the SPA platform length was not long enough to get into the abdominal cavity. In the third, the sleeve could not be



Figure 1: Typical set up for Single Port Access Bariatric Surgery

	Band	Sleeve	Mini-Bypass	Range
n	8	32	10	
Age (years)	40	38	37.1	20-57
Initial weight (Kg)	102.8	103.4	105	75-135
BMI (Kg/m <sup>2</sup> )	38.7	40	39	32.5-53.4
Operative time (min)	75	83	125	110-150
Associated procedures	0	4*	2	*3 cholecystectomies, *3 cruroplasties
Hospital stay (days)	2	3	2.5	1-5
Conversions (to lap.)	0	3	0	
Morbidity	0	2*	0	*1 major abdominal wall bruising *1 small bowel enterotomy
Mortality	0	0	0	

done safely because of difficulty in dissecting the Angle of His. Consequently I have developed criteria for deciding on the SPA approach in the bariatric population as outlined in Table 2.

In four patients we performed additional surgeries: two cholecystectomies and two cruroplasties. In one case we performed cholecystectomy, cruroplasty and gastric bypass by the single umbilical incision.

We have had two complications: one periumbilical ecchymosis that resolved after two weeks of conservative treatment and one iatrogenic small bowel perforation. The perforation was detected due to bilious fluid appearing in the drain inserted at the time of sleeve gastrectomy. The patient underwent re-laparoscopy, washout and the enterotomy was oversewn. The patient was discharge home on post-operative Day 4.

The 1 year % excess weight loss (% EWL) in the 32 sleeve gastrectomy cases was 72.8% and we are awaiting more long term data for the other bariatric surgeries.

**Bariatric Single Port Access Surgery – Tips & Tricks**

One of the major difficulties with SPA bariatric surgery is liver retraction. We have tried several options

PATIENT SELECTION	
BMI	<45kg/m <sup>2</sup>
Height	<170cm
Habitus	Gynoid
	No previous abdominal operations
	No umbilical processes (hernia or infection)

for retraction of the left lobe of the liver including utilizing liver-suspension tape (LST) and the Tacchino technique using hiatal anchored trans-abdominal threads with good effect.

For suturing (mainly in gastric bypass) we used the Covidien Endostitch™ but a regular needle-holder may be also used. In some cases we need use an extra instrument for retraction or to hold sutures. We use a disposable suture Grasper Needle (Proxy™ 14 Gauge), the incision of which, heals with no visible scarring. In the sleeve gastrectomy cases we have performed staple line reinforcement by way of oversewing the staple line (Covidien Endostitch™), application of fibrin glue or utilizing the Endo-GIA Duets TRS™.

We routinely leave a Robinson drain traversing above the fascia incision and exiting through the umbilical skin incision. We are meticulous about closing the aponeurosis and the skin, leaving the umbilical cicatrix attached to the aponeurosis for a good cosmetic effect.

**Conclusions**

Although Single Port Access bariatric surgery is expanding in North America, there is still no evidence of its' clinical benefit. In addition current SPA hardware is expensive and so it is important that if SPA bariatric surgery is to expand throughout the world these costs will need to be minimized. The advantages of SPA bariatric surgery pertain mainly to that of patient cosmetics and privacy.