A technique for laparoscopic surgery of transabdominal preperitoneal repair for groin hernia: nearly invisible and cosmetically satisfying surgical scar

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- The standard technique of transabdominal preperitoneal repair (TAPP): 3 ports
- Single port surgery TAPP (SPS-TAPP) : 1 incision which needs about 25mm long

Less cosmetic ?
More difficult?
More abdominal damage?

To solve the problems

To reduce...
The number of ports
Abdominal damage
Scar length

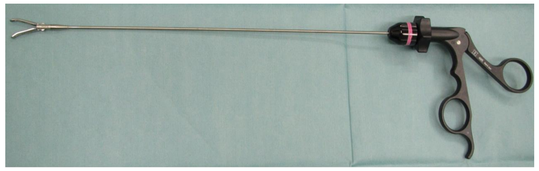
One needle forceps plus SPS with 12mm umbilical incision technique

Two 5mm ports (1 for the scope and 1 for the forceps) through an umbilical multi-channel port (EZ access®).





An additional 2.4mm needle instrument (Endo Relief® needle holder type) is pierced above the pubic bone.















※A 5mm flexible scope allows us to keep the triangular formation easily.

Patient and hernia characteristics of POP-SPS

Number of the patient		374
(January 2017 to August 2023, including recurrence cases)		
Age (Median)：		70（20-99）
Gender	Male	319
	Female	55
Location：	Right	255
	Left	249
	（Bilateral 69 cases included）	
Type of hernia：	Indirect	286
	Direct	104
	Combined or Other	33
	Recurrence	14

Result 1
Comparison of the operation time and hospital stay

Median operation time			n=
unilateral	POP-SPS	72min(30-277min)	305
bilateral	POP-SPS	121min(61-269min)	69

Postoperative stay 2（1-5）days

*7 cases needed one or two additional 5mm ports

Result 2
Complication and recurrence

Operative complications	
postoperative seroma	5/374 (1.33%)
spermatic cord injury/incisional hernia	none
Relapse after the operation	none

※No lethal complications were occurred.

These data was comparable to the reported conventional TAPP laparoscopic hernia repairs in Japan.

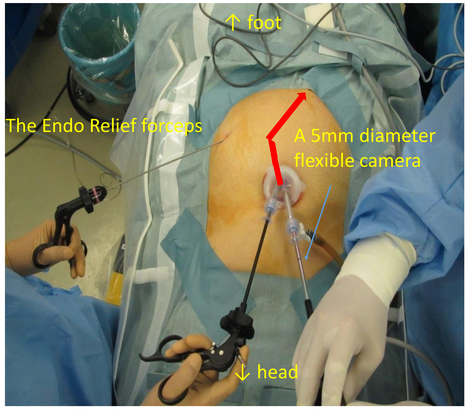
How to deal with the difficult cases

Case	Factor	operation time	How to deal	hospital stay	complication
1	recurrence	62	+ one forceps	3	none
2	recurrence	70	+ one forceps	3	none
3	recurrence	128	+ two forceps	3	additional drug
4	Colon incompetent	148	+ one forceps	3	none
5	Post prostatectomy	133	+ one forceps	2	none
6	Post prostatectomy	152	convert to open	3	bleeding over 300 ml
7	Post prostatectomy	154	+ one forceps	2	none

Conclusion

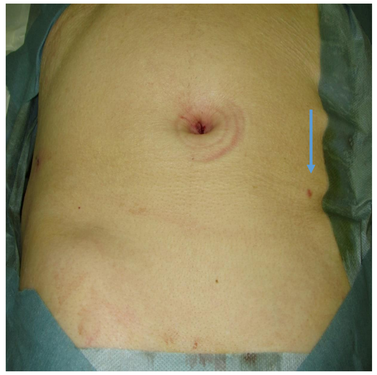
Our POP-SPS technique is considerable as a minimally invasive and more cosmetic approach of laparoscopic inguinal hernia repair.





The surgeon stands on the left side of the patient, for manipulating energy devices by the right hand.
The left hand of the patient is tightened to the body.
The head of the patient is put on the left side and the body position is diagonal to the surgical table.

Operation scar



Just after operation



Two months later

The umbilical operation scars and the pierced needle instrument scars became gradually invisible within 1 or 2 months.