

CHANGES IN RETROVEISCAL ANGLE AND BLADDER NECK POSITION AFTER LAPAROSCOPIC SACROCOLPOPEXY (LSC) FOR PELVIC ORGAN PROLAPSE

Hypothesis / aims of study

Pelvic floor dysfunction is a significant public health problem, as shown by the 11.1 % lifetime risk for a woman to undergo a single operation for pelvic organ prolapse (POP) or urinary incontinence (UI) [1]. Numerous surgical procedures for POP with transvaginal or transabdominal approach have been described previously. Since the U.S. Food and Drug Administration warning about mesh-related complications following transvaginal POP surgery using mesh, an abdominal approach such as sacrocolpopexy has gained popularity. Stress urinary incontinence (SUI) is common in patients with POP. 28–33 % of women who are asymptomatic for SUI before prolapse repair develop de novo SUI after mesh repairs [2–4]. The presence of stress incontinence may be associated with the anatomical and functional changes in the bladder neck and urethra. In LSC, since the tension at the time of fixing the mesh to the promontory is transmitted straight to the urethra, may affect morphological changes in the bladder neck and urethra. The aim of this study was to identify changes in retrovesical angle(RVA) and bladder neck position (BNP) after LSC, and to investigate the relation between these morphological changes and urinary incontinence postoperatively.

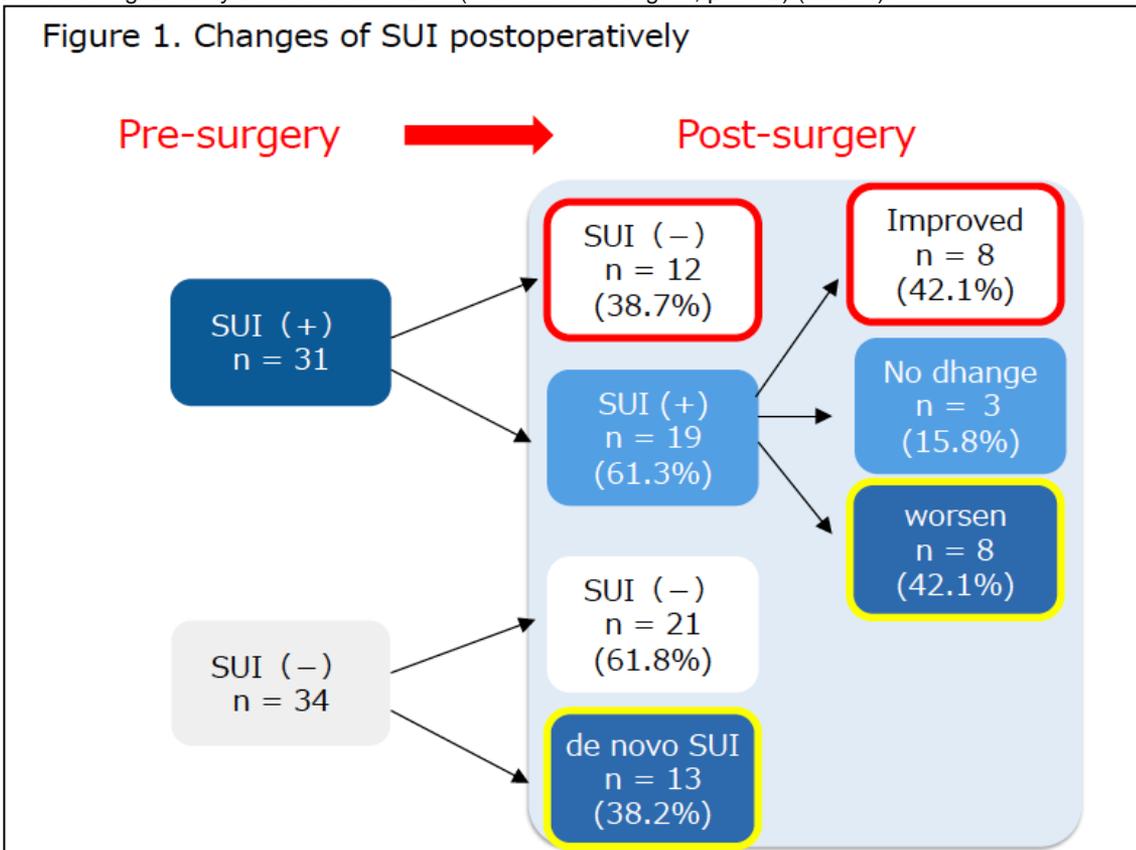
Study design, materials and methods

Retrospectively, we analysed archives data set of 65 woman who underwent LSC for asymptomatic POP. All of them underwent translabial ultrasound (TLUS) to measure RVA and BNP at rest pre-operatively and 3 months postsurgery. SUI was diagnosed by the International Consultation on Incontinence Questionnaire - Short Form (ICIQ-SF). All of the surgical procedures were performed by an experienced specialist, while TLUS were performed by same examinaer.

Results

Of the 65 women who underwent LSC and completed all clinical evaluations. Mean age was years 63.9. Mean BMI was 23.5kg/m, Median parity was 2. Thirty-four (52.3%) were continent and 31 (47.7%) had stress incontinence before surgery (Fig. 1). Of the 34 continent women, 13 (38.2 %) had de novo SUI after surgery, while 21 (61.8 %) remained continent. Of the 31 incontinent women, 12 (38.7 %) were cured, while 19 (61.3 %) had persistent SUI. Among those with persistent SUI, eight (42.1 %) were improved, 3 (15.8%) were no change, and 8 (42.1%) were worsened.

In the pre- and post-operative TLUS of all of the patients, RVA was significantly increased after LSC (101.4 vs 109.4 degree, p=0.005), while BNP was not significantly elevated after LSC (20.2 vs 21.5 mm, p=0.15), whereas in the patient of cured and improved SUI, BNP was significantly elevated after LSC (19.4 vs 203.0 mm, p=0.03) and in the patient of worse and de novo SUI, RVA was significantly increased after LSC (98.7 vs 108.6 degree, p=0.02) (table 1).



	Cured and improved SUI (n=20)			Worse and de novo SUI (n=21)		
	Pre-LSC	Post-LSC	p	Pre-LSC	Post-LSC	p
RVA (degree)	104.8	109.2	0.28	98.7	108.6	0.02
BNP (mm)	19.4	23.0	0.03	18.6	19.1	0.87

Table 1. Pre- and post-operative retrovesical angle (RVA) and bladder neck position (BNP)

Interpretation of results

Our study indicates that LSC could successfully treat stress incontinence if the bladder neck was repositioned in a supported retro-pubic position, but opening RVA too much leads to de novo SUI.

Concluding message

In LSC, SUI was improved as the bladder neck was elevated, although, excessive tension on the bladder neck leads to the opening of RVA and may cause deterioration of SUI.

References

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Disclosures

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