

LONG-TERM SUCCESS RATE OF SUBURETHRAL SLING PROCEDURE IN PATIENTS WITH STRESS URINARY INCONTINENCE AND DIFFERENT BLADDER FUNCTION

Hypothesis / aims of study

The female stress urinary incontinence (SUI) is mainly due to intrinsic sphincter deficiency. Suburethral sling is established to provide a hammock effect on the hypermobility of urethra. We intend to investigate the long-term success rate of suburethral sling in stress urinary incontinence (SUI) patients with different bladder function such as stable bladder, detrusor overactivity (DO) and detrusor underactivity (DU).

Study design, materials and methods

A total of 403 female SUI patients who underwent suburethral sling procedure were enrolled in the study. Pre-operative video urodynamics study (VUDS) were performed and they were classified into 3 groups: (i) stable bladder, (ii) DO and (iii) DU. The baseline urodynamic parameters and the therapeutic outcome were compared among three groups. The longest follow up in this study was up to 240 months.

Results

Of a total of 403 participants, 291 (72.2%) had stable bladder, 78 (19.4%) had DO and 34 (8.4%) had DU. The overall continence rate was 355 (81.8%), dysuria 79 (18.2%), urge incontinence 15 (3.5%), SUI and required secondary sling was 70 (16.1%) and urethrolysis was 14 (3.2%). The continence rate in stable bladder group was 84.5%, 80.8% in DO group and 79.4% in DU group, $p=0.59$. The therapeutic outcome of different bladder functions was shown in Table 1. and the long-term success rates in Fig. 1. Using Kaplan-Meier survival analysis, patients with stable bladder had the most sustainable cure rate for SUI, followed by patients with DO and lastly DU ($p=0.39$).

Interpretation of results

The continence rate of patient with stable bladder, DO and DU showed equally high and sustainable. Pre-operative videourodynamics provided a better assessment for peri-operative adjustment of sling position and tension.

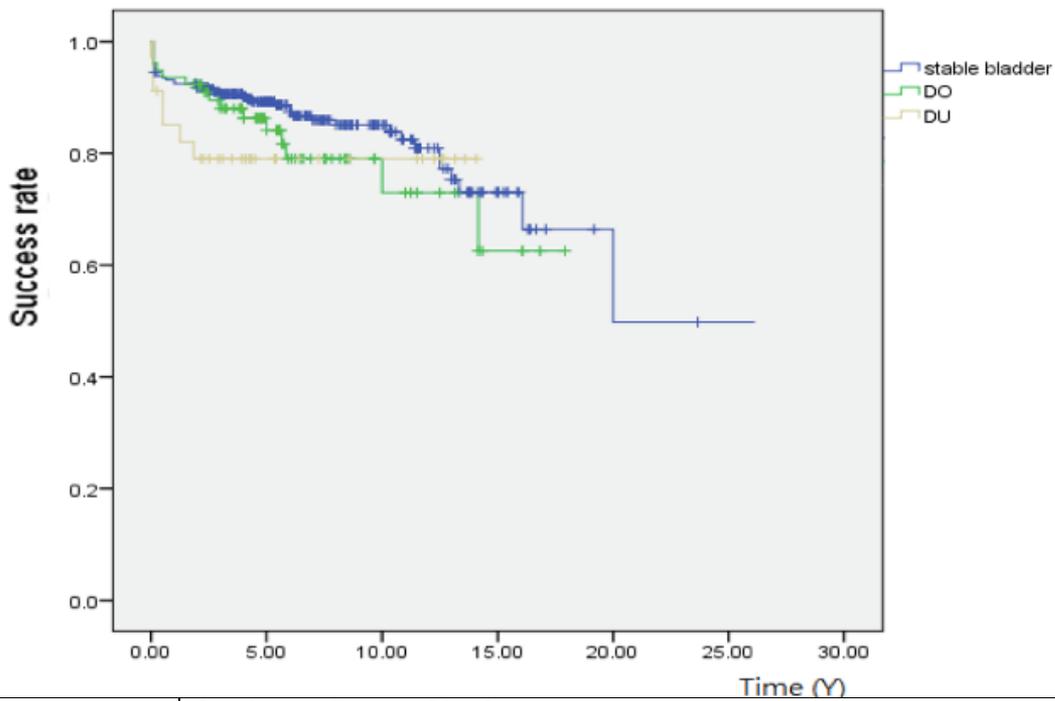
Concluding message

The overall continence rate was 83.4% and the 10-year continence rate achieved at least 72.9%. Pre-operative urodynamic study for bladder function could not determine the therapeutic outcome in patients with SUI.

Table 1. Therapeutic outcome in patients with different groups.

Detrusor function	Therapeutic outcome; n (%)					
	Continent	De novo UUI	De novo Urgency	De novo Dysuria	Urethrolysis	Second sling
Stable(291)	246(84.5)	11(3.8)	13(4.5)	51(17.5)	11(3.8)	54(18.6)
DO (n=78)	63(80.8)	3 (3.8)	4(5.1)	15(19.2)	0	14(17.9)
DU (n=34)	27(79.4)	0	1(2.9)	5 (14.7)	2(5.9)	16(47.1)
Total(n=403)	336 (83.4)	14(3.5)	18(4.5)	71(17.6)	13(3.2)	84(20.8)

DO: Detrusor overactivity; DU: Detrusor underactivity; UUI: Urge urinary incontinence; SUI: Stress urinary incontinence



	Continence Rate, % (Year)			
	5	10	15	20
Stable	88.6	83.8	73	49.8
DO	84.1	72.9	62.5	
DU	79.0			

Fig. 1. Kaplan-Meier Survival analysis of cumulative continence rate of suburethral sling in three groups of patients according to pre-operative urodynamic study.

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Research Ethics Committee, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation **Helsinki:** Yes **Informed Consent:** No