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SHORT TERM OUTCOME OF THE READJUSTABLE SLING PROCEDURE FOCUSED ON THE CAUSE OF FAILURE

Hypothesis / aims of study
Readjustable midurethral sling system (Remeex) which could regulate the sling tension in any time of the follow up was popularly used in last decades. However, the cause of failure was not been well evaluated. Therefore, we evaluated the short-term outcomes and cause of failure of a Remeex in Stress urinary incontinence (SUI).

Study design, materials and methods
Between 2011 and 2014, 79 patients who underwent the Remeex procedure for SUI were included. Preoperative urodynamic study and postoperative uroflowmetry were performed.

Results
The mean follow-up duration was 27.4 (6-51) months. The mean patient age was 60.1 yrs. Twelve (15.2%) patients had a previous sling operation history and 97 (92.4%) patients had an ISD. Thirty-six (45.6%) patients showed both ISD and urge incontinence (U.I).
Thirty-eight (48.1%) patients needed immediate tension regulation before discharge. For the continence, mean 1.0 times of regulation were needed. 0 time for 41 patients, 1 for 16, 2 for 7, 3 for 10, 4 for 5 patients, respectively. In multivariate analysis, only lager residual urine volume in preoperative uroflowmetry (p=0.034) was related factors to predict immediate postoperative tension regulation.
After the first Remeex procedure (Both no regulation and immediate regulation), 69(87.3%) patients were continent during stress test, whereas 9(11.4%) patients with SUI and 1(1.3%) patient with difficult emptying needed delayed readjustment. 16(8.9%) patients showed U.I.
Among the delayed readjustment required group, 2 patients refused a readjustment. After the delayed readjustment, 4 patients were cured, and 3(3.8%) patients failed to achieve continence because of difficult emptying. These 3 patients showed preoperative emptying difficulty and also were elderly patient (age≥75yr). One patient is waiting for delayed re-adjustment. And finally 5 (6.3%) patients showed uncontrolled U.I even with medical treatment. Among them, 4 showed preoperative urodynamic detrusor overactivity or U.I, whereas 1 showed de novo detrusor overactivity.

Interpretation of results
Remeex procedure showed 100% (72/72) of successful rate in repeat sling operation and pure SUI with ISD cases. Preoperative emptying difficulty in elderly patient is a most strong factor for failure to achieve continence. The 68.8% (11/16) of patients who presented U.I were improved after Remeex procedure.

Concluding message
In short term follow up, the cure rate for SUI was 93.6%(73/78) after
Remeex procedure with 48.1% (n=38) of immediate tension regulation and 7.6%(n=6) of delayed readjustment cases. The mean number (± SD) of times of immediate operative tension regulation was 1.0 ± 1.3 times. Although statistically unanalyzed, old age, insufficient emptying and underlying detrusor overactivity would be possible causes for fail to achieve continence after Remeex procedure.

References
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Table 1. Perioperative data

	N	Mean or N	Std. Deviation or Percent
Age (yr)	79	60.1	10.9
Parity (n)	67	2.7	1.3
menopause (N /Y)	77	21 vs 56	27.3% vs 72.7%
Preoperative Urgency (N /Y)	79	43 vs 36	54.4% vs 45.6%
Pelvic organ prolapse (N /Y)	79	64 vs 15	81.0% vs 19.0%
Preoperative Uroflowmetry			
Q max (ml /s)	79	29.7	11.2
Voiding volume (cc)	79	306.5	89.7
Residual volume (cc)	79	15.2	29.4
Preoperative Urodynamic study			
MUCP (cmH2O)	68	57.1	28.3
VLPP (cmH2O)	47	46.3	16.6
Maximal bladder capacity (cc)	47	300.2	39.4
Detrusor overactivity (cc)	47	66 vs 13	83.5% vs 21.5%
Postoperative Uroflowmetry			
Q max (ml /s)	78	21.2	9.7
Voiding volume (cc)	78	264.0	141.3
Residual volume (cc)	78	31.6	50.6
Short term complication (N /Y)	79	70 vs 9	88.6% vs 11.3%
Bladder puncture		1	1.3%
Transient unrinary retension		1	1.3%
Transient emptying difficulty		2	2.5%
Wound infection		4	5.1%
Secondary closure for vaginal tape extrusion		1	1.3%
Immediate postoperative tension regulation (N /Y)	79	41 vs 38	51.9% vs 48.1%
Mean number of tention regulation (n)		1.0	1.3
None		41	0.5
1 time (n)		16	17.0%
2 times (n)		7	8.5%
3 times (n)		10	12.8%
4 times (n)		5	4.3%
Readjustment or readjustment needed (N /Y)	79	69 vs 10	87.3% vs 12.7%
Patient refused readjustment (n)		2	4.3%
Cured SUI (n)		5	5.1%
Failed readjustment (n)		3	3.8%