

De novo overactive bladder after midurethral sling surgery: prevalence , timing and risk factors

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AIMS OF STUDY

The **primary aim** of this study was to evaluate the prevalence and severity of de novo or resolved urgency and UUI after TOT

The **secondary aim** was to determine the predictive factors for postoperative de novo urgency and UUI in SUI

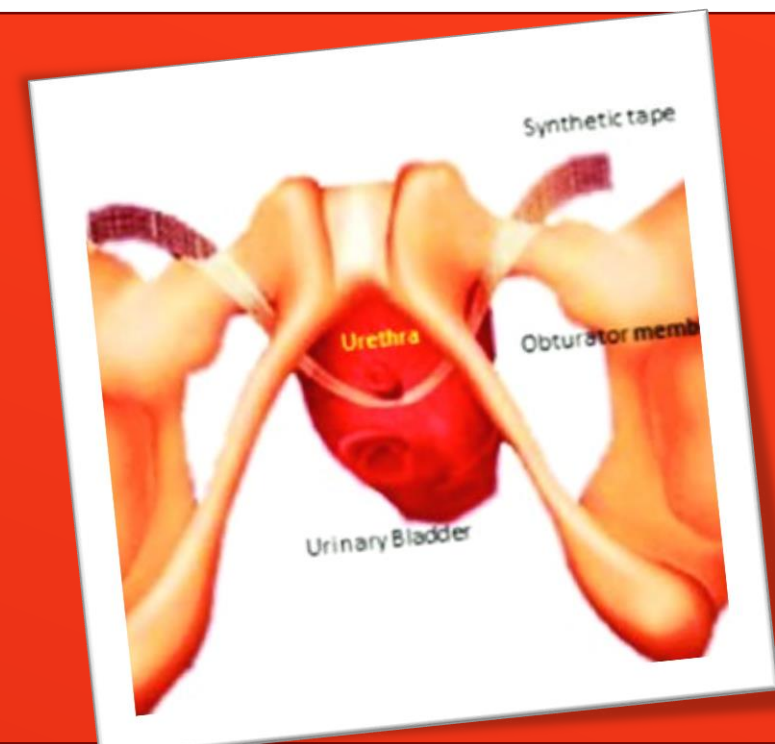
MATERIALS AND METHODS

This was a prospective study on female patients with SUI underwent "out-in" TOT from 2002 to 2015 .

Exclusion criteria were: diabetes; neurologic disease; POP ≥stage II.

Preoperative evaluation included: history; pelvic examination; urodynamic study and transperineal ultrasound.

Follow-up visits were scheduled for 1 month, 6 months, 1 year, then annually, by the same preoperative protocol. Statistical analysis :p-value was <0.05; Student's t-test and chi-square analysis; Logistic regression analysis



RESULTS

A total of 359 patients (mean age, 58.9±11 years) were included in the study. **The mean follow up** was 155±85 months.

Population

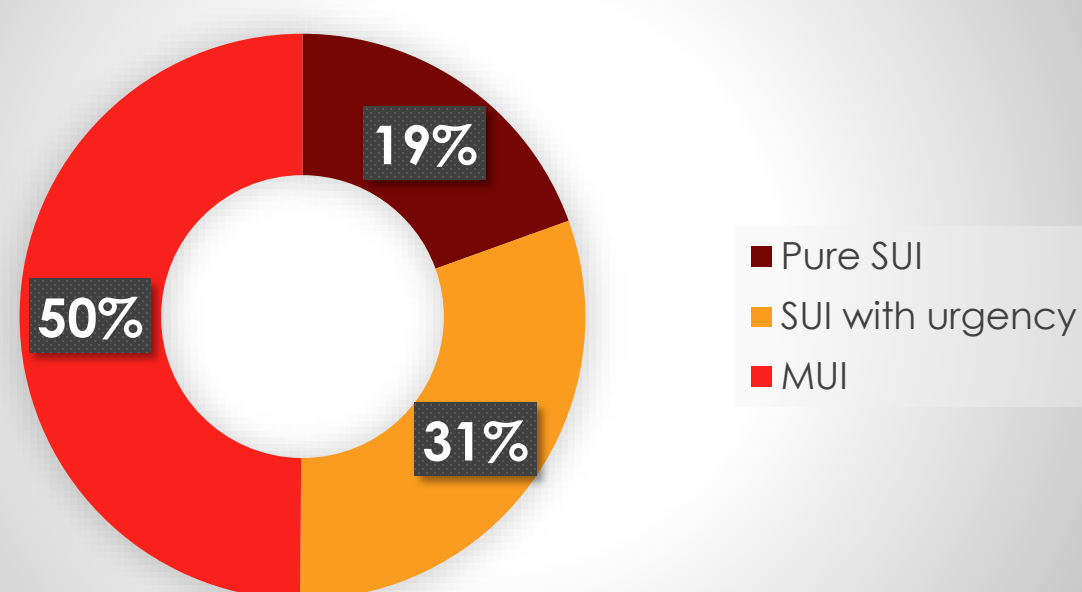


Table 1 Demographic and clinical data of population

Data	Pure SUI (n=70)	SUI with urgency (n=110)	MUI (n=179)
Age, mean±SD	58.83±10.96	58.97±10.98	60.5±10.95
≤60 years n(%)	40 (57.1)	68 (61.8)	90 (50.2)
>60 years n(%)	30 (42.8)	42 (38.1)	89 (49.7)
Previous hysterectomy ,n(%)	7 (7)	8 (7.2)	17 (9.4)
Previous pelvic surgery, n(%)	11 (15.7)	26 (23.6)	28 (15.6)
Body mass index (kg/m ²), median (range)	25.78(18.36-37-18)	25.85(19.3-35.8)	26(19.5-45.2)
Normal 18.5-24.9, n(%)	25 (35.7)	49 (44.5)	49 (27.3)
Overweight 25-29.9, n(%)	29 (41.4)	48 (43.6)	73 (40.7)
Obese >30, n(%)	16 (22.8)	13 (11.8)	57 (31.8)
Detrusor overactivity	20 (28.5)	45 (40.9)	80 (44.6)

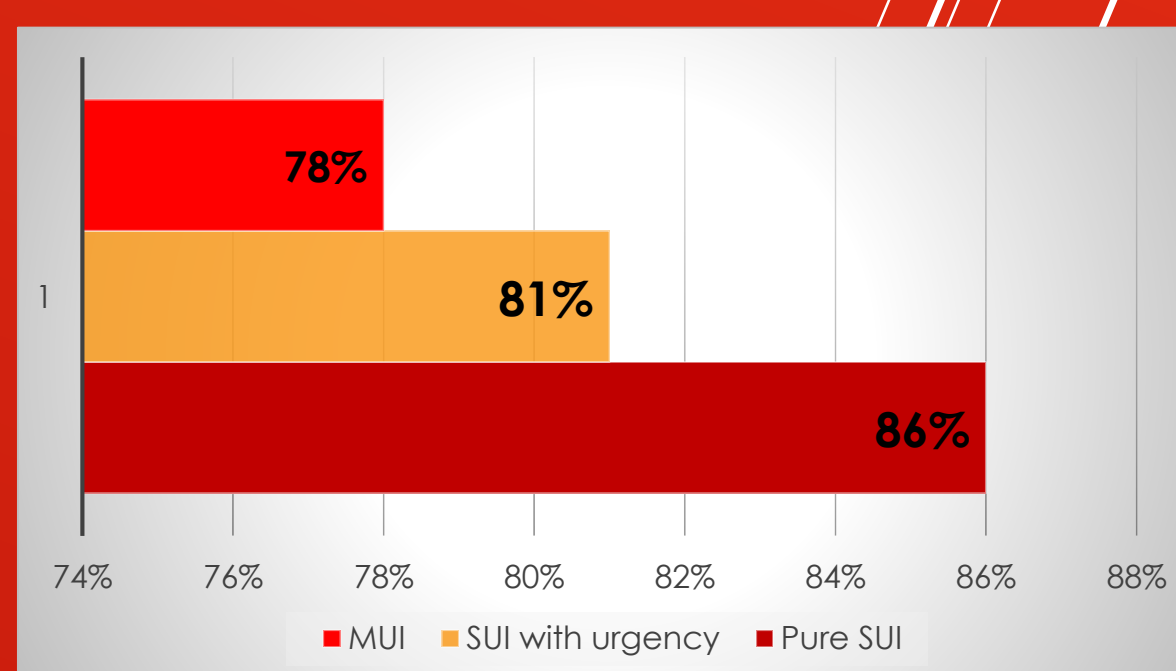
Table 2 Risk factors for de novo urgency in pure SUI patients and UUI in SUI with urgency

	Univariate HR (95% CI)	P value	Multivariate HR (95% CI)	P value
De novo urgency in pure SUI patients				
Age ≤60 years	0.86 (0.49-1.60)	p<0.0001	0.95 (0.51-1.67)	0.02
Age > 60 years	1.15 (0.62-2.14)	p<0.0001	2.70 (1.09-3.75)	0.04
Previous hysterectomy	0.96 (0.32-2.90)	0.12		
Previous pelvic surgery	1.30 (0.61-2.78)	0.059		
Normal 18.5-24.9	0.14 (0.49-1.10)	p<0.0001	0.71 (0.03-1.30)	0.02
Overweight 25-29.9	1.07 (0.57-2.01)	p<0.0001	2.91 (1.06-3.57)	0.001
Obese >30	4.19 (2.19-8.00)	p<0.0001	3.31 (1.23-4.35)	0.001
Detrusor overactivity	1.26 (0.12-2.36)	0.02	2.79 (1.24-3.67)	0.01
De novo UUI in SUI with urgency patients				
Age ≤60 years	0.63 (0.32-1.89)	p<0.0001	0.96 (0.61-1.86)	0.01
Age > 60 years	1.25 (0.45-2.56)	p<0.0001	2.45 (1.01-3.56)	0.02
Previous hysterectomy	0.35 (0.04-1.90)	0.22		
Previous pelvic surgery	1.78 (0.49-2.63)	0.057		
Normal 18.5-24.9	0.19 (0.36-1.23)	p<0.0001	0.81 (0.01-1.57)	0.01
Overweight 25-29.9	1.41 (0.98-2.13)	p<0.0001	2.45 (1.46-4.23)	0.01
Obese >30	3.27 (1.14-7.23)	p<0.0001	4.31 (1.45-4.23)	0.001
Previous treatment by anticholinergic	2.56 (0.58-3.69)	0.03	3.67 (1.78-4.92)	0.001
Detrusor overactivity	1.45 (0.25-2.89)	0.01	2.93 (1.27-3.65)	0.02

The BMI≥25 kg/m², age > 60 years, detrusor overactivity during preoperative urodynamic test were risk factors for de novo urgency in patients with pure SUI, and for de novo UUI in patients with SUI and OAB dry. Furthermore, the previous use of anticholinergics in the preoperative phase could favor the onset of incontinence after surgery.

CONCLUDING MESSAGE

De novo urgency probably occurred for causes not related to the surgical procedure. Risk factors were aging, obesity, preoperative detrusor overactivity and previous use of anticholinergics



In the the **PURE SUI GROUP** de novo urgency developed in 22 (31.4%) patients. The severity of urgency was tolerable in 16 patients; only 6 patients required medical treatment.

DE novo urgency after TOT



In the **SUI WITH URGENCY GROUP** de novo UUI developed in 23 patients (20.9%), of these 16% after 4 years. **Sixtyeight patients (62.3%) had resolved urgency.**

In the **MUI GROUP** 111 patients (62%) had resolved UUI, **with resolved urgency in 75 (41.8%)** and remnant urgency in 27 (15%). Sixtyeight patients (37.9%) had persistent UUI. Among them, the degree of urgency was improved in 55, the same in 4, and aggravated in 13.

Persistent urgency after TOT

