

## 402 Abstracts

significant improved after the operation. Two-thirds of the patients obtained a decrease in the UII score and 38% had no urge incontinence after the operation. Residual urine volume was, however, statistically significant increased after the operation. The TVT operation was the most frequent surgical technique applied and 88% of the patients were very satisfied with this intervention.

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Title (type in CAPITAL LETTERS, leave one blank line before the text):

**PRE-OPERATIVE PRESSURE FLOW STUDIES: DO THEY PREDICT THE OUTCOME OF CONTINENCE SURGERY?**

### AIM OF STUDY

The acceleration of flow rate, is a simple urodynamic parameter described by Susset in 1983, defined as the peak flow rate divided by the time to reach maximum flow. It can be derived from uroflowmetry and is calculated in ml/s<sup>2</sup>. Acceleration of flow rate has been used to study voiding in both men and women and is independent of voided volume. The acceleration of flow rate is thought to reflect the speed of the detrusor contraction.(1) Differences in detrusor pressure at urethral opening and closing between women with different diagnoses has been demonstrated by Wagg in 1996. (2) This study aims to determine whether the acceleration of flow rate and the pressure flow parameters might have a role in the evaluation of women with genuine stress incontinence, to predict de-novo detrusor instability and surgical outcome.

### METHODS

All women referred to the urodynamic clinic, because of lower urinary tract symptoms, underwent complete history, vaginal examination, frequency-volume chart, and videocystourethrography (VCU). After uroflowmetry, (performed with the patient voiding in private and recorded by a gravimetric flowmeter), the urinary residual was measured and the bladder filled at 100 ml/min with room temperature contrast medium. The bladder was imaged at maximum bladder capacity and provocative manoeuvres were undertaken. Finally a pressure-flow study was performed and the urinary residual measured. Only women diagnosed as having genuine stress incontinence were included. All women underwent a modified Burch colposuspension. A further VCU was performed six months postoperatively. Pressure flow studies were only accepted if they were good quality traces. The acceleration of flow rate and the opening and closure detrusor pressure were calculated for each woman pre and post-operatively. All terms and definitions are in accordance with International Continence Society (ICS). Statistical analysis was performed using an independent t test (SPSS inc,Chicago).

### RESULTS

239 women (aged 37 to 69 years) were studied All these women had an acceleration of flow rate measurement preoperatively and 77 women had good quality of pressure flow measurements pre and post-operatively.

Fifty one women demonstrated postoperative de-novo detrusor instability. These women had an acceleration of flow rate preoperatively significantly higher (mean 4.7 (sd 3.9) vs 3.7 (sd 2.5)ml/s<sup>2</sup>, p<0.05) than those who had stable bladder postoperatively.

The women who were not cured post-operatively had significant lower preoperative opening and closure detrusor pressures than women who continent after colposuspension. The maximum urethral closure pressure was not significantly different between the two groups of women. The preoperative values of the acceleration of flow rate, the opening and closure detrusor pressure and the postoperative outcomes are shown in tables 1, 2 and 3.

<i>Post operative diagnosis</i>	<i>N. patients</i>	<i>Mean acc.flow rate (ml/s<sup>2</sup>)</i>	<i>p value</i>
<i>Stable urodynamics</i>	188	3.7	<0.05
<i>Detrusor instability</i>	51	4.7	

Table 1. Preoperative acceleration of flow rate and postoperative urodynamic diagnosis.

<i>Post operative diagnosis</i>	<i>N. patients</i>	<i>Mean opening det. Press (cm/H20)</i>	<i>Mean closure det. Press. (cm/H20)</i>
<i>Cured</i>	69	23.7	28.7
<i>Failed continence surgery (GSI)</i>	8	15	20.7
P value		<0.05	<0.05

Table 2. Preoperative opening and closure detrusor pressure and postoperative urodynamic diagnosis (excluding de-novo detrusor instability).

<i>Post operative diagnosis</i>	<i>N. patients</i>	<i>Mean preMUCP (cm/H20)</i>	<i>Mean preFUL (mm)</i>
<i>Cured</i>	28	37.7	3.9
<i>Failed continence surgery (GSI)</i>	5	39.8	2.9
P value		>0.1	>0.2

Table 3. Preoperative maximum urethral closure pressure and postoperative incontinence (excluding de-novo detrusor instability).

### CONCLUSIONS

Our data suggest that women with postoperative detrusor instability have a significantly higher acceleration of the flow rate. This simple and non invasive parameter, although not diagnostic, could predict de-novo detrusor instability after continence surgery. The opening and closure detrusor pressures do appear to be useful preoperative urodynamic parameters to predict the outcome of the surgery and may be more discriminating than urethral pressure profiles.

### REFERENCES

- <sup>1</sup> Br J Urol 1990 Jan;65(1):17-9.
- <sup>2</sup> J Urol 1996 Dec;156(6):1984-8.

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Title (type in CAPITAL LETTERS, leave one blank line before the text):

TISSUE REACTION COMPARISON BETWEEN CADAVERIC HUMAN FASCIA LATA AND TWO TYPES OF POLYPROPYLENE MESH ON RABBIT URINARY BLADDER

**Aims of Study:** The commercial availability of cadaveric human fascia lata allografts (CFA) and artificial mesh has considerably simplified sling procedures for the treatment of female stress urinary incontinence. We aim to evaluate the histological tissue reaction of rabbit urinary bladders to the tissue when applied in close contact as in the sling procedure.

**Methods:** 45 female New Zealand rabbits were randomized in 4 groups; Group A (n=12) multifilament-Surgipro \*Mesh, Group B (n=12) prolene mesh as delivered in a Tension Free Vaginal Tape (T.V.T.) kit, Group C (n=12) CFx and Group D (n=9) surgical control. With anesthesia and using an aseptic technique, a laparotomy was performed. The bladder was approached at its dome where a piece of CFx or one of the two mesh was fixed in direct contact with the dome. The control group only had manipulation of the bladder. At 6 week intervals half the number of animals in each group were sacrificed, the other half were sacrificed at 12 weeks. The urinary bladder was collected and examined histologically by a uropathologist.

**Results:** At the time of the writing of this abstract the results of the T.V.T. mesh