Table I: Pelvic floor anatomical defects following Burch.

	All Patients	Group A	Group B
Enterocele	33 (7.5%)	20 (15.1%)	13 (4.2%)
Vault	5 (1.1%)	-	5 (1.6%)
Uterine	5 (1.1%)	5 (3.8%)	-
Total	43 (9.7%)	25 (18.9%)	18 (5.8%)

Comparing the two groups we found significant differences (P<0.0001) between group A (Patient with Burch only 18.9%) and group B (with cul-de-sac obliteration 5.8%).

Table 2: Comparison between two surgical procedures to prevent pelvic floor anatomical defects formation following Burch Colposuspension

	Burch only (132)	P<	Moschowitz Procedure (131)	P<	Approximation of Sacro-uterine ligaments (178)
Enterocele	20		11		2
Vault prolapse	-		4		-
Uterine prolapse	5				1
Total	25 (18.9%)	NS	15 (11.4%)	0001	3 (1.7%)

We did not find statistical differences when Moschowitz Procedure was performed (11.4%) compared to the Burch Colposuspension group (18.9%) in reducing pelvic floor anatomical defects formation. Cul-de-sac obliteration using the approximation of the Sacrouterine ligaments was found much more effective than the Moschowitz Procedure (P<0.001) and compared to the Burch Colposuspension only group (P<0.001), in preventing the formation of post operative anatomical defects.

We examined the time of postoperative anatomical defects appearance.

In the total group only 7 of 43 (16.3%) of the anatomical defects were detected within the first two post-operative years. After 5 years only 46.5% of the cases were detected (18/43). After 10 years of follow up 74.4% were found (31/43). We compared the time of postoperative anatomical defects appearance in the two groups. We found that in group A (patients without cul-de-sac obliteration) the anatomical defects appear significantly much earlier than in group B (patients with cul-de-sac obliteration). After 2 years 24% compared with 5.5% (P<0.01) respectively. After 5 years 69% compared with 22.2% respectively (P<0.001).

Conclusions

1. Pelvic floor anatomical defects following Burch colposuspension appear significantly less frequently in patient with concomitant cul-de-sac obliteration (5.8%) compared with patients without cul-de-sac obliteration (18.9%).
2. The Moschowitz procedure did not prevent significantly anatomical defect formation following Burch Colposuspension.
3. Cul-de-sac obliteration using the approximation of the sacro uterine ligaments was found significantly more effective (1.7%) than using the Moschowitz procedure (11.4%) in preventing post Burch anatomical defect formation.

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

A NATIONAL STUDY OF INCONTINENCE SURGERY OUTCOME EVALUATED BY A QUESTIONNAIRE AND OBJECTIVE OUTCOME VALUES

Aims of Study

To evaluate subjective symptoms and objective outcome values in female patients before and after incontinence surgery by using the combination of a national shortform incontinence questionnaire and objective recordings.

Method

All gynecological departments performing incontinence surgery in our country were invited to participate in a national network in order to evaluate the results of this treatment. A shortform questionnaire assessing symptoms and quality of life (QoL) was developed and evaluated. Two indices were constructed from the symptom section. A stress incontinence index (SII) was constructed by 3 subindices: when-, how often- and to which extent stress incontinence was experienced. The urge incontinence index (UII) was constructed by 2 questions: How often- and to which extent- urge incontinence was experienced. The QoL index (QoLI) was constructed by 3 items. How often did they avoid activities-, places or situations- due to fear of leakage, and how did leakage possibly influence vacations, family life, social life and sleep. In all items a scale of 5 categories were possible choices, with the scores 0, 1, 2, 3, 4 respectively. The items: number of pads used, treatment satisfaction and how sexual life was influenced by the leakage were not implemented in any index. In the objective variables section leakage during 24 hours, leakage during a standardised stress test, residual urine volume, surgical procedure and complications were recorded. The patient and local surgeon's identity were recorded employing a code exclusivly known by the local hospital. The questionnaire was completed before the operation, and repeated 6 to 12 months after the operation. From September 1st 1998 untill now we have recieved 960 preoperative forms. Up to February 1st 1999 329 patients had been operated. Until February 1st 2000 we recieved 265 pre and post- operative forms from 2/3 of all departments performing incontinence operations in our country. All the large departments participated exept one. The number of the different surgical interventions performed were: open Burch 39, laparoscopic Burch 2, tension free vaginal tape (TVT) 213, Kelly 1, sling 8, other 2. A vaginal procedure for other purpose than incontinence was performed in 21 patients. The median and range of age was 54 (28–86). Median and range number of patients per department, observation time in days, number of surgeons per department and operations per surgeon were 9(2–61), 165(131-365), 2(1-7), 4(1 – 32) respectively. Statistics: Wilcoxon signed rank test and Chi-Square linear by linear association.

Results

Outcome values pre and post operatively

	Mean	SD	Median	Min.	Max.	P
STRESS INC. index pre op.	8,9	2,1	9	0	12	
STRESS INC. index post op	1,5	2,5	0	0	11	<0.001
URGE INC. index pre op.	3,6	2,5	4	0	8	
URGE INC. index post op.	1,6	1,8	2	0	7	<0.001
QOL index pre op.	5,7	3,4	6	0	12	
QOL index post op.	1,4	2,3	0	0	11	<0.001
PADS pre op.	2,8	1,1	3	0	4	
PADS post op.	,7	1,2	0	0	4	<0.001
SEXLIFE pre op..	2,6	,8	2	0	4	
SEXLIFE post op.	1,8	,7	2	0	4	<0.001
24 H PADTEST pre op.	105,1	117,1	64	0	695	
24 H PADTEST post. op.	15,4	55,7	0	0	475	<0.001
STRESS TEST pre op.	55,1	51,5	43	0	300	
STRESS TEST post op.	5,3	20,2	0	0	180	<0.001
RESIDUAL URINE pre op.	7,8	17,2	0	0	130	
RESIDUAL URINE post op.	18,7	39,9	5	0	375	<0.001

Nr. of patients satisfied with the operation

	very satisfied	some stisfaction	neither sat. nor unsat.	slightly unsatisfied	very unsatisfied
abd. burch	18	8	2	1	1
lap. scop. Burch	1				
TVT	170	12	6	4	2
Kelly		1			
sling	6	3		1	
other	1			1	

Fifteen (26%) of 57 patients with UII score 0 pre operatively (no urge incontinence) scored >0 post operatively. Out of 208 patients with UII score >0 before the operation 78 patients (38%) scored 0 after the operation. In 114 patients the residual urine volume was larger after the operation than before. The increase was mean 30 ml (SD 42). Only 69 patients completed the question assessing whether the sex life had changed after the operation. The question was not relevant for 81 patients. Patients who had TVT operation performed were statistically significant more satisfied than those who had abdominal Burch operation performed $P<0.05$. The following complications occurred: 8 bladder perforations, 5 hematomas larger than 4 cm, 2 superficial wound infections, 6 urinary retention necessitating a catheter for more than 7 days, 1 urinary retention necessitating a catheter for more than 1 month.

Conclusions

In the present study 81% of all patients operated 1 year earlier are included. All indices, incontinence pad use, leakage during 24 hours pad test and stress test were statistically significant reduced and sex life was statistically

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^2. 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 uroflometry, (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^2, $p<0.05$) 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.

Post operative diagnosis	*N. patients*	*Mean acc.flow rate (ml/s2)*	*p value*
Stable urodynamics	188	3.7	<0.05
Detrusor instability	51	4.7	

Table1. Preoperative acceleration of flow rate and postoperative urodynamic diagnosis.