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Vierhout M[1], Pauwels R[2], Smits T[2], Kluivers K[2], Withagen M[2], Milani F[3]

1. *Radboud University medical centre Nijmegen netherlands,* ***2.*** *Radboud University Nijmegen Medical Centre Netherlands,* ***3.*** *Reinier de Graaf Hospital, Delft, Netherlands*

THE COMPLEX RELATIONSHIP BETWEEN PELVIC ORGAN PROLAPSE AND URINARY INCONTINENCE; DOES PROLAPSE SURGERY WITHOUT CONCOMITANT ANTI-INCONTINENCE SURGERY CURE OR INDUCE STRESS AND URGE INCONTINENCE?

Hypothesis / aims of study

The relationship between pelvic organ prolapse (POP) and urinary incontinence(UI) is complex. UI can be divided in stress urinary incontinence (SUI) or urge urinary incontinence (UUI) or a combination of both. POP can be the cause of both SUI and UUI. However severe POP can also be associated with masked incontinence which may be unmasked by surgical correction of POP. UUI can be both cured and induced by POP surgery making the relationship even more complex. The aim of the present was to assess the changes in UI rates in a large cohort of women undergoing POP surgery without an incontinence procedure.

Study design, materials and methods

The study was performed with data from a prospective outcome registration on POP surgery from two teaching hospitals with specific interest in urogynaecology. In this database all patients who undergo POP surgery are included and pre-, peri- , postoperative and follow-up data are recorded. From all patients the UDI is filled out and a POP-Q examination is performed preoperatively as well as one year after operation. For this study the two questions in the UDI specifically dealing with SUI and UUI were converted into domain scores. A domain score reaches from 0 to 100 and the higher the score the more severe the bother of a complaint is. Only patients without concomitant anti incontinence surgery were included which implies that 34 patients who underwent a concomitant TVT were excluded.

Results

A total of 734 patients who underwent POP surgery between 2006-2010 were included in the study. Table 1 illustrates the basic characteristics of the population.

Table 1. Basic characteristics of the study population.

Characteristic	
Age(median/range) years	60(35-88)
Parity(median/range)	2 (0-8)
BMI(median/range)	26(18-44)
Postmenopausal(%)	55%
Previous POP surgery(%)	55%
Surgery including anterior compartment(%)	62%
Mesh surgery(%)	56%
Anatomical recurrence at 1 year(POP-Q > stage1)	42%

Tables 2-4 show the median domain scores before and after surgery for SUI, UUI and any incontinence respectively.

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Table 2 Stress urinary incontinence	**n**	**%**	**Score pre-op**	**Score post-op**
Preop score >0 and increases	34	5%	33	67
Pre-op score >0 and decreases	66	9%	67	33
Pre-op score=0 and increases (de novo)	92	13%	0	33
Pre-op score =0 and stays 0	280	39%	0	0
Pre-op score > 0 and becomes 0(cured)	124	17%	33	0
Pre-op score >0 and stays equal	120	17%	33	33

Table 3 Urge urinary incontinence	**n**	**%**	**Score pre-op**	**Score post-op**
Preop score >0 and increases	34	5%	33	67
Pre-op score >0 and decreases	54	7%	67	33
Pre-op score=0 and increases(de novo)	83	12%	0	33
Pre-op score =0 and stays 0	285	40%	0	0
Pre-op score > 0 and becomes 0(cured)	139	19%	33	0
Pre-op score >0 and stays equal	124	17%	33	33

Table 4 Stress and/or urge urinary incontinence	**n**	**%**	**Score pre-op**	**Score post-op**
Preop score >0 and increases	77	11%	17	50
Pre-op score >0 and decreases	131	18%	50	17
Pre-op score=0 and increases(de novo)	80	11%	0	17
Pre-op score =0 and stays 0	190	27%	0	0
Pre-op score > 0 and becomes 0(cured)	117	16%	33	0
Pre-op score >0 and stays equal	109	15%	33	33

Interpretation of results

This study confirms that there is a complex interrelationship between UI and surgery for POP. Only 38% of women had no symptoms of UI before embarking on POP surgery. Eleven percent develops a form of de novo incontinence but in general with low domain scores. Twenty two percent is confronted with a deterioration of her continence status and 16% is cured from her incontinence without any concomitant anti-incontinence surgery. The data are remarkably similar for SUI and UUI.

Concluding message

This large cohort study provides important information on incontinence before and after POP surgery. It is a complex picture with many grey scales. The low percentage of deterioration of the continence status in combination with a low bother score in those patients supports our restrictive policy in combining POP and anti-incontinence surgery. Proper counseling on the effect of surgery on urinary continence is essential.

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
Is this a Randomised Controlled Trial (RCT)?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**The study is officially exempt from ethics approval by the Ethics Committee of the Radboud University Medical Centre Nijmegen on the basis that it is a registration project**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**