Assessment and Management of POP with occult Stress Urinary Incontinence

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Disclosure and acknowledgment

- No conflict of interest to declare

- Acknowledge the support of Dr Marinus van der Ploeg, Martine Hospital, Groningen (The Netherlands)

content

- Definition of Occult Stress Urinary Incontinence
- Assessment of OSUI
- Surgical treatment of vaginal prolaps with or without SUI surgery
- How to manage OSUI

Definition of Occult Stress Urinary Incontinence (OSUI)

- Incontinence only observed after reduction of coexistent vaginal prolapse
- Stress continence mechanism in the presence of prolaps due to mechanical obstruction of the urethra due to kinking or pressure
- POP surgery may be associated with correction of the obstruction with postoperative SUI

IUGA/ICS joint report on terminology of female pelvic floor dysfunction. Haylen et al. IUJ 2010

Issues in the management of OSUI

- How do we access and how accurate are diagnostic tools?
- What is the best treatment strategy?
  - One step approach: treat POP and SUI in one session
  - Two step approach: treat first POP and if necessary, SUI in a second surgical session

Association between OSUI and postoperative SUI
(in women with only prolapse surgery, follow up 3 months)

Repositition test	Positive test rate of OSUI		
Test 1 Manual (100 ml)	4 %		
Test 2 Pessary (100 ml)	7 %		
Test 3 Pessary (300 ml)	9 %		
Test 3 Pessary (continued use)	19 %		
Test 3 and 4 combined	27 %		
Test 2, 3 and 4 combined	34 %		
Test 1, 2, 3 and 4 combined	38 %		
N = 137			

Svenningsen, IUJ 2012

Association between OSUI and postoperative SUI
(in women with only prolapse surgery, follow up 3 months)

Repositition test	Positive test rate of OSUI	Postoperative SUI with positive vs. negative test	Odds ratio positive postoperative SUI test
Test 1 Manual (100 ml)	4 %	40 % vs. 16 %	3,5 (0,5 – 22)
Test 2 Pessary (100 ml)	7 %	22 % vs. 17 %	1,4 (0,3 – 7)
Test 3 Pessary (300 ml)	9 %	50 % vs. 13 %	6,5 (1,6 – 15) p=0,012
Test 3 Pessary (continued use)	19 %	47 % vs. 11 %	7,5 (2 – 25) p=0,004
Test 3 and 4 combined	27 %	44 % vs. 8 %	9,0 (2 – 35) p=0,002
Test 2, 3 and 4 combined	34 %	42 % vs. 9 %	7,7 (2 – 28) p=0,003
Test 1, 2, 3 and 4 combined	38 %	39 % vs. 9 %	6,8 (1,9 – 24) p=0,002
N = 137; vaginal prolapse surgery			

Svenningsen, IUJ 2012

Association between OSUI and postoperative SUI
(in 137 women with only prolapse surgery, follow up 3 months)

- Incidence of post-operative SUI
  - Outcome of questionnaire: 24 (17 %)
  - Outcome of subjective and objective pessary test: 14 (10 %)
- SUI surgery for bordersome SUI 6 (4,3 %)

Svenningsen, IUJ 2012

Clinical relevance of occult SUI following vaginal prolapse surgery

Method

- N = 113 women of whom 57 with OSUI
- Assessment of OSUI: stress test, padtest or UDI
- Surgical repair : vaginal prolapse surgery only
- Follow-up: 5 years (2 – 8)

Outcome

- Objective and/or subjective SUI: 16 (28 %)
- Surgery for SUI: 3 (5,3 %)

Ennemoser, IUJ 2012

Rate of urodynamic stress incontinence with various prolapse reduction methods

Prolapse reduction test	Pre-operative leakage with reduction
Pessary	6 % (5/88)
Manual	16 % (19/122)
Swab	20 % (32/158)
Forceps	21 % (21/98)
Speculum	30 % (35/118)
All methods combined	19 % (112/584)

Visco et al, CARE trial, IUJ 2007

Postoperative rates of SUI in the *no Burch* group

	Pre-operative leakage during reduction	Postoperative SUI	sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)
Pessary	leakage	50 %	5	96	50	59
	no leakage	41 %				
Manual	leakage	50 %	18	90	50	66
	no leakage	34 %				
Swab	leakage	79 %	33	93	79	65
	no leakage	35 %				
Forceps	leakage	50 %	17	84	50	51
	no leakage	49 %				
Speculum	leakage	55 %	39	74	55	60
	no leakage	40 %				
All methods combined	leakage	60 %	24	88	60	61
	no leakage	39 %				

Visco et al, CARE trial, IUJ 2007

The value of pre-operative detecting OSUI?

- Pre-operative testing for Occult SUI may be performed with a wide variety of methods
- The positive predictive value for postoperative SUI however is very limited

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De novo (postoperative) SUI after combined surgery versus prolapse surgery alone

Study	Outcome	Postoperative SUI in women *with* occult SUI		Postoperative SUI in women *without* occult SUI	
		POP and SUI surgery	POP surgery only	POP and SUI surgery	POP surgery only
Meschia et al	Subjective SUI, 24 months	4 %	36 %		
Liapsis et al.	Objective SUI, 24 months	14 % (6/43)	46 % (18/39)	na	na
Brubaker, Visco et al (CARE trial)	Objective SUI, 3 months	32 % (12/38)	58 % (23/40)	21 % (22/106)	38 % (38/109)
Wei et al (OPUS trial)	Objective UI, 12 months	35 % (19/54)	60 % (34/57)	28 % (30/107)	41 % (48/113)
Total	Objective SUI	22 % (18/81)	52 % (41/79)		
NNT		**3,3 (30 %)**			

Van der Ploeg et al., BJOG 2013, in press
Brubaker et al, CARE trial, IUJ 2008
Wei et al., NEJM 2012
Liapsis et al., Eur J Obstet Gynecol, Reprod Biol 2011
Meschia et al, AJOG 2004

Surgery for de novo SUI after combined surgery versus prolapse surgery alone

Study	POP and SUI surgery	POP surgery only	Risk ratio
Schierlitz et al.	0 % (0/37)	9 % (4/43)	
Constantini	3 % (1/34)	0 % (0/32)	
Brubaker et al (CARE trial)	4 % (7/153)	6 % (15/158)	
Wei et al (OPUS trial)	0,6 % (1/165)	5 % (8/172)	
Total	2,3 % (9/389)	6,6 % (27/405)	0,37 (0.18 – 0.78)

Van der Ploeg et al., BJOG 2013, in press

Brubaker et al, CARE trial, IUJ 2008
Wei et al., NEJM 2012
Schierlitz et al, Neurourol Urodynamics 2010
Constatini et al., Obstet Gynecol Int 2012

Adverse events after combined surgery versus prolapse surgery alone

Study	POP and SUI surgery	POP surgery only	Risk ratio
Urge incontinence in women without SUI	6 % (14/224)	10 % (22/226)	0,66 (0.35 – 1.24)
Prolonged catheterization after vaginal repair	6 % (17/275)	1,3 % (4/290)	**4,52** (1.54 – 11.38)
SAE after vaginal prolapse repair	15 % (39/252)	10 % (26/266)	1,58 (0.99 – 2.51)
SAE after sacrocolposuspension	30 % (63/211)	33 % (70/213)	0,92 (0.70 – 1.21)

Van der Ploeg et al., BJOG 2013, in press

Brubaker et al, CARE trial, IUJ 2008
Wei et al., NEJM 2012
Schierlitz et al, Neurourol Urodynamics 2010
Constatini et al., Obstet Gynecol Int 2012
Liapsis et al., Eur J Obstet Gynecol, Reprod Biol 2011
Borstad et al., IUJ 2010

The value of combining POP and SUI surgery

- Significantly higher cure rates for SUI
- No difference in SUI cure rates between abdominal of vaginal prolapse surgery
- Lower complication rates (SAE) after vaginal approach

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How to manage Occult SUI

- Develop better diagnostic tools to detect Occult SUI
- Should we always combine prolapse surgery with SUI surgery?
- Can we identify women with an increased risk of postoperative SUI after prolapse surgery alone and perform combination surgery instead?
- Is a two step approach to be recommended: first surgery of the prolapse and if necessary in a second procedure SUI surgery?

Identifying women at risk for postoperative SUI

1. Women who have a clear and documented history of SUI which cleared up with worsening of the prolapse: Anti-incontinence surgery should be performed with POP surgery if occult SUI is detected.
2. Women with occult SUI detected with a vaginal pessary in situ.
3. Women requiring posterior POP surgery if occult SUI is detected upon reduction of the posterior vaginal wall.

Malak , clinical opinion in IUJ 2012

One step or two steps in the treatment of women with POP and diagnosed, non occult SUI

Methods

- Randomized study of 181 women with POP and SUI
- Group 1: POP surgery and TVT
- Group 2: POP surgery and if SUI present after 3 months TVT

Results

- After 3 months Group 2: SUI cured 24, improved 14; 41 (**44 %**)
  Surgery for SUI needed: 53 (56 %)

- After 12 months Group 1: SUI cured: 95 %
  Group 2: SUI cured: 89 % (p = 0,12)

Borstad et al., IUJ 2010

Conclusions

- Diagnostic tools to detect Occult Stress Urinary Incontinence have limited value.
- Incidence of bordersome SUI after prolapse surgery only and needing surgery is low.
- Combined prolapse and SUI surgery gives significant higher cure rates for SUI, but also more complications.
- A two step approach in the management of prolapse with Occult Stress Urinary Incontinence is recommended. First prolapse repair and if necessary, a MUS.