

| Start | End   | Topic  | Speakers  |
|-------|-------|--|---|
| 09:00 | 09:05 | introduction   | Carlos D'Ancona   |
| 09:05 | 09:15 | Much is said about physical therapy, but what is the evidence? | Giulio Del Popolo   |
| 09:15 | 09:25 | New techniques to evaluate the degree of incontinence          | Andrew Gammie   |
| 09:25 | 09:35 | How to select the technique                                    | Carlos D'Ancona   |
| 09:35 | 09:45 | For How long is the surgery is?                                | Sender Herschorn  |
| 09:45 | 09:55 | What to do if the patient improves but is still unsatisfied    | Giulio Del Popolo   |
| 09:55 | 10:05 | How do you deal with complications: infection, erosion         | Sender Herschorn  |
| 10:05 | 10:30 | Discussion   | Carlos D'Ancona<br>Sender Herschorn<br>Andrew Gammie<br>Giulio Del Popolo |

### **Aims of Workshop**

The objective of this workshop is to identify and answer the main questions of patients with urinary incontinence after radical prostatectomy and to allow the discussion of how to interpret and solve their problems. The discussion of the selected questions attempts to observe the anxieties and concerns of the patients affected by this comorbidity. The expected outcome is to learn how we can improve treatment under emotional and functional aspects.

### **Learning Objectives**

Classify the grade of urinary incontinence, the results of physiotherapy and expectation of each type of surgery.

### **Learning Outcomes**

Identify patient anxieties and select the more appropriate treatment.

### **Target Audience**

Urologists, Nurses, Physiotherapists.

### **Advanced/Basic**

Basic

### **Conditions for Learning**

This is an interactive workshop.

### **Suggested Learning before Workshop Attendance**

Trofimenko V, Myers JB, Brant WO. Post-Prostatectomy Incontinence: How Common and Bothersome Is It Really? *Sex Med Rev.* 2017 Oct;5(4):536-543. doi: 10.1016/j.sxmr.2017.05.001. Epub 2017 Jun 20.

Gomes CS, Pedriali FR, Urbano MR, Moreira EH, Averbeck MA, Almeida SHM. The effects of Pilates method on pelvic floor muscle strength in patients with post-prostatectomy urinary incontinence: A randomized clinical trial. *Neurourol Urodyn.* 2017 May 2. doi: 10.1002/nau.23300. [Epub ahead of print]

Kretschmer A, Nitti V. Surgical Treatment of Male Postprostatectomy Incontinence: Current Concepts. *Eur Urol Focus.* 2017 Nov 22. pii: S2405-4569(17)30263-8. doi: 10.1016/j.euf.2017.11.007. [Epub ahead of print]

### **Suggested Reading**

Biardeau X, Aharony S; AUS Consensus Group, Campeau L, Corcos J. Artificial Urinary Sphincter: Report of the 2015 Consensus Conference. *Neurourol Urodyn.* 2016 Apr;35 Suppl 2:S8-24.

Comiter CV, Rhee EY, Tu LM, Herschorn S, Nitti VW. The virtue sling--a new quadratic sling for postprostatectomy incontinence--results of a multinational clinical trial. *Urology.* 2014 Aug;84(2):433-8.

Crivellaro S, Singla A, Aggarwal N, Frea B, Kocjancic E. Adjustable continence therapy (ProACT) and bone anchored male sling: Comparison of two new treatments of post prostatectomy incontinence. *Int J Urol.* 2008 Oct;15(10):910-4.

Costa Cruz DS, D'Ancona CA, Baracat J, Alves MA1, Cartapatti M, Damião R. Parameters of two-dimensional perineal ultrasonography for evaluation of urinary incontinence after Radical Prostatectomy. *Int Braz J Urol.* 2014 Sep-Oct;40(5):596-604.

Romano SV, Metrebian SE, Vaz F, Muller V, D'Ancona CA, de Souza EA, Nakamura F. [Long-term results of a phase III multicentre trial of the adjustable male sling for treating urinary incontinence after prostatectomy: minimum 3 years]. *Actas Urol Esp.* 2009 Mar;33(3):309-14.

### **Much is said about physical therapy, but what is the evidence?**

**Del Popolo Giulio**

**Neuro-Urology Unit; Careggi University Hospital Firenze (Italy)**

Men who develop PPI (post-prostatectomy incontinence) should be treated through conservative methods in the first year, as continence status will continue to evolve. The value of the approaches to conservative management of post-prostatectomy incontinence after radical prostatectomy remains uncertain despite improvement of surgical open and video laparoscopic or robotic technique in preserving neurovascular bundle. The evidence is conflicting about physical therapy interventions after prostatectomy, which may include pelvic floor exercises (PFE), electrical stimulation (ES), biofeedback training (BFB) and also behavioural therapy (BT). Although, in general, there is enough evidence to demonstrate the beneficial effects of pelvic floor muscles training (PFMT) (Anderson et al., 2015), there is insufficient evidence to demonstrate the right time to begin PF training after surgery nor the amount and type of exercises to be performed, i.e., there is not a clear protocol to be followed. Conclusions are difficult to make because of the heterogeneity of the results, and most studies do not describe exactly treatments. We currently do not know in most cases pelvic floor muscle strength and innervation prior to surgery, even if has been demonstrated that anatomic support and pelvic innervation are essential factors in the aetiology of PPI and that their damage leads to higher rates of PPI (Heesakker et al., 2017).

In particular the role of PFE has been debated: data show that strength of pelvic floor muscles (PFM) and striated urethral sphincter (SUS) plays a crucial role in maintenance of urinary continence and if the urethra is short this may accompany lesser volume of SUS muscle fibers available to compress the urethra (Stafford 2018).

Despite the variety of outcome measurements used to assess PPI, several trials showed that PFMT was significantly more effective than no treatment or sham treatment in the immediate postoperative period and that preoperative and postoperative PFMT is better than only postoperative PFMT (Van Kampen et al., 2000; Manassero et al., 2007). The results of preoperative PFMT on incontinence were positive in several trials, and postoperative PFMT is better than only information about PFMT before and after surgery (Burgio et al., 2006; Centemero et al., 2010; Tienforti et al., 2012).

Biofeedback involves the use of a device to provide visual or auditory feedback: no additional effect of biofeedback was found in men undergoing a radical prostatectomy; the positive role of Functional Electrical Stimulation (FES) was confirmed (Yokoyama et al., 2004; Liu et al., 2008; Yamanishi et al., 2010) using a rectal probe or transcutaneous electrodes to facilitate awareness of contraction of the pelvic floor muscles or to inhibit detrusor contraction.

Future studies should focus on identification of men more likely to benefit from conservative interventions, as symptoms of incontinence after prostatectomy tend to improve over time without intervention. Screening those with potential intrinsic sphincter deficiency post-surgery.

The specific effectiveness of a physical therapeutic approach for incontinence after prostatectomy can only be evaluated with randomised controlled studies.

### **New Techniques to Evaluate the Degree of Incontinence**

**Andrew Gammie, Bristol Urological Institute, UK**

Leakage of any amount, however small, is bothersome to the patient. The clinician may be interested to ask how much leakage, what is the cause etc., but the patient is more likely to be concerned about stopping it completely, and what intervention might be possible to achieve that.

It has recently been stated that 'the role of urodynamic testing to assess these patients and offer treatment is still to be determined'<sup>1</sup>. It is clear, though, that the combined function of the sphincter and the pelvic floor is vital in this group of patients. There may then be a role for urethral pressure profilometry (UPP) in this area, dealing as it does with the changes in pressure through the functional length of the urethra.

Data from a small number of patients in our centre shows that the UPP traces can demonstrate the action of the pelvic floor on the continence mechanism, alongside a measurement of sphincter closure pressure. It can also demonstrate the different action of pelvic floor contraction and abdominal straining by measuring pressure changes above and below the sphincter level. Voluntary and spontaneous (evoked) coughs could be used within the protocol, as these are known to have different effects<sup>2</sup>.

Thus the UPP test may have a use in biofeedback, in assessing the relation between urethral closure pressure and leakage and evaluating the capacity of the pelvic floor to aid continence. The patient can then be advised on the degree of improvement possible through physiotherapy.

1. Arcila-Ruiz M, Brucker BM. The Role of Urodynamics in Post-Prostatectomy Incontinence. *Curr Urol Rep*. 2018; 19(3):21.
2. Stafford RE, Mazzone S, Ashton-Miller JA, Constantinou C, Hodges PW. Dynamics of male pelvic floor muscle contraction observed with transperineal ultrasound imaging differ between voluntary and evoked coughs. *J Appl Physiol* 2014; 116:953-960.

#### **How to select the technique?**

**Calos D'Ancona, UNICAMP, Brazil.**

To treat post prostatectomy incontinence, the most used techniques are: artificial sphincter and sling. The sling can be compressive or repositioning and adjustable or not. How to select the best technique for the patient? It depends on the grade of incontinence, the preference of the patient and the ability to action the artificial sphincter. How to select the technique between sling and artificial sphincter?

There are many maneuvers or techniques to grade the incontinence and we want to analyze the effectiveness of each technique: numbers of pads, weight pad test, reposition test, ultrasound and urodynamics. Some authors separate in mild, moderate and severe incontinence, but what is the threshold?

We performed a study to answer this question. And the answer is .....

#### **References:**

Costa Cruz DS, D'Ancona CA, et al, Parameters of two-dimensional perineal ultrasonography for evaluation of urinary incontinence after Radical Prostatectomy. *Int Braz J Urol*. 2014, 40(5): 596-604.

Fischer MC1, Huckabay C, Nitti VW. The male perineal sling: assessment and prediction of outcome. *J Urol*. 2007, 177(4): 1414-8.

#### **What to do if the patient improves but is still unsatisfied**

**Del Popolo Giulio**

**Neuro-Urology Unit; Careggi University Hospital Firenze (Italy)**

Patients after surgery ask to maintain or improve their previous urinary continence and sexual function.

Despite new surgery technique and early rehabilitation patients can be affected by post-prostatectomy urinary incontinence (PPI) and/or lower urinary symptoms (LUTS) and/or Erectile Dysfunction (ED). If pelvic floor rehabilitation is not enough to obtain patient's satisfaction, medical therapy can improve LUTS and/or continence. Erectile function can be improved by early pharmacological therapy.

Antimuscarinics and B3 agonist can improve bladder control if urgency/frequency and/or urge incontinence is detected. Some study showed also a role of Duloxetine in post-prostatectomy stress urinary incontinence due to sphincter deficiency, but few study has been published and also if Duloxetine showed a good efficacy but only in the short time follow up. If oral treatment fails urodynamic evaluation is needed and a second level treatment may be taken in consideration such as percutaneous tibial nerve stimulation (PTNS), sacral neuromodulation or botulinum toxin intradetrusor injection. If botulinum toxin is used the patient must informed regarding the risk of post treatment urinary retention and need of a period of intermittent catheterization. In case of light or mild stress urinary incontinence persistence the sling procedure for light or mild urinary incontinence or artificial sphincter implant, if severe incontinence, are indicated.

In patients with overactive bladder associated with stress urinary continence recovery of continence is hard to reach, especially if bladder show a very low capacity or reduced bladder compliance.

In patients affected by incontinence with associated voiding dysfunction and high residual urine, first of all is mandatory to ensure at least a complete bladder voiding. Intermittent catheterization should be taken in consideration as first approach. Regarding erectile dysfunction there are some data showing that early use of PDE5 inhibitors can improve recovery erectile potency. But if despite oral therapy the patient is not satisfied intracavernous prostaglandin injection can be offered starting the treatment with a low dosage. Last option is the surgical implantation of a penile prosthesis. Penile prosthesis and artificial sphincter despite a good efficacy at short and medium follow up, we must inform the patient about risk of complications such as erosion, infection and mechanical malfunctioning.

In conclusion functional outcome after prostatectomy improved in the last ten years. We have conservative, medical and surgical option to recovery continence and sexual activity. Early approach of treatment is recommended to avoid more invasive treatment.



**POST PROSTATECTOMY URINARY INCONTINENCE: QUESTIONS THE PATIENTS ASK**

**MUCH IS SAID ABOUT PHYSICAL THERAPY, BUT WHAT IS THE EVIDENCE?**

Giulio Del Popolo  
Neuro-Urology & Spinal Unit  
Careggi University Hospital  
Firenze - Italy

**HOW TO START**

Post-prostatectomy incontinence

Initial clinical assessment

- Medical history (medications, co-morbidities and surgery)
- Physical examination (rectal and neurological exams)
- Obstructed post-voiding residual urine
- Questionnaire (subjective assessment)
- Urea analysis
- Post test

Stress incontinence    Mixed incontinence    Urgency incontinence

Lifestyle intervention

- Bladder training
- pelvic floor muscle training
- Anticholinergics or mirabegron (if urgency incontinence)

Failure

Specialised clinical assessment

- Urodynamics
- Urothelioscopy

Substantial incontinence

Surgical treatment

**INITIAL MANAGEMENT OF URINARY INCONTINENCE IN MEN**

**HISTORY**

- Post-voiding dribble
- Incontinence on exertion (usually post-prostatectomy)
- Incontinence with mixed symptoms
- Urgency / frequency with or without urgency incontinence

**CLINICAL ASSESSMENT**

- General assessment (see relevant chapter)
- Urology symptom assessment and complete score (including bladder diary or frequency volume chart and questionnaire)
- Address quality of life and desire for treatment
- Physical examination: abdominal, rectal, sacral, neurological
- Urodynamics: Urothelioscopy or urothelioscopy, voiding and reflux
- Assessment of pelvic floor muscle function
- Assess post-void residual urine

**PRESUMED DIAGNOSIS**

- Stress incontinence presumed due to sphincteric incompetence
- Mixed incontinence: Treat most bothersome symptom first
- Urgency incontinence presumed due to detrusor overactivity

**MANAGEMENT**

- Urothel training (II)
- pelvic floor muscle contraction (II)
- DISCUSS TREATMENT OPTIONS WITH THE PATIENT
- Lifestyle interventions
- pelvic floor muscle training 1 (biofeedback) (II)
- Scheduled voiding/voiding training: OAB (I)
- Anticholinergics 1 (upheld for OAB & urgency incontinence) (II)
- α1-blockers 2 (upheld if suspected bladder outlet obstruction)

**SPECIALISED MANAGEMENT**

\* Consider CONTINENCE PRODUCTS for temporary support during treatment

**LIFESTYLE**

Smoking cessation,  
Healthy Eating,  
Appropriate Body Weight,  
Avoiding excessive Caffeine or Alcohol

**EVIDENCE?**

**LIFESTYLE**

**Appropriate Body Weight**

AHEAD trial - on a subset of male participants (n=1910).

Prevalent UI at one year were reduced by 38%

support and education group  
UI decreasing from 11% to 9%

Phelan, Kanaya et al. (2012)

Lifestyle modification interventions promoting weight loss as a tool to reduce urinary incontinence in men who are overweight or obese.  
(Level of Evidence: 2)

**LIFESTYLE**

highest level of caffeine intake was associated with having moderate to severe UI

Davis, Vaughan et al. 2013

Caffeine consumption is likely to play a role in exacerbating UI in men. New epidemiological evidence from a large cross sectional study supports this conclusion  
(Level of Evidence: 3)

**LIFESTYLE**



Evidence from a small new RCT indicates that urinary frequency may be improved by **smoking abstinence**,

(Level of Evidence: 3).

**LIFESTYLE**

Lifestyle recommendations such as smoking cessation, healthy eating, appropriate body weight, avoiding excessive caffeine or alcohol are all part of a primary care approach

Few trials have addressed the topic of lifestyle interventions alone for men with UI

**PELVIC FLOOR MUSCLE TRAINING (PFMT)  
Timing**



1) Preoperative RP PFMT

2) Pre-Operative and/or Post-Operative RP PFMT, Post RP Continence Status

3) Post-Operative PFMT Immediately Before or After Catheter Removal

4) Post-Operative RP PFMT for Incontinent Men



**1) PREOPERATIVE RP PFMT**

randomised preoperatively to PFMT plus proprioceptive training (n=60) vs PFMT alone (n=57).

**innovative theoretical perspective**

BUT

**no difference between groups in continence at 14, 30 or 60 days** (Only abstract)

Delmastro [2010]

Tobia [2008]

**6/8 (75%) of the intervention group compared to 4/8 (50%) of the control did not require pads at 8 weeks.**

Ocampo-Trujillo et al. (2013)

**no differences between intervention and control groups at any time point**

Laurienzo (2013)



**WHAT WE KNOW**

Received: 16 May 2017 | Accepted: 31 June 2017  
DOI: 10.1002/ltl.2217

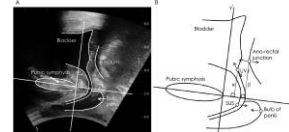
ORIGINAL BASIC SCIENCE ARTICLE

WILEY *Continuity* *ICS* *PH*

**Postprostatectomy incontinence is related to pelvic floor displacements observed with trans-perineal ultrasound imaging**

Ryan E. Stafford<sup>1</sup> | Wolbert van den Hoona<sup>1</sup> | Geoff Coughlin<sup>2</sup> | Paul W. Hodges<sup>1</sup>

Neurology and Urodynamics, 2017, 1-6. | wileyonlinelibrary.com/journal/ltl | © 2017 Wiley Periodicals, Inc.



**FIGURE 1** Method to calculate displacements and measured location of the rectal pelvis. (A) Trans-perineal ultrasound image with markers of pelvic floor structures identified by solid lines. (B) Locations of points used to calculate displacements of the middle rectal junction (M), anterior junction, bulb of the penis, and testicular contribution to shortening of the urethral urethral sphincter (US) shown with white circles. Bulb position of the US and urethral junction was calculated as the perpendicular distance from a line that bisected the pubic symphysis to each, respectively. Bulb length was calculated as the linear distance between the US and the point on the dorsal border of the urethra that intersected the bulb of the penis

**WHAT WE KNOW**

**Original Article**  
 Int Neurourol J 2018;22:114-122  
<https://doi.org/10.5213/inj.1836026.013>  
 pISSN 2093-4777 · e-ISSN 2093-6931

**INJ**  
 INTERNATIONAL NEUROUROLOGICAL JOURNAL  
 OPEN ACCESS

**The Role of Preoperative Puborectal Muscle Function Assessed by Transperineal Ultrasound in Urinary Continence Outcomes at 3, 6, and 12 Months After Robotic-Assisted Radical Prostatectomy**

Patricia Briar Neumann<sup>1</sup>, Michael O'Callaghan<sup>2</sup>  
<sup>1</sup>School of Health Sciences, University of South Australia, Adelaide, Australia  
<sup>2</sup>Urology Unit, Flinders Medical Centre, Bedford Park, Australia  
<sup>3</sup>South Australian Prostate Cancer Clinical Outcomes Collaborative, Adelaide, Australia  
<sup>4</sup>Flinders Centre for Innovation in Cancer, Flinders University, Bedford Park, Australia  
<sup>5</sup>Treweek Foundation Centre for Men's Health and Discipline of Medicine, University of Adelaide, Adelaide, Australia

↓  
**Pubo-rectal function**  
**Anal sphincter function**

Journal of Robotic Surgery  
<https://doi.org/10.1007/s13701-018-0803-8>

**REVIEW ARTICLE**

**A systematic review of PFE pre-prostatectomy**

S. S. Goonewardene<sup>1</sup> · D. Gillatt<sup>2</sup> · R. Persad<sup>3</sup>

Received: 2 December 2017 / Accepted: 12 March 2018

Weak pelvic floor muscles compromised normal pelvic floor function and led to urinary incontinence and erectile dysfunction. Strengthening the pelvic floor muscles was shown to significantly improve post-prostatectomy urinary continence, post-micturition dribble and erectile function. **It would be prudent for all men to exercise their pelvic floor muscles to maintain normal pelvic floor function and start prior to surgery.**

Activate  
PF  
muscles

Self - Palpation

**2) Pre-Operative and/or Post-Operative RP PFMT, Post RP Continence Status**

Before post-op continence/incontinence was no established

**Effectiveness of Early Pelvic Floor Rehabilitation Treatment for Post-Prostatectomy Incontinence**  
 Maria Emma Filocamo, Vincenzo L. Manni\*, Giulio Del Popolo, Filippo Cocconi, Michele Manassero, Aldo Inosa, Giulio Nicita

**Manassero 2007, Centemero 2010, similar results**

(Level of Evidence: 1)

**2) Pre-Operative and/or Post-Operative RP PFMT, Post RP Continence Status**

Before post-op continence/incontinence was no established

recrutamento m. perineal

found a **significant difference** in achieving continence at one, three and six months  
**Tienforti (2012)**

there were **no differences** between the groups  
**Geraerts (2013)**

**Lamberti G. & Giraudo D.**

**3) Post-Operative PFMT Immediately Before or After Catheter Removal**


**WHAT?**  
 PFMT plus EStim and PFMT plus EStim and BF compared to PFMT alone

**more men continent** at 12 and 24 weeks  
**Ahmed (2012)**

**recovery of urinary continence favoured the intervention group (PFMT with EStim) at 12 months**  
**Morihiro (2012)**


### 4) Post-Operative RP PFMT for Incontinent Men

- PFMT with Digital Rectal Feedback (DRE) After Radical Prostatectomy




*There are no trials to clarify whether PFMT taught by DRE offers any benefit over and above verbal or written instruction,*

(Level of Evidence: 2)




### 4) Post-Operative RP PFMT for Incontinent Men

- PFMT Plus or minus BF with EStim or MStim after Radical Prostatectomy



**58% of the Pilates group and 50% of the EStim plus PFME achieved Continence**

Pedriali (2014)



**no differences** between controls and two intervention groups (PFMT, PFMT with EStim)


Laurienzo (2015)

**No further benefit of EStim when added to PFMT over PFMT alone**  
(Level of Evidence: 2).

### PENILE VIBRATORY STIMULATION (PVS)


WHAT?

39 men with UI over one-year post RP randomised to two groups. (early and delayed PVS)





Results showed a **significant improvement** only in the early intervention group from baseline to 6 weeks

Fode (2015)




### Addition of MStim to Other Treatments

WHAT?



The addition of MStim to PFMT does not appear to be beneficial  
(Level of Evidence: 2)



### PELVIC FLOOR MUSCLE TRAINING (PFMT) Conclusion

*There is modest but inconsistent evidence that therapist delivered PFMT with or without BF or EStim before or after surgery may support an earlier return of continence after RP in some men up to 3-6 months post-surgery*

(Level of Evidence: 2)

### Review - Incontinence

#### Pathophysiology and Contributing Factors in Postprostatectomy Incontinence: A Review

John Heesakkers<sup>a</sup>, Fawzy Farag<sup>b,c</sup>, Ricardo M. Bauer<sup>a</sup>, Jaspreet Sandhu<sup>a</sup>, Dirk De Ridder<sup>a</sup>, Arnulf Stenzl<sup>d</sup>

EUROPEAN UROLOGY 71 (2017) 936–944

Table 1 – Biological factors contributing to postprostatectomy incontinence

| Factor                      | Positive impact | Negative impact | No effect | Study           | LR |
|-----------------------------|-----------------|-----------------|-----------|-----------------|----|
| Age                         |                 | +               |           | Hessau (16)     | 3  |
|                             |                 | +               |           | Matsudaoka (11) | 3  |
|                             |                 | +               |           | Kakumoto (12)   | 3  |
|                             |                 | +               |           | Kakumoto (13)   | 3  |
|                             |                 | +               |           | Leahy (14)      | 3  |
|                             |                 | +               |           | Radtke (15)     | 3  |
| Pre-existing IODs           |                 | +               |           | Leahy (14)      | 3  |
| Functional bladder changes  |                 | +               |           | Doehle (17)     | 3  |
|                             |                 | +               |           | Long (15)       | 3  |
| RP before RP                |                 | +               |           | Stake (18)      | 3  |
|                             |                 | +               |           | Kilgus (19)     | 4  |
| Prostate size               |                 | +               |           | Bachler (20)    | 3  |
|                             |                 | +               |           | Konety (21)     | 3  |
| Neurovascular bundle length | +               |                 |           | Kakumoto (12)   | 3  |
|                             | +               |                 |           | Nguyen (13)     | 3  |
|                             | +               |                 |           | Pharm (22)      | 3  |
|                             | +               |                 |           | Matsudaoka (11) | 3  |
|                             | +               |                 |           | Leahy (14)      | 3  |
|                             | +               |                 |           | Kakumoto (12)   | 3  |
| Body mass index             |                 | +               |           | Wells (23)      | 3  |
|                             |                 | +               |           | Matsudaoka (11) | 3  |
| Urologist RP after RP       |                 | +               |           | Kakumoto (12)   | 3  |
|                             |                 | +               |           | Chen (24)       | 3  |

LR = level of evidence; RP = radical prostatectomy; IOD = ischaemic orchitis of prostate; RT = radiation therapy; IOD = lower urinary tract symptoms.



**Review – Incontinence**

**Pathophysiology and Contributing Factors in Postprostatectomy Incontinence: A Review**

**John Heesakkers<sup>1</sup>, Fawzy Farag<sup>1,2</sup>, Ricardo M. Bauer<sup>3</sup>, Jaspreet Sandhu<sup>4</sup>, Dirk De Ridder<sup>5</sup>, Arnulf Stenzl<sup>1</sup>**

EUROPEAN UROLOGY 71 (2017) 936–944

| Outcome                       | Positive impact | Negative impact | No effect | Study        | OR |
|-------------------------------|-----------------|-----------------|-----------|--------------|----|
| Erectile                      | +               | -               | -         | Pageur (16)  | 3  |
|                               | +               | -               | -         | Shalaby (16) | 3  |
| Bladder emptying              | +               | -               | -         | Lee (17)     | 3  |
|                               | +               | -               | -         | Mohamed (17) | 3  |
| Bladder volume                | +               | -               | -         | Lee (17)     | 3  |
|                               | +               | -               | -         | Mohamed (17) | 3  |
| Bladder sensation             | +               | -               | -         | Lee (17)     | 3  |
|                               | +               | -               | -         | Mohamed (17) | 3  |
| Safety of the penile support  | +               | -               | -         | Lee (17)     | 3  |
|                               | +               | -               | -         | Mohamed (17) | 3  |
| Transmembrane transfer damage | +               | -               | -         | Lee (17)     | 3  |
|                               | +               | -               | -         | Mohamed (17) | 3  |
| Denervation                   | +               | -               | -         | Lee (17)     | 3  |
|                               | +               | -               | -         | Mohamed (17) | 3  |
| Devascularization             | +               | -               | -         | Lee (17)     | 3  |
|                               | +               | -               | -         | Mohamed (17) | 3  |
| Lymphatic disruption          | +               | -               | -         | Lee (17)     | 3  |
|                               | +               | -               | -         | Mohamed (17) | 3  |

**Editorial**

**Factors affecting urinary incontinence during robotic radical prostatectomy**

Mohammad Hajiba, D. Duane Baldwin

*Transl Androl Urol* 2018;7(Suppl 1):S93-S95

**Surgeon expertise!**

DOI:10.22034/APJCP.2017.18.1.81  
Physical Therapy in the Recovery of Continence

**RESEARCH ARTICLE**

**Assessment of Physical Therapy Strategies for Recovery of Urinary Continence after Prostatectomy**

Nivea Adriano de Santana e Santos<sup>1</sup>, Maria Vieira de Lima Saintrain<sup>2\*</sup>, Rommel Prata Regadas<sup>1</sup>, Romulo Augusto da Silveira<sup>1</sup>, Francisco Julimar Correia de Menezes<sup>1</sup>

Asian Pac J Cancer Prev 18 (1), 81-86

**« Tailored treatment PFMT and BFB is useful for the patients. »**

**Cochrane Library**  
Cochrane Database of Systematic Reviews

**Conservative management for postprostatectomy urinary incontinence (Review)**

Anderson CA, Omar M, Campbell SE, Hunter KF, Cody JD, Glazener CMA

**Authors' conclusions**

The value of the various approaches to conservative management of postprostatectomy incontinence after radical prostatectomy remains uncertain. **The evidence is conflicting** and therefore rigorous, adequately powered randomised controlled trials (RCTs) which abide by the principles and recommendations of the CONSORT statement are still needed to obtain a definitive answer. The trials should be robustly designed to answer specific, well constructed research questions and include outcomes which are important from the patient's perspective in decision making and are also relevant to the healthcare professionals.

Anderson CA, Omar M, Campbell SE, Hunter KF, Cody JD, Glazener CMA  
Conservative management for postprostatectomy urinary incontinence.  
Cochrane Database of Systematic Reviews 2015, Issue 1. Art. No.: CD010463.  
DOI: 10.1002/14651958.CD010463.pub2.  
www.cochranelibrary.com

**CONCLUSION**

**II. URINARY INCONTINENCE IN MEN**

**A. INITIAL MANAGEMENT**

**1. INITIAL ASSESSMENT SHOULD IDENTIFY:**

- Those with **“Complicated” incontinence group**: Those with pain or with haematuria, recurrent infection, suspected or proven poor bladder emptying (the majority due to bladder outlet obstruction), or incontinence following pelvic irradiation or radical surgery, are recommended for **specialised management**.
- Four other main groups of men** should be identified by initial assessment as being suitable for **initial management**:
  - Those with post-micturition dribble (see 2).
  - Those with overactive bladder (OAB) symptoms: urgency with or without urgency incontinence, together with frequency and nocturia.
  - Those with stress urinary incontinence (most often post-prostatectomy).
  - Those with mixed urinary urgency and stress incontinence (most often post-prostatectomy).

**2. MANAGEMENT**


- For men with **post-micturition dribble**, this requires no assessment and can usually be treated by teaching the man how to do a strong pelvic floor muscle contraction after voiding, or manual compression of the bulbous urethra directly after micturition. (GoR B)
- Supervised pelvic floor muscle training for men with post radical prostatectomy SUI accelerates recovery time(GoR B)**

**For men with stress, urgency or mixed urgency / stress incontinence**, initial treatment should include appropriate lifestyle advice, pelvic floor muscle training, individualised voiding regimen, behavioural therapies and medication, in particular:

- Lifestyle interventions (eg weight loss GoR B)
- Supervised pelvic floor muscle training for men with post radical prostatectomy SUI accelerates recovery time(GoR B)**
- Scheduled voiding regimen for OAB (GoR C)
- Antimuscarinics (3 agents) (GoR C) for OAB symptoms with or without urgency incontinence (GoR B) if the patient has no evidence of significant post-void residual urine.
- α-adrenergic antagonists (α-blockers) can be added if it is thought that there may also be bladder outlet obstruction (GoR C)
- Should initial treatment be unsuccessful** after a reasonable time (for example, 6-12 weeks), **specialist advice** is highly recommended.

Clinicians are likely to wish to treat the **most bothersome symptom** first in men with symptoms of mixed incontinence.

**Conclusions...**



**«La solution du bon sens est la dernière à laquelle songent les spécialistes»**

Bernard Grasset, 1928

**The common sense solution is the first one to be considered by specialists**

Andrew Gammie

ICS 2018 PHILADELPHIA

Affiliations to disclose\*:  
 Astellas, Ipsen consultancy  
 Andromeda, Digitimer, Laborie project grants

Funding for speaker to attend:  
 Self-funded  
 Institution (non-industry) funded  
 Sponsored by:

Workshop 30 - PPI

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New techniques to evaluate the ~~degree of incontinence~~  
 degree of continence control

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Sphincter / pelvic floor combination

UPP?

Urethral Pressure Profiles

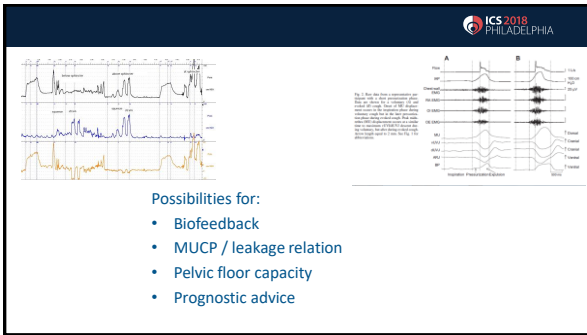
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UPP with PPI

ICS 2018 PHILADELPHIA

Dynamics of male pelvic floor muscle contraction observed with transperineal ultrasound imaging differ between voluntary and evoked coughs

Fig. 2. Raw data from a representative participant with a short presentation phase. Data are shown for a voluntary (A) and evoked (B) cough. Chest of 50% diaphragm descent occurs in the inspiratory phase during voluntary cough but in the force presentation phase during evoked cough. Peak rectus abdominis (RA) and external oblique (EO) muscle activity is observed in the inspiratory phase during voluntary, but after during evoked cough. Average length equal to 2 mm. See Fig. 1 for abbreviations.



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## How to select the technique?

Carlos D'Ancona  
Professor of Urology  
UNICAMP

ICS 2018  
PHILADELPHIA

Carlos D'Ancona

Affiliations to disclose\*:

Ibsen – clinical trial

\* All financial ties (over the last year) that you have with any business organization with respect to the subjects mentioned during your presentation.

Funding for speaker to attend:

Self-funded

Institution (non-industry) funded

Sponsored by:

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### Urinary Incontinence: post radical prostatectomy

2.9 a 87%

How was the information was obtained ?

- How long after surgery
- The rigor of the evaluation

Liss MA, J Urol, 2010,183: 1464-8

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### Mechanism of continence – anatomy

Bladder

Bladder neck

Pelvic muscles

Rhabdosphincter

Smooth muscle fibers

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### Urinary Incontinence PRP

Causes of UI

- Sphincter lesion
- Detrusor overactivity

Associate factors

- Age
- Vesico urethral anastomosis stricture
- Tumor invasion of the sphincter

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### How to select the techniques?

BALLOON

CUFF

PUMP

### How to evaluate the patient?

1. Voiding Diary
2. Number of pads
3. Pad weight test
4. Quality of Life
5. Cystoscopy
6. Perineal ultrasound
7. Urodynamics

### 1. Voiding diary

### 2. Numbers of pads

Important for the diagnosis

No relation to the volume of leakage

### 3. Pad weight test

Volume of leakage

- 1 hour test
- 24 hour test

### 1 hour test

|          |   |            |
|----------|---|------------|
| Minimum  | → | < 1g       |
| Mild     | → | > 1 < 10g  |
| Moderate | → | > 10 < 50g |
| Severe   | → | > 50g      |

Smither A, BMC Urology, 2007, 7: 2

### 1 hour test

Does not reflect the normal activity of the patient

Can sub estimate the amount of leakage


Smither A, BMC Urology, 2007, 7: 2

24 hour test ICS 2018  
PHILADELPHIA

Ideal 3 days

Classification:

|              |   |          |
|--------------|---|----------|
| • < 100g     | → | mild     |
| • 100 – 400g | → | moderate |
| • > 400g     | → | severe   |



Nitti VW, J Urol, (177), 2007

4. Quality of Life ICS 2018  
PHILADELPHIA

Specific questionnaires

- ICIQ-SF
- King's Health Questionnaire

Generic questionnaires

- SF 36
- Patient Global Impression of Improvement

ICS 2018  
PHILADELPHIA

**Validation of the "International Consultation on Incontinence Questionnaire - Short Form" (ICIQ-SF) for Portuguese**

Jose Tadeu Nunes Tamarinini, Miriam Dambrós, Carlos Arturo Levi D'Ancona, Paulo César Rodrigues Palma and Nelson Rodrigues Netto Jr

*Disciplina de Urologia da Faculdade de Ciências Médicas, Universidade Estadual de Campinas, Campinas, SP, Brasil*

Specific quality of life questionnaire for incontinent patient

Rev. Saude Pública, 2004

Urinary incontinence & Quality of Life ICS 2018  
PHILADELPHIA

Significant Correlation between reduction of pad weight test and ICIQ-SF and PGI-I score

Twiss CO, Fischer MC, Nititi VW. Neurourol & Urodyn 2007

5. Cystoscopy ICS 2018  
PHILADELPHIA

0.4 a 32% urethral stricture

Should be treated before any surgery to promote continence

**Sphincter  
Residual Activity  
With Repositioning Test**



Cystoscopy – reposition test ICS 2018 PHILADELPHIA

- Good contraction of rhabdosphincter
- Urethral mobility
- But, how to quantify these variables?

6. Prienal Ultrasound ICS 2018 PHILADELPHIA

ORIGINAL ARTICLE Vol. 40 (5): 596-604, September - October, 2014  
doi: 10.1007/s10755-014-0104-0

**Parameters of two-dimensional perineal ultrasonography for evaluation of urinary incontinence after Radical Prostatectomy**

Daniilo Souza Lima da Costa Cruz<sup>1</sup>, Carlos Arturo Leivi D'Ancosa<sup>2</sup>, Jamal Barakat<sup>3</sup>, Marco Antonio Dionisio Alves<sup>4</sup>, Marcelo Cartagott<sup>5</sup>, Ronaldo Damilto<sup>6</sup>

27 patients incontinent after radical prostatectomy  
34 control group



Prienal Ultrasound ICS 2018 PHILADELPHIA

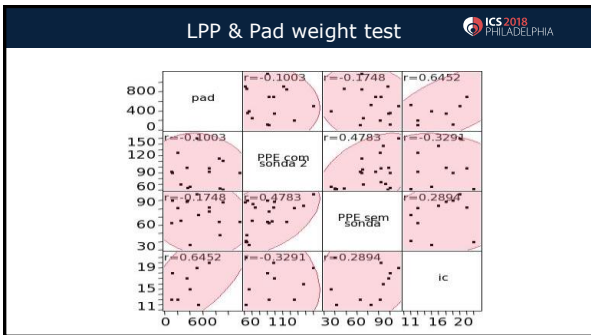
We can evaluate the contraction of the pelvic muscles and mobilization of the urethra

### 7. Urodynamics

### Detrusor overactivity

### Detrusor hypoactivity

### Stress leak point pressure




### Urethral pressure profile (UPP)

The urethral pressure profile began in 1969, when Brown and Wickham realized that there was a need to develop a simple and efficient method to evaluate the pressure inside the urethra.

Brown M; Wickham J.E.A.: The urethral pressure profile. BJU Int 47:445-8, 1969




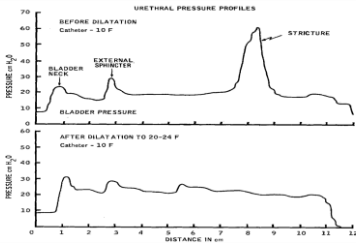
**Concept of compression zone** 

The region of greater pressure in normal urethra receives the term of **compression zone**


It corresponds to the **external sphincter**

Griffiths D.J: Urodynamicis. The mechanisms and Hydrodynamics of the Lower Urinary Tract (ed Second). United Kinton, ICS, 2014

**URETHRAL PRESSURE PROFILES** 




Brown M; Wickham J.E.A: The urethral pressure profile. BJU Int 47:445-8, 1969

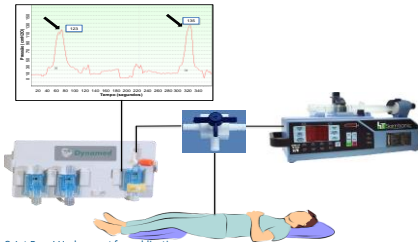
**Evaluation of sphincter activity by urethral pressure profile UPP** 

sphincter relaxed ( $P_{ura.max}$ )


sphincter under contraction ( $P_{ura.cont.max}$ )

Moser D, D'Ancona C. Int Braz J Urol, accept for publication

**Urethral pressure profile** 



Moser D, D'Ancona C. Int Braz J Urol, accept for publication

**Catheter and traction** 


Urethral catheter 10Fr

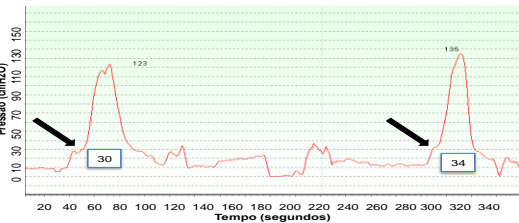
4 circumferential orifices at 5cm of the extremity of the catheter

Extremity of the catheter was occluded

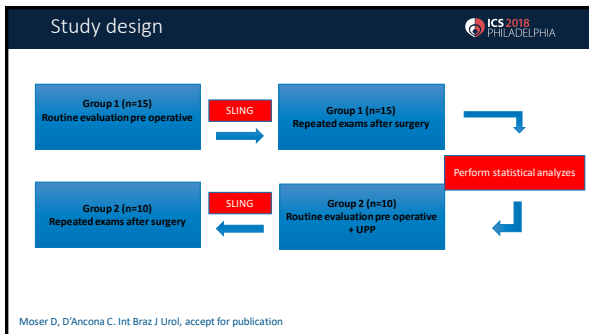
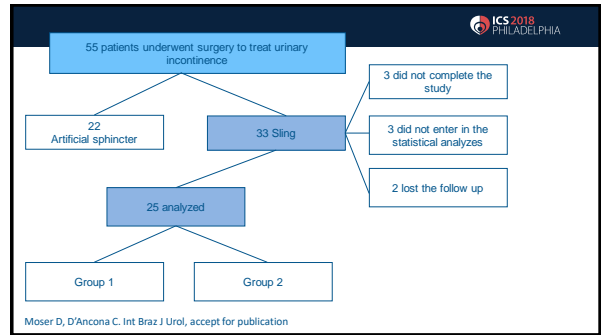
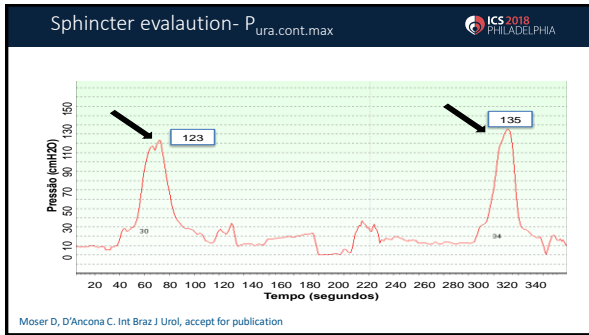
Manual traction until localized the compression zone (area of greater pressure corresponding to rabdosphincter)

Moser D, D'Ancona C. Int Braz J Urol, accept for publication

**Sphincter evaluation-  $P_{ura.max}$**  



Moser D. Tese Doutorado, UNICAMP



### Relation between surgical results of P<sub>ura.cont.max</sub> and reposition test

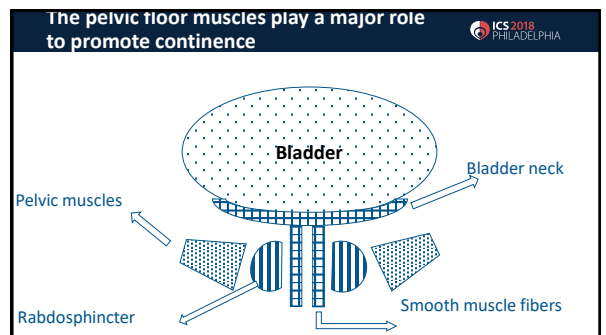
| Pacients | Pad weight test 24h (g) before | Pad weight test 24h (g) after | P <sub>ura.cont.max</sub> (cmH2O) | Reposition test |
|----------|--------------------------------|-------------------------------|-----------------------------------|-----------------|
| 16       | 750                            | 400                           | 120                               | Positive        |
| 17       | 200                            | 0                             | 181                               | Negative        |
| 18       | 80                             | 0                             | 186                               | Positive        |
| 19       | 1200                           | 600                           | 120                               | Negative        |
| 20       | 740                            | 100                           | 154                               | Positive        |
| 21       | 1200                           | 570                           | 36                                | Negative        |
| 22       | 80                             | 0                             | 184                               | Positive        |
| 23       | 1400                           | 670                           | 42                                | Negative        |
| 24       | 550                            | 320                           | 101                               | Positive        |
| 25       | 245                            | 0                             | 201                               | positive        |


Moser D, D'Ancona C. Int Braz J Urol, accept for publication

### Predictive Positive Value (PPV) for cure and improvement in accordance of P<sub>ura.cont.max</sub>

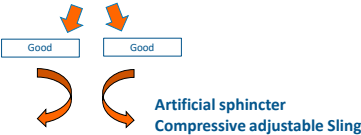
| P <sub>uro.cont.max</sub> | Number of patients | PPV (%) improvement | PPV (%) cure |
|---------------------------|--------------------|---------------------|--------------|
| 180                       | 4                  | 100                 | 100          |
| 150                       | 5                  | 100                 | 80           |
| 120                       | 7                  | 86                  | 57           |
| 100                       | 8                  | 75                  | 50           |

Moser D, D'Ancona C. Int Braz J Urol, accept for publication




**Conclusion** 

1. Sphincter activity + Mobilization of the urethra
2. Pad weight test < 400ml
3. Pura.cont.max > 150cmH2O




**Reposition Sling**  
**Artificial sphincter**

**Artificial sphincter**  
**Compressive adjustable Sling**

**Why perform all these test?** 

To identify the best technique to fit for the patient

**Sling obtain more indication** 

Less complex

- Age men, degenerative diseases

Less components

- Lower revision procedures rate

Lower cost

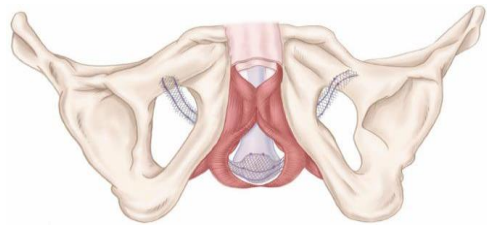
It is possible implant artificial sphincter in the future

## Case 1

67 year old patient  
 Radical prostatectomy 6 months ago  
 Complains of urinary incontinence  
 Four pads a day  
 ICIQ-SF – 21

After 1 year...  
 Improvement of weight pad test → 50g/day  
 ICIQ-SF – 12  
 What to do?

## Sling - TOT



Totally dry  
 The patient asks

- Can I exercise ?
- What are the recommendations ?

## Case 2

**urelogia**  
UNICAM

59 years  
 Radical prostatectomy  
 • Adenocarcinoma Gleason 3+3

Urinary incontinence  
 • > 10 pads/day  
 • PAD weight test: 920 g / 850 g




**urelogia**  
UNICAM

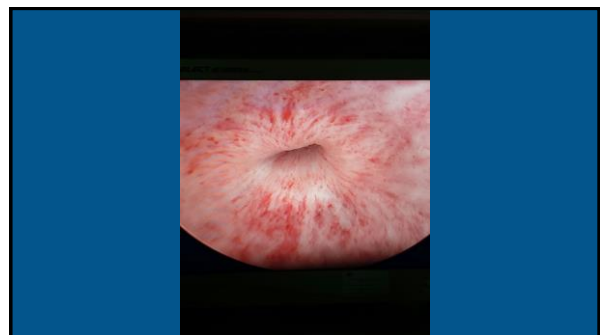
Underwent implantation of artificial sphinter

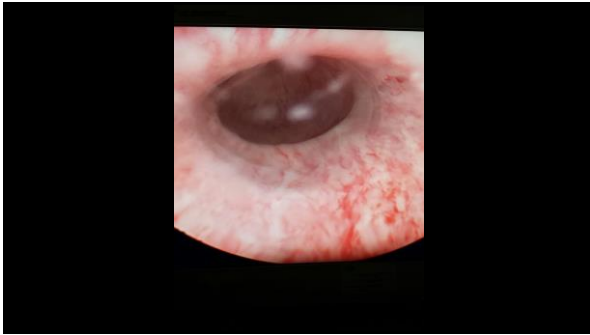
Post operative  
 • Dry  
 • Well adapted

**urelogia**  
UNICAM

2 years later

-Urinary incontinence  
 -1 pad day  
 -Pad weight test : 35 g/day



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It was changed for a smaller cuff

ICS 2018 PHILADELPHIA

**Case 3**

ICS 2018 PHILADELPHIA

**Mr. R. O. (DOB July 27, 1941)**

1998: Radical P for T3 CaP with adjuvant radiation and 2 years of ADT

Mild to moderate SUI (1-2 pads/day)

2001: Transurethral injection of Macroplastique® x3 (as part of clinical trial)

ICS 2018 PHILADELPHIA

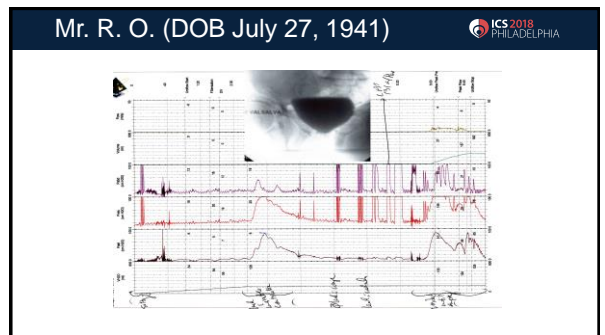
**Mr. R. O. (DOB July 27, 1941)**

SUI worsened; Macroplastique eroded through injection site and removed transurethraly

Developed vesico-urethral anastomotic stenosis that settled with dilation and daily self cath.

**Video-urodynamics**

- Supine filling capacity 200 cc and SUI with coughing seen.
- Upright filling capacity 190 cc and DO up to 75 cm water



What to do ?

Mr. R. O. (DOB July 27, 1941)

SUI severe requiring condom drainage,  
no change with anticholinergics  
May 2003: Insertion of artificial sphincter



Mr. R. O. (DOB July 27, 1941)

Sphincter activated and given anticholinergic for UUI  
Persistent moderate SUI

Options for management

1. Change drug or increase anticholinergic
2. Add in AdVance sling or alternative
3. More injectable agent
4. Revise sphincter
5. Urinary diversion

Mr. R. O. (DOB July 27, 1941)

Feb 2005: sphincter revision with addition of second cuff  

- Improved to 1-2 pads/day; still taking anticholinergic

 2009: increased leakage to 2-3 pads/day

Options for management

1. Change drug or increase anticholinergic
2. Add in AdVance sling or alternative
3. More injectable agent
4. Revise sphincter
5. Urinary diversion

## Mr. R. O. (DOB July 27, 1941)



Feb 2009: Revision – 4 cm distal cuff replaced outside bulbospongiosus muscle

Sphincter activated 1 month later

UI markedly better, now on 10 mg solifenacin

Jan 2010 incontinence worsened

Cystoscopy – both cuffs looked functional

Video-urodynamics

- Capacity: 200 cc with DO up to 70 cm water, contraction settled and VLPP 138 cm water

## Options for management



1. Change drug or increase anticholinergic
2. Add in AdvVance sling or alternative
3. More injectable agent
4. Revise sphincter
5. Urinary diversion

## Mr. R. O. (DOB July 27, 1941)



Sep 2010: Cystoscopy and 100u Botulinum toxin A injected

Oct 2010: 1 pad/day

Mar 2011: stable response but developed colorectal cancer and in Jul 2011 underwent APR

Sep 2011: repeat Botox (100u)

Repeat Botox q 6 mo. with good response

## Case 4

57 years

Radical prostatectomy

Gleason 4.4

Urinary incontinence

Underwent reposition sling

Good results

But PSA relapse after one year

Underwent radiation therapy

Urinary incontinence



What is the proposal?

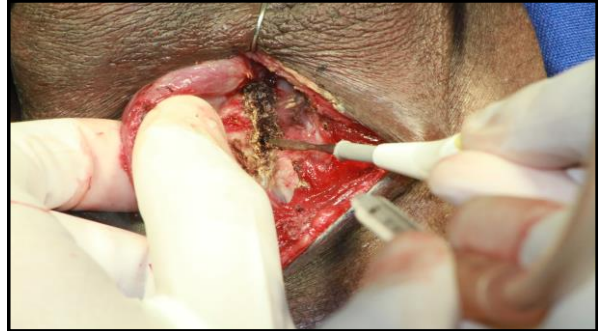


Do nothing

Another sling – compressive

Artificial sphincter

- Double cuff
- Transcorporeal cuff



## Case 5



**65 year old**

**Radical retropubic prostatectomy**

**Diabetes – controlled**

**Artificial sphincter**

**18 months after surgery**



Options:

- Remove all of the device?
- Only the pump?
- Antibiotics and suture?

## Case 5

**72 year old patient**

**Radical prostatectomy in 2015**

**Urinary incontinence and impotence since the surgery**

**Physiotherapy without improvement**

**AUS implanted**

### Results

- Unsatisfied
- Perineal pain
- Incontinence

Change the cuff to smaller size

Add one more cuff

Transcorporeal cuff

Possible infection → antibioticotherapy

Erosion → removal of the system

Endoscopy without erosion

No infection

What are your recommendation?

Change cuff



**POST PROSTATECTOMY URINARY INCONTINENCE: QUESTIONS THE PATIENTS ASK**

**WHAT TO DO IF THE PATIENT IMPROVES BUT IS STILL UNSATISFIED**

Giulio Del Popolo  
Neuro-Urology & Spinal Unit  
Careggi University Hospital  
Firenze - Italy

**WHAT DO YOU WANT TO BE REALLY SATISFIED?**

**Cochrane Library**  
Cochrane Database of Systematic Reviews

**Conservative management for postprostatectomy urinary incontinence (Review)**

Anderson CA, Omar M, Campbell SE, Hunter KF, Cody JD, Glazener CMA

**Authors' conclusions**  
The value of the various approaches to conservative management of postprostatectomy incontinence after radical prostatectomy remains uncertain. **The evidence is conflicting** and therefore rigorous, adequately powered randomised controlled trials (RCTs) which abide by the principles and recommendations of the CONSORT statement are still needed to obtain a definitive answer. The trials should be robustly designed to answer specific well constructed research questions and include outcomes which are important from the patient's perspective in decision making and are also relevant to the healthcare professionals. **Long-term incontinence may be managed by an external penile clamp** but there are safety problems.

Anderson CA, Omar M, Campbell SE, Hunter KF, Cody JD, Glazener CMA  
Conservative management for postprostatectomy urinary incontinence.  
Cochrane Database of Systematic Reviews 2015, Issue 1. Art. No.: CD010463.  
DOI: 10.1002/14652051.CD010463.pub2  
[www.cochranelibrary.com](http://www.cochranelibrary.com)

**Perineal Muscles Hypertrophy and Proprioception Improvement**

**Perineal Muscles Hypertrophy and Proprioception Improvement**

**BFB**                      **Estim**

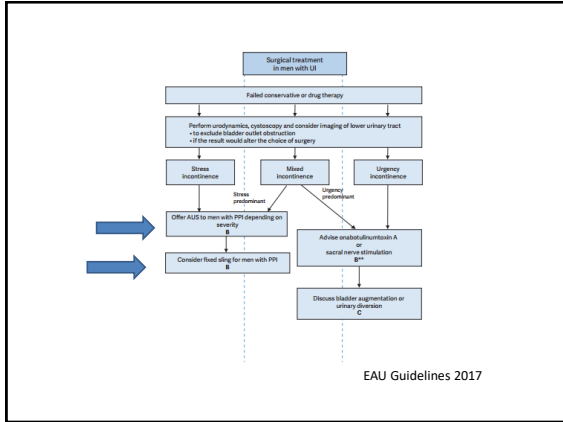
**Prostate Cancer**

**Pharmacologic Treatment in Postprostatectomy Stress Urinary Incontinence**

Maria Teresa Filocomo<sup>a,\*</sup>, Vincenzo Li Marzi<sup>a,\*</sup>, Giulio Del Popolo<sup>b</sup>, Filippo Ceconi<sup>a</sup>, Donata Villari<sup>a</sup>, Michele Marzocco<sup>a</sup>, Giulio Nicita<sup>a</sup>

EUROPEAN UROLOGY 51 (2007) 1559-1564

**Duloxetine was shown to be complementary to PFMT with a synergic clinical effect demonstrated by a significant reduction of incontinence episodes in postprostatectomy incontinence, compared with PFMT alone.**



Review - Incontinence

### Contemporary Management of Postprostatectomy Incontinence

Ricarda M. Bauer<sup>1,2</sup>, Christian Gozzi<sup>3</sup>, Wilhelm Hübner<sup>4</sup>, Victor W. Nitti<sup>5</sup>, Giacomo Novara<sup>6</sup>,  
EUROPEAN UROLOGY 59 (2011) 985-998

Bulking Agents

Review - Incontinence

### Contemporary Management of Postprostatectomy Incontinence

Ricarda M. Bauer<sup>1,2</sup>, Christian Gozzi<sup>3</sup>, Wilhelm Hübner<sup>4</sup>, Victor W. Nitti<sup>5</sup>, Giacomo Novara<sup>6</sup>,  
EUROPEAN UROLOGY 59 (2011) 985-998

**Table 5 - Recommendations for the diagnosis and treatment of postprostatectomy incontinence**

- Radical prostatectomy is the main causative factor for male stress urinary incontinence (SUI).
- Evaluation and diagnosis should be performed according to the two-stage assessment recommended by the European Association of Urology guidelines.
- Validated questionnaires should be used to assess symptoms and impact on quality of life.
- Before surgical treatment, patients should be evaluated with uroflowmetry and androdynamics.
- Preoperative pelvic floor muscle training (PFMT) may be useful in increasing early postoperative continence rates. PFMT is also of benefit in men with persisting SUI > 1 yr after surgery.
- If conservative treatment fails after a period of at least 6-12 mo, surgical therapy is recommended.
- Patients desiring for minimally invasive treatment options is high and will drive the choice to use a sling to avoid using a mechanical device such as the well-established artificial urinary sphincter.
- Male slings show promising results and seems to be a good alternative surgical treatment option with best results in patients with persistent mild to moderate SUI.
- Bulking agents should only be used in highly selected patients due to the low success rate.
- Due to early high complication rates of the adjustable balloon system, more data are required for an evidence-based recommendation.
- Currently, stem cell therapy should not be applied.
- For more evidence-based recommendations, more prospective randomised controlled trials are necessary.

### Artificial Urinary Sphincter

Table 10.2 AUS (male only)

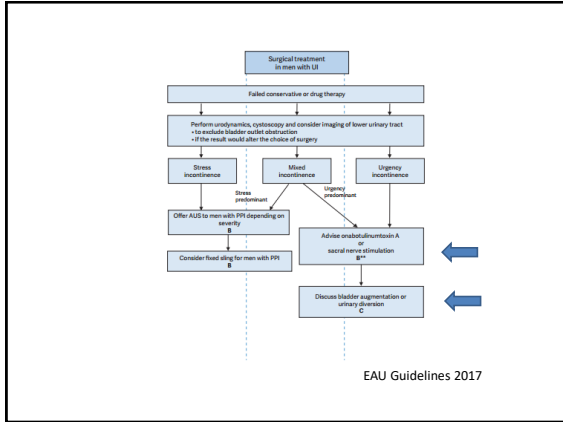
| Parameter                     | 2005 | 2009 |
|-------------------------------|------|------|
| Success rate                  | 85%  | 85%  |
| Complication rate             | 10%  | 10%  |
| Quality of life               | High | High |
| Cost-effectiveness            | High | High |
| Time to return to normal life | High | High |

Caustic Devices  
Males - Male Stress Urinary Incontinence  
10

Double Cuff

### TEMPORARY CONTINENCE

### EXTERNAL CONSTRICTOR



**DO DRUG TREATMENT**  
**ANTIMUSCARINICS**

| DRUG                                | DOSE        | FREQUENCY               |
|-------------------------------------|-------------|-------------------------|
| <b>Tolterodine</b>                  | 1 – 2 mg    | TID <sup>1</sup>        |
| <b>Tolterodine XL</b>               | 2 - 4 mg    | Once-daily              |
| <b>Oxybutynin*</b>                  | 2,5 - 5 mg  | BID <sup>2</sup> or TID |
| <b>Oxybutynin XL</b>                | 5 - 15 mg   | Once-daily              |
| <b>Oxybutynin transdermal patch</b> | 3.9 mg/d    | 1 patch BIW             |
| <b>Oxybutynin gel 10%</b>           | 1 ml        | Once-daily              |
| <b>Trospium*</b>                    | 20 mg       | BID or TID              |
| <b>Trospium XL</b>                  | 60 mg       | Once-daily or BID       |
| <b>Propiverine</b>                  | 15 mg       | BID or TID              |
| <b>Propiverine XL</b>               | 30 mg       |                         |
| <b>Solifenacin**</b>                | 5 – 10 mg   | Once-daily              |
| <b>Fesoterodine**</b>               | 4 – 8 mg    | Once-daily              |
| <b>Darifenacin**</b>                | 7.5 – 15 mg | Once-daily              |

**B3 Agonist**

|                   |              |                   |
|-------------------|--------------|-------------------|
| <b>Mirabegron</b> | <b>50 mg</b> | <b>Once-daily</b> |
|-------------------|--------------|-------------------|

**DO TREATMENT**

**BOTULINUM TOXIN**  
*Intra-Detrusor injection*

**Percutaneous tibial nerve stimulation (PTNS)**

**Sacral Neuromodulation**

**SOCIAL CONTINENCE**

**Condom catheter**

**Urocondom**

**Conclusions**

- Condom catheters facilitate urinary containment in neurologic male patients. (LOE 3)
- Long-term use does not increase the risk of UTI when compared to other methods of bladder management. (LOE 3)
- Complications may be less if technique, hygiene, replacement and maintenance of low bladder pressures are optimised. (LOE 3)

**Recommendations**

- Size selection should consider control of leakage, and prevention of penile compressive effects. (B)
- Regular bladder emptying with low bladder pressures and low post void residual should be confirmed (B).

**Condom catheter**

**Bladder Augmentation or Urinary Diversion**

**Bricker UD**

**VLP or Robotic Surgery**

- Enterocystoplasty can be made with gastric, ileal, ileocecal or sigmoidal segments.

**Robotics and Laparoscopy**

**Long-term evaluation of survival, continence and potency (SCP) outcomes after robot-assisted radical prostatectomy (RARP)**

Vincenzo Ficarra<sup>1\*</sup>, Marco Borghesi<sup>1\*</sup>, Nazareno Suardi<sup>1</sup>, Geert De Nayer<sup>2</sup>, Giacomo Novara<sup>3</sup>, Peter Schaltehan<sup>4</sup>, Ruben De Gooze<sup>5</sup>, Paul Carpentier<sup>6</sup> and Alexander Mottrie<sup>7</sup>

<sup>1</sup>CVI Robotics Surgery Institute Asstl, Belgium; <sup>2</sup>University of Padova, Padova; <sup>3</sup>University of Bologna, Bologna; and <sup>4</sup>Wilo Salute University San Raffaele, Milan, Italy

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**Fig 1** Continence outcome in patients who underwent RARP versus radical prostatectomy (RP) (continuous) and RP (discrete) (discrete) (Kaplan-Meier) at median (SD) of 23.5 months.

**Fig 2** Potency outcome in patients who underwent RARP versus RP (continuous) (Kaplan-Meier) at median (SD) of 23.5 months.

**Erectile dysfunction**

*Treatment options*

- Physical management
- Pharmacological management
- Surgical management

**Management of ED**

**PDE5-inhibitors**

**PDE5-INHIBITORS ARE CONTRAINDICATED WITH CONCURRENT USE OF NITRATES**

- Sildenafil (Viagra®) - effect 3-5 hours
- Vardenafil (Levitra™) - effect 3-6 hours
- Tadalafil (Cialis®) - effect 24-36 hours

**Technique of ICI**

➤ **Venous constrictive band and/or**

➤ **Vacuum erection device**

**Penile implants**

**CONCLUSIONS**

Patient is really satisfied if:

- He is post-op dry
- Maintain sexual activity post-op

OR IF:

- He is dry with conservative treatment or after surgical treatment for SU1 or drugs for OAB
- Recovery of sexual activity with pharmacologic treatment

**Other solutions can only reduce negative impact on QoL and prevent secondary complications**

**THANK YOU FOR YOUR ATTENTION**