**W32: ICS Institute - School of Male LUTS and Urethra: Post prostatectomy urinary incontinence: Questions the patients ask**

Workshop Chair: Carlos D’Ancona, Brazil

05 September 2019 14:30 - 15:30

<table>
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<tr>
<th>Start</th>
<th>End</th>
<th>Topic</th>
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<tr>
<td>14:30</td>
<td>14:40</td>
<td>- Much is said about physical therapy, but what is the evidence?</td>
<td>Carlos D’Ancona</td>
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<td>14:40</td>
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<td>- How to select the technique?</td>
<td>Daniel Moser</td>
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<td>- For How long is the surgery is?</td>
<td>Matthias Oelke</td>
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<td>15:00</td>
<td>15:10</td>
<td>- How do you deal with complications: infection, erosion.</td>
<td>Gommert van Koeveringe</td>
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| 15:10   | 15:30   | - Discussion                                                         | Carlos D’Ancona
                     |                                   | Gommert van Koeveringe            |
                     |                                   | Matthias Oelke                    |
                     |                                   | Daniel Moser                      |

**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**

It is important that the identification of patients who may benefit from PFMT and when to start treatment. Many techniques have been described for the treatment of urinary incontinence and some exams may support the selection of the best techniques for each case. Despite the good results, urinary incontinence relapse and complications may occur and treatments of how to solve will be presented. Finally, we will discuss cases and present solutions and answer questions.

**Target Audience**

Urologists, Physical therapists, Nurses

**Advanced/Basic**

Intermediate

**Suggested Learning before Workshop Attendance**


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

Prof. Dr. Carlos D’Ancona
University of Campinas Medical School - UNICAMP
São Paulo - Brazil

Radical prostatectomy (RP) is one of most frequent treatment for localized prostate cancer. Despite excellent oncologic results, morbidity associated with the procedure as urinary incontinence (UI) and erectile dysfunction (ED) deeply affect patient’s quality of life (QoL) and may delay return to work and/or usual physical and social activities (1).

Urinary incontinence after radical prostatectomy, regardless of the technique used, varies between 5 to 57%, notably during the first year after surgery. Although there is no consensus on post prostatectomy urinary incontinence pathophysiology has been attributed: urethral sphincter insufficiency, detrusor overactivity, detrusor hypoactivity and low compliance.

Conservative management includes behavioral alterations to prevent leakage, pelvic floor muscle training (PFMT) with or without biofeedback, electrical stimulation, extra-corporeal magnetic waves, compression devices (penile clamps), lifestyle changes, or a combination of methods. The value of the various approaches to conservative management of post-prostatectomy incontinence after radical prostatectomy remains uncertain. Preoperative PFMT is thought to improve postoperative urinary incontinence after radical prostatectomy (2).

The advantage of PFMT is that it is a noninvasive method with no side effects and easily performed. It is considered an actual method of treatment of urinary incontinence. The aim of physiotherapy is to improve pelvic floor muscles proprioception, to increase tone of anus levator muscles and to favour automatization of these muscles in daily life. PFMT may improve the ability to increase urethral closure during stress episodes.

A recent randomized clinical trials show different results: improved or not early continence. The explanation is that the definitions of the outcomes, is zero pad or safety/one pad. However, the same reports presented an improvement in the QoL. It would be that the QoL is the primary outcome and reflect the clinical scenario that the patient faces and ultimately would inform decision making, at the bedside, to a much greater degree (3).

Urinary incontinence gradually improves during the first year after surgery and it is necessary to distinguish early from delayed incontinence patients. Surgical reconstructive treatment is indicated after 12 months of RP which keeps patients with a decreased QoL during this period. PFMT is an attractive treatment option during the first year after surgery, presenting good results such as reducing recovery continence time as well as incontinence severity.

References


How to select the technique?
Daniel Moser, MD, MSc, PhD
Campinas, SP - Brazil

Radical prostatectomy (RP) and a transurethral resection of the prostate (TURP) are the most frequent causes of post-operative incontinence in men. Recent studies indicated that the most used devices to treat these patients are male slings (36.4%) and artificial urinary sphincters (AUS) (34.9%).1 Clinical history, physical exam are usually accompanied with pre-operative assessment in order to improve the surgical decision-making. Contemporary post-prostatectomy incontinence (PPI) may be evaluated by many ways like combination of history, number of pads per day (PPD), pad weights, cystoscopy, repositioning test, urodynamics, quality of life and incontinence questionnaires.2-5 The vast majority of researchers agree that standardization of preoperative diagnostic evaluation, as well as postoperative definitions of success are very important for incontinence protocols.6 Although there is no consensus regarding the utility and real necessity of each of these methods.7-9

A consequence of this wide number of pre-operative assessment possibilities is a huge difference between the various protocols and also with difficulty to compare patient cohorts and consequently the success rates. The complete standardization in pre-operative assessment is a difficult goal because it evolves more than what is right or wrong but also surgeon personal points of view, self-confidence, previous experience with assessment methods, techniques and surgical outcomes. Although complete standardization of pre-operative assessment seems a remote possibility, anyone can easily agree that when one speaks with the language of the majority makes his ideas more understandable and consequently more acceptable. The main question is how to get it standardized? This workshop will hopefully help with future standardization and understand the current practice.

References

How do you deal with complications: infection, erosion
Prof Dr. Gommert A. van Koeveringe
Maastricht University Medical Center, The Netherlands

If an implantable device is chosen, complications may occur such as malfunction of the device, infection or erosion. Complication rates are dependent on the type of procedure, the patient’s previous medical history and surgical technique. Sling surgery post prostatectomy has the following positive predictive factors: Age under 71, patient using less than 5 pads a day, circumferential coaptation of the urethra during preop cystoscopic evaluation, dry at night and patient can reach the bathroom in the morning without leakage, the patient did not have previous Radiotherapy or TURP/BOO surgery. (Bauer 2017) Infection or erosion after sling surgery are rare but may occur: more often after perineal compressive slings than after retro-urethral repositioning slings.

Artificial urinary sphincters (AUS) generally have a higher cure rate than slings, have a significantly higher cure rate after radiotherapy but the infection and erosion rates are higher. Infection and erosion rates differ among studies: Lindner et al 2015 described 31% urinary retention, 2 % infection and 2 % erosion. Van der Aa 2013 described: 6 % mechanical failure, 8 % urethral atrophy, 8,5% infection and erosion and a 26% reoperation rate. Although evidence is conflicting on complication rates of the artificial sphincter after radiotherapy generally the rate has been described higher than after just radical prostatectomy. Van Bruwaene in 2015 reviewed post radiotherapy complications after sling and AUS and found that for sling surgery radiotherapy was a negative predictive factor in almost all studies and for AUS in only in some studies a higher complication rate was identified. Radomski 2018 retrospectively found no relationship of AUS device explantation and revision after radiotherapy. Moser et al 2018 identified radiotherapy as a significant risk factor for erosion and complications after recurrent AUS. In AUS, generally risk factors for cuff erosion are: radiotherapy, Urethral catheterization, revision surgery and the use of a 3,5 cm cuff. Patient specific risk factors are: diabetes, hypertension and coronary artery disease. (Siegel 2015).

Erosions are best managed by removing all parts of the device, catheter placement and reoperation after 4 to 6 months. Cuffs can then be placed in another location or transcorporally. Salvage procedures after erosion with antibiotics are obsolete. (Gross 2017, Eswara 2015)

The learning objectives are to give sufficient evidence in combination with experience data to be able to manage expectations of a patient before post prostatectomy incontinence surgery. In addition management and therapy options are discussed in case of an erosion or infection.

References

For how long is the surgery?
Matthias Oelke; MD, PhD, FEBU
Department of Urology, St. Antonius Hospital, Gronau, Germany

Introduction
Median- or long-term rates for complete continence (i.e. cure), great improvement (i.e. social continence) or little/no improvement of continence or even deterioration of incontinence (i.e. failure) are available for all three prototypes but only the artificial urinary sphincter can demonstrate continence results ≥8 years after implantation due to its usage since 1983. It also has to be taken into account that patients may have had (multiple) revision operations to restore continence. In order to correctly judge the efficacy of the three prototypes of devices, the reader also has to consider the preoperative incontinence severity/ number of pads, previous continence operations and previous radiotherapy of the small pelvis. Therefore, one continence device can deliver different outcomes due to different patient populations. There may even be a publication bias because the majority of publications originate from high-volume centers with experienced, highly trained and specialized surgeons. Therefore, published continence results may not reflect the real-life situation.

Non-adjustable tapes
Taken together the information of the published literature on the AdVance® sling, approx. 77-90% of patients are dry or improved after 36 months and approx. 60-70% after 60-70 months.

Pre-treatment incontinence severity (pad usage) and younger patient age (≤71 years) were the predictive parameters for treatment success [2,6]. Previous radiotherapy of the small pelvis (for the treatment of prostate cancer) was associated with lower success rates [7,8]. De novo urgency appeared in 16.6% of patients during a follow-up of 60 months [5].

Adjustable tapes
The potential advantage of adjustable tapes is to repeatedly modify urethral compression after the implantation, thereby adjusting the compression to the individual needs without a new operation. Due to the later introduction of the ATOMS® device, continence results are only available for a median follow-up ≤34 months. At a median follow-up of 18.5 months (range: 12-26 months) and a median number of 1 adjustment (range: 0-5), 85.3% of patients were dry and 8.8% improved [9].

Artificial urinary sphincter
Several revision operations are necessary during long-term follow-up of the artificial urinary sphincter (AMS800®). Taken together the information of the published literature on the artificial urinary sphincter (AMS800®), approx. 85-91% of patients are dry or improved after ≤60 months and 77% after 180 months.

Conclusions
Despite different patient populations, non-adjustable slings, adjustable tapes or artificial urinary sphincters achieve similar long-term continence rates at the level of 70-80%. However, when patients can decide whether they want an artificial urinary sphincter or a sling, the majority of patients (92%) would opt for a sling [17].

References
Post prostatectomy urinary incontinence: Questions the patients ask

Please complete the in-app evaluation in the workshop before leaving.

Agenda

- Handout for all workshops is available via the ICS app, USB stick and website.
- Please silence all mobile phones
- PDF versions of the slides (where approved) will be made available after the meeting via the ICS website so please keep taking photos and video to a minimum.
Much is said about physical therapy, but what is the evidence?

Carlos D’Ancona
Professor Urology
Unicamp

Urinary incontinence – 5 to 57%
• How the information is obtained
• How long after surgery
• Volume of leakage

Castle et al., 2005 e Romano et al., 2006)
(Feldman et al., 2008)

Mechanism of continence

Mechanism of continence

Bladder
Pelvic muscles
Bladder neck
Rabdosphincter
Smooth muscle fibers

Decrease sphincter function

66 patients
Pre and post radical prostatectomy
Urethral profilometry decrease 64%
Maximal closure urethral pressure decrease 41%

Dubbelman YD. Neurourol Urodyn. 2012; 31:946-5
Causes of incontinence

- Causes of UI
  - Sphincter lesion
  - Detrusor overactivity

- Associate factors
  - Age
  - Advance local disease
  - Anastomosis stricture

Tools

- Pelvic Floor Muscle Training (PFMT)
- Biofeedback
- Electrical stimulation

How does this work?

Pelvic Floor Muscle Training (PFMT): Combination of exercises + electromyography + biofeedback helps to increase proprioception of pelvic floor muscles, facilitating contraction and relaxation.

Physiotherapy

- AIMS
  - Severity
  - Recovery time
  - Quality of Life

There are some questions

1. Is there a reduction time of incontinence?
2. Does PFMT promote continence?
3. Does PFMT pre-operative improve results?
4. What is the impact of the combination of techniques?
5. Is there a standardization of PFMT?
6. Are there clinical or home based physiotherapy differences?

1. Is there a reduction time of incontinence?
Correlation between age and continence

Improvement of Continence Rate with Pelvic Floor Muscle Training Post-Prostatectomy: A Meta-Analysis of Randomized Controlled Trials

8 RCT participants
Urinary continence was evaluated by:
- pad test
- ICIQ-SF
- bladder diary
- number of pads used
Mean follow up 43.25 +/- 16.9 weeks
Conclusions

The majority of patients recover urinary control within 1 year after surgery (93.3%).

This result can be achieved sooner with regularly performed physical therapy.

2. Does PFMT promote continence?

Conclusions

There are no side effects or risks from therapy. Physiotherapy should be offered to all patients with incontinence from the first day after catheter removal.

Treatment is most effective during the first 4 months after surgical intervention.
3. Does PFMT pre-operative improves results?

End point:

To determine whether patients who performed PFMT before and after surgery regained urinary continence earlier than patients who performed PFMT only after catheter removal.

- Preoperative pelvic floor muscle training was found to be effective in reducing the time to continence as well as the severity of incontinence.
- Also, the patients learn how to do the exercises without the neurological and vascular changes caused by surgery and can also identify pre and post surgical muscle strength.
4. What is the impact of combination techniques?

15 included studies
3,503 participants
Aged 45 to 90

Conclusions
Meta-analysis showed positive treatment effects for PFMT plus ES

5. Is there a standardization of PFMT?

Design of programs to train pelvic floor muscles in men with urinary dysfunction: Systematic review

- Large variations in the design of PFMT protocols:
  - target muscles
  - instructions
  - feedback techniques
  - contraction types
  - number of contractions per day
Little or no consensus:

- Which instructions
- Positions
- Feedback
- Amount of repetitions

6. Are there clinical or home-based physiotherapy differences?

PFMT programs guided by a physiotherapist have no greater effectiveness than PFMT programs performed by subjects at home.

Cost effective advantage

Saving financial and human resources
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<td>2. Promote continence? - Yes</td>
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<td>3. Pre-operative PFMT improve results? - Yes</td>
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<td>4. Impact of combination techniques - Yes</td>
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<td>5. Standardization of PFMT - No</td>
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<td>6. Clinical or home based physiotherapy? - The same</td>
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Post Prostatectomy Urinary Incontinence: Questions the Patients Ask

How to select the Technique?

Daniel Moser, MD, MSc, PhD
D’Or Institute Research and Teaching – São Paulo /Brazil
ICS Institute – School of Male LUTS and Urethra

Which implant would patients prefer?

First of all, ask yourself:
What method would you prefer?
- A mechanical or nonmechanical device?
- More or less revisions?
- One piece device or two/three piece device?
- A palpable or nonpalpable device?
- Double or single incision?

DON’T GUESS WHAT PATIENTS WANT
LET THEM TELL YOU !!!!

Artificial Urinary Sphincter Versus Male Sling for Post-Prostatectomy Incontinence—What Do Patients Choose?
Angelish Kumar, Elana Rosenberg Litt, Katie N. Balleri and Victor W. Nitti*
From the Department of Urology, New York University Langone Medical Center, New York, New York. THE JOURNAL OF UROLOGY®
Vol. 181, 1221–1225, March 2009

For more than 10 years patients tell us:
WE PREFER SLINGS

Why do they prefer slings?

PATIENTS WANT TO HAVE PHYSIOLOGICAL MICTURITION
If I was an incontinent patient....

- Nonmechanical
- Less revisions
- One piece
- Nonpalpable
- AND MUST
  Make me dry with long term efficacy

Asking the right question can frame the successful treatment

How to select the technique?

In which patient do Male Slings work?

Almost a consensus

MILD TO MODERATE

INCONTINENCE

Why is it almost and not a complete consensus?

SELECTION METHODS SEEM TO BE GOOD,

BUT MAY FAIL ON IDENTIFYING THE

MALE SLING CANDIDATE WITH

COMPLETE ACCURACY

Why is it almost and not a complete consensus?

MANY mild to moderate = FAIL

(GRAY ZONE)

Why male sling is not the gold standard to mild and moderate incontinence?

DIFFERENT QUESTION, BUT THE SAME ANSWER

MANY mild to moderate = FAIL

(GRAY ZONE)
A little bit more of the same...

Post-prostatectomy incontinence (PPI) may be evaluated by many ways like combination of history and:

- number of pads per day (PPD)
- pad weights (1h or 24h)
- cystoscopy
- repositioning test
- urodynamics
- quality of life and incontinence questionnaires.


Pad number

- 1 - 2: mild
- 3 - 4: moderate
- > 5: severe

Putter H, J Urol., (183), 2010
McGuire, E, Urol. Intern, (85), 2010

Pad weight

- < 200g: mild
- 200 - 400g: moderate
- > 400g: severe

Nitti VW, J Urol., (177), 2007

Repositioning test

Current methods are used to find these patients

And avoid these other patients
There are many reports but no consensus concerning the **utility and real necessity** of each of these methods.

How often are these methods in fact been used?

In order to critically summarize current areas of research in the field and highlight unmet needs regarding the evidence of pre and post-operative assessment of male incontinence, a systematic literature search was conducted in January 2018 in the PubMed/Medline database.

The following keywords were used: (male incontinence AND prostatectomy AND (sling OR artificial sphincter OR bulking agent OR treatment OR therapy) AND 2015[PDAT]: 2018[PDAT]).

### Articles selection

- **IDENTIFICATION**  
  Records identified through database searching (n=419)
- **SCREENING**  
  Records screening by titles and abstracts (419)
  → Exclusion criteria articles removed (349)
- **ELIGIBILITY**  
  Records systematically assessed for eligibility (70)
- Full text articles excluded: revision articles / technical report or not related treatment intervention / no interest outcome (34); mixed cohort (2) and Pre-ACT (4)
- Relevant articles from reference lists of included articles (9)
- **INCLUSION**  
  Studies included in narrative review (39)

### PAD TEST

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*Fisher's exact test
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OUTCOMES QUESTIONARIES

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So what do we need?

Use all this methods for every patient?

More methods?

More controlled methods?

All these stuff does not matter, implant an artificial sphincter in every patient?

So what do we need?

All you need is love
All you need is love
All you need is love, love
Love is all you need

There's something you can't know that isn't known
Nothing you can see that isn't shown
There's nowhere you can be that isn't where you're meant to be
It's easy

All you need is love
All you need is love
All you need is love, love
Love is all you need
It seems that everything is just on the table....

There's nothing you can know that isn't known
Nothing you can see that isn't shown
There's nowhere you can be that isn't where you're meant to be it's easy

Ok, but maybe something else..... Beyond love and new methods

19/09/2019

Refined nomogram incorporating standing cough test improves prediction of male transobturatory sling success

Proposal of a new way to evaluate the external sphincter function prior male sling surgery

Sphincter Pressure Under Contraction (SPUC)
**Pad test X SPUC X Repositioning test**

<table>
<thead>
<tr>
<th>Patient ID Number</th>
<th>Pre-op Pad test</th>
<th>Post-op Pad test</th>
<th>SPUC (cmH2O)</th>
<th>Repositioning test</th>
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**SPUC X improvement graduation**

<table>
<thead>
<tr>
<th>SPUC (cmH2O)</th>
<th>Number of patients</th>
<th>PPV (%) Improvement</th>
<th>PPV (%) Cure</th>
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**Proposal of a new way to evaluate the external sphincter function prior male sling surgery**

**SPUC (Sphincter Pressure Under Contraction) seems to have positive correlation with better outcomes after sling surgery**

**THANK YOU SO MUCH !!!**

Let’s make together: danielmoser.com.br
Post-prostatectomy urinary incontinence: Questions the patients ask

Matthias Oelke; MD, PhD, FEBU
Department of Urology, St. Antonius Hospital, Gronau, Germany

How to achieve urinary continence?

1. Non-adjustable slings:
   - Advance™ sling (Boston Scientific)

2. Adjustable tapes:
   - Remeex™ tape (Neomedic International)
   - Argus™ tape (Promedon)
   - ATOMS™ (A.M.I.)

3. Artificial urinary sphincters:
   - AMS800™ (Boston Scientific)
   - ZSI 375™ (Zephyr Surgical Implants)
   - Victo™ (Promedon)
   - FlowSecure™ (distribution Germany: RBM – Reinhard Becker Medizinprodukte)
   - Periurethral constrictor™: device not yet advertised

How to select the continence device?

Depends on:
- Incontinence grade
- Patient factors (morbidity, life expectancy, ability to have anesthesia, previous treatments/radiotherapy, etc.)
- Patient preferences
- Availability of the device in the individual countries
- Surgeon’s experience and preferences
- Complication rate of the devices
- Continence results

Why do continence devices fail?

1. Primary failure:
   - wrong indication (e.g. urgency incontinence)
   - intraoperative surgical complications (e.g. opening of the urethra)

2. Secondary failure:
   - device infection
   - device malfunction
   - urethral erosion
   - atrophy of the urethra
   - deterioration of incontinence (as a function of aging)
   - additional procedures (e.g. radiotherapy, urethral stricture - urethral surgery, trauma – transurethral catheter)
Problems to judge continence results

- RCTs and direct comparison of devices very limited
- Strange comparison of continence systems (e.g. Macroplastique™ vs. AMS800™ in 45 pts.)
- Use of different continence definitions (dry vs. socially dry; success rate: cure ± improvement)
- Use of different tools to define continence (history vs. questionnaires vs. number of pads vs. pad test)
- Comparison of different patient groups (age, incontinence grades, incontinence etiology, previous continence surgery, previous radiotherapy, etc.)
- Comparison of different centres (low volume vs. high volume)
- Bias of different surgeons (developer most frequently has the best results) and commercial interests (private centers tend to have better results than public hospitals)
- Comparison of different follow-up after continence surgery, only short-term follow-up for new devices, long-term follow-up limited (>8 years only AMS800™)
- Inclusion of the same patient in different publications and at different follow-ups

Continence after non-adjustable slings (Advance™)

- 36 months: cure or improvement of incontinence in 76.8%
- 36 months: cure in 66% and improvement in 23.4%
- 52 months: cure in 51% and improvement in 25%
- 60 months: cure or improvement in 66.7%
- 70 months (18-83): cure in 46.7% and improvement in 13.3%

Continence after adjustable tapes (ATOMS™)

- 36 months: cure or improvement of incontinence in 76.8%
- 36 months: cure in 66% and improvement in 23.4%
- 52 months: cure in 51% and improvement in 25%
- 60 months: cure or improvement in 66.7%
- 70 months (18-83): cure in 46.7% and improvement in 13.3%

Continence after artificial sphincters (AMS800™)

- 45 months (re-operation rate 26.4%): 84.3% dry or improved
- 50 months (re-operation rate 30%): 91.4% dry or improved
- 98 months: 81% dry with their primary AUS
- 180 months: 77.2% dry (but only 44% still had their AUS)

Conclusions

- Continence results of different devices are difficult or even impossible to compare
- RCTs are necessary to correctly judge continence results
- Medium- and long-term results of non-adjustable slings, adjustable tapes and artificial urinary sphincters are limited but seem to be pretty similar at a level of approx. 70-80%
- If the patient can choose between a sling or AUS, 92% would opt for a sling
- Adjustable tapes have the advantage to re-adjust urethral compression
- Long-term results (>8 years) are only available for the AMS800
- Standardization and definition of continence is necessary (ICS task)
How do you deal with complications: infection, erosion

Workshop 32: School of male LUTS and Urethra
Post prostatectomy urinary incontinence: Questions the patients ask.

Gommert van Koeveringe, MD, PhD, Fellow EBU, urologist
Professor and section leader Functional, Reconstructive and Neurourology
department of Urology, Maastricht UMC+
The Netherlands

Conflicts of Interest:
G.A. Van Koeveringe
Astellas: Consultancy, Clinical trial
Solace therapeutics: Consultancy, Clinical trial
Boston Scientific: Consultancy
Medtronic: Clinical trial
Neuspera: Clinical trial
Axonics: Clinical trial
Bluewind: Clinical trial

Complications after post prostatectomy incontinence surgery.

Complications after PPI surgery depend on:
1- the right treatment for the right patient
2- the patients comorbidity
3- the surgical technique
4- postoperative care and events.
5- how complications were dealt with

1- the right treatment for the right patient
Important for the choice for therapy

- Incontinence severity: mild-moderate-severe?
- Co-morbidity: Radiotherapy!!
- Dexterity, ability to deal with devices?
- Urethra:
  - is it open? strictures, BN strictures
  - Bladder:
    - can it store? - can it accommodate at least ..., ml?
    - Can it empty? - can it overcome obstruction?

Bladder: can it store?

- Do Urodynamics
  - You are doing complication surgery, there are a lot of other threats around the corner.
  - Poor compliance: small capacity: small gain of the treatment?
  - Botox helps

Bladder: can it empty?

- Underactive bladder: do NOT choose an obstructive therapy!
  - Do urodynamics

My world:

2 - the patients comorbidity
Post-radiotherapy: fibrosis

- Post radiotherapy bladder fibrosis is likely to have a negative impact on:
  - OAB symptoms
  - UAB symptoms
  - Outcome after stress incontinence surgery due to lower detrusor compliance

- Post radiotherapy sphincter and pelvic floor fibrosis is likely to have a negative impact on:
  - Urthral patency
  - Outcome of male sling therapy for stress urinary incontinence
  - Sphincter and urethral apposition ability
  - Healing after surgery

Post-radiotherapy: bladder neck stenosis and incontinence

- Complications and Interventions in Patients with an Artificial Urinary Sphincter: Long-Term Results
  - Sidney B. Kalish et al. Neurourol. Urodyn. 2017

Post-radiotherapy: stress incontinence treatment

- Complications and Interventions in Patients with an Artificial Urinary Sphincter: Long-Term Results
  - Sidney B. Kalish et al. Neurourol. Urodyn. 2017
Risk Factors for Erosion of Artificial Urinary Sphincters: A Multicenter Prospective Study

Table 1. Univariate analysis of explantation rate by cancer and urogenital variables

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<thead>
<tr>
<th>Variable</th>
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1920-2019

3- the surgical technique

Reconstructive Urology

Revision Techniques After Artificial Urinary Sphincter Failure in Men: Results From a Multicenter Study

[Graphs showing outcomes of revision techniques]

Postoperative Complications following Artificial Urinary Sphincter Placement

[Graphs showing postoperative complications]

4- postoperative care and events.
5- how complications are dealt with

25

how complications are dealt with

26

how complications are dealt with

27

how complications are dealt with

28

how complications are dealt with

29

how complications are dealt with

30
how complications are dealt with

General Conclusions

- Important to choose the right treatment for the right patient taking into account the patient's comorbidity:
  - Rather no sling after radiotherapy
  - Be careful with poorly compliant bladder
  - Be careful with underactive bladder

- When a malfunction occurs:
  - Exchange the whole device rather than a specific part.
  - Avoid cuff size 3.5.
  - Rather do double cuff or transcorporeal than repositioning or downsizing.

- Don't make the cuff too tight: postop retention = bad outcome

- If erosion or infection is present: remove the whole device and come back later. (Salvage irrigation and antibiotics is obsolete)

- Consider: urethroplasty at time of removal
Case 1

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

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

Totally dry
The patient asks
• Can I exercise ?
• What are the recommendations ?

Case 2
59 years
Radical prostatectomy
- Adenocarcinoma Gleason 3+3

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

Underwent implantation of artificial sphincter

Post operative
- Dry
- Well adapted

2 years later
- Urinary incontinence
- 1 pad/day
- Pad weight test: 35 g/day
It was changed for a smaller cuff

Case 3

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
We perform a transcorporeal cuff.

Case 4

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

What would you suggest?
Change the cuff to smaller size
Add one more cuff
Transcorporal cuff
Possible infection → antibiotics therapy
Erosion → removal of the system

Endoscopy without erosion
No infection
What are your recommendation?

Change cuff