



# Educational Forum

## Common and Complex Cases in Stress Urinary Incontinence

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# Potential Conflict of Interest Disclosures

| Speaker /Chair Name | Advisory Boards                           | Speaker's Bureau   | Payment/Honoraria  | Grants/ Research Support | Clinical Trials | Investments | Patents |
|---------------------|---|--|--|--------------------------|-----------------|-------------|---------|
| —                   | Allergan<br>Astellas<br>Ferring<br>Pfizer | Allergan<br>Astellas<br>Ferring<br>Laborie<br>Pfizer<br>Red Leaf<br>Medical<br>SearchLight<br>Pharma | Allergan<br>Boston<br>Scientific<br>Red Leaf<br>Medical<br>SearchLight<br>Pharma | Pfizer                   | Astellas        | —           | —       |

# Objectives

- Assess non-mesh alternative management options in patients with SUI
- Understand the surgical principles of a variety of stress urinary incontinence (SUI) procedures
- Delineate and describe the appropriate choices to manage complex cases of SUI



# Case 1 Claire

- 78F
- PMHx: DM, HTN, stroke, Afib, lumbar hernia L5-S1
- G4P4 (all VD)
- PSx: Burch in 1995
- Meds: rivaroxaban, insulin, bupropion, pregabalin, metformin, irbesartan
- No UTI, no hematuria
- Stopped smoking 5 yrs ago
- Not sexually active
- Recently had endometrial biopsy and had to stop HRT

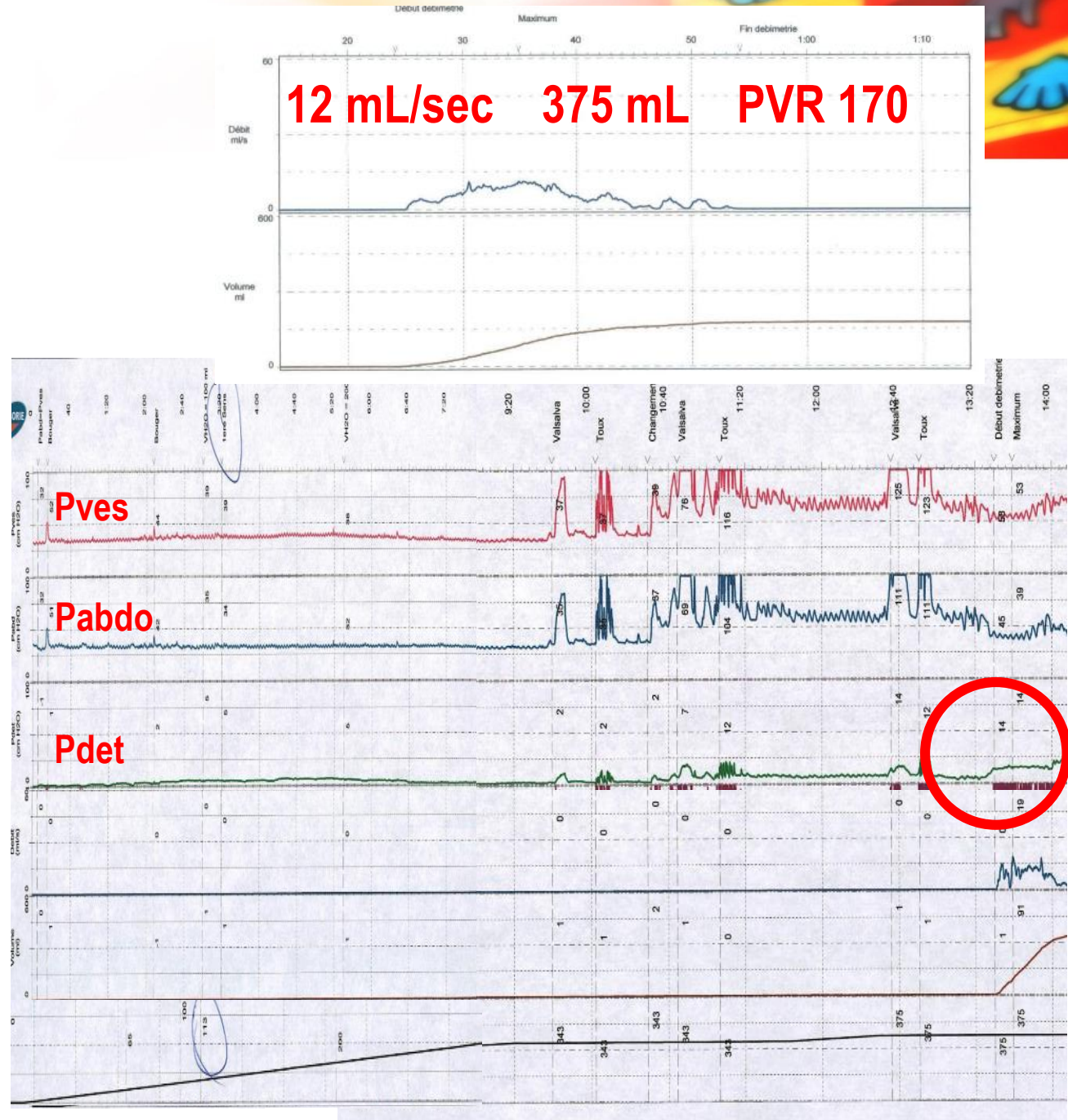
# Case 1

- Active woman complaining of symptoms of MUI
- Urgency improved since using Fesoterodine 4mg
- Leaks with any sort of activity and wears 2 thick pads/d
- As soon as she stands up, the bladder completely empties
  
- P/E: cystocele grade I, atrophic vaginitis
- PVR of 170 cc
- Cysto:
  - ✓ Healthy bladder, capacity 550 cc
  - ✓ Important SUI with minimal urethral hypermobility, muscles 1-2/5, Q-tip 0–30°

# Case 1

## Flow & UDS

- No DO
- Capacity 375cc
- VLPP 38 cmH<sub>2</sub>O
- Poor detrusor contraction during voiding
  - ✓ Pdet max 8-10 cmH<sub>2</sub>O



# Case 1

- Dx : MUI (stress-predominant), ISD, detrusor hypocontractility

# 1. What treatment would you offer this patient after conservative measures have failed?

Transobturator MUS

Mini-sling

Bulking agent

Pubovaginal sling

Artificial urinary sphincter

Other



# 1. What treatment would you offer this patient after conservative measures have failed?

Transobturator  
MUS

Mini-sling

Bulking agent

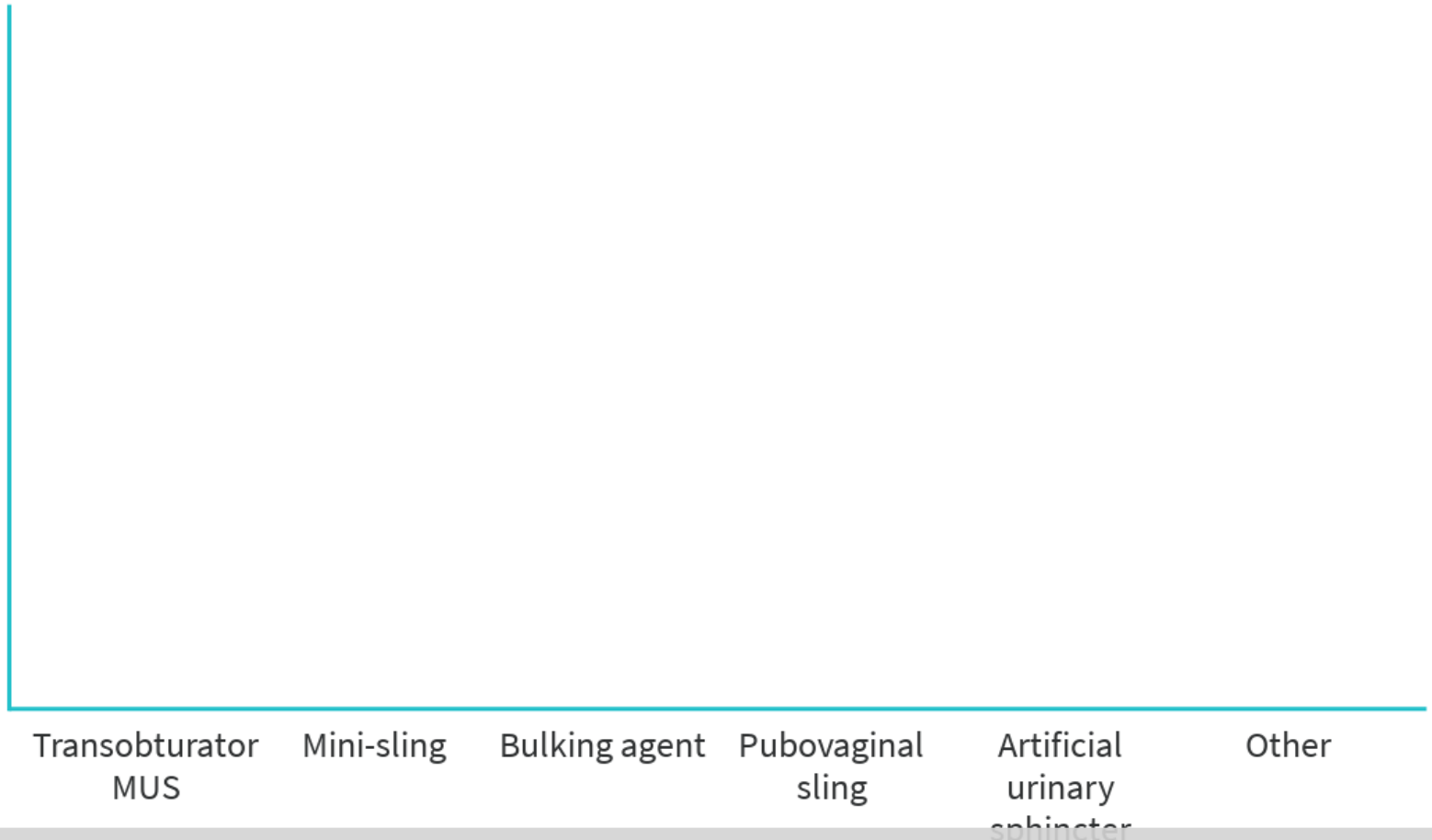
Pubovaginal  
sling

Artificial  
urinary  
sphincter

Other

# 1. What treatment would you offer this patient after conservative measures have failed?

 **Poll locked.** Responses not accepted.





# **Bulking agents: Why, Who, How ?**

Dr Matthew Andrews

# Bulking Agents for Stress Urinary Incontinence

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Clinical Assistant Professor

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# Disclosures

- Lecturer
  - Astellas Pharma Canada
  - Pfizer
- Advisor
  - Sanofi

# Armamentarium against SUI

## **Non-Surgical**

- Observation
- Continence Pessary
- Vaginal Inserts
- Pelvic Floor Muscle Exercises

## **Surgical**

- Bulking Agents
- Midurethral sling (synthetic)
- Autologous Fascia Pubovaginal Sling
- Burch colposuspension
- Artificial Urinary Sphincter

# AUA / SUFU Guideline 2017

- In index patients considering surgery for stress urinary incontinence, physicians may offer the following options: (Strong Recommendation; Evidence Level: Grade A)
  - Midurethral sling (synthetic)
  - Autologous fascia pubovaginal sling
  - Burch colposuspension
  - Bulking agents

# AUA / SUFU Guideline 2017

- In patients with stress urinary incontinence and a fixed, immobile urethra (often referred to as ‘intrinsic sphincter deficiency’) who wish to undergo treatment, physicians should offer: (Expert Opinion)
  - Pubovaginal slings
  - Retropubic midurethral slings
  - Urethral bulking agents



# Bulking agents – Patient Selection

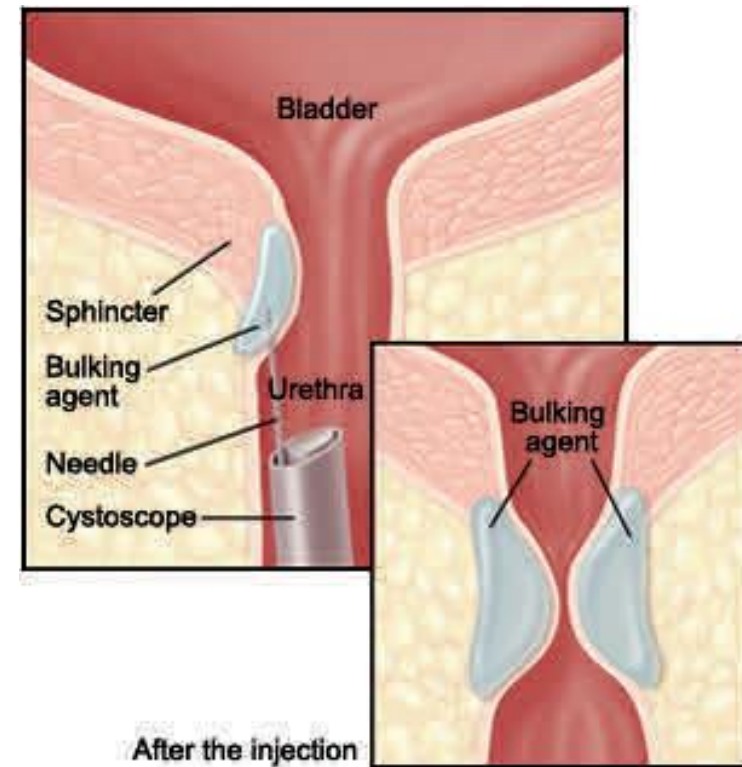
- First described as early as 1904
  - Injection of periurethral paraffin wax for SUI
- Viable option for SUI in select patient population
- Alternative option for:
  - Salvage procedures post-failure of MUS
  - Patients with contraindication to MUS

**Table 1. Indications for periurethral bulking for female stress urinary incontinence (SUI)**

| Indication                                 | Key points   |
|--|--|
| Patient choice                             | <ul style="list-style-type: none"><li>• Low to moderate volume SUI</li><li>• Accepts lower likelihood of success versus surgery</li></ul>                                    |
| Young patient who desires future pregnancy | As above   |
| Poor bladder emptying                      | Lower risk of permanent urinary retention vs. surgery  |
| Poor candidate for surgical intervention   | <ul style="list-style-type: none"><li>• High anesthetic risk</li><li>• Stenotic introitus</li><li>• Advanced age</li><li>• Severe obesity</li><li>• Anticoagulated</li></ul> |

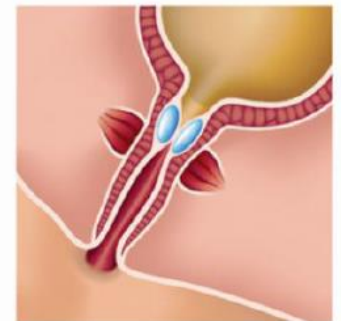
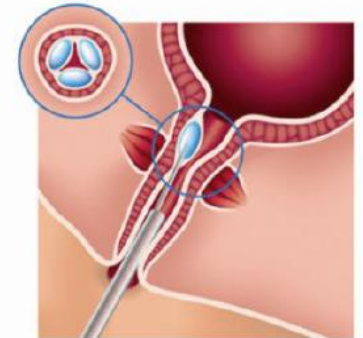
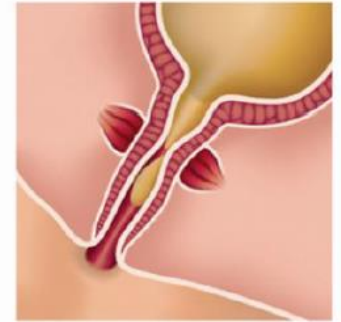
# Mechanism of action

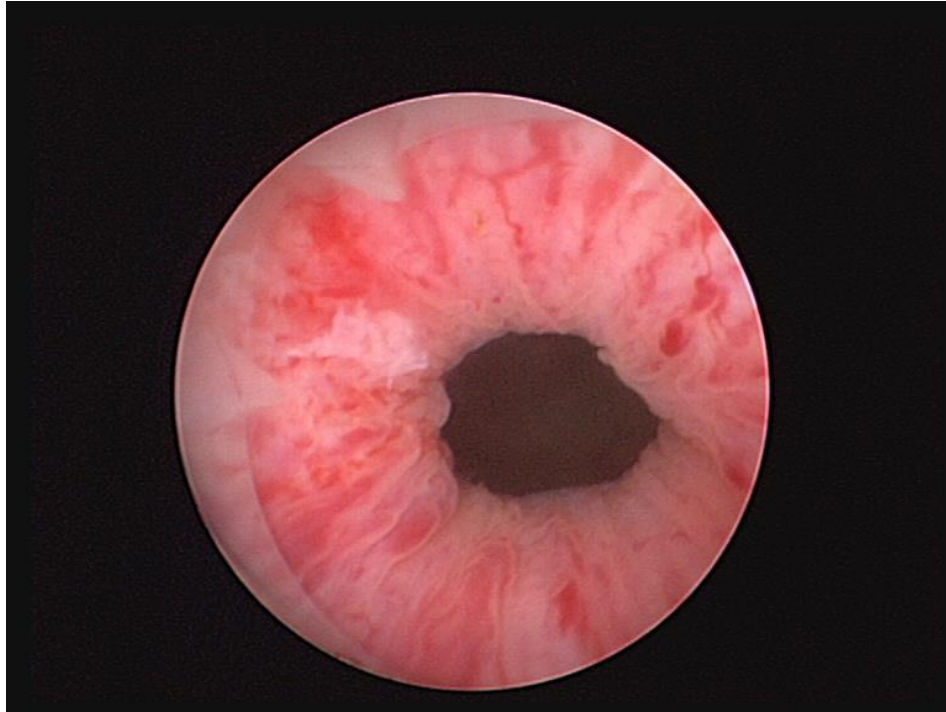
- Augment or restore mucosal coaptation without obstructing urination
- Injected into the submucosal space to elevate the urethral mucosa
  - increases coaptation and urethral resistance
- Inject at bladder neck or proximal urethra



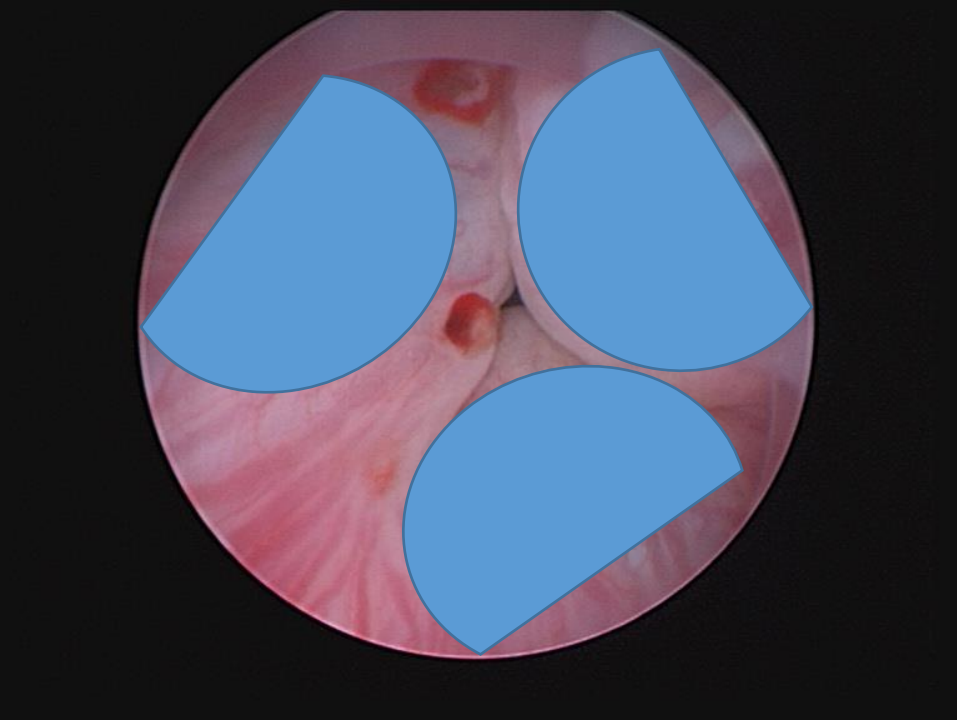
# Technique Aspects

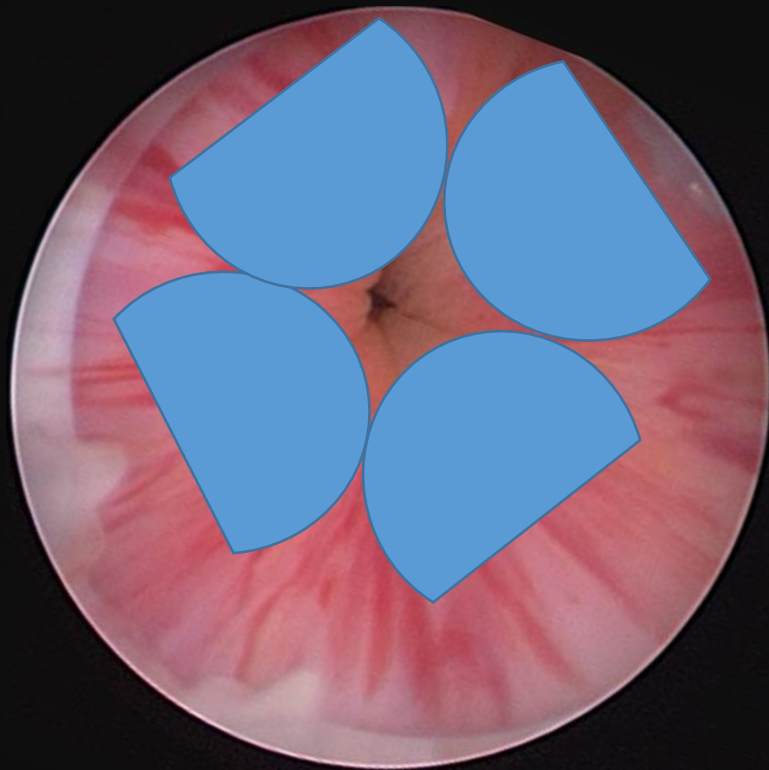
- Outpatient setting
- Anesthesia: **Local** vs IV sedation vs general
- Peri-urethral or trans-urethral injections
- Cystoscope with 0 degree lens
- 23-gauge 120mm needle
- 3 - 4 equally spaced submucosal injections at level of proximal urethra and/or bladder neck
- Minimize passage of scope across bladder neck
- Drain bladder with small in/out catheter
- Repeat injections in 1-3 mths if incontinence persists











# Ideal Bulking Agent

- Easy to inject
- Non-immunogenic, non-carcinogenic,
- Biocompatible
- Non-migratory
- Cost-effective
- Non-inflammatory
- Sufficient durable clinical improvement



# Available agents

|  | Bulking agent   | Material  | Particle size (Mm) |
|--|-----------------|---|--------------------|
| <b>Cross-linked collagen</b>   | Contigen®       | Bovine collagen   | N/a                |
|  | Permacol®       | Collagen piglet   |                    |
| <b>Particulate combination Gels</b><br>(Mini-particles suspended in a carrier gel) | Zuidex®         | Dextranomer hyaluronic acid   | 80 - 200           |
|  | Deflux®         | Dextranomer hyaluronic acid   | 80 - 250           |
|  | Macroplastic®   | Polydimethylsiloxane  | 73 – 100           |
|  | Durasphere EXP® | Carbon coated beads   | 90 – 212           |
|  | Opsys®          | Polyacrylate polyalcohol copolymer  | 300                |
|  | Coaptite®       | Calcium hydroxylapatite   | 75 - 125           |
| <b>Silicon elastomer</b>   | Uryx / Tegress® | Vinyl alcohol copolymer implants  | N/a                |
|  | Urolastic®      | Crosslinked vinyl dimethyl polydimethylsiloxane   |                    |
| <b>Homogenous hydrogel</b>   | Bulkamid®       | Hydrogel Polyacrylamide (PAHG)<br><b>97.5% water and water 2.5% cross-linked polyacrylamide</b> | N/a                |

Withdrawn from market for safety or commercial reasons

Courtesy Dr. G. Nadeau

# Efficacy

- Clinical data on bulking agents is limited and heterogenous
- Majority of literature focuses on subjective improvement rather than objective improvement measures
- Long term follow-up is lacking
- Cochrane review 2017<sup>1</sup>
  - 14 trials – small, moderate quality
  - Insufficient data to allow for meta-analysis or clinical decision making
  - Select agents shown to be more effective than pelvic floor muscle therapy, but less effective than open surgical management for SUI
- Overall, efficacy ranges 50-70% for early subjective improvement<sup>2</sup>
  - Not sustainable and lacks durability over time
- Inadequate data to recommend one injectable agent over another

<sup>1</sup> Kirchin V et al. Cochrane Database of Systematic Reviews 2017, Issue 7.

<sup>2</sup> Kocjancic et al. Neurourol Urodyn. 2019

# Hyaluronic acid and Dextranomer microspheres

- Viscous gel
- Biocompatible
- **Zuidex<sup>®</sup>** (Periurethral injection)– **removed from market**
  - High complication rate
  - Lower success rates compared to Collagen (53% vs 66.5%)<sup>1</sup>
- **Deflux<sup>®</sup>** (Transurethral injection)
  - Lightner et al. Urol 2010
    - 4/35 pts developed pseudoabscess requiring operative management
    - Failed for 23/35 pts with ISD

<sup>1</sup>Lightner et. al. Urol 2009

# Polyarcylamide hydrogel (PAHG) - Bulkamid<sup>®</sup>

- Injectable hydrogel consisting of **97.5%** water and **2.5%** cross-linked polyacrylamide
- Homogeneous (no micro-particles)
- Non-degradable and non-migratory
  - Exchanges water, salts and organic molecules with host tissue
- Pivotal study<sup>1</sup>
  - 345 women with SUI, randomized 2:1
  - PAHG non-inferior to collagen
  - At 12 mths, 53% improved, 47% cured
  - 77% required repeat injections



<sup>1</sup>Sokol et al. JUrol 2014

# Safety

- ~ 1/3 of patients experience some complication<sup>1</sup>
  - Majority low grade, transient, noninvasive tx (ie. ABX, catheter)
- Potential adverse events<sup>2</sup>
  - **Urinary tract infection**
  - **Injection site pain**
  - Urinary retention
  - Hematuria
  - Periarethral abscess
  - De novo urgency urinary incontinence
  - Bulking agent extrusion
  - Delayed hypersensitivity reaction
  - Granuloma formation

<sup>1</sup> Kocjancic et al. Neurourol Urodyn May 2019

<sup>2</sup> Mamut & Carlson CUAJ 2017

# Contraindications

- Hypersensitivity to the agent
- Active urinary tract infection



# Patient Counselling

www.psdgraphics.com



- Minimally invasive
- Low tx morbidity
- Improved coaptation

- Efficacy & durability inferior to surgical slings for SUI
- Repeat injections may be required

# Summary

- Viable option for select patients
  - Non candidates for more invasive surgical interventions
  - Multiple prior failed surgeries
- Efficacy is modest at best
- Not as effective as slings
- Repeat injections are the norm



# Case 1

## Questions for the panel

- Do you perform/offer bulking agents currently in your practice ?
  - ✓ Which agents do you use
  - ✓ How do you define success ?
- In an elderly with severe leakage and good detrusor contractility, would you consider offering a MUS ?
- Should we give preop estrogen vaginal cream routinely to postmenopausal women prior to a MUS ?  
And postoperative estrogen cream ?

## Case 2 Suzie

- 49F
- PMHx: DM, on Metformin
- PSHx:
  - ✓ TAH for fibroma in 2005
- G2P2 (VD)
- Sexually active
- C/O pure SUI, using 2 pads/d
- No urgency





## Case 2

- P/E:
  - ✓ Mild cystocele, mobile urethra, Q-tip 50°
  - ✓ CST supine (+) muscle strength 2/5
  - ✓ Normal UA, PVR 0
  
- Did physio: no change
  
- **At this point, what treatment would you offer her ? (panel)**
  
- **Is there still a place for TOT in 2019 ?**

## Case 2

- Had TVT in 2012 : satisfied, dry

## 2. How long do you follow patients postop of a MUS ?

Only 1 post-op visit (6-12 wks),  
then prn only

Initial post-op visit + routine F-U at  
1 year, then prn only

Initial post-op visit + routine  
annual F-U for a few years or more

## 2. How long do you follow patients postop of a MUS ?

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## Case 2

- Had TVT in 2012 : satisfied, dry
- **How long do you follow patients postop of a MUS ? (panel)**
  - ✓ Only 1 post-op visit (6-12 wks), then prn only
  - ✓ Initial post-op visit + routine F-U at 1 year, then prn only
  - ✓ Initial post-op visit + routine annual F-U for a few years or more
- **Do you ever let them go and come back prn ? How soon do you see them postop (standard) (panel)**



## Case 2

- Had TVT in 2012 : satisfied, dry
- 2017: Recurrent SUI now requiring 3 heavy pads/day
- F/V chart: max VV 420 mL, no nocturia, N frequency
- Cysto: no erosion, CST +, minimal hypermobility
- PVR 30 cc
- UDS: stress is still the main component, VLPP 70 cm H<sub>2</sub>O

## Case 2

### Questions for the panel

- A bulking agent was tried without any improvement
- How would you proceed with management of this patient?
  - ✓ TVT after TVT ?
  - ✓ TOT after TVT ?
  - ✓ PVS ?

## Case 2

- Underwent a TOT in 2017
- Leakage decreased from 3 to 2 ppd: still bothered ++
- What is the max number of MUS you would do on a patient ?
- After 2 MUS, what else should we offer her (after thorough workup)?
  - ✓ PVS ?
  - ✓ Role/place of laparoscopic Burch ?
  - ✓ Female AUS ?



# When do I go for female AUS?

Dr Gary Gray

# Female AUS



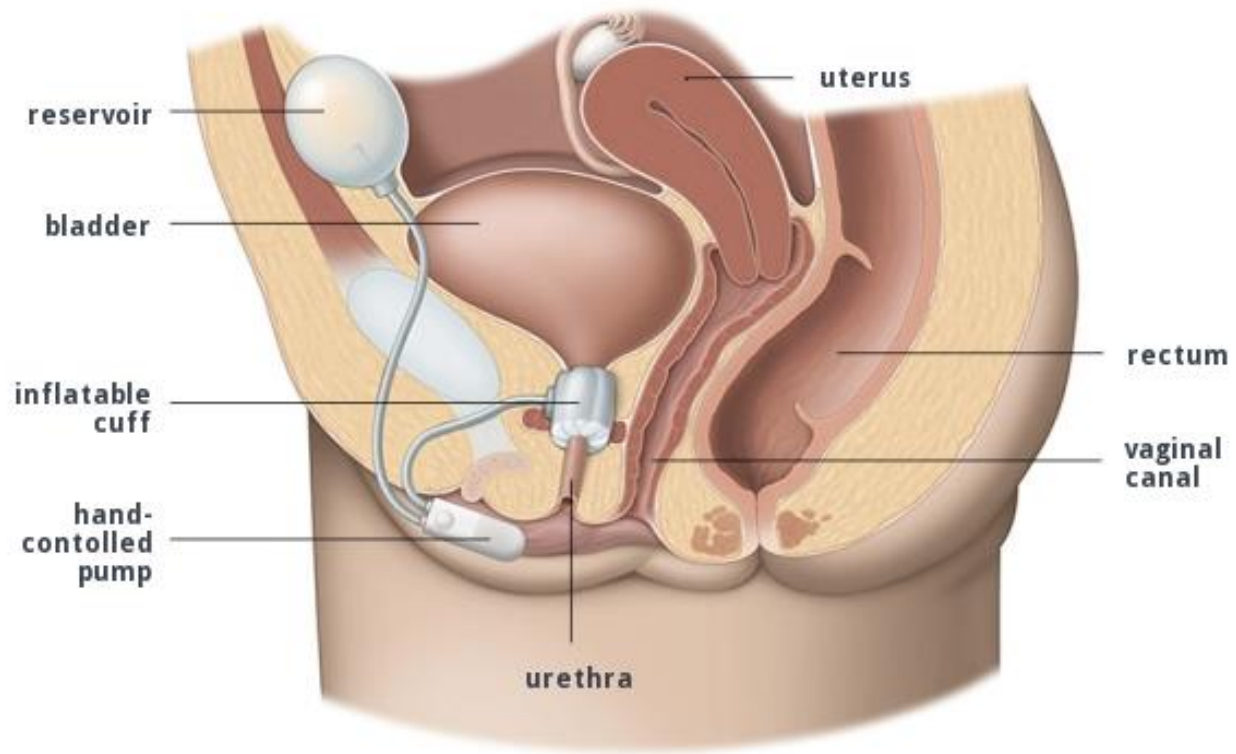
**N**orthern  
**A**lberta  
**U**rology  
**C**entre



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# Surgery for female SUI: The ICI algorithm

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**Introduction:** Stress urinary incontinence (SUI) is common in women and can significantly impact quality of life.

**Methods:** This is a review of the 6th International Consultation on Incontinence (ICI) chapter analyzing level of evidence on surgical treatment of SUI as well as the consensus algorithm that resulted from the detailed work in the committee report as of April 2017. Included studies in this review were selected to highlight the algorithm for management.

**Results:** Non-operative and surgical treatment options exist; conservative therapies comprise first line management, but if SUI remains bothersome, surgical treatment should be considered. Bulking agents offer a minimally invasive option with moderate short-term success rates. The most commonly performed surgical treatments for SUI are mid-urethral and pubovaginal slings, with high cure rates and patient satisfaction. Retropubic suspension is a more traditional but widely accepted procedure. Single incision sling, adjustable sling, or artificial urinary sphincter may be appropriate in carefully selected patients.

**Conclusions:** The choice of surgical procedure should be made only after a thorough discussion and shared decision between the patient and surgeon regarding risks, benefits, and alternatives. A trial of conservative therapy should be conducted where relevant. Referral to a specialist should be considered in women with a more complex presentation.

**TABLE 1** Summary of ICI recommendations for surgical treatment of female stress urinary incontinence

| Procedure                                    | ICI recommendation   |
|--|--|
| Bulking agents                               | Not appropriate for women desiring a single, durable treatment for SUI (Grade B)   |
|  | Option in select women after counseling about limited long-term durability (Grade B)   |
|  | May be offered for recurrent or persistent SUI following anti-incontinence surgery with understanding that it is likely an inferior option to repeat anti-incontinence surgery (Grade C) |
| Autologous fascial sling                     | Surgical option for primary and recurrent female SUI (Grade A)   |
| Mid-urethral sling                           | RP MUS is an effective and durable option (Grade A)  |
|  | TO MUS is an effective treatment after appropriate counseling about adverse events and limited long-term data (Grade B)  |
|  | TO MUS surgical technique (ie, outside-in or inside-out) should be based on surgeon experience and judgement (Grade A/B)   |
|  | SIMS is option after counseling about lack of long-term follow-up (Grade B)  |
| Burch colposuspension                        | Surgical option for primary and recurrent female SUI (Grade A)   |
|  | Consider in women undergoing concomitant abdominal surgery (Grade D)   |
|  | Minimally invasive technique has limited long-term data and should only be performed by trained surgeons (Grade C)   |
| MMK suspension                               | Not recommended (Grade A)  |
| Artificial urinary sphincter                 | Should be limited to highly select women with recurrent SUI and only after extensive counseling about likelihood for revision (Grade C)  |
| Transurethral radiofrequency ablation        | Not recommended (Grade D)  |
| Transvaginal and transurethral laser therapy | Not recommended (Grade D)  |
| Vesair™ device                               | Not recommended (Grade C)  |
| Stem cell therapy                            | Use remains investigational and should only be offered in setting of a clinical trial (Grade D)  |



# University of Alberta Experience

- Fellowship trained surgeon
- 24 AUS in women over 19 years in
  - 18 open
  - 6 robotic in last 12 months

# University of Alberta Experience

- Indications
  - ISD
  - Refractory to all other options:
    - Sling
    - MUS
    - Bulking agent
  - Unwilling/unsuccessful pessary management

# University of Alberta Experience

- Outcomes:
- Dry 21
- Improved 2
- Failed 1
- 3 explants:
  - 1 device failure
  - 2 erosions

# Open vs Robotic

- Open approach:
  - Lower midline incision
  - Take down all prior suspensions
  - Incise endopelvic fascia
  - Blind dissection behind bladder neck
  - Cystoscopic confirmation of urethral integrity
  - Cuff passage with indwelling 16F foley
  - Labial/abdominal wall control pump placement

# Open vs Robotic

- Robotic approach
  - 4 arms + camera
  - Drop bladder
  - Take down prior suspensions
  - Bladder neck dissection direct vision, ProGrasp forceps
  - Cysto confirmation of urethral integrity
  - Cuff plugged, dropped into abdomen
  - Superficial connections

**CUAJ – Techniques in Urology**

**Zhao et al**

**Techniques – RAL implantation of artificial urinary sphincter**

**Techniques – Robotic-assisted laparoscopic implantation of artificial urinary sphincter with concomitant hysterectomy and sacrocolpopexy**

Yunwei Zhao; Gary Gray; Blair St. Martin  
University of Alberta, Edmonton, AB, Canada

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<http://dx.doi.org/10.5489/cuaj.5580>

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journal homepage: [www.europeanurology.com](http://www.europeanurology.com)

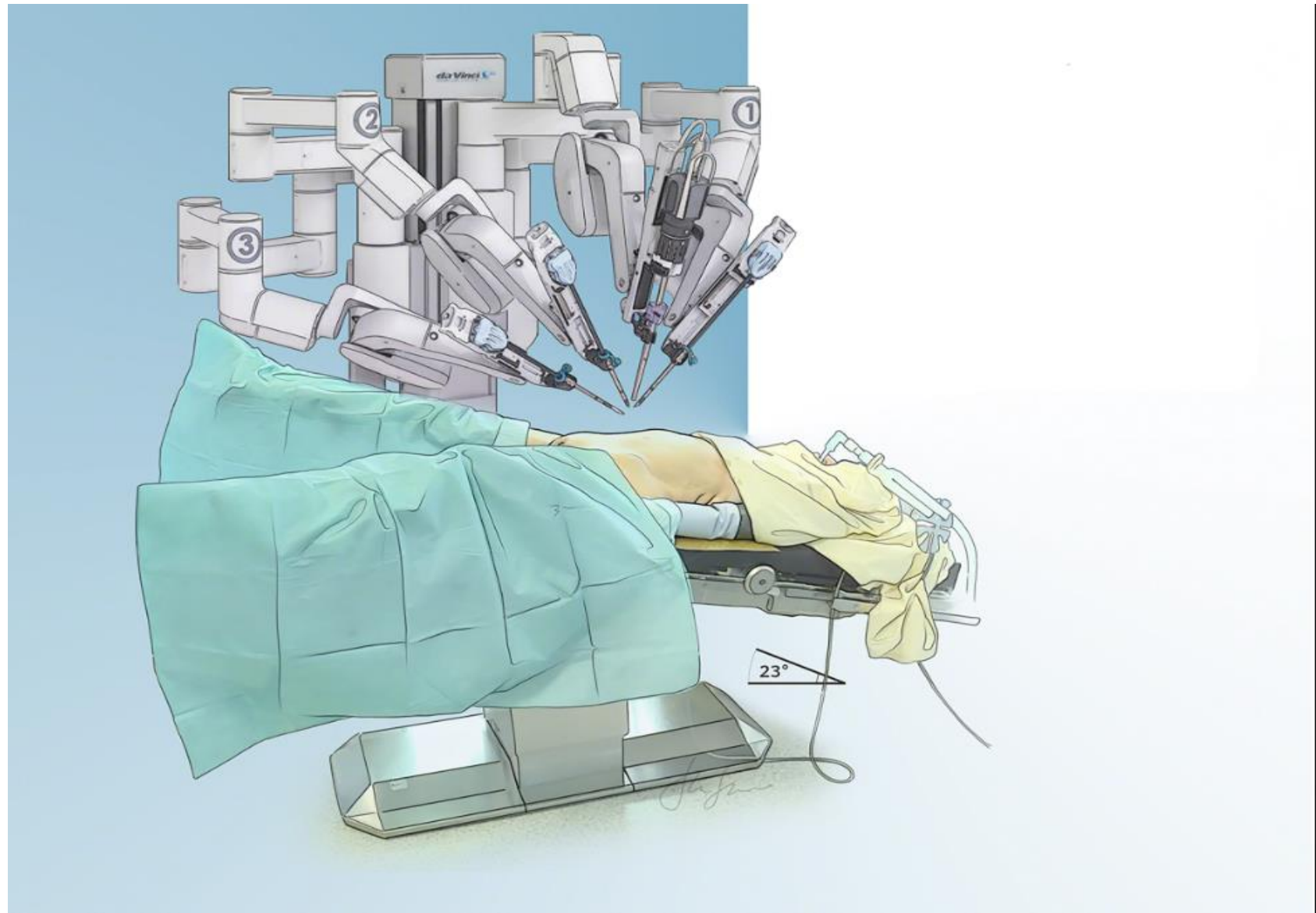


## Surgery in Motion

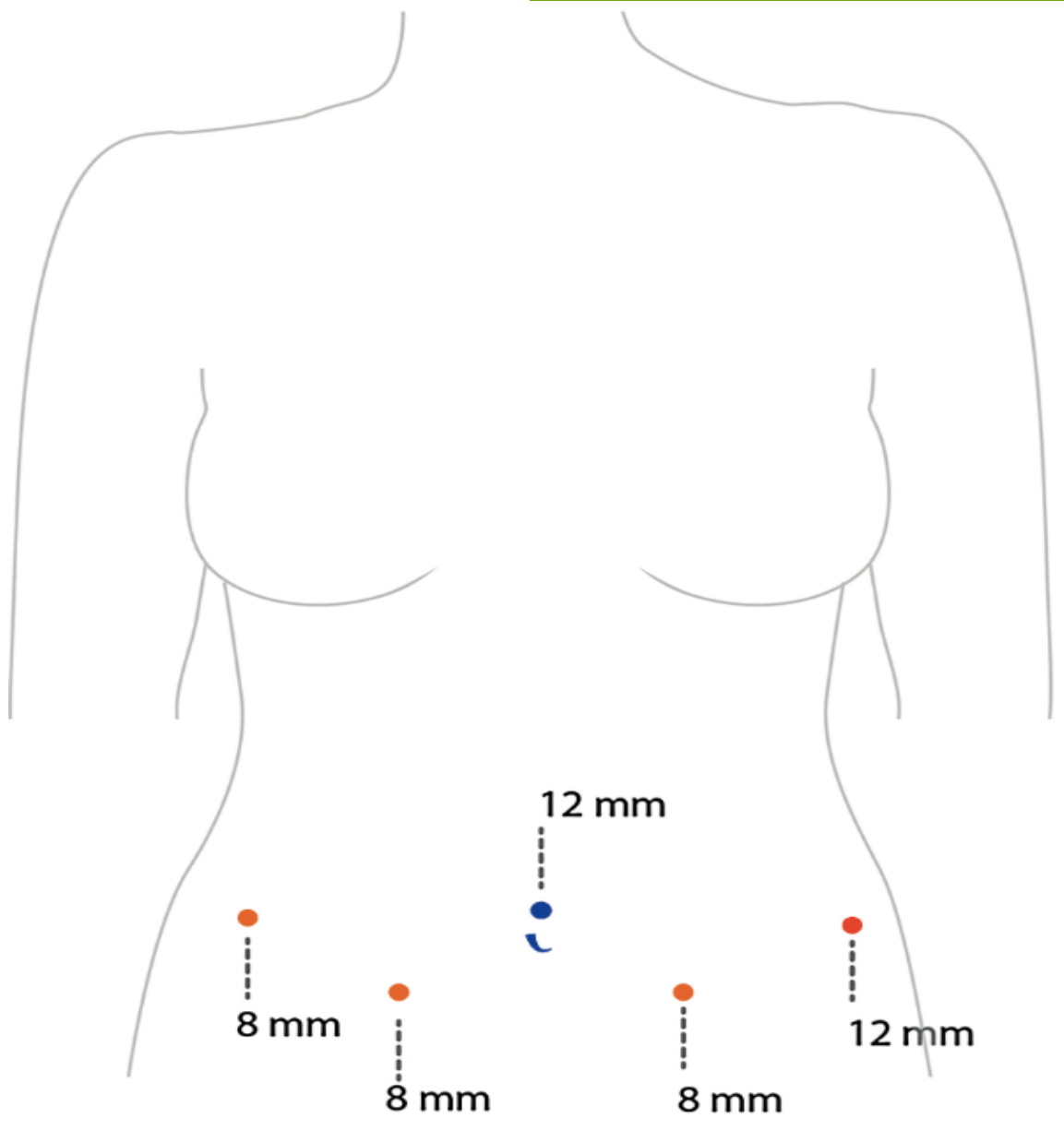
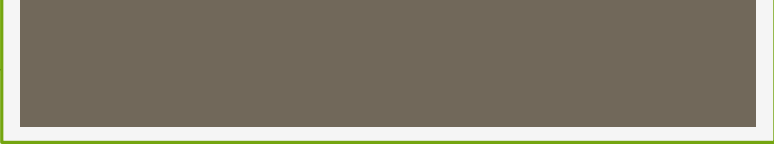
# Robot-assisted AMS-800 Artificial Urinary Sphincter Bladder Neck Implantation in Female Patients with Stress Urinary Incontinence

*Benoit Peyronnet<sup>a,\*</sup>, Grégoire Capon<sup>b</sup>, Olivier Belas<sup>c</sup>, Andrea Manunta<sup>a</sup>, Clément Allenet<sup>b</sup>, Juliette Hascoet<sup>a</sup>, Jehanne Calves<sup>d</sup>, Michel Belas<sup>c</sup>, Pierre Callerot<sup>d</sup>, Grégoire Robert<sup>b</sup>, Aurélien Descazeaud<sup>e</sup>, Georges Fournier<sup>d</sup>*

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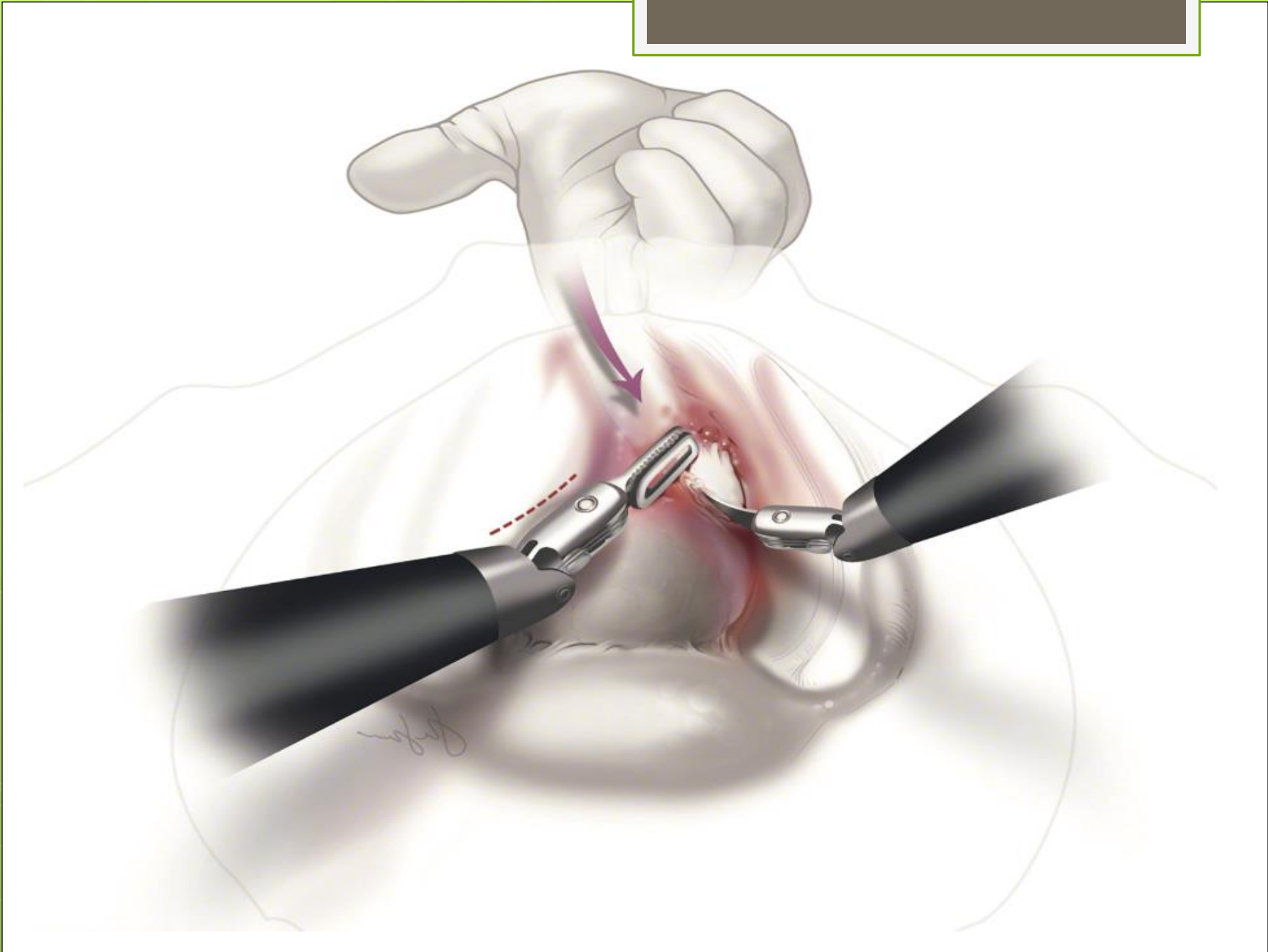
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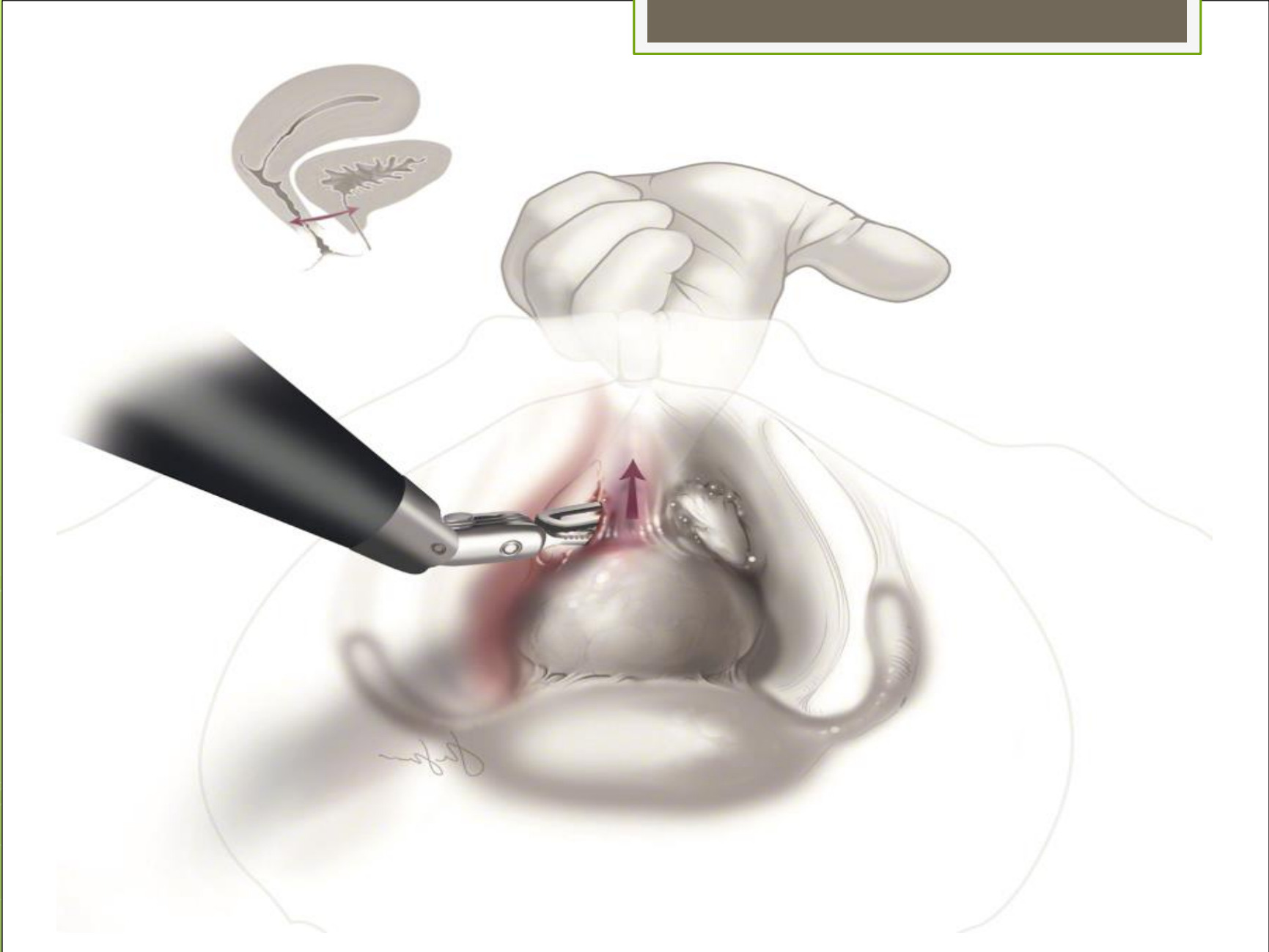
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## AMS-800 Artificial urinary sphincter in female patients with stress urinary incontinence: A systematic review.

[Peyronnet B](#)<sup>1</sup>, [O'Connor E](#)<sup>2</sup>, [Khavari R](#)<sup>3</sup>, [Capon G](#)<sup>4</sup>, [Manunta A](#)<sup>1</sup>, [Allue M](#)<sup>5</sup>, [Hascoet J](#)<sup>1</sup>, [Nitti VW](#)<sup>6</sup>, [Gamé X](#)<sup>7</sup>, [Gillera J](#)<sup>8</sup>, [Castro-Sader L](#)<sup>5</sup>, [Cornu JN](#)<sup>9</sup>, [Waltregny D](#)<sup>10</sup>, [Ahyai S](#)<sup>11</sup>, [Chung E](#)<sup>12</sup>, [Elliott DS](#)<sup>13</sup>, [Fournier G](#)<sup>14</sup>, [Brucker BM](#)<sup>6</sup>.

### + Author information

#### Abstract

**AIMS:** To perform a systematic review of studies reporting the outcomes of AMS-800 artificial urinary sphincter (AUS) implantation in female patients with stress urinary incontinence (SUI) resulting from intrinsic sphincter deficiency (ISD).

**METHODS:** A systematic literature search of the Medline and Embase databases was performed in June 2018 in accordance with the PRISMA statement. No time limit was used. The protocol was registered in PROSPERO (CRD42018099612). Study selection and data extraction were performed by two independent reviewers.

**RESULTS:** Of 886 records screened, 17 were included. All were retrospective or prospective non-comparative case series. One study reported on vaginal AUS implantation, 11 on open AUS implantation, two on laparoscopic AUS implantation, two on robot-assisted AUS implantation and one compared open and robot-assisted implantations. The vast majority of patients had undergone at least one anti-incontinence surgical procedure prior to AUS implantation (69.1-100%). The intraoperative bladder neck injury rates ranged from 0% to 43.8% and the intraoperative vaginal injury rates ranged from 0 to 25%. After mean follow-up periods ranging from 5 to 204 months, the complete continence rates ranged from 61.1% to 100%. The rates of explantation, erosion and mechanical failure varied from 0% to 45.3%, 0% to 22.2% and 0% to 44.1%, respectively.

**CONCLUSIONS:** AMS-800 AUS can provide excellent functional outcomes in female patients with SUI resulting from ISD but at the cost of a relatively high morbidity. High level of evidence studies are needed to help better define the role of AUS in the female SUI armamentarium.

# Bottom Line

- Excellent option for refractory ISD
- Robotic approach may make more palatable
- European experience is supportive

## Case 2b

- Different scenario:
  - ✓ TVT 2012, dry and happy
  - ✓ Paraurethral (vaginal fornix) painful exposed mesh on palpation
  - ✓ Partial vaginal excision
  - ✓ Well healed vaginal mucosa but recurrent pure SUI 4ppd

Question for the panel

- **How would you manage her pure recurrent SUI after an extruded TVT ?**

## Case 3 Julia

- 32F, Nurse
- PMHx: Otherwise healthy
- No prior surgery
- Meds: None
- 2 coffees/d, never smoked, not constipated
- G2P2 (SVD)
  - ✓ 3 & 5 y.o.
  - ✓ Not planning to have more kids





## Case 3

### ■ History:

- ✓ Started leaking ~ 2 years ago
- ✓ Mostly when coughs, exercises and lifts kids
- ✓ Urinates more frequently to ensure her bladder is empty
- ✓ Has mild non-bothering urgency
- ✓ Changes panty liners 3 times a day
- ✓ Crossfit workouts: uses 2 thick pads
- ✓ No UTI, no dyspareunia

## Case 3

### ■ P/E:

- ✓ BMI 23
- ✓ No significant prolapse
- ✓ Moderate urethral hypermobility, Q-tip 60°
- ✓ CST supine (-) standing (+), strong muscles 4/5
- ✓ Normal UA, PVR 0

### ■ F/V chart:

- ✓ 24 hour urine 1.5 L, 7 daytime voids (q 2h), 1 nighttime void
- ✓ Maximum volume 300cc, average 250 cc

### ■ Tried PFMT X 9 months, no significant improvement

## Case 3

- Dx: MUI, stress-predominant



### 3. What would be your next step ?

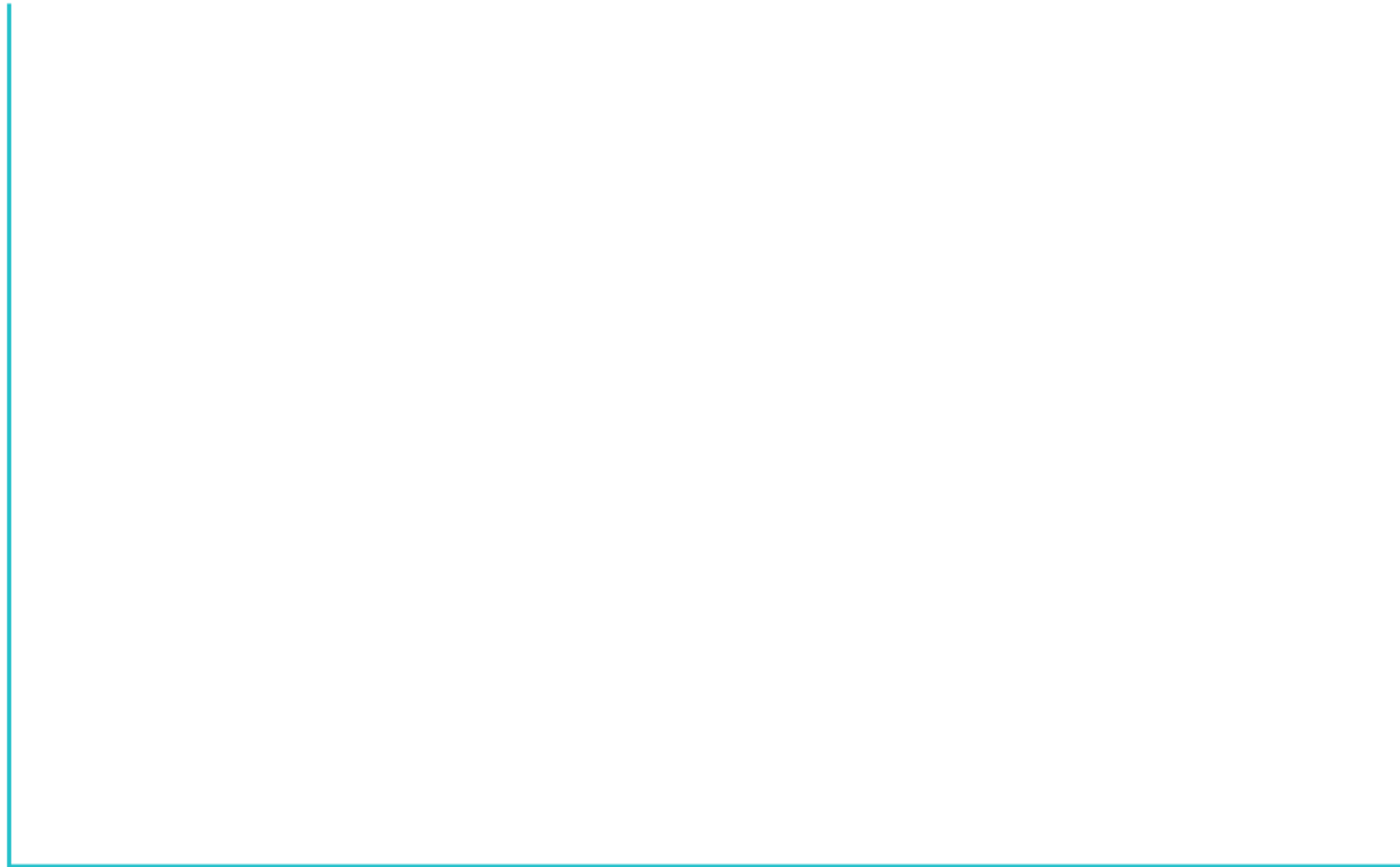
Cysto only

Cysto & UDS

No test, offer antimuscarinics

No test, offer MUS

### 3. What would be your next step ?



Cysto only

Cysto & UDS

No test, offer  
antimuscarinics

No test, offer  
MUS

### 3. What would be your next step ?

 **Poll locked.** Responses not accepted.

Cysto only

Cysto & UDS

No test, offer  
antimuscarinics

No test, offer  
MUS

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## Case 3

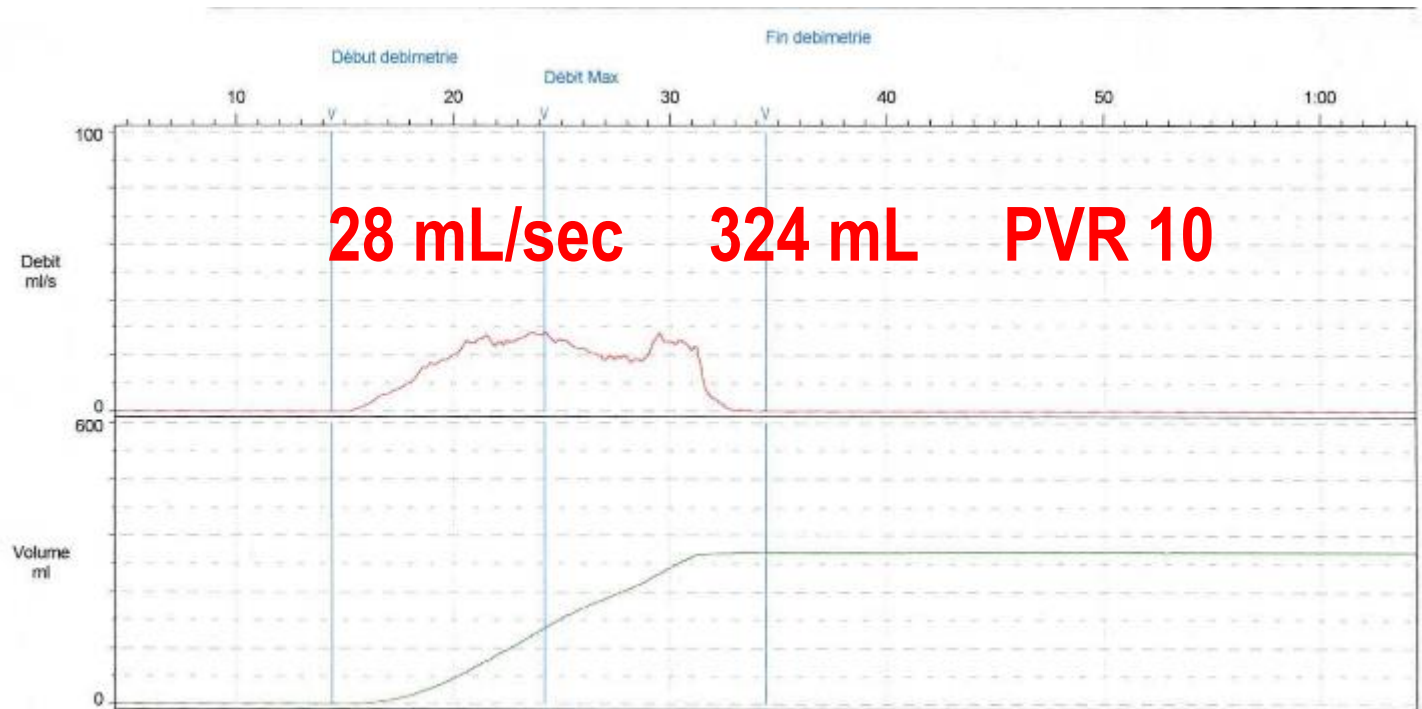
- Dx: MUI, stress-predominant

### What would be your next step ?

- Cysto only
- Cysto & UDS
- No test, offer antimuscarinics
- No test, offer MUS
- In a “straightforward” presentation of SUI:
  - ✓ Any chance you would offer/schedule surgery at 1<sup>st</sup> encounter
  - ✓ or do you systematically schedule a 2<sup>nd</sup> appointment to let the patient think prior to deciding for OR

## Case 3

- Cysto: normal, CST supine (-) standing (+) with hypermobility
- Normal Uroflow

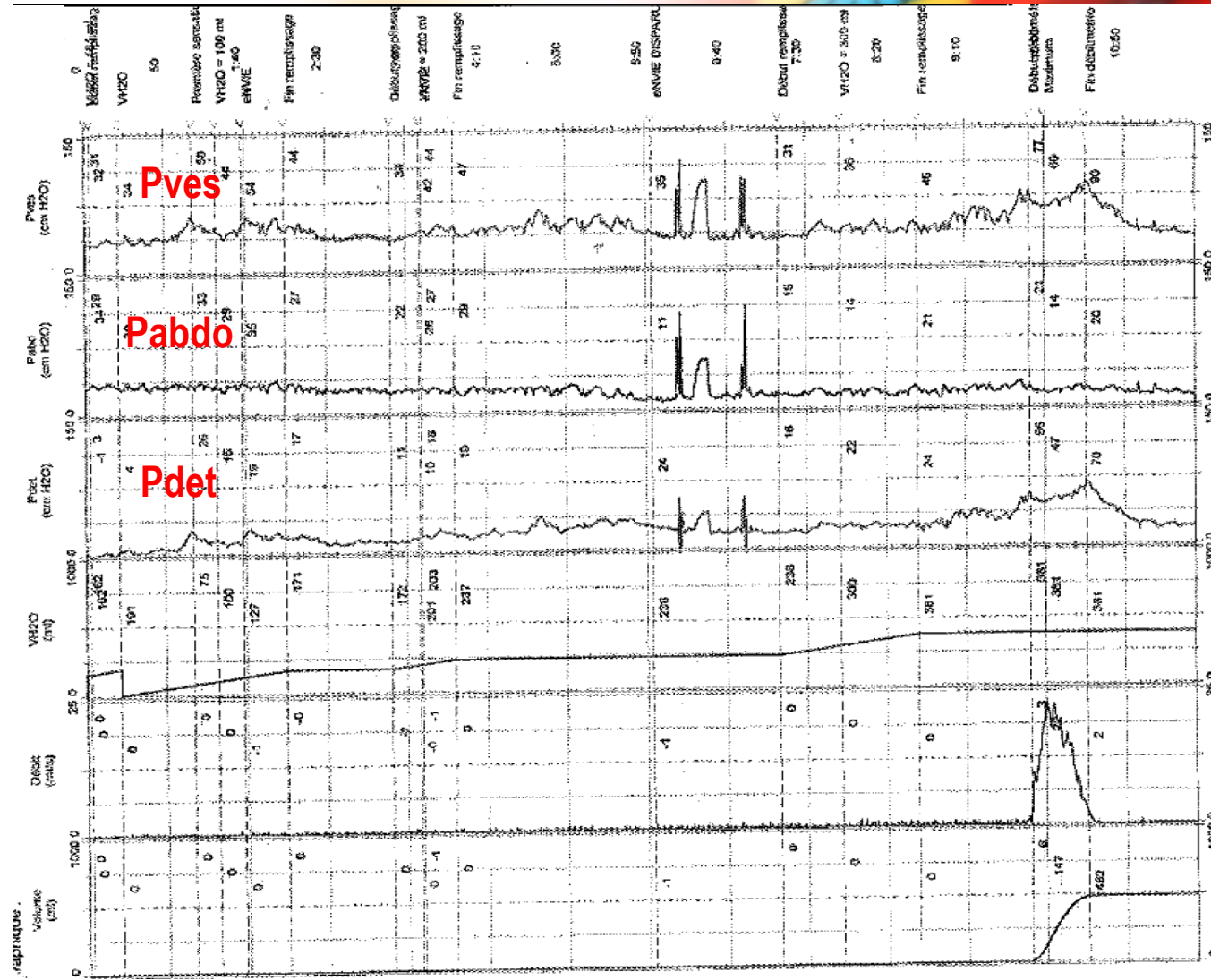




# Case 3

UDS

- No DO
- Capacity 381 mL
- VLPP 104 cm H<sub>2</sub>O



- Effect of UI on QoL : scored herself 8/10

## Case 3

- Dx: MUI, stress-predominant, moderate-severe leakage
- Normal UDS
- No change in symptoms with Solifenacin 10 mg X 3 months

## 4. At this point, what treatment would you offer her ?

MUS (transobturator)

MUS (retropubic)

Mini-sling

Pubovaginal sling

Other

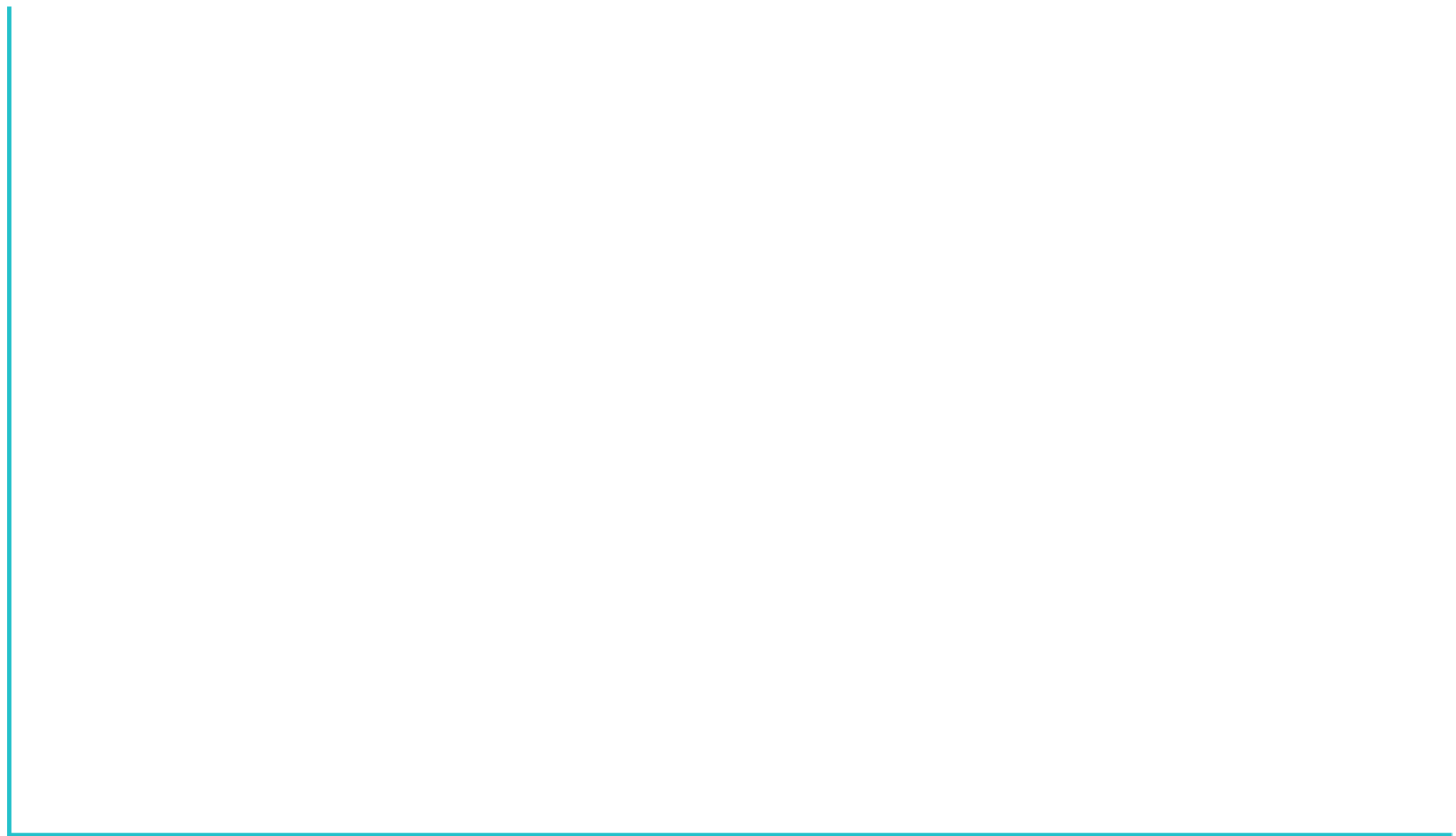
## 4. At this point, what treatment would you offer her ?

MUS (transobturator)    MUS (retropubic)    Mini-sling    Pubovaginal sling    Other

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## 4. At this point, what treatment would you offer her ?

 **Poll locked.** Responses not accepted.



MUS (transobturator)    MUS (retropubic)    Mini-sling    Pubovaginal sling    Other

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# Case 3

## Questions for the panel

- You elect to perform a TVT. What do you tell her to expect for efficacy ?
- Would you do anything different if her BMI was 34 ?
- What if she can't « afford » the post-op convalescence at this moment ?

## Case 3

### Questions for the panel

- What if she's concerned with mesh and the FDA/Health Canada warning
- If she would have had **mild dyspareunia**, would it have changed your management in any way ?
- Would you consider offering her a mini-sling ?

## Case 4 Olivia

- 59F
- PMHx: Otherwise healthy
- G1P1 (CS)
- PSx: noncontributory
  
- C/O Pure SUI, 4 ppd
- No other storage voiding complaint
- Sexually active, mild dyspareunia
- On questioning, she notes the need to strain to fully empty





## Case 4

- F/V chart: MVV 300 cc
  - ✓ 4 daytime voids, 0 nocturia
- Normal UA, PVR 0

**Can you describe what you are looking at specifically on pelvic floor exam ? (panel)**

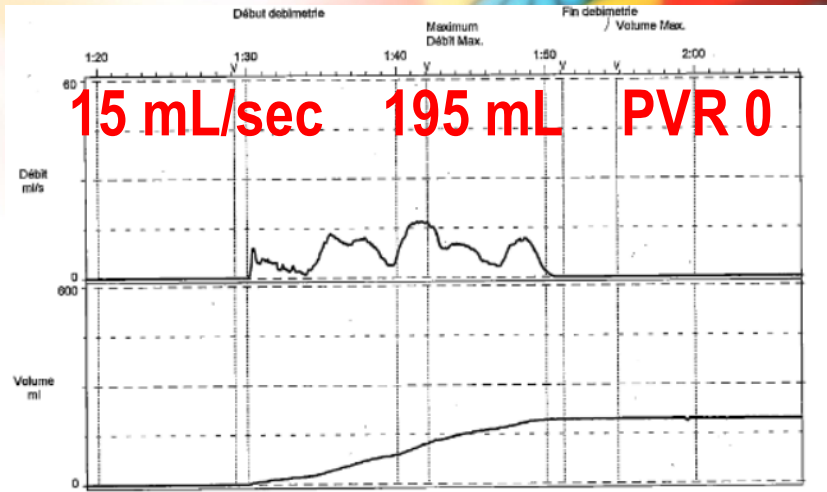
## Case 4

- Pelvic floor exam:
  - ✓ Weak muscle contraction 2/5, **adequate** relaxation
  - ✓ No prolapse, **NO** tenderness
- Cysto
  - ✓ No sign of obstruction: no stricture, no trabeculation
  - ✓ CST supine (+)
  - ✓ Moderate urethral hypermobility

# Case 4

## Flow & UDS

- No DO
- Capacity 443cc
- VLPP 98 cmH<sub>2</sub>O
- Valsalva voiding
- Complete emptying



# Case 4

## Questions for the panel

- How would you manage this patient ? Do you approach Valsalva voiders differently ?

She did PFMT: mild improvement of SUI, dyspareunia improved  
Is still bothered significantly by SUI

- Is Valsalva voiding a contraindication to do a MUS ?
- Are the rates of post-op retention higher ?

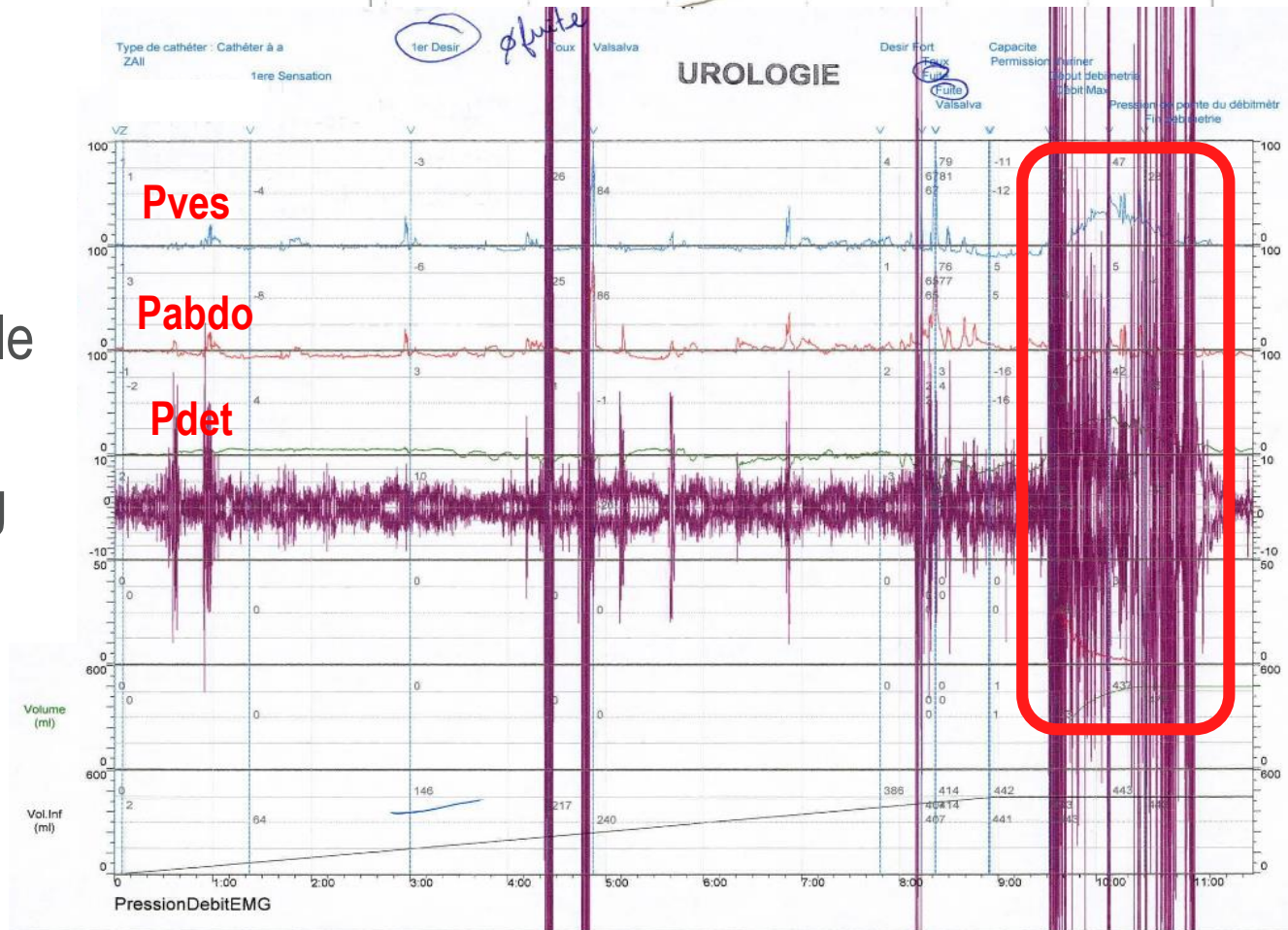
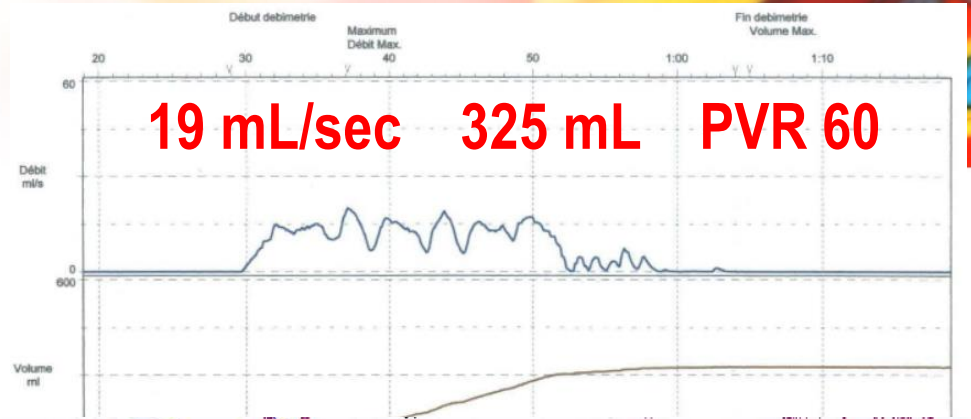
## Case 4b

- Pelvic floor exam:
  - ✓ Weak muscle contraction 2/5, **poor** voluntary relaxation
  - ✓ No prolapse, **mild tenderness** at levator ani (5 & 7 o'clock)
- Cysto
  - ✓ No sign of obstruction: no stricture, no trabeculation
  - ✓ CST supine (+)
  - ✓ Moderate urethral hypermobility, Q-tip 40°

# Case 4b

## UDS

- No DO
- Capacity 443cc
- VLPP > 100cmH<sub>2</sub>O
- ↑ EMG activity while voiding
- Complete emptying



# Case 4

## Questions for the panel

- How would you manage this patient ?
- Should we do a uroflow to all our patients prior to a MUS to screen for dysfunctional voiding ?
- Do you think MUS are obstructive ?

# Case 5 Jenny

- 44F
- Diagnosed with relapse-remitting MS in 2014
- Stable since on Copaxone
- Perfectly healthy otherwise
- G2P2 (VD)
- Ambulating, spontaneous voiding, no hesitancy, no straining
- 2 UTI in the last year
- Sexually active, no dyspareunia



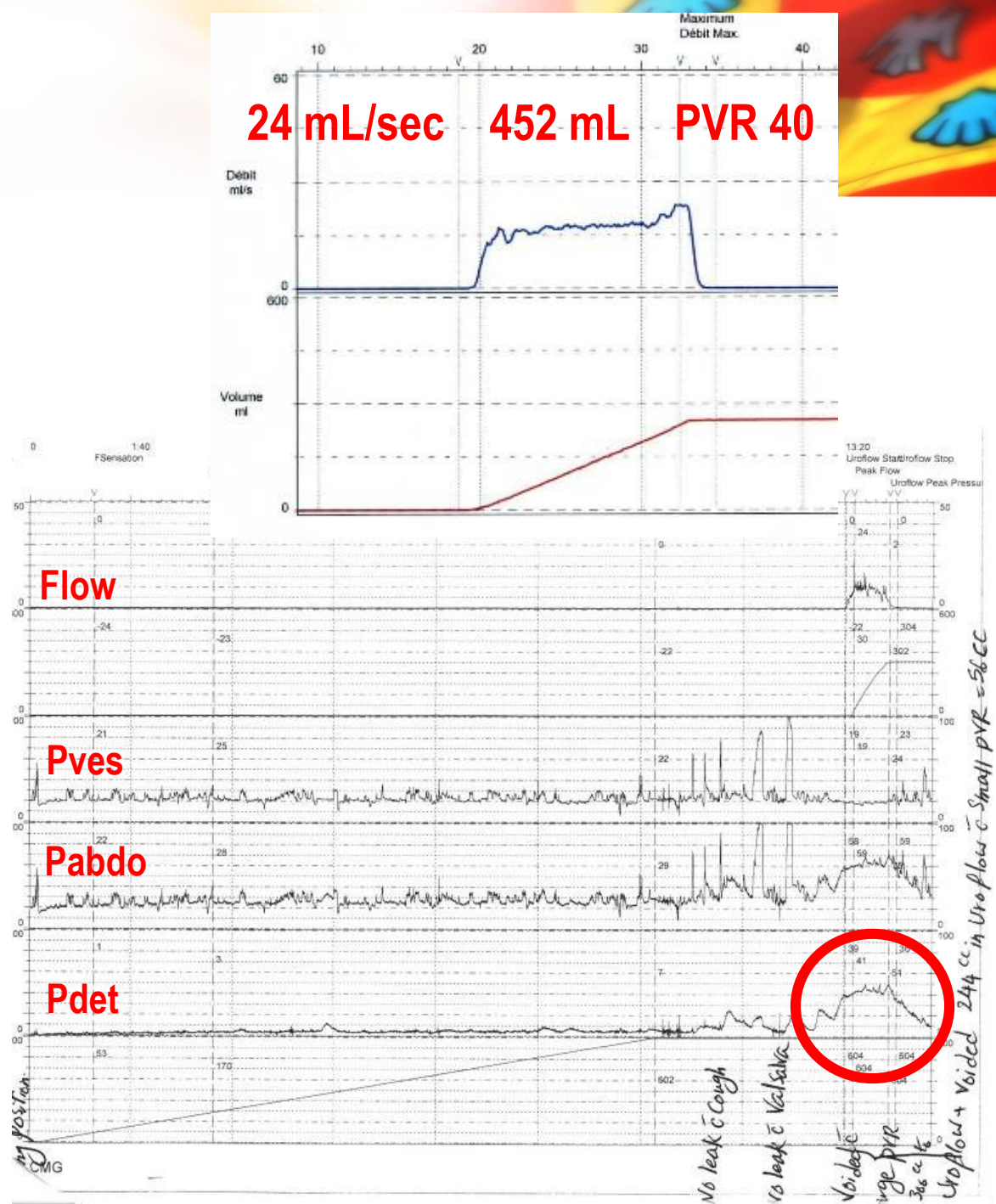




# Case 5

## Normal Flow & UDS

- ✓ 1<sup>st</sup> sensation 170cc
- ✓ Capacity 602cc
- ✓ Compliance N
- ✓ No DO
- ✓ No leak with Valsalva
- ✓ Pdet 50 cmH<sub>2</sub>O during voiding
- ✓ No straining on voiding



# Case 5

## Questions for the panel

- How would you manage this patient ?
- Who should we avoid doing a MUS ?
- Should we do simultaneously a MUS at the time of a hysterectomy or postpone ?
- Is prior abdominal hysterectomy a contra-indication to do a TVT ?