

# CONCOMITANT OAB AND POP: EVALUATION AND TREATMENT

Kathleen C. Kobashi, MD, FACS  
Head, Section of Urology and Renal Transplantation  
Virginia Mason Medical Center, Seattle, WA

# Disclosures

- ⦿ Advisory Board and/or Speaker
  - Allergan
  - Medtronic
  - Astellas
- ⦿ AUA Guidelines
  - Urodynamics, Member 2011-2014
  - Stress Incontinence, Chair, 2015-current

# Urology at Virginia Mason



# Introduction

## ⦿ Prevalence of OAB

- Estimated > 500 million worldwide by 2018<sup>1</sup>
- Increases with age

## ⦿ Prevalence of POP

- Overall: 2.9%<sup>2</sup>
- Increases with age
- 11% have surgery by age 80<sup>3</sup>

1. Irwin DE, et al., BJU International 2011;108(7):1132-8.

2. Nygaard I, Barber M: JAMA 2008;300(11)L1311-6.

3. Olsen AL, et al.: Obstet Gynecol 1997;89(4):501-6.

# OAB and POP in general population

## Risk factors for symptomatic OAB

- Symptoms of POP
- Prior surgery for POP or incontinence
- Age >75 years
- Overweight
- Postmenopausal status
- Smoking

# Relationship between OAB and POP

- Do OAB and POP coexist?
- Can OAB exist without POP?
- Can POP *cause* OAB?
- Does repairing prolapse *fix* OAB?

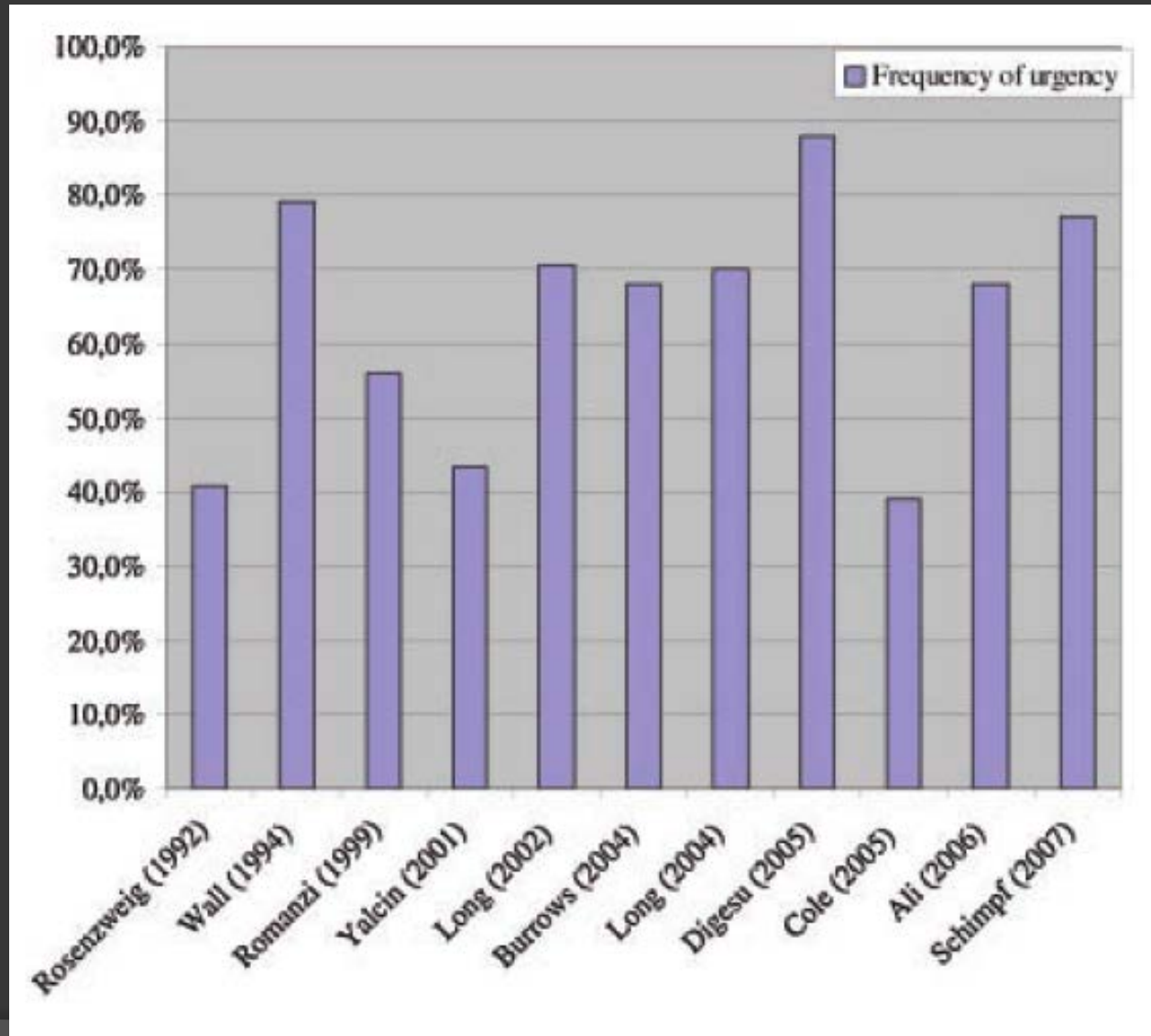
Yes

Yes

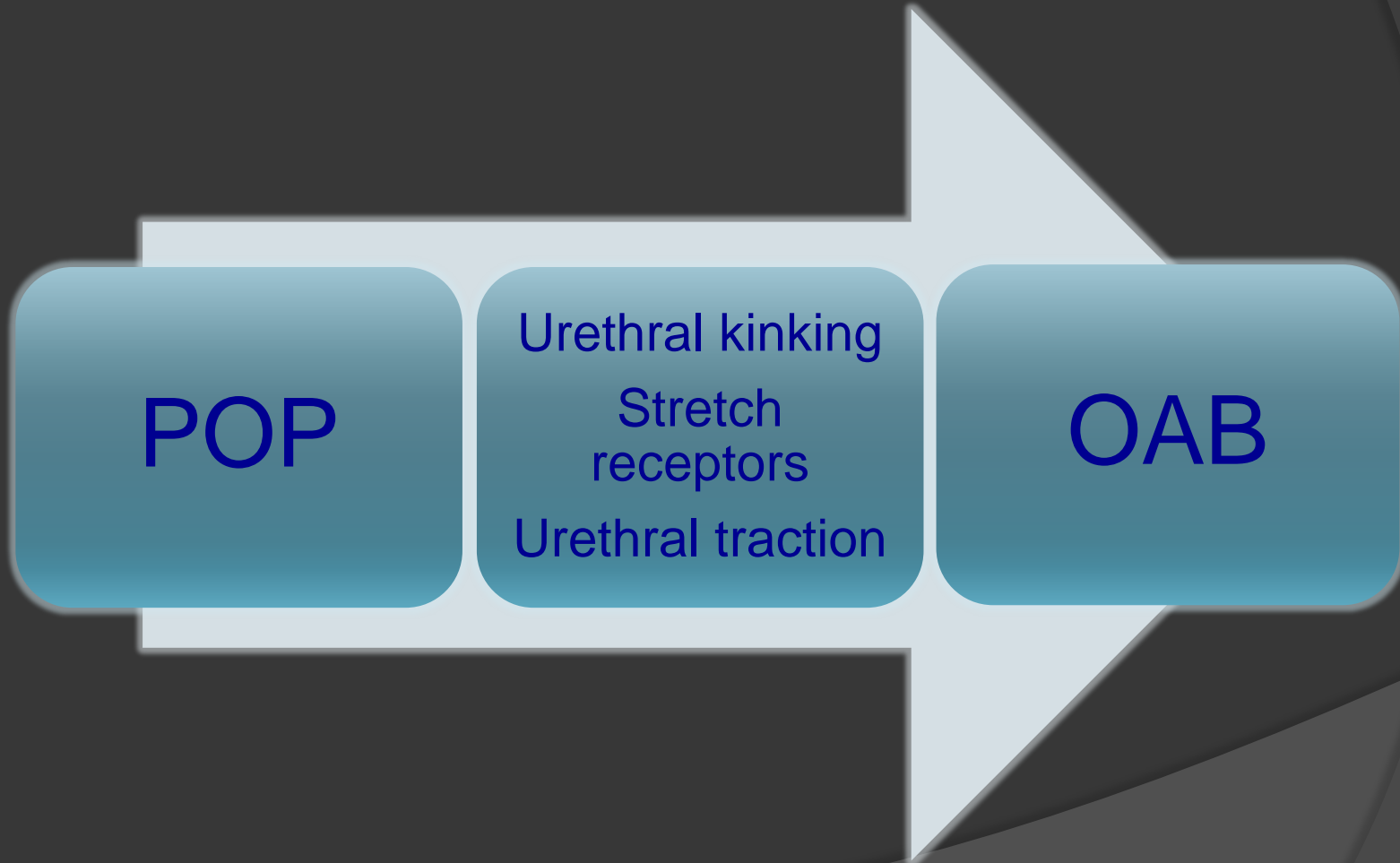
Maybe

Possibly

# Prevalence of OAB with POP



# Can POP *cause* OAB?





# OAB and prolapse

- ⦿ Prevalence of OAB higher with POP<sup>1</sup>
- ⦿ POP is a risk factor for OAB<sup>1</sup>
- ⦿ OAB resolves following prolapse repair<sup>2</sup>
  - (but not in everybody)

An F, et al.: Neurourol Urodyn 2014, Epub ahead of print.  
DeBoar TA, et al.: Neurourol Urodyn 2010;29(1):30-9.

# Anatomy or function?

- ⦿ OAB can be a primary condition
- ⦿ OAB can be a secondary condition
- ⦿ Or both...

# The questions at hand...

- ⦿ Can we determine if it a problem of anatomy or function?
  - Would that guide our decision?
- ⦿ Does degree of bother play a role?
- ⦿ Do we HAVE to treat stage II prolapse?
- ⦿ Can we just treat the OAB?
  - Risk of retention in the face of POP

# Case scenario

- ① 58 year-old woman
- ① Urgency incontinence requiring 2 pads/day
- ① No SUI
- ① Mild obstructive symptoms
  - Occasional hesitancy and intermittency
  - Moderate force of stream
  - Feels she empties

# Pelvic examination

- Stage II anterior compartment prolapse
  - Aa +1, Ba +1
- Minimal posterior
  - Ap -3, Bp -2
- Minimal apical prolapse
  - TVL 11 cm, C -9, D-10
- Urethra mobile, no SUI
- Mild atrophic vaginitis



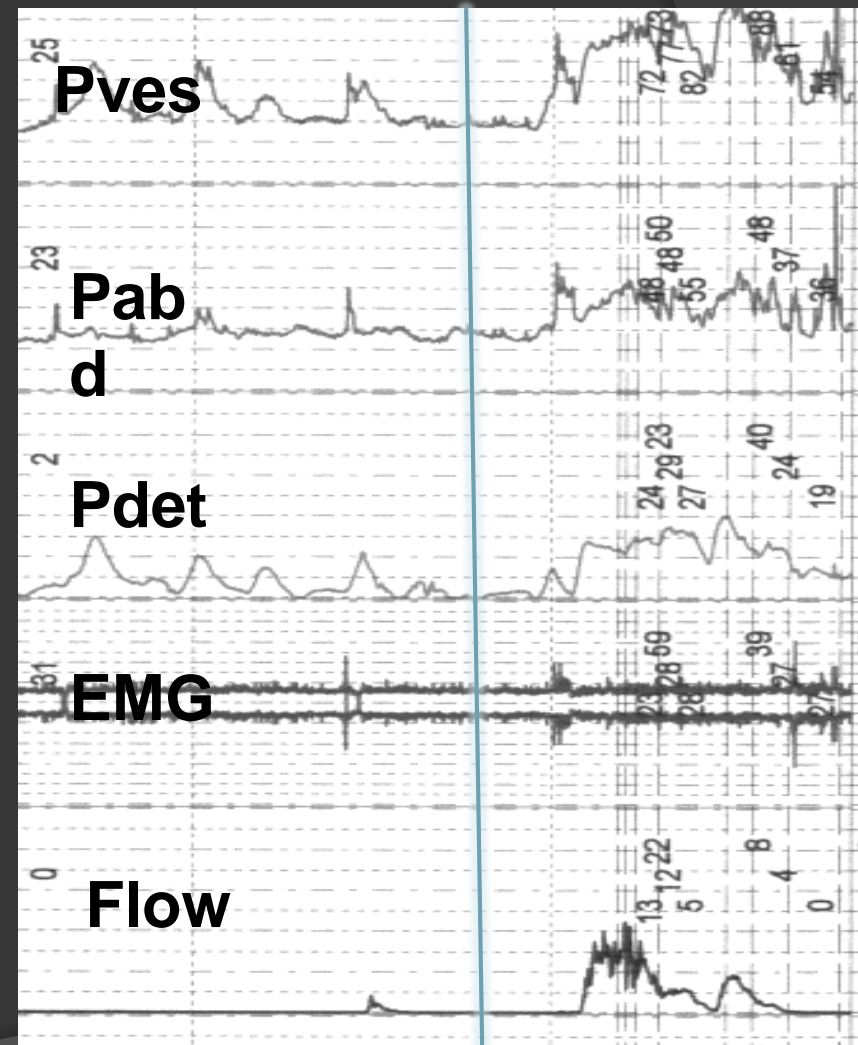


# Urodynamics

- ◎ Filling cystometry
  - Bladder capacity: 400cc
  - Low amplitude detrusor overactivity
  - Sensation normal
- ◎ No occult SUI

# Pressure flow analysis

- Multiphasic flow curve
- Maximum flow: 13 cc/sec
- Pdet Qmax: 24 cm H2O
- Minimal straining
- PVR: 110 cc



**WHICH DO WE TREAT  
FIRST?**



# AUA/SUFU OAB Guidelines

- ◎ 1<sup>st</sup> line
  - Behavioral/dietary modification
  - Physical therapy
- ◎ 2<sup>nd</sup> line
  - Antimuscarinics
  - $\beta$ -3 agonists
- ◎ 3<sup>rd</sup> line
  - Neuromodulation
  - Onabotulinumtoxin A

# 1<sup>st</sup> line therapy

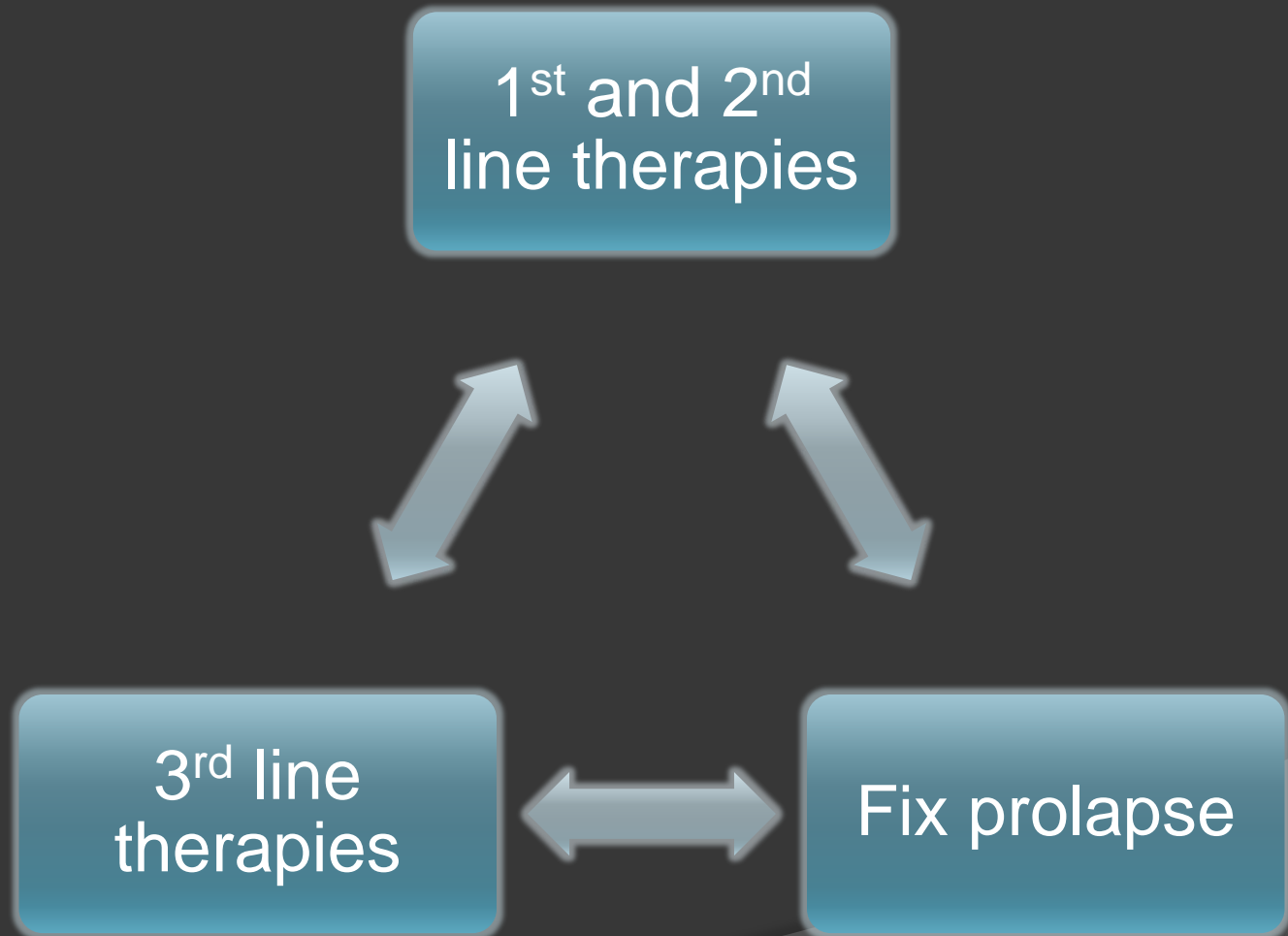
- ⊙ Behavioral therapy
  - Bladder training
  - Timed voiding
  - “Quick flicks”
- ⊙ Dietary modification
- ⊙ Physical therapy
- ⊙ May be combined with pharmacotherapy

# 2<sup>nd</sup> line therapy

- ⦿ Antimuscarinics
- ⦿  $\beta$ -3 agonists
  
- ⦿ Limitations of drug use
  - Side effects
  - Duration of treatment
  - Cost

**What if meds  
don't work?**

# This is the crossroads...



# Considerations

- Degree of urgency
- Degree of prolapse
- Degree of bother from each
- Preoperative emptying
- Risks of interventions

# 3<sup>rd</sup> line therapy

- ⦿ Neuromodulation
  - Sacral
  - Peripheral Tibial Nerve Stimulation (PTNS)
- ⦿ OnabotulinumtoxinA injection

# Prolapse reduction → ↓ OAB

- ⊙ Multi-study summary
- ⊙ Pessary reduced OAB symptoms
  - Up to 4 month follow up by questionnaire



# Effect of POP on OAB resolution?

- n=235 women with POP and OAB
- Treated with tolterodine
- Conclusion: POP → causative effect on OAB

POP stage	Pre-treatment	Post-treatment	RR
Stage I	184/184 (100%)	26/84 (14.15%)	7.09
≥ Stage II	51/51 (100%)	20/51 (39%)	2.55

# Effect of POP repair on OAB

- ⊙ n=175 with concomitant OAB and POP
  - 133 anterior repair; 24 posterior
- ⊙ OAB decreased significantly in both groups
  - Anterior > posterior

# Effect of POP repair on OAB

- Comprehensive review of literature
- Conclusion: In practically all studies, there was an improvement in OAB symptoms following POP surgery
- Implication: Link exists between OAB and POP

# ↓ in OAB sxs after POP repair

Symptoms	Stage I and II	Stage III and IV
Urgency	90%	85%
Frequency	89%	85%

# Postulation

- ⦿ Women with high grade POP may be at higher risk for persistent OAB
- ⦿ Irreversible changes to detrusor muscle?
- ⦿ Flaws
  - No PVR
  - No information regarding obstruction
  - No suggestion of how to treat persistent OAB

# “BeDri” study

- Predictors of outcomes in OAB treatment
- Stop treatment
- Who would still be dry?
- Patients with greater anterior prolapse did better off med
- Conclusion: POP → urethral kinking → prevents urine from getting into urethra → decreases OAB

# Literature variable

- ⦿ Improvement of OAB seen in some
  - (but not all)
- ⦿ Higher stage POP
  - Less likely to have resolution of OAB
- ⦿ POP may either
  - Cause OAB due to outlet obstruction
  - OR**
  - Prevent OAB by not allowing urine to enter proximal urethra

# The problem in the literature

- ⦿ Lack of uniformity in:
  - Definitions
  - Patient populations
  - Outcomes measures



# What can we conclude?

- ⊙ Minimum f/u 12 months
  - 6/7 papers: significant OAB improvement
  - 1/7 no improvement
- ⊙ Still, OAB improved after POP surgery
  - There must be a causal relationship

# Bother matters...

- OAB did not improve in all
- Unclear what predicted improvement
- Message: antimuscarinics may be considered in pts with OAB and POP *if she is bothered by OAB*
- (Converse may be true as well)

# Theory on OAB and POP

- ⊙ “Unkinking” of urethra may:
  - relieve obstruction
  - improve emptying
  - decrease OAB
- ⊙ POP repair
  - Improved flow
  - Decreased Pdet at Qmax

# 3<sup>rd</sup> line therapies

- ⊙ Peripheral Tibial Nerve Stimulation (PTNS)
  - Life-long therapy
  - Literature limited in refractory OAB
- ⊙ OnabotulinumtoxinA injection
  - Already at risk for retention
- ⊙ Sacral neuromodulation
  - For refractory OAB and incomplete emptying
  - But, for non-obstructive emptying dysfunction
  - Life-long maintenance of device

# Cumulative 3-year costs

Treatment	Cost (US \$)
PTNS	7,565
OnabotulinumtoxinA	11,748
Interstim®	24,681
Vaginal POP repair	6,353

# Implications of intervention

- ⦿ OAB treatment
  - Adverse effects and cost of medications
  - Retention
  - Potential for resolution with surgery
- ⦿ Prolapse repair
  - Risks of surgery
  - Persistence or exacerbation of OAB

# Conclusion

On OAB in the face of prolapse...

- ⦿ OAB first
  - If OAB bothers her, but prolapse does not
- ⦿ Prolapse first
  - If both bother her
  - If she is obstructed
- ⦿ If unsure, consider pessary trial

# A practical approach

OAB and  
POP

- Treat OAB
- AUA/SUFU Guidelines

If OAB  
persists

- Repair prolapse

If OAB  
persists

- Repeat OAB Guidelines





***THANK YOU!***