



SAAOG

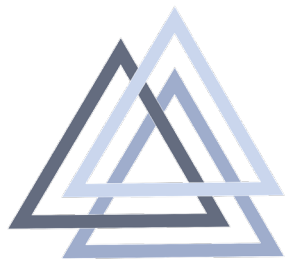
Annual Meeting • 2024

January 20-23 • The Cloister at Sea Island

# Urinary Incontinence

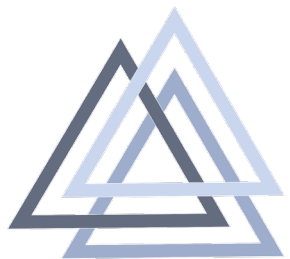
## Urethral Bulking to Treat Female Stress Urinary Incontinence

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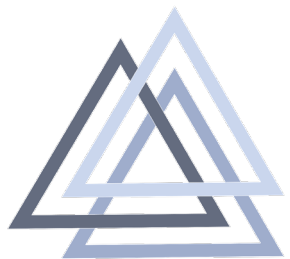
# Disclosures

NONE



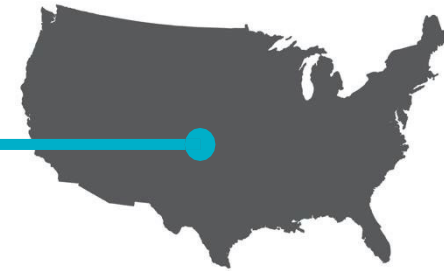
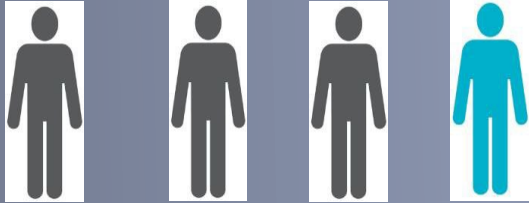
# Learning Objective

- Review of bulking agents to treat urethral sphincter insufficiency
- Discuss data on polyacrylamide gel to treat urinary incontinence
- Consider patient centered subjective outcomes vs clinical objective outcomes in treating urinary incontinence?

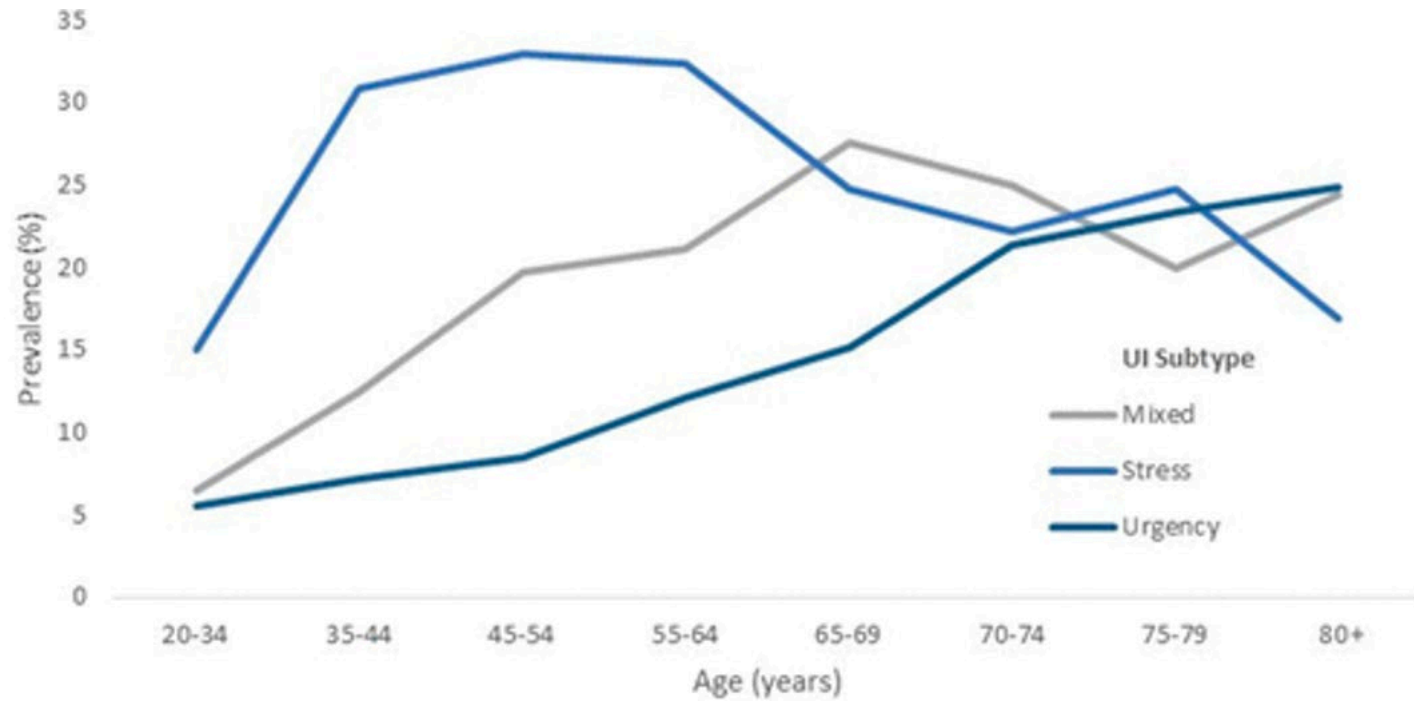


# Urinary Incontinence

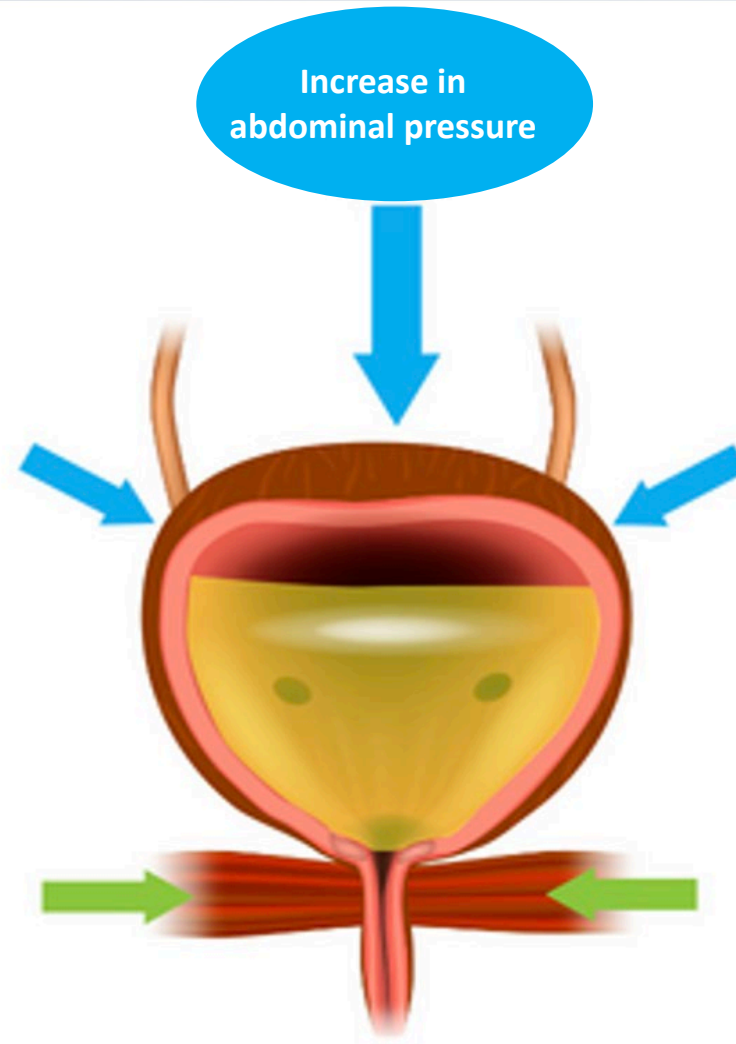
1 in 4 women over the age of 18



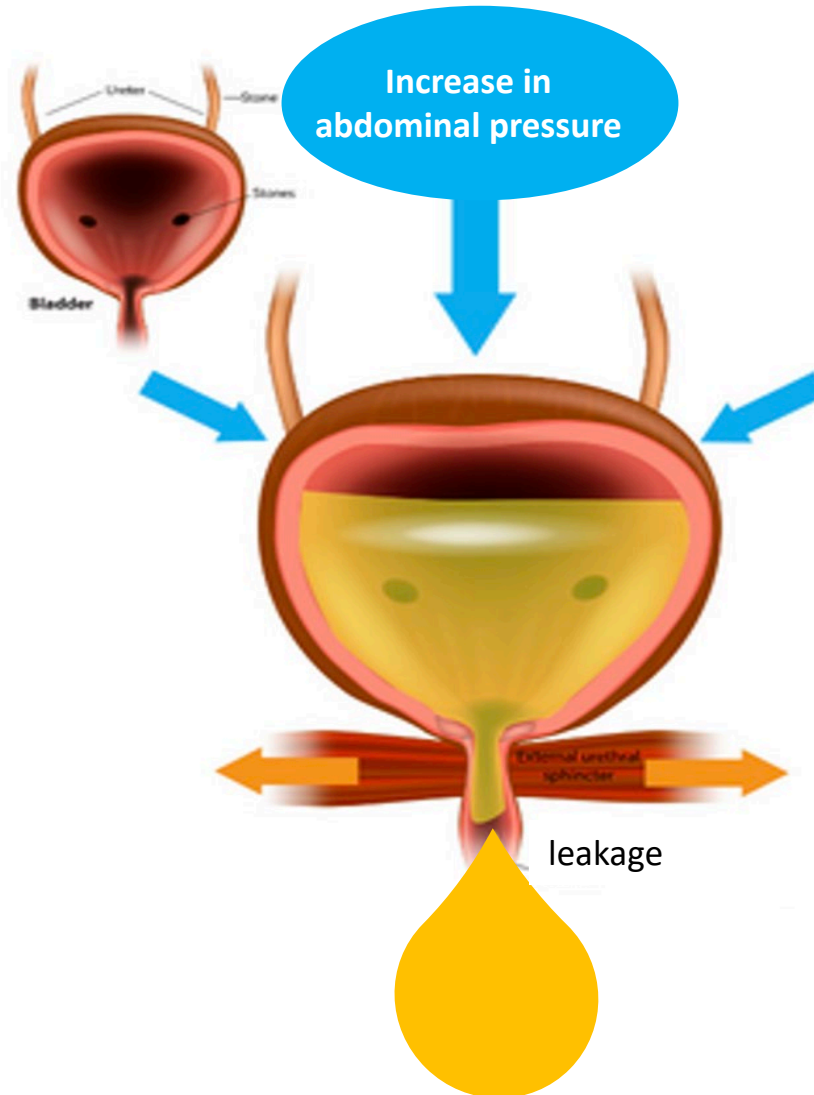
# Prevalence of Urinary Incontinence



# Stress Incontinence



# Stress Incontinence





# Urethral Anatomy

# Diagnosis – Keep it Simple

- Simple Cystometrics – catheter and fill
- Complex urodynamics
- Pad test
- Visual examination

# Treatment of Stress Urinary Incontinence

## Non-Surgical options

- Behavioral modification
- Weight loss (BMI <36 kg/m<sup>2</sup>)
- Pelvic floor physical therapy
- Vaginal and urethral inserts (i.e. plugs)

## Surgical options

- Sling procedure
- Pubovaginal sling (i.e. Fascial Sling)
- Retropubic urethropexy
- Urethral Bulking

# Sling Procedures

- MUS consider "Gold Standard"
- Subjective short term cure rate 77-90%
- Objective cure rate as high as 90%
- Over 5 years success rate decrease to 50%
- Overall 73% report satisfaction

Richter, H. N Engl J Med 2010;362:2066-2076.

Braga, A. Int Urogynecol J. 2022; 22(4): 947-953

# Sling Procedures Outcomes

Image of mesh erosion

- Slings and use of mesh not universally available
- Renewed interest in less invasive treatment of SUI

# History of Urethral Bulking

- Reserved for intrinsic sphincter dysfunction (VLLP  $\leq$  60cm H<sub>2</sub>O or MUCP < 20cm H<sub>2</sub>O)
- Women who suffer with recurrent urinary incontinence after prior urethropexy or sling procedure
- Treatment in office for patients at risk of anesthesia complications
- Women who desire less invasive procedures to treat SUI

# Urethral Bulking Theory

- Improve incontinence due to ISD
- Injection of autologous or synthetic fillers under the lining of the urethra to effectively narrow the lumen.
- Improves coaptation
- Creates a seal against passive urine leakage

# Urethral Bulking Agents

## Available

- Calcium hydroxylapatite (Boston Scientific Coaptite)
- Carbon-coated zirconium oxide beads (Coloplast Durasphere EXP)
- Cross linked Polydimethylsiloxane (Laborie Macroplastique)
- Polyacrylamide Hydrogel (Axonics Bulkamid)

## No longer available in U.S. market

- Ethylene vinyl alcohol copolymer
- Dextranomer hyaluronic acid
- Polytetrafluoroethylene
- Glutaraldehyde cross-linked bovine collagen (\*Bard Contigen)
- Autologous fat



# Bovine Collagen Bulking

- Effective with cure rate of 48% at 12 months but often repeated at 6 month intervals
- Required skin testing prior to injections
- Removed from the market in 2010 due to allergic reactions
- All new UBA analyzed historically to be assess non-inferiority to Bovine Collagen

# UBA's Long-Term Treatment Outcomes

## Cure rates

- Coaptite cure rate 60-75%
- Macroplastique 21-80%
- Bulkamid 42-70%

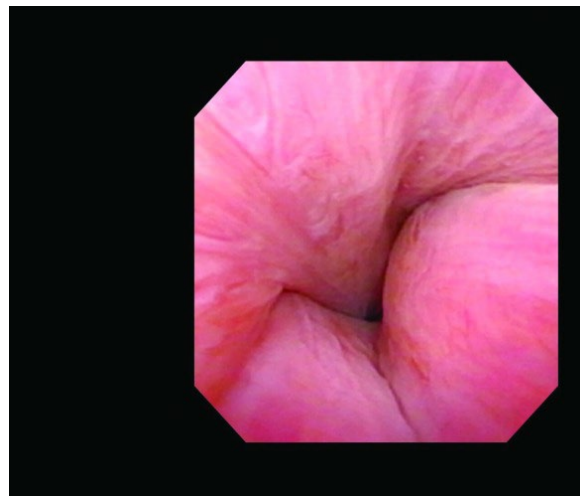
## Complications:

- UTI 4-10%
- Urinary retention 34% with Coaptite
- Erosion and nodal migration noted with Durasphere and Macroplastique as high as 24%

# Polyacrylamide Hydrogel

# Polyacrylamide Hydrogel Injection

video



# Summary

- Stress urinary incontinence socially and emotional condition effecting millions of adult women
- Recent scrutiny over use of mesh slings and other more invasive procedures has renewed interest in UBA and less invasive procedures
- Current agents are proving to be safe and effective
- Long term durability and efficacy is lacking
- There is a need for more rigorous outcomes research in this area

# References

- Lee\*, Una J.; Feinstein, Lydia; Ward, Julia B.; Abbott, Kevin C.; Bavendam, Tamara; Kirkali, Ziya; Martinez-Miller, Erlene; Matlaga, Brian R.; Kobashi, Kathleen C. PD21-11 PREVALENCE OF URINARY INCONTINENCE AMONG A NATIONALLY REPRESENTATIVE SAMPLE OF ADULT WOMEN: FINDINGS FROM THE UROLOGIC DISEASES IN AMERICA PROJECT, *Journal of Urology*: April 2020 - Volume 203 - Issue Supplement 4
- doi: 10.1097/JU.0000000000000871.011