LEADING MEDICINE:
A TOWN HALL CONVERSATION
WITH DR. MARC BOOM

Town Hall Conversation XXIII

We will begin at 10 a.m.
Houston Methodist Urology

Kathleen C. Kobashi, MD, FACS
Chair, Department of Urology
A little history

HMH founded in 1919

>2200 bed multispecialty tertiary referral medical center

>2000 physicians

7-hospital system

Tremendous trajectory in 15 years
Who is Urology?

- 18 Surgeons
- 15 Residents
- 3 Fellows
- 2 Advanced Practitioners
What is Urology?

- Surgical subspecialty
- Addresses issues of the urinary tract
- Male and female
- Adults and children
- Spans broad range
Our Vision

Serve our patients

Clinical excellence

Coordinated service delivery across enterprise

Innovative research

Exceptional education

World-Class Urology Department
Forward-thinking

Top-notch team
Leading in each subspecialty
Multi-disciplinary relationships
Outcomes, service, and innovation
Urology Service Lines

- **Urologic Oncology**
  - Prostate, Bladder, Kidney, Testis
- **Stone Center**
- **Men’s Health Center**
  - Andropause, Sexual medicine
- **Pelvic Floor Medicine/Functional Urology**
  - Voiding dysfunction
  - Prostate health
  - Neurogenic bladder
- **Women’s Urology Center**
  - Incontinence, prolapse
Scope of Urology

Oncology
- Prostate
- Bladder
- Kidney
- Testis

Men’s Health
- Sexual function
- Prostate health
- Infertility

Functional urology
- Neurogenic bladder
- Transitional medicine

Kidney stones

Women’s Health and Pelvic Medicine
- Stress incontinence
- Overactive bladder
- Pelvic prolapse

- Bladder
- Kidney
- Testis
“Functional Urology”
Female Urology and Pelvic Medicine
It’s all about perspective

20 Starbucks or 20 bathrooms?
Prevalence

– Any leak in the past year (25-45%)\(^1\)
– Increases with age\(^2\)

• 12% in women 60-64
• 21% in women ≥85
• 58% of women living in nursing homes
– 20% of continent women aged ≥60 develop incontinence within a year

1. Buckley BS, Lapitan MC. Urology 2010; 76(2):265-70
Urinary Incontinence

• Under-reported and under-treated
  – < 50% of women with significant symptoms seek treatment

• Burgio & colleagues
  – 1,104 community-dwelling elderly persons who self-reported urinary incontinence
  – 62% had not mentioned UI to any provider

Bladder responsibilities

• Store urine
• Empty completely

(And don’t leak!)
Types of Urinary Incontinence

OVERACTIVE BLADDER (OAB) SYNDROME
- Urinary urgency, usually accompanied by frequency and nocturia, with or without urgency urinary incontinence, in the absence of urinary tract infection or other obvious pathology

STRESS URINARY INCONTINENCE
- Complaint of involuntary loss of urine on effort or physical exertion, or on sneezing or coughing

OTHER TYPES
- Mixed (stress and urgency incontinence)
- Continuous
- Insensible
- Postural

1Haylen, BT et al., Neurourol Urodyn. 2010; 29:4-20
Prevalence of Chronic Conditions in US

- Obesity: 80 million
- High blood pressure: 70 million
- Arthritis: 60 million
- Tobacco abuse: 50 million
- Binge drinking: 40 million
- Diabetes: 30 million
- Cancer: 10 million

OAB symptoms

Total OAB costs in the US ~$66 billion!1

- $49 billion direct medical
  - Diagnostic evaluation
  - Medications
  - Procedures
- $2.3 billion direct non-medical
  - Absorbent products
  - Bedside commodes
- $14.6 billion indirect
  - Lost productivity (OAB related work loss)

Partnering with our patients

Treatment Options for Urinary Incontinence

**Stress Incontinence**
Leakage with laughing, coughing, physical activity

- Reduce Risk Factors
  - Patient education
  - Weight loss
  - Smoking cessation

**Overactive Bladder**
Urinary frequency, urgency, and/or incontinence associated with urgency

**Mixed Incontinence**

- Bladder squeezes more than expected
- Urethra is weaker than expected

**Non-Surgical**
Pelvic floor muscle training
Pelvic floor physical therapy
Incontinence pessary
Vaginal inserts

**Surgical**
Urethral bulking
Sling
  - Autologous fascia (your own tissue)
  - Mesh (retropubic or transobturator approach)
Retropubic Suspension (Burch)

**Clinical Trials**

1st line: Patient Education and Behavioral Therapy
Fluid management & avoidance of bladder irritants
Bladder control strategies & bladder training
Pelvic floor physical therapy

2nd line: Medications
- Overactive bladder medications
- Vaginal estrogen

3rd line: Procedures
Posterior Tibial Nerve Stimulation
Botox® injections into the bladder
Sacral Neuromodulation (Interstim®)

*If you are not improving and are still experiencing bothersome symptoms, please call your physician and schedule a follow up appointment.*
Surgical Treatment of Female Stress Urinary Incontinence: AUA/SUFU Guideline


From the American Urological Association Education and Research Inc., Linthicum, Maryland and the Society of Urodynamicists, Female Pelvic Medicine & Urogenital Reconstruction, Schaumburg, Illinois

The AUA/SUFU Guideline on Adult Neurogenic Lower Urinary Tract Dysfunction

Panel Members: David A. Ginsberg, MD; Timothy B. Boone, MD PhD; Anne P. Cameron, MD; Angelo Gousse, MD; Melissa R. Kaufman, MD; Erick Keays; Michael J. Kennelly, MD; Gary E. Lemack, MD; Eric S. Rovner, MD; Lesley H. Souter, PhD; Claire C. Yang, MD; Stephen R. Kraus, MD

ADULT URODYNAMICS: AUA/SUFU GUIDELINE

Overactive Bladder
Medications

- Muscarinic receptors:
  - M1-5
  - M1-M2: CNS
  - M3: eyes, mouth, bowel
  - M3, M2: bladder → contraction

- Beta 3 adrenergic receptors
  - Present in bladder
  - Mediate relaxation via AC and K+ transport

Andersson KE, October 2013, Volume 14, Issue 5, pp 435-441
But what if meds don't work?
Percutaneous tibial nerve stimulation

Botox® injection in the bladder

Sacral nerve stimulation (bladder pacemaker)
PTNS

• PTNS (percutaneous tibial nerve stimulation)
• Simple office procedure
• 6-12 weekly treatments
PTNS ("Accupuncture")

- 34-gauge needle
- 3-5 cm cephalad to medial malleolus
- Placement confirmed
  - Great toe plantar flexion
  - Sensation on plantar aspect of foot
PTNS Results

• Improvement in global response assessment (GRA)
  • *PTNS vs sham*
    – PTNS vs sham: 58.3 vs 21.9%
  • *PTNS vs tolterodine*
    – 79.5% vs 54.8%
• At 36 months 77% had sustained moderate/marked improvement¹

Botox® in the Bladder

• 100-200 units
• Local anesthetic in the office
• 5-minute procedure
• Drive yourself
• 1-2 times a year
• Success: 80%
Interstim ("Pacemaker")

- Outpatient
- In operating room or office
- Lead in lower back
- Stimulator under skin
Interstim test drive

- Two stages
- “Colonoscopy sedation”
- Success ~90%
Stress incontinence
Educating our patients

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- Fluid management & avoidance of bladder irritants
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- Pelvic floor physical therapy

2nd line: Medications
- Overactive bladder medications
- Vaginal estrogen

3rd line: Procedures
- Posterior Tibial Nerve Stimulation
- Botox® injections into the bladder
- Sacral Neuromodulation (Interstim®)

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Surgical Options

Urethral bulking injections

- Urethral bulking injections
- Increase urethral resistance
- Enhance mucosal seal
- Increase sphincter strength?
- Increase sarcomere length?
Surgical Options

Urethral bulking injections

Success of 70% up to 7 years
Surgical Options

Slings

- Hammock beneath the urethra
- Outpatient
- <30-minute procedure
- Can use your own tissue or polypropylene
Surgical Options

Slings

- Backstop supports urethra
- Success rates in the 80-85% range
Quality of Life
Due to their large file size, the slides of Drs. Ricardo R. Gonzalez and Rose Khavari cannot be posted. Please email foundation@houstonmethodist.org to receive a copy of the slides.
Houston Methodist COVID-19 Patients by Day

Data as of March 23, 2022
Confirmed COVID-19 Lab Tests

Houston Methodist Testing Trend

- Positive COVID-19 Tests
- 7 Day Rolling Average of Percent of Positive Tests
COVID-19 Viral Load Detected in City of Houston Wastewater

HOUSTON
March 14, 2022

Viral Load: 18%
In comparison to July 6, 2020

Positivity Rate: 2%

COVID-19 Viral Load in Wastewater
(Compared to July 6, 2020)

https://covidwwtp.spatialstudieslab.org/
Deaths from COVID-19 in the U.S.

COVID-19 was the third-leading cause of death in the U.S. in 2020

Older Americans accounted for most COVID-19 deaths

Source: Centers for Disease Control and Prevention

- Vaccination reduces rate of positive tests, symptomatic infection, hospitalization and ICU admission
- Booster reduces all of these risks further
Effectiveness of Vaccination vs. Booster

Abu-Raddad et al NEJM March 10, 2022

- Retrospective cohort study of people who had two or three doses of mRNA vaccine
- Compared effectiveness against symptomatic infection, hospitalization or death
- Vaccination effectiveness three doses compared to two doses – omicron
  - 49.4% for infection
  - 76.5% for severe disease
- Vaccination effectiveness three doses compared to two doses – delta
  - 76.5% for infection
  - 86.1% for severe disease
GET YOUR FREE COVID-19 BOOSTER
Houston Chronicle Series: Transplanted

CLINGING TO HOPE
A young father fights a COVID infection so catastrophic he needs a lung transplant
10-Way Successful Kidney Transplant Swap

https://www.npr.org/2022/03/19/1086245705/10-strangers-come-together-for-a-life-changing-kidney-swap
General Session

Smart Future, All In: Making Bets for the Hospital of the Future

Smart Room

ViVE

Miami Beach | March 6–9, 2022
Awards and Accolades

Healthgrades Releases Top 24 Hospitals Leading Early COVID Care

by Jasmine Pennic 03/07/2022  Leave a Comment

WORLD'S BEST HOSPITALS 2021

100 SafeCare Hospitals
Recognizing Healthcare Excellence

AMERICA'S BEST LARGE EMPLOYERS 2022

ACCREDITED Hospital

Quality & Patient Safety

AMERICA'S 50 Best HOSPITALS™ 2022
Leadership Update

Dr. Jun Li is joining Houston Methodist as the Chair of the Stanley H. Appel Department of Neurology at the Houston Methodist Neurological Institute, effective June 1.
THANK YOU FOR ATTENDING OUR TOWN HALL CONVERSATION

If you would like more information about Urology at Houston Methodist or the Urology Task Force, please contact Shu Muthyala at ssmuthyala@houstonmethodist.org

Take care and be well