BPH & male LUTS
What works?
What's new?

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Disclosures

- Urotronic Inc
  - Clinical trial
- Hollister
  - Speaker, honorarium

Objectives

1. To enable primary care physicians to diagnose and manage mild to moderately severe BPH and male LUTS.
2. To enable primary care physicians to identify when it is appropriate to refer to urology.
3. To understand the various treatment options for BPH and male LUTS including conservative, medical and surgical treatment options.

BPH & MLUTS
Why are they important to talk about?

- BPH one of the most common diseases in ageing men
  - Not all men with BPH have LUTS, and not all men with LUTS have BPH
  - Impact of genetics, diet, lifestyle and other co-morbidities
- Age is risk factor for BPH & male LUTS (MLUTS)
  - Up to 60% prevalence in 9th decade
  - Continuous prostate enlargement 2-2.5% per year in men over 50
- Association with other common conditions
  - Metabolic syndrome and obesity
  - Erectile dysfunction

Lim, Asian J Urol. 2017

Terminology

- BPH? BPE? MLUTS?
- Obstructive LUTS? Irritative LUTS?

Terminology

- BPH: Benign prostatic hyperplasia
  - Pathologic diagnosis
- BPE: Benign prostatic enlargement
  - Clinical diagnosis (prostate volume Pvol > 30cc)
- BPO: Benign prostatic obstruction
  - LUTS resulting from BPE/BPH
- Male LUTS (MLUTS): Male lower urinary tract symptoms
  - Current terminology
  - Encompassed LUTS associated with BPO and/or overactive bladder (OAB) and/or other conditions

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Terminology

- Storage ~~irritative~~ LUTS
  - Frequency, urgency and urge incontinence, nocturia
- Voiding ~~obstructive~~ LUTS
  - Decreased, intermittent or prolonged flow, straining, hesitancy
- Post-micturition/post-void LUTS
  - Sensation of incomplete emptying, post-void dribbling

Clinical scenario

- Mister I.P.
- 65 year old Caucasian male
- Known for HTN, DLPD, T2DM, past knee surgery

- *Doc, I'm having issues with my bladder!*

Work-up of MLUTS

- Per CUA guidelines (updated 2022), diagnostic considerations include:
  - Mandatory
    - Full history
    - Physical exam including DRE
    - Urinalysis (rule out infection, hematuria)
  - Recommended
    - Formal symptom inventory (ex: IPSS – International prostate symptom score)
    - PSA (if life expectancy > 10 years)

Elterman et al., Can Urol Assoc J, 2022

Clinical scenario – Mr I.P.

- History
  - HTN, DLPD, T2DM, past knee surgery
  - FHx –ve prostate ca, +ve BPH (father & brother)
  - Non smoker (quit 20 yrs ago), ½ bottle wine q HS, no drugs
  - 2-3 coffee in am, 1 coffee or tea in pm, orange juice in am, 3 glasses H2O
- 1-2 year progressive history of urination issues
  - C/o frequency q 1-2h esp in am, urgency, rare urge incontinence (few drops)
  - Nocturia 1-3x, snores
  - Hesitancy (esp 1st am void), slower flow but no straining
  - No post-micturition LUTS
- No UTI, dysuria or gross hematuria. Occasional constipation.
- Decreased erection rigidity, able to penetrate and ejaculate, sex active 1-2x/month

Clinical scenario – Mr I.P.

- Physical exam
  - Obesity BMI 31
  - N uncirc penis, N meatus, testicles N x 2
  - DRE: 40cc BPH no nodules
- Urine analysis
  - Negative
  - N.B. If micro hematuria (> 3-5 RBC/HPF x 2) —> should get Abdo US and be referred to urology for cystoscopy

Clinical scenario – Mr I.P.

- PSA 2.5
- IPSS score 15 (moderate)
- QoL 3 (moderate bother)

AUA SYMPTOM SCORE

PATIENT NAME: _____ TODAY'S DATE: _____

(Circle One Number on Each Line)	Not at All	Less Than 1 Time in 5	Less Than Half the Time	About Half the Time	More Than Half the Time	Almost Always
Over the past month or so, how often have you had a sensation of not emptying your bladder completely after you finished urinating?	0	1	2	3	4	5
During the past month or so, how often have you had to urinate again less than two hours after you finished urinating?	0	1	2	3	4	5
During the past month or so, how often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5
During the past month or so, how often have you found it difficult to postpone urination?	0	1	2	3	4	5
During the past month or so, how often have you had a weak urinary stream?	0	1	2	3	4	5
During the past month or so, how often have you had to push or strain to begin urination?	0	1	2	3	4	5
	None	1 Time	2 Times	3 Times	4 Times	5 or More Times
Over the past month, how many times per night did you most typically get up to urinate from the time you went to bed at night until the time you got up in the morning?	0	1	2	3	4	5

Add the score for each number above and write the total in the space to the right. TOTAL: _____

SYMPTOM SCORE: 1-7 (Mild) 8-19 (Moderate) 20-35 (Severe)

QUALITY OF LIFE

	Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible
How would you feel if you had to live with your urinary condition the way it is now, no better, no worse, for the rest of your life?	0	1	2	3	4	5	6

How to manage this patient?

- Per CUA guidelines (updated 2022)
- Patients with mild symptoms (e.g., IPSS <7) should be counselled about a combination of lifestyle modification and watchful waiting
- Treatment options for patients with bothersome moderate (e.g., IPSS 8–18) and severe (e.g., IPSS 19–35) symptoms of BPH include:
  - Watchful waiting/lifestyle modification
  - Medical treatment
  - Minimally invasive or surgical therapies

Lifestyle modifications & conservative management

- Fluid restriction, particularly prior to bedtime
- Avoidance of caffeinated beverages, alcohol, and spicy foods
- Avoidance/monitoring of some drugs (e.g., diuretics, decongestants, antihistamines, antidepressants)
- Avoidance or treatment of constipation
- Weight loss and prevention or treatment of conditions associated with metabolic syndrome
- Timed or organized voiding (bladder retraining)
- Pelvic floor physical therapy (PFPT) in cases of suspected non-relaxing pelvic floor dysfunction (causing LUTS, pelvic and or genital pain, bowel and sexual dysfunction, etc.) or overactive bladder and/or urinary incontinence (Kegel exercises, urge suppression, etc.)
- Obstructive sleep apnea (OSA) screening for men with nocturia over the age of 50 (STOP BANG)

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STOP BANG

OSA screening

STOP-Bang questionnaire

Please answer the following questions by checking "yes" or "no" for each one.

	Yes	No
Snoring (Do you snore loudly?)	❑	❑
Tiredness (Do you often feel tired, fatigued, or sleepy during the daytime?)	❑	❑
Observed Apnea (Has anyone observed that you stop breathing, or choke or gasp during your sleep?)	❑	❑
High Blood **P**ressure (Do you have or are you being treated for high blood pressure?)	❑	❑
BMI (Is your body mass index more than 35 kg per m^2?)	❑	❑
Age (Are you older than 50 years?)	❑	❑
Neck Circumference (Is your neck circumference greater than 40 cm [15.75 inches]?)	❑	❑
Gender (Are you male?)	❑	❑

Score 1 point for each positive response.

Scoring interpretation: 0 to 2 = low risk, 3 or 4 = intermediate risk, ≥5 = high risk.

Source: University Health Network, Toronto, Ontario, Canada (www.stopbang.ca/osa/screening/php). Used with permission from Sauk Prairie Healthcare.

OSA AND OVERACTIVE BLADDER

Obstructive Sleep Apnea Syndrome Is Associated with Overactive Bladder and Urgency Incontinence in Men

Helene Kemmer, MD[1]; Alexander M. Mathes, MD[2]; Olaf Dilk, MD[3]; Andreas Gröschel, MD[4]; Christian Grass, MD[5]; Micheal Stöckle, MD, PhD[3]

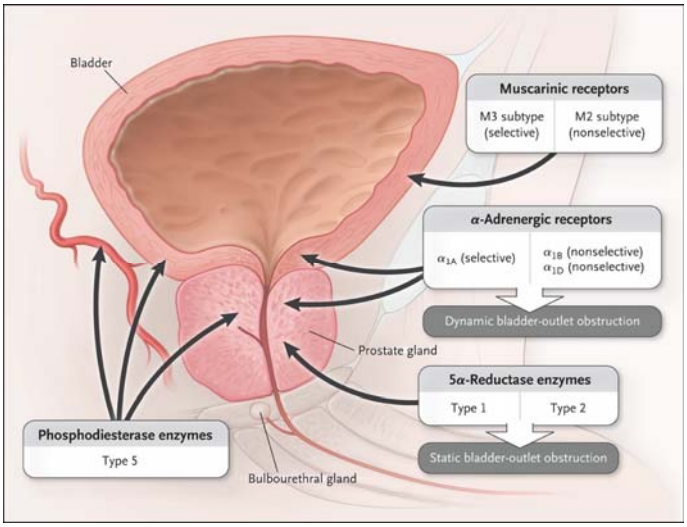
Urological Manifestations of Obstructive Sleep Apnea Syndrome: A Review of Current Literature

Gautam Dagur[1], Kelly Warren[1], Sedrick Ambroise[1], Reese Imhof[1] and Sardar A. Khan[1,2]

Obstructive sleep apnea syndrome should always be screened in patients complaining of nocturia

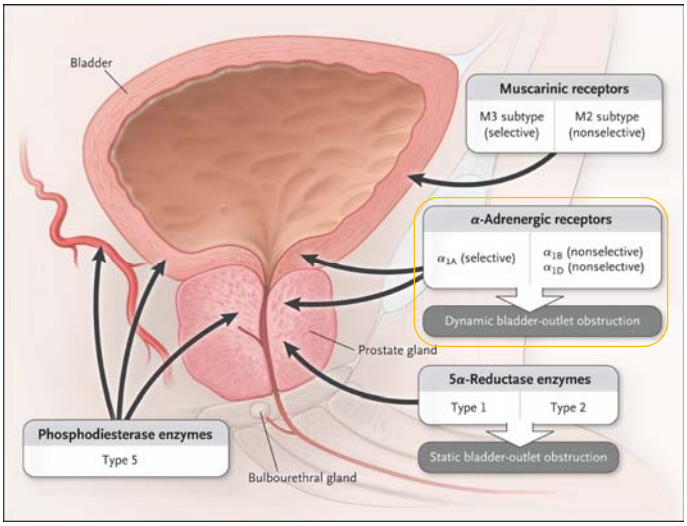
Vincent Misraï[1] · Helene Charbonneau[2] · David Attias[3] · Atul Pathak[4]

Medical treatment for MLUTS



Sarma & Wei, N Eng J Med, 2012

Medical treatment for MLUTS



Sarma & Wei, N Eng J Med, 2012

Medical treatment: alpha-blockers

- **Excellent first-line treatment option for men with symptomatic bother and who desire treatment (strong recommendation, evidence level A)**
  - No dose titration: tamsulosin, silodosin, alfuzosin
  - Dose titration & BP monitoring: doxazosin, terazosin
- All have similar clinical efficacy
- Do not alter natural progression of BPH
- Most common side effects: dizziness (2-10%) and ejaculatory changes
- Floppy iris syndrome

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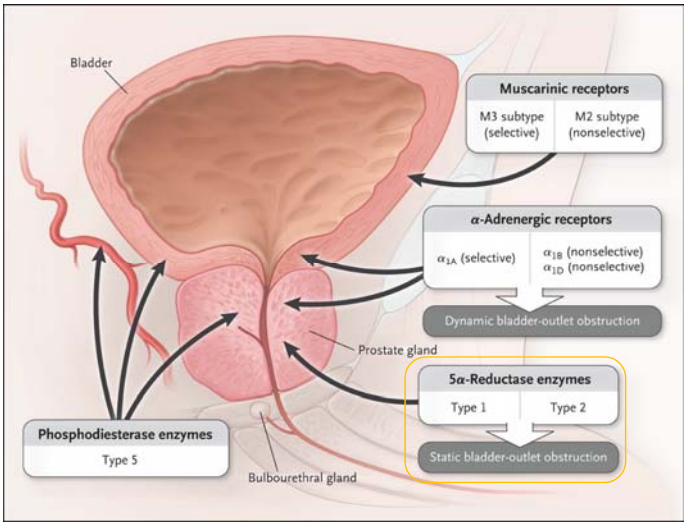
Medical treatment for MLUTS



Sarma & Wei, N Eng J Med, 2012

Medical treatment: 5-alpha-reductase-inhibitors

- **Appropriate & effective treatment for patient with MLUTS and associated prostatic enlargement (strong recommendation, evidence level A)**
  - Dutasteride & finasteride
- Modest prostate shrinkage (25-30%) and slowed growth over time
  - Reduction PSA 50%
- Reduces risk of BPH progression, retention and need for surgery
  - Pvol > 30cc and/or PSA > 1.4
- Side effects: erectile dysfunction, decreased libido, ejaculation disorders, and rarely gynecomastia and post-finasteride syndrome

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Medical treatment: combination treatment

- **Appropriate & effective treatment for patient with MLUTS and associated prostatic enlargement (strong recommendation, evidence level B)**
  - Alpha-blocker and 5ARi
- Pronostic factors for BPH progression
  - Age > 50, Pvol > 30 and PSA > 1.4 (MTOPS trial)
- Combination Tx significantly improves urine flow and symptoms compared to monotherapy
  - Additive side effects of dual therapy (esp ejaculation changes)

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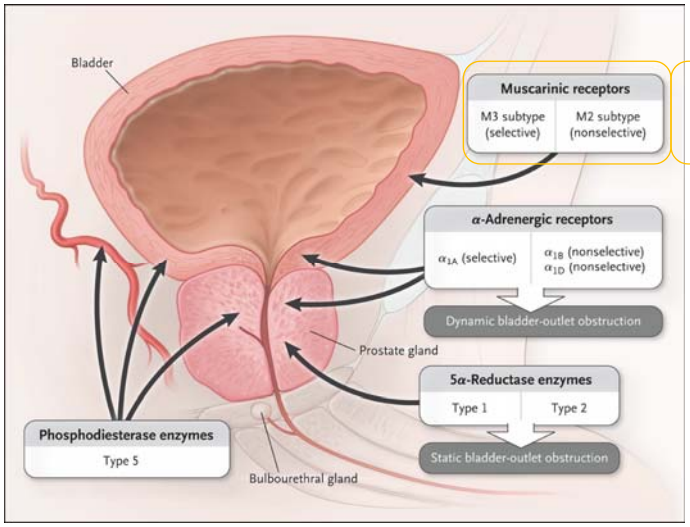
Medical treatment for MLUTS



Sarma & Wei, N Eng J Med, 2012

Medical treatment: anti-muscarinics & beta-3 agonists

- **May be useful in men with predominant storage LUTS, but to be used with caution in men with significant BOO and/or elevated PVR (conditional recommendation, evidence level C)**
  - Anti-muscarinics: oxubutinin, solifenacin, tolterodine, fesoterodine, trospium
  - Beta-3 agonist: mirabegron
- Improvement in storage LUTS (with or without BPH)
- Low rates of urinary retention
  - Studies excluded patients with PVR > 250cc (mirabegron probably safer)
- Side effects
  - Anti-muscarinics: dry mouth, eyes, constipation, cognitive, C-I closed-angle glaucoma
  - Beta-3 agonists: increase BP and HR, C-I severe uncontrolled HTN

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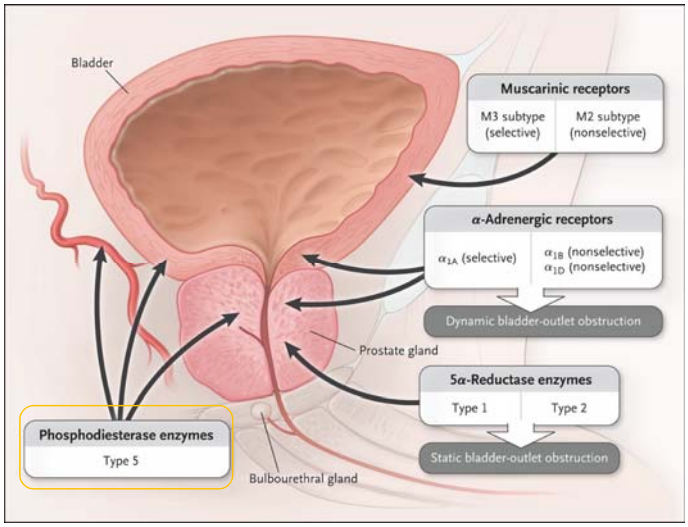
Medical treatment for MLUTS



Sarma & Wei, N Eng J Med, 2012

Medical treatment: PDE5 inhibitors

- **PDE5i recommended for men with MLUTS and particularly if concomitant erectile dysfunction (strong recommendation, evidence level B)**
  - Tadalafil (long-acting PDE5i) 5mg
- Clinical improvements in:
  - Storage and voiding LUTS
  - Urinary QoL
- Combination alpha-blocker and PDE5i superior to PDE5i alone
- Side effects: rhinitis, flushing, headache, back pain, $$$

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Clinical scenario: Mr I.P.

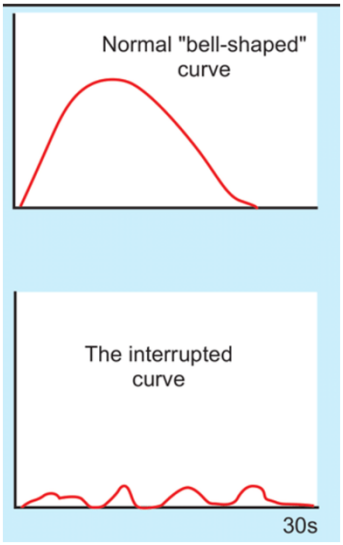
- Lifestyle changes
  - Decreased coffee/decaf and increased H2O
  - Lost a few pounds and healthier diet/blood sugar
  - OSA testing +ve & compliant w CPAP (nocturia x 1)
- Did well for few years with medical therapy
  - Initially just on alpha-blocker
  - Eventually started on 5ARI for progression of LUTS with good response
  - No private insurance tadalafil too expensive
  - Bothered by sexual SEs with Rx, persistent moderate LUTS and taking lots of Rx

Indications for referral to urology

- Atypical LUTS or LUTS not responding to medical Tx
- Intolerance or aversion to taking Rx
- Hematuria (negative urine culture)
  - US or CT Urogram for upper tract imaging
- Urinary tract infection
  - US to rule out urinary tract anomaly/stones
- Increased PVR or creatinine
  - US to rule out HN
- Bladder stones, persistent dysuria, etc.

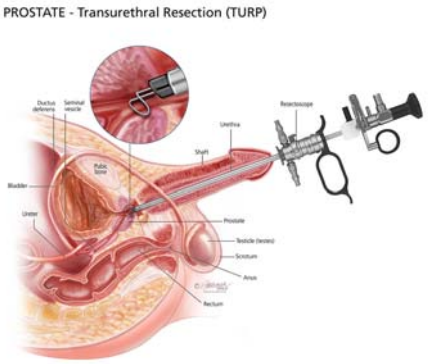
Pre-surgical evaluation of BPH patients

- Uroflowmetry and bladder scan (PVR)
- Recent PSA and DRE
- Cystoscopy (surgical planning)
- Prostate sizing
  - TRUS or recent US/CT
  - MRI if elevated SA or suspicious DRE
- Urodynamic testing
  - Rarely, only if atypical LUTS or unsure if surgery will benefit



Surgical and MIST options for BPH

- Traditional TURP
  - Monopolar – old school, risk of electrolyte anomalies
  - Bipolar and « button »
- Laser TURP
  - Greenlight laser – good for anticoagulated patients
  - Laser enucleation (Holmium, Thulium lasers) – very large prostates vs open simple prostatectomy
- MIST (private only in QC)
  - Rezum – water vapour injection
  - Urolift
  - Medicated and nitinol stents



Objectives - RECAP

1. To enable primary care physicians to diagnose and manage mild to moderately severe BPH and male LUTS
   - History, physical w DRE, urine analysis, PSA, degree of bother
2. To enable primary care physicians to identify when it is appropriate to refer to urology.
3. To understand the various treatment options for BPH and male LUTS including conservative, medical and surgical treatment options.

Objectives - RECAP

1. To enable primary care physicians to diagnose and manage mild to moderately severe BPH and male LUTS
2. To enable primary care physicians to identify when it is appropriate to refer to urology.
   - Not responding or doesn't want Rx, hematuria, UTIs, renal failure, stones
3. To understand the various treatment options for BPH and male LUTS including conservative, medical and surgical treatment options.

Objectives - RECAP

1. To enable primary care physicians to diagnose and manage mild to moderately severe BPH and male LUTS
2. To enable primary care physicians to identify when it is appropriate to refer to urology.
3. To understand the various treatment options for BPH and male LUTS including conservative, medical and surgical treatment options.
   - Conservative: hydration, bladder irritants, weight loss, OSA screening
   - Rx: alpha-blockers, 5ARIs, anti-muscarinics, beta-3 agonists, PDE5i
   - Surgery: TURP, laser TURP, MIST

Thank you!

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Questions?