“As man draws near the common goal
Can anything be sadder
Than he who, master of his soul
Is servant to his bladder”
Prevalence

- 2007 study: enlarged prostate = 4th most common diagnosis in men over 50.
- Approximately 1/3 of men over 50 have moderate to severe LUTS
- i.e. ~ 3 million men in UK

Presentation: what do patients say?

- “I’m worried about me prostrate”
- “While I’m here doc…”
- “I’m here because the wife sent me in.”

Presentation

- Huge issue = men reporting symptoms at all
- Some can be rather stoical: “just part of growing old”

Presentation: what do we say?

- GPs worry about missing prostate cancer — only 11% confident distinguishing between BPH & PCa
- ~ ½ refer before maximising medical therapy
- GPs seek specialist advice in 1/3 men with LUTS
Presentation: what do we say?

- Urologists feel ~40% of BPH referrals could be managed in primary care
- ~2/3 of urologists agree that interpreting PSA is difficult for GPs

What are LUTS?

- What happened to “prostatism”?
- Or at least “BPH”?

LUTS: Storage symptoms

- Urgency
  +/- Urgent Incontinence
- Frequency
- Nocturia
- (Nocturnal enuresis)

LUTS: Voiding symptoms

- Hesitancy
- Straining
- Poor flow
- Intermittency
- Terminal dribble
LUTS: Post-micturition

1) Post micturition dribble

2) Incomplete emptying

LUTS: Assessment

4 pages of interest:
- Initial assessment
- Referral
- Conservative management
- Drug treatment

LUTS Assessment: History

• Storage symptoms
• Voiding symptoms
• How much bother from symptoms?
• What's the patient's worry?

LUTS Assessment: History

- Other elements of PMH, e.g.
  - Diabetes
  - Heart failure
  - Kidney failure
  - Liver failure
  - OSA
  - Oedema, chronic venous stasis
  - Neurological conditions
LUTS Assessment: History

- Medications, e.g.:
  - Diuretics
  - Ca channel blockers
  - SSRIs
  - Bronchodilators (anti-cholinergics)
  - Antihistamines

LUTS Assessment: History

- Medications, e.g.:
  - Lithium
  - Benzodiazepines
  - NSAIDs
  - Pioglitazone
  - Gabapentin
  - Pregabalin

LUTS Assessment: Examination

- Abdomen
- External genitalia
- PR / DRE

LUTS Assessment: Examination

PR / DRE:

- Is it smooth?
- Is it big?
LUTS Assessment: Investigations

- Urine dipstick test

- Bloods:
  - “Offer a serum creatinine test only if you suspect renal impairment”
  - PSA?

LUTS Assessment: Investigations

- “Ask men with bothersome LUTS to complete a urinary frequency volume chart.”

- “Offer men considering treatment an assessment of baseline symptoms with a validated symptom score (e.g. IPSS).”

What’s normal?
- Void: ~300-500ml
- Fluid in: ~1.5-2L / 24 hrs
- Urine out: ~1.5-2L / 24 hrs
  - 30ml/kg / 24hrs
- Frequency: > 8 voids / 24hrs
- Nocturia: as > 1 void at night
  - (Nocturnal polyuria: volume at night)

LUTS Assessment: Investigations

- Small volume voids with variation in voided volume – characteristic of OAB
- Small volume voids without significant variation in voided volume:

LUTS Assessment: Investigations

International prostate symptom score (IPSS)

- Incomplete emptying
- Frequency
- Urgency
- Nocturia
- (0-5)
LUTS Assessment: Not NICE

- Ask re ED
- Measure BP
- Might add to bloods:
  - Lipids
  - Glucose

LUTS & ED

- Interest in sex declines with worsening LUTS
- Many studies shown association of LUTS with ED

- Prostate disease 2nd only to DM as ED risk factor:
  - more than PVD, hyperlipidaemia, HT, depression, IHD

LUTS & Metabolic Syndrome

- Unclear how much association is physiological, or related to sleep disturbance/anxiety

LUTS Severity

Age 50 – 59 years

Age 60 – 69 years

Age 70 – 79 years


LUTS & Erectile Dysfunction

No. I cannot get an erection Net reduc. in stiffness

0 4 6 12 24 55 43 63 64 81 58 58 44

Incidence %

LUTS Severity

**Link with Metabolic Syndrome**

<table>
<thead>
<tr>
<th>Waist Circumference</th>
<th>&lt;80 cm [% of men]</th>
<th>80-99 cm [% of men]</th>
<th>≥100 cm [% of men]</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate volume (g)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30</td>
<td>39.6</td>
<td>34.7</td>
<td>31.9</td>
<td></td>
</tr>
<tr>
<td>20-50</td>
<td>32.6</td>
<td>31.0</td>
<td>28.4</td>
<td>0.07</td>
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<tr>
<td>≥60</td>
<td>27.8</td>
<td>34.3</td>
<td>39.7</td>
<td></td>
</tr>
<tr>
<td>Prostate-specific antigen (ng/dL)</td>
<td>1.87</td>
<td>2.94</td>
<td>3.96</td>
<td>0.001</td>
</tr>
<tr>
<td>International Prostate Symptom Score</td>
<td>5-7</td>
<td>23.4</td>
<td>17.6</td>
<td>18.3</td>
</tr>
<tr>
<td>8-19</td>
<td>47.0</td>
<td>47.7</td>
<td>42.8</td>
<td>0.10</td>
</tr>
<tr>
<td>20-35</td>
<td>29.6</td>
<td>34.7</td>
<td>39.9</td>
<td></td>
</tr>
<tr>
<td>Urinary frequency (ml voids per 24 h)</td>
<td>16.4</td>
<td>25.7</td>
<td>38.9</td>
<td>0.02</td>
</tr>
<tr>
<td>Nocturia (≥2 voids per night)</td>
<td>14.7</td>
<td>20.9</td>
<td>44.3</td>
<td>0.001</td>
</tr>
</tbody>
</table>

**LUTS & Metabolic Syndrome**

Obesity Increases and Physical Activity Decreases Lower Urinary Tract Symptom Risk in Older Men: The Osteoporotic Fractures in Men Study

Conclusions: In older men, obesity and higher physical activity are associated with increased and decreased risks of incident LUTS, respectively. Prevention of chronic urinary symptoms represents another potential health benefit of exercise in elderly men.

**LUTS Management**

**Uncomplicated LUTS**
- Gradual onset
- Impalpable bladder
- Normal external genitalia
- Benign feeling prostate
- Normal PSA
- No infection / haematuria

**Complicated LUTS**
- Raised PSA / Abnormal DRE
- Pelvic / Urogenital pain
- Recurrent UTI / Dysuria
- Palpable bladder
- Incontinence
- Haematuria
- Severe symptoms
- Bladder stones

**Primary Care = ideal setting for holistic management of male LUTS**

**The prostate as the “gateway to men’s health”**
LUTS Management

• If LUTS not bothersome or complicated, **reassure**

Cancer worry:
• For most cases, **NO strong link between onset of LUTS & onset of prostate cancer**

LUTS Management

• Think possible causes (PMH/Meds)
• Offer:
  – advice on **lifestyle interventions** (e.g. fluid intake, caffeine, smoking, time of diuretics)
  – information on the condition

LUTS Management - Conservative

• If you suspect OAB, offer:
  – supervised bladder training
  – if needed, containment products.

LUTS Management - Conservative

• If you suspect OAB, offer:
  – supervised bladder training
  – if needed, containment products.

  • Do not offer penile clamps

  **Dribblestop**
  Throw away those pads and dance the night away!

  **Dribblestop** Product Info

LUTS Management - Conservative

• For men with **post-micturition dribble**, advise how to perform **urethral milking**:
LUTS Management – Drug Rx

• Offer only if bothersome LUTS, & conservative management unsuccessful or not appropriate.
• Do not offer homeopathy, phytotherapy or acupuncture.

LUTS Management – Drug Rx

• Overactive bladder:
  – Offer an anticholinergic

Sub-sections
  - DAPERIMEN
  - DULOXETINE
  - DESMETHOXYPERUVATE
  - FLAVOXATE HYDROCHLORIDE
  - MIRABEGRON
  - OXITOTEN HYDROCHLORIDE
  - PROPAMATINE BITARTRATE
  - PROPROMETHINE HYDROCHLORIDE
  - SOLUFENACIN SUCINATE
  - TOLTERODINE TARTRATE
  - TROPSIUM CHLORIDE

LUTS Management – Drug Rx

• Overactive bladder:
  – Offer an anticholinergic

Sub-sections

LUTS Management – Drug Rx

• Overactive bladder:
  – Mirabegron (Betmiga), 50mg od
  – β3-adrenoceptor agonist

• NICE: only if anticholinergic is ineffective, contraindicated or not tolerated

LUTS Management – Drug Rx

1. Moderate to severe LUTS (not OAB predominant):
  – Offer an α-blocker

2. LUTS with PSA >1.4, prostate >30g:
  - high risk of progression:
    – Offer a 5-α reductase inhibitor (5-ARI)

If 1 and 2:
  – Offer combination treatment

LUTS Management – Drug Rx

• Progression =
  – Worsening symptoms
  – Acute retention
  – BPH-related surgery

Risk factors:
  – Age over 70
  – Moderate to severe bothersome symptoms
  – PSA > 1.4 ng/ml, Prostate volume >30ml

Risk of Acute Retention by Baseline PSA

LUTS Management: α-blockers

- Reduce tone of bladder neck / prostate
- Ideal first line in primary care for ‘mixed LUTS’
- Rapid onset 4-6 weeks
- No effect on PSA level or prostate size

LUTS Management: 5-ARIs

- Inhibit conversion of T to DHT
- ↓ prostatic volume
- Most effective in larger prostates

BUT: do not prevent progression
- S/E include: dizzy, faint, weak, bowel effects, headache, ejaculatory dysfunction ...

LUTS Management: 5-ARIs

- Beneficial effects start at 6-9 months, fully develop over years
- ↓ symptoms & ↓ rate of retention / surgery
- S/E include: fatigue, ED, ↓ libido, gynaecomastia

LUTS Management: 5-ARIs & PSA

- Any confirmed increase from lowest PSA level may signal non-compliance to therapy, or prostate cancer (particularly high-grade)
  - should be carefully evaluated
- Can still use PSA to help risk assessment of PCa, after a new baseline established

LUTS Management: Combination

2x
LUTS Management: Combination

- Studies show combination Rx:
  - Most effective for controlling symptoms
  - Most effective for reducing progression

- e.g. At 4 years, combination vs tamsulosin alone:
  - ↓ risk of acute retention / surgery by 70%
  - 7.7% actual risk reduction (NNT=13)

CombAT: the relative risk of AUR and/or BPH-related surgery versus tamsulosin at 4 years

CombAT: mean change from baseline in IPSS greater with dutasteride + tamsulosin combination therapy

CombAT: the most common adverse events with combination therapy were consistent with previous experience for either monotherapy

LUTS Management – Drug Rx

2012:
Cialis (tadalafil) 5 mg od:
Licensed for treating the “signs & symptoms of BPH”
SLS restrictions amended, so can prescribe for condition other than ED
LUTS Management – Drug Rx

Back to NICE:
• Nocturnal polyuria (>1/3 urine at night):
  – Consider late-afternoon loop diuretic
  – Consider desmopressin, if other medical causes have been excluded

LUTS Management – Drug Rx

Back to NICE:
• Consider adding an anticholinergic if storage symptoms after α–blocker for LUTS
• LOW risk of retention

LUTS Management – Drug Rx


4.4.6 Recommendations

PDE type 5 inhibitors reduce moderate-to-severe storage and voiding LUTS in men with or without erectile dysfunction. Only tadalafil (5 mg once daily) has been licensed for the treatment of male LUTS in Europe

LUTS: Referral

• Bothesome LUTS not responded to conservative & drug management
• Complicated LUTS
LUTS: Secondary Care

- Flow-rate
- Post-void residual
- Possibly:
  - Cystoscopy
  - Upper tract imaging

LUTS: Secondary Care

- Flow-rate
- Post-void residual
- Possibly:
  - Cystoscopy
  - Upper tract imaging

LUTS: Secondary Care

- Flow-rate
- Post-void residual
- Possibly:
  - Cystoscopy
  - Upper tract imaging
  - Urodynamics (if considering surgery)

LUTS: Surgery

Voiding:
- TURP
- TUVP
- HoLEP (laser)
- TUIP / BNI (often smaller prostates, young men)
- Urethrotomy

LUTS: Surgery

Voiding:
- ‘Urolift’ for some
  - Relieves LUTS while avoiding risk to sexual function
  - Day case, with cost savings

LUTS: Surgery

Storage:
- Botox injections
- Sacral / tibial nerve stimulation
- Cystoplasty
LUTS: SUMMARY

• Common, under-reported
• Ask: what is bothering the patient?
• Strong link with ED / Metabolic Syndrome
• Holistic assessment
• Think: balls

LUTS: SUMMARY

• Lifestyle intervention especially fluid intake
• Medical therapy according to symptoms
• Find & treat nocturnal polyuria
• Remember: a progressive condition
• Refer if not responding / atypical / complicated