

Management of Lower Urinary Tract Symptoms (LUTS) in men

History FUNI v SHIP

Symptoms and Severity	
<u>Storage /OAB</u>	<u>Voiding -Obstructive</u>
F requency	S training
U rgency	H esitancy
N octuria(>1)	I ntermittent stream
I ncontinence	P oor Stream

Differential diagnosis for LUTS	
BPH	OAB
UTI	
Chronic prostatitis	
Urethral stricture/phimosis	
Bladder tumour/prostate cancer	
Drugs (e.g. diuretics, calcium channel blockers, decongestants, antihistamines, ketamine)	
Excessive fluid intake	
Diabetes/ heart failure	

Examination

- Genitalia - phimosis, urethral stenosis
- Bladder – palpable (retention)
- Digital Rectal Examination (DRE)- Prostate- size-enlarged if larger than ping-pong ball (33ml) and feel consistency

- | Food and drinks which irritate the bladder |
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| • Tea/coffee |
| • Hot chocolate |
| • Alcohol |
| • Fizzy drinks |
| • Green tea |
| • Blackcurrant |
| • Citrus |
| • fruit/juices |
| • Tomatoes |

Investigations

- Urine dipstick
- Bloods
- Glucose
- U+E,
- +/- PSA

- | Red Flags/ Secondary Care Referral |
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| • RAISED PSA
<u>Single PSA $\geq 20\text{ng/ml}$</u>
<u>in the absence of documented UTI</u> |
| • PSA abnormal if
- >3
- on two results
- 4 weeks apart |
| • Double PSA result if patient taking Finasteride/Dustasteride > 6 months |
| • Abnormal DRE – firm, hard, nodular |
| • Haematuria |
| • Elevated Cr related to LUTS |
| • Acute/chronic retention |
| • 1+ UTI |
| • H/O renal stones |

Take 2 PSA Tests 4 weeks apart if:

- | |
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| <ul style="list-style-type: none"> • Voiding symptoms • Family history of prostate cancer • >50 yrs • DRE abnormal <p>Counsel on false positive/negative results.</p> <p>Postpone PSA test IF</p> <ul style="list-style-type: none"> • Active UTI
(check PSA 6 weeks afterwards. Note: it can take 3-6 months for PSA to normalise after a UTI) • Ejaculation/ exercise within last 48 hrs. • Prostate biopsy last 6 weeks. |
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Fluid Volume Chart Normal Values

No. of voids/day 3-8
 No. of voids/night 0-1
 Total volume/24hrs <3 litres

 Total nocturnal urine/24 hr urine should be < 33 %

 Volume /void -300-600ml
 No. of leakage should be 0

Nocturnal polyuria

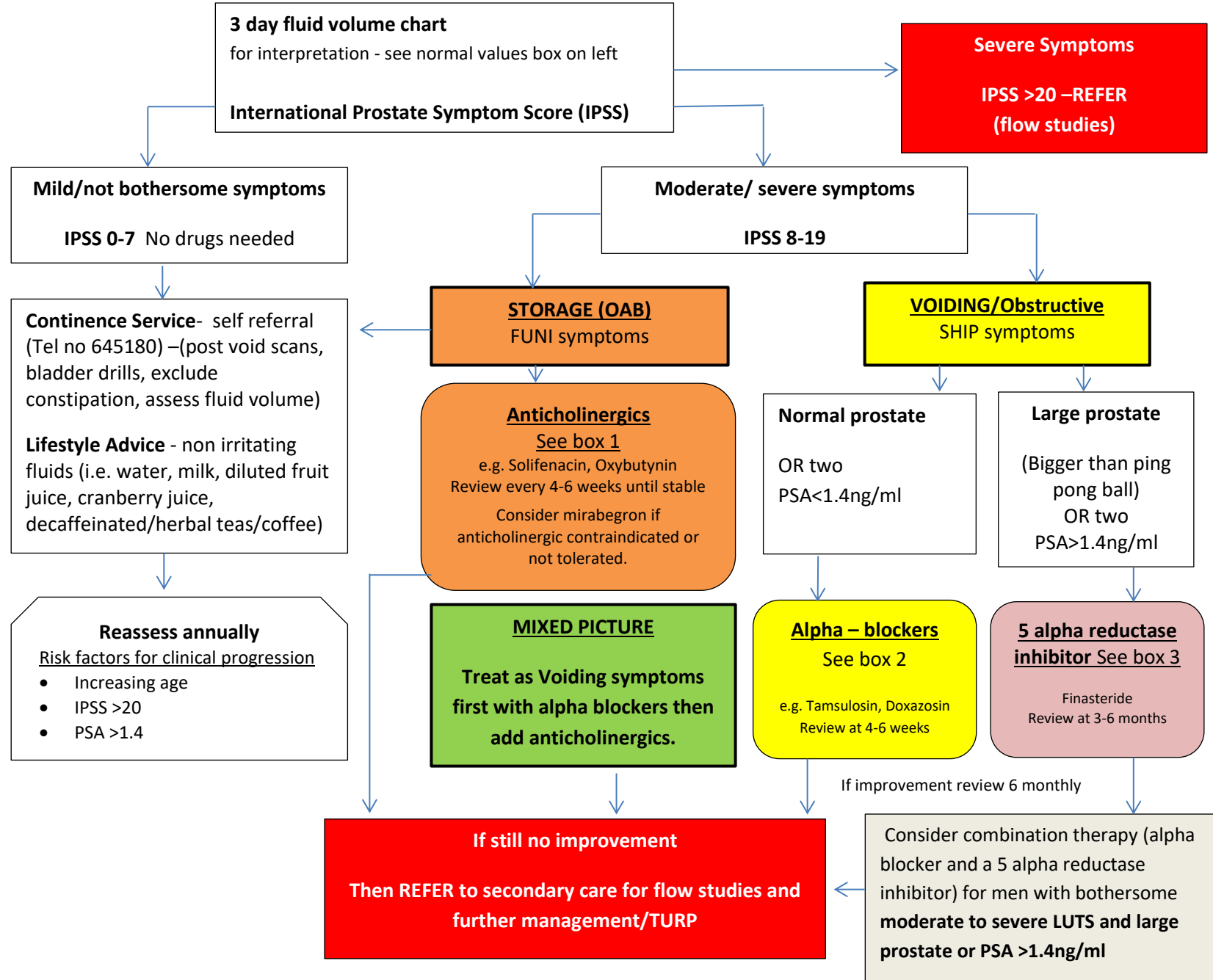
Isolated nocturia only- exclude diabetes/ CCF. Others may have disturbance in the normal homeostatic control of fluid balance – excessive urine being produced at night.

Advice- restrict fluid and food after 6pm/ elevate legs above heart level in the evening before bed/ consider support stockings.

Furosemide 40 mg at 4pm

2nd line desmopressin- caution risk hyponatraemia – take a baseline sodium level before starting the medication and monitor serum sodium 72 hrs after the first dose.

Most cases of LUTS can be dealt with in General Practice



Box 1: Anticholinergics (antimuscarinics)**Review every 4-6 weeks until symptoms are stable and then every 6-12 months.**

When offering antimuscarinic drugs to treat OAB, take account of coexisting conditions e.g. poor bladder emptying, cognitive impairment or dementia, BPH, constipation and glaucoma; the use of other existing medication affecting total anticholinergic load (please see below for further information) and risk of adverse effects.

Caution should be taken when prescribing antimuscarinic drugs to elderly and/or frail patients as their cognitive function may be affected.

Antimuscarinics reduce symptoms of urgency and urge incontinence and increase bladder capacity.

Side effects: Dry mouth, dry eyes, nightmares

First Line:

NICE³ recommends using the anticholinergic medicine with the **LOWEST ACQUISITION COST:**

Solifenacin 5mg-10mg od may have better efficacy than tolterodine/oxybutynin

Oxybutynin 2.5- 5mg bd Side effects especially in the elderly.

28 days costs (Drug Tariff April 2023)

£1.80-£1.81

£1.59-£1.74

Second Line**Alternative from first line medication list above**

Tolterodine 2mg bd (reduce to 1mg if necessary to minimise side effects)

£2.80 (1mg bd £2.37)

Tolterodine MR 4mg od (prescribe as Tolthen[®] XL 4mg od)

£6.99 (Tolthen[®] XL), £25.78 (generic)

Tropium 20mg bd

£10.67

Third Line

If antimuscarinics contra indicated/ not tolerated, mirabegron (Betamiga[®]) may be considered. Beta 3 agonist.

Mirabegron (Betamiga[®]) 25mg-50mg od

£29.00

Reduce to 25mg od if eGFR<39ml/min

- MHRA Drug Safety Update October 2015

Mirabegron is contraindicated in patients with severe uncontrolled hypertension (systolic blood pressure ≥ 180 mm Hg or diastolic blood pressure ≥ 110 mm Hg, or both)

- Blood pressure should be measured before starting treatment and monitored regularly during treatment, especially in patients with hypertension.

If swallowing difficulties or unable to tolerate solid formulation, consider either transdermal Oxybutynin 36 mg (Kentera[®]) twice a week (£27.20) or Solifenacin 1mg/ml oral suspension SF. Take 5-10ml od (£25.78-£51.56). Please note: Oxybutynin liquid is very expensive and is a non formulary grey drug.

Consider offering a Treatment Break if patients have been taking an antimuscarinic drug for at least 6 months, a patient information leaflet⁸ and questionnaire is available to support this work (please see reference 8).

Box 2: Alpha blockers**Review at 4-6 weeks and then every 6-12 months**

Alpha blockers ease symptoms by relaxing muscle of the prostate. Work within a few days with full effect being achieved in 6 weeks.

Side effects: Dizziness, light headedness, postural hypotension, retrograde ejaculation, dry mouth, blurred vision, Floppy Iris Syndrome- during cataract surgery (inform ophthalmologist).

28 days costs (Drug Tariff April 2023)**First line:**

Tamsulosin Hydrochloride capsules 400 micrograms at night

£1.07

Alternative options:

Doxazosin 1 mg od initially. Double dose every 1-2 weeks up to maximum of 8 mg daily.

£0.78-£1.84 (4mgx2)

Alfuzosin hydrochloride 2.5mg bd initially, increasing up to 10 mg daily in divided doses after food.

£1.37-£2.74 (2.5mgx4)

Alfuzosin hydrochloride XL 10mg od

£12.51

Box 3: 5-Alpha reductase inhibitors**Review at 3-6 months and then every 6-12 months**

5 alpha reductase inhibitors work by shrinking the prostate. Take up to 6 months to see benefit.

Side-effects: Reduced libido, impotence. Breast tenderness/enlargement (uncommon).

28 days costs (Drug Tariff April 2023)

Finasteride 5mg od

£3.09

Consult - SPC / BNF for further information on specific medicines

There is increasing awareness and concern regarding the accumulation of anticholinergic “burden” (ACB) or “load” associated with antimuscarinic agents as a result of taking multiple medications, leading to increased adverse events, especially in the elderly.⁵ Drugs with established and clinically relevant cognitive anticholinergic effects are considered to be definite anticholinergics and have an ACB score of 2 or 3. Patients with an ACB score greater than 3 have a high risk of mortality. For each point increase in total ACB score, a 0.33-point decline in Mini-Mental State Examination over 2 years has been suggested. Furthermore, each additional point in total ACB score has been correlated with a 26% increase in the risk of death in a published study⁵.

Drugs on the ACB scale⁶

The Aging Brain Care, Anticholinergic Cognitive Burden Scale (2012 update) is available on the University of East Anglia Website: www.uea.ac.uk/documents/3306616/10940915/Anticholinergics/088bb9e6-3ee2-4b75-b8ce-b2d59dc538c2

References

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