The Hearing Aid Podcasts

Episode 6.05 Show Notes
Prostatic Problems

Presented by: Dr Jo Preston, Dr Iain Wilkinson

Faculty: Owen Ingram, Edda Hensler

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Resources for Website

International Prostate Symptom Score:

http://www.urospec.com/uro/Forms/ipss.pdf

Benign Prostate Enlargement – NHS.uk:

http://www.nhs.uk/conditions/prostate-enlargement/

Main Show Notes:

Learning Outcomes

Knowledge:

- To recall where the prostate is and its function
- To recall how the anatomy of the prostate causes symptoms

Skills:

- To recognise when urinary symptoms in an older man may be due to a prostatic problem

Attitudes:

- To proactively ask about symptoms and signpost for assessment

Definitions:

The prostate is a gland sitting at the neck of the bladder surrounding the urethra. It produces prostatic fluid which is an important component of male semen. Normally about the size of a walnut.

Key Points from Discussion

Main illnesses affecting the prostate:

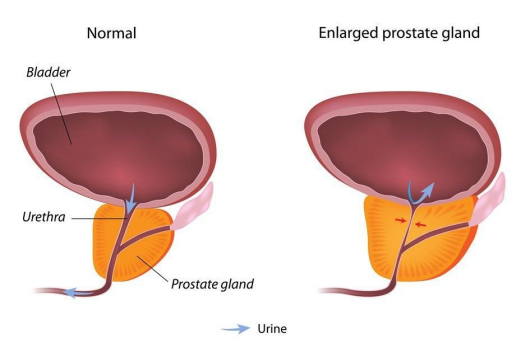
Symptoms related to the prostate are due to the local effect on the urethra of enlargement of the gland, causing bladder outflow obstruction (BOO).

These are part of a collective group of symptoms called LUTS - Lower Urinary Tract Symptoms which are related to any symptoms involving the bladder and urethra, so can be caused by anything affecting these organs, including overactive bladder.

30% men over 65 yo have LUTS. Importantly not all LUTS are causes by prostate disease, but prostate disease is the commonest cause in men.

Benign Prostatic Hypertrophy / Enlargement (BPH / BPE)

- Increase in the size of the prostate gland surrounding the prostatic urethra
- 1/3 over 50 year olds
- 90% over 80 year olds.



Prostate cancer more on this later, early symptoms are similar to BPH due to pressure effects.

Prostatitis

- acute issue and due to infection / inflammation of the prostate
- generally in younger men 30-50
- pain urinating and ejaculation, fever
- can be 'hidden' source of infection

Typical history of bladder outflow tract obstruction:
Voiding symptoms (i.e. difficulty passing urine out of bladder into the world)

- Hesitancy – difficulty starting urination
- Poor flow
- Straining to pee
- Difficulty emptying the bladder
- Terminal dribbling

Storage symptoms (i.e. bladder - may be retention or overactive bladder) *link previous episode on urinary continence*

- Urgency
- Frequency – Going more often (lower volumes)
- Nocturia – Waking up to pee >1 at night (increased risk of hip fracture, predictor of mortality related to increased episodes, Sleep disturbance)

Supporting evaluation

- Urine dipstick / MSU to evaluate for potential infection
- Abdominal examination for signs of retention (dullness suprapubically) and including a DRE to assess prostate size and contour.
- Bladder diary - monitor urinary frequency and volumes
- Baseline symptoms with a validated symptom score (for example, the IPSS (International Prostate Symptom Score) to allow assessment of subsequent symptom change.

Additional evaluation

Routine serum creatinine, cystoscopy, renal US, post-void residual, flow-rate measurement is not required unless there are specific concerns.

Medication review this is more overactive bladder...

Remember to check herbal remedies (these can cause diuresis – Dandelion, Hawthorn, Juniper, Green tea, Parsley, Hibiscus)

Ask re: Alcohol and coffee

Overactive bladder medication can cause urinary retention as well. Check for other anticholinergics

PSA testing

PSA (Prostate Specific Antigen) is a protein that liquefies semen and occurs in low levels in normal situations. It can be used as tumour marker to identify potential prostate cancers but it is not a perfect test.

False negative rate of 15% meaning that for 100 negative results, 15 number of men will have a prostate cancer that is missed

False positive rate of 75%: meaning that for every 100 positive results, 75 number of men will not actually have prostate cancer.

Raised PSA increases the likelihood of prostate cancer and may allow an early diagnosis, but may lead to over investigation and morbidity both psychological and physical of these treatments.

PSA normal ranges varies with age:

- *Under 70* >3 (recently updated)
- *70-80* >5
- No reference range for men over 80 years.

<u>If PSA under 10</u> – 20% chance of Prostate Ca
<u>If PSA over 10</u> – 50% chance of Prostate Ca

Other causes of raised levels of PSA include

- Prostatitis
- BPH
- UTI
- Recent catheterisation
- Recent ejaculation
- Rises with age as part of a normal process

Counsel patients on doing a PSA and give written information if:

- LUTS suggestive of bladder outflow obstruction
- Abnormal DRE
- They are concerned re: Prostate Ca

Who needs 2WW referral to urology?

- Patients with LUTS but no UTI and raised PSA
- Any raised result
- Abnormal feeling prostate on DRE

<u>Screening asymptomatic men?</u>

Prostate Cancer mortality significantly reduced over a 13 year period but 27 new diagnoses to avoid one death. Evidence does not support screening due to the risks / morbidity associated with the investigation process and over treatment of clinically insignificant lesions.

Prostate Cancer

Note: episode on cancers in older adults later this series.

- 41700 new diagnoses per year
- 1% in under 50s
- 1 in 8 men will be diagnosed in their lifetime with prostate cancer
- Associated with ageing
- Approx 80% of 80 year olds have cancer cells in their prostate
- More common in black African population (1 in 4 lifetime risk)
- FHx: more than one 1st degree relative 3.5x RR
- Smoking / overweight increases risk

Natural history of prostate cancer unclear, numerous stages:

- Initiation – abnormal cells in prostate
- Diagnosis by screening – abnormal blood tests
- Diagnosis by clinical symptoms - LUTS
- Clinically detectable metastatic disease e.g. bone mets

Treatment and management is difficult due to the broad spectrum of the disease, which is defined by the rate of tumour growth observed.

For instance, slow-growing 'clinically insignificant' tumours in asymptomatic men are unlikely to progress or require treatment, whereas rapidly growing 'clinically significant' tumours have the potential to progress and metastasize.

It is not known why some tumours are more aggressive and PSA levels do not necessarily indicate which is which. i.e. PSA negative tumours can still be aggressive.

Prognosis:

- 93.5% of patients alive at 1 year, 81.4% at 5 years
- Metastatic disease: 50% alive at 3 years, 30% at 5 years.

This is an example of where cancers can be split into two kinds dependent on their effect on the person who is living with it. Some, such as slow growing prostate cancers, can be considered alongside other chronic diseases i.e. a condition that the person lives with, and may cause symptoms and require treatment but that they are more likely to die with, rather than as a direct consequence of. As opposed to some other kinds of cancer that without treatments such as chemotherapy, radiotherapy or surgery, will progress and spread and be the cause of physical deterioration and ultimately death.

4% of deaths in men are from prostate cancer but prevalence in over 80 year olds is around 80%.

Interestingly a study of radical prostatectomy vs observation for localised prostate cancer did not show any difference in 12 year mortality.

Given the high prevalence of prostate cancer in over 80 yo without impact on mortality, prostate cancer only needs to be diagnosed if it is likely to need treatment.

Incontinence post prostatectomy for prostate cancer

Affects up to 40% of patients, and up to 10% will require further surgery for their incontinence.

The majority of these patients will have stress incontinence due to weakness of the bladder sphincter - some with have detrusor overactivity and should be managed accordingly.

Those with stress incontinence should initially be offered pelvic floor muscle training for 3 months.

If this fails there are some surgical treatments, so worth referring for urological assessment

- *Peri-urethral bulking injections (little evidence)*
- *Adjustable balloon systems – balloon sitting at bladder outlet that can have water added and taken from it.*

- *Urethral slings (in female continence slings and tape have been associated with poor late post-operative outcomes*
- *Artificial urethral sphincter*
    - *Most efficacious*
    - *If you come across a patient with an artificial urethral sphincter in urinary retention: do not try to catheterise them. The sphincter needs deflating before it can be attempted.*

Management of non-prostate cancer related bladder outflow obstruction / BPH

General continence is covered in our episode on continence. 1.03

For Bladder Outflow Obstruction / BPH symptoms:

- Alpha blockers (tamsulosin, doxazosin, alfuzosin) works to relax the bladder neck
    - Side effects postural hypotension
    - Clinical review at 4-6 weeks and then every 6-12 months
- 5-alpha reductase inhibitor (finasteride) helps to shrink the prostate size
    - Best to be used in bigger sized prostates and people at risk of progression (older men)
    - Takes longer to work than alpha blockers (weeks to months)
    - Clinical review at 3-6 months and then every 6-12 months

Combination therapy can be considered in those with moderate to severe LUTS and estimated larger prostates (PSA level >1.4)

If after commencing alpha blocker for LUTS and then there are significant ongoing storage symptoms (urgency, nocturia, frequency) an anticholinergic can be added to the alpha blocker if OAB is suspected as well.

Those who do not respond or can not tolerate these treatments (e.g. postural hypotension) should be considered for more invasive treatments such as catheters or surgery. Decisions should be guided by how symptoms impact on QOL

Surgery for BPH

Surgery is a well evidenced effective treatment for LUTS related to BPH and is usually transurethral but there are multiple techniques in use and an open technique might be used for larger prostate glands.

People being considered for surgery will be seen by the urologist and have some extra investigations to evaluate the impact of the anatomy on function, such as

- 'Urodynamics' including, urine flow rate, measuring
- Post void residual volume
- Cystoscopy (if symptoms severe)
- Renal US (if chronic retention)

Surgery includes

- General Anaesthetic
- Short hospital admission
- Bladder irrigation post operatively incl risk of haematuria

So those at risk of delirium or with significant other medical comorbidities might find this too large an operation.

Urinary retention due to an enlarged prostate

Acute Urinary retention: Should be catheterised and started on an alpha blocker before planned trial without catheter down the line.

Chronic Urinary Retention

- Check serum creatinine and arrange renal US to rule out hydronephrosis
- If renal impairment related to urinary retention: catheterise
- ISC / carer administered intermittent catheterisation should be considered before inserting an indwelling catheter
- Consider surgery as a definitive treatment
- LTC / ISC for those not suitable for surgery

Long Term Catheters

Risks

- Penile trauma - urethral tears if pulling on catheter
- Haematuria and prostate trauma on insertion if difficult
- CAUTI – 1-2 per year for LTC on average (75% of in-patient UTIs)
- Bladder spasms (therefore may not improve symptoms of urgency)
- Leakage of urine if incorrect size
- Bladder stones
- Urethral stenosis and internal pressure damage

Consider LTC if

1. Medical management has failed and surgery is not appropriate
   and
2. Unable to manage ISC – (preferred option)
   and
3. Skin wounds / pressure ulcer
   or
4. Distressed by bed and clothing changes

The Gallery

If you have something you would like us to include - a poem, passage from a book etc then please let us know via Twitter etc etc.

Curriculum Mapping To Be Completed

This episode covers the following areas (n.b not all areas are covered in detail in this single episode):

The Hearing Aid Podcasts

Curriculum	Area
NHS Knowledge Skills Framework	Suitable to support staff at the following levels: • Personal and People Development: Levels 1-3 • Service Improvement: Level 1 - 2 • Communication: Levels 3-4
Foundation curriculum	4. Keeps practice up to date through learning and teaching 10. Recognises, assesses and manages patients with long term conditions 11. Obtains history, performs clinical examination, formulates differential diagnosis and management plan
Core Medical Training	History taking Patient as central focus of care Relationships with patients and communication within a consultation Micturition Difficulties Oncology (Prostate)
Core Surgical Training	Module 2: Genitourinary disease
PA conditions matrix	1A - 11 Renal and Genito-Urinary - Benign Conditions of the GU Tract - Benign prostatic hyperplasia - Acute and chronic urinary retention 1B - 11 Renal and Genito-Urinary - Prostate Ca
GPVTS program	Section - 3.07 Men's Health • Core Competence: Data gathering and interpretation • Core Competence: Clinical management
ANP (Draws from KSF)	7.8 Urine retention, incontinence, infection
Geriatric Medicine	6. Patient as the Central Focus of Care

Training Curriculum	11. Managing Long Term Conditions and Promoting Patient Self Care 12. Relationships with Patients and Communication within a Consultation. 3.2.3 Presentations of Other Illnesses in Older Persons 3.2.4 Drug Therapy 34. Continence 42. Psychiatry of Old Age

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