**Theme:** Voiding dysfunction in Parkinson’s disease

**Scenario:** A 59 year old man is presented to you with a 2 month history of frequency, urgency, urge incontinence, nocturia and poor urinary flow. Two years prior to his presentation he was diagnosed with Parkinson’s Disease which is variably controlled with co-beneldopa and benzhexol.

**Introductory question:** How would you assess him and what role does his PD play in the generation of his LUTS?

**Key Points for Discussion:**
- As for any man of this age - may have LUTS secondary to BPE
- So, history, examination and tests
- Uroflow and PVR
- PSA?
- Dip urine etc
- Role of urodynamics?

Discuss the impact of Parkinson’s Disease on the physiology of voiding
Discuss the different types of voiding problems they may experience

**Question 2:** His PSA is 1.2ng/ml and he has an eGFR of 95mls/min. He goes on to have a urodynamic study which demonstrates an overactive bladder with high pressure/low flow voiding. Why might his voiding appear obstructive and what would you advise him regarding treatment?

**Key Points for Discussion:**
- Discuss obstructive causes
- Discuss sphincter dyssynergia
Prefer initial medical management with anticholinergics
Discuss choice of anticholinergic medication and differing pharmacodynamics
Discuss risks of precipitating an acute retention with these and why
Discuss the possibility of starting him on synchronous alpha blockers
Discuss the possibility for him to need to catheterise, self/carer
Discuss risks of surgical intervention especially incontinence
Higher risk of developing an acute retention - probably, as many drugs given for Parkinson’s Disease, such as benzhexol have anticholinergic properties so may precipitate a cholinergic crisis

**Question 3: (complications of management)**
He is given Oxybutynin 5mg tds and an alpha-blocker for three months with no improvement in his lower tract symptoms. He is now having episodes of urinary incontinence and feels that his quality of life is significantly adversely influenced. He is reasseesed and his post void residuals appear to be increasing and he has suffered from at least one urinary tract infection.
What are his options?

**Key Points for Discussion:**
Consider outlet surgery
Intermittent catheterisation
Indwelling catheter

*Risks of surgical intervention*
Discuss evidence for outcome from TURP in his situation
Discuss, in particular, the risks of incontinence

*Bad prognostic indicators for surgery*
Poor control of the underlying neurological condition
Akinesia getting worse
Dexterity getting worse
Deteriorating cognitive function
Multi-system atrophy

**Question 4:**
He elects to undergo a further urodynamic study which shows continued high pressure voiding and consents to a TURP despite the risks. Surgery is performed under GA and there is significant worsening of his Parkinson’s disease following the intervention. He is totally wet following his surgery.
How do you manage him?

**Key Points for Discussion:**
Video or conventional CMG - discuss
M/CSU
Measure residual volumes
Empirical management of his wetness after discussion with him/his carers

Depends on general state and what he/carers want
Discuss empirical anticholinergics and waiting
Discuss yet further urodynamic assessment with video study
Discuss other, novel, ways of managing his wetness
Emphasise that he is not a good candidate for an AUS even were he to have pure sphincteric wetness as:
Necessitates further surgery
Won’t make him totally dry
Dependent upon cortical function which will necessitate greater carer input
Intercollegiate Specialty Examination in Urology

Urological Imaging & Principles of Technology

Theme: Diathermy, DVT & positioning

Scenario: You are about to commence a standard TURP. You start the procedure but find that the loop will not cut.

Introductory question: (e.g. integration of information presented/application of basic principles to the situation described in the scenario/differential diagnosis)
What do you do? If the earth plate has not been applied to the patient, where would you place it? What factors do you need to consider?

Key Points for Discussion:
Check irrigation fluid
Check lead attached to resectoscope
Check lead attached to machine
Earth plate on and connected correctly
Foot pedal plugged in
Diathermy machine settings correct (probe for what candidate would have them set at (Cut, Coag + Spray, on Monopolar))
If no cause found try replacing lead and/or loop.

Plate near to site of surgery
Avoid current stream crossing heart
Shave if hairy
Large plate with contact agent (usually part of the adhesive)
Dual plate
Avoid wetting plate
Avoid metal prostheses.
For TURP upper thigh or lower abdominal wall ideal.

Discuss the other options like

Bipolar Resection. (discuss the differences)
Laser Vapourisation and Holmium enucleation

**Question 2: (e.g. management, relevant applied pathophysiology, anatomy)**
During WHO the anaesthetist informs you of the fact the patient has a pacemaker.

What measures would you take to avoid interference with pace maker?

**Key Points for Discussion:**
Type of pace makers – refer the details with cardiologist
Bipolar resection
Plate as far away from the heart as possible
Use of magnet!!

**Question 3: (complications of management)**
You are taking an ST3 through an inguinal orchidectomy. While diathermising a small vessel near the wound edge, he delivers 5 mm burn to the skin edge; sustains a glove burn. How do you manage this situation? How could it have been avoided?

**Key Points for Discussion:**
What is the disadvantage of leaving the skin burn?
Excise the area taking a ellipse of the affected wound edge, closure will be unaffected –
Post operatively, document what happened and tell the patient the truth.

Diathermy levels as low as appropriate, use diathermy forceps with minimum of bare metal, don’t use intermediate conductor i.e. normal forceps, same surgeon controls pedal and diathermy forceps, ensure trainees understand the dangers of kit they are using.

Glove burn – Don’t activate diathermy without contact with the patient + insulation defects?

**Question 4:**

Two weeks post op Radical Prostatectomy your patient develops shortness of breath and chest pain. What do you want to know from your trainee? What investigations will you request? This is the CT Pulmonary Angiogram. What can be seen in this image? How and how often does this occur, and what measures would do you take to try and avoid this situation?
**Key Points for Discussion:**
It demonstrates a large saddle pulmonary embolus

VTE (venous thromboembolic disease): Migration of clot that have formed in large veins, usually in the lower limbs
Rate of occurrence plus fatal rate
DVT rate; (0.6% -1.4%)

For all patients; use mechanical devices (either TED stockings + or Flowtron calf compression boots while on table or both).
Use of low molecular weight heparin if risk factors
Consider caval filter if pre-existing clot and anticoagulation contraindicated
Preoperative Clexane, continue postoperatively up to 28 days

What is the evidence for these actions?
Local guidelines, national guidelines, NICE guidelines

Discuss patient related risk factors?

High BMI
Active cancer or cancer treatment
Active heart or respiratory failure
Acute medical illness
Age over 60 years
Antiphospholipid syndrome
Behcet’s disease
Central venous catheter in situ
Continuous travel of more than 3 hours approximately 4 weeks before or after surgery
Immobility (for example, paralysis or limb in plaster)
Inflammatory bowel disease (for example, Crohn’s disease or ulcerative colitis)
Inherited thrombophilias, for example:
High levels of coagulation factors (for example, Factor VIII)
Hyperhomocysteinaemia
Low activated protein C resistance (for example, Factor V Leiden)
Protein C, S and antithrombin deficiencies
Prothrombin 2021A gene mutation.

Newer anticoagulants / clopidogrel and when to stop pre op
Intercollegiate Specialty Examination in Urology

Urological Oncology 1

**Theme:** CisB with BCG failure

**Scenario:**
A newly appointed GP rings you about a 64 year old male smoker presents with frequency and urgency of micturition and non-visible haematuria.

**Introductory question:** (e.g. integration of information presented/application of basic principles to the situation described in the scenario/differential diagnosis)
How would you advise him?

**Key Points for Discussion:**
- **2WW referral to haematuria clinic, investigations performed in this setting**
- Role /benefit rapid access clinics-significance of non-visible haematuria
- Urinary biomarkers/cytology
- Cystoscopy (Role of Blue light / NBI >sensitivity, <specificity)
- Upper tract imaging

**Question 2:** (e.g. management, relevant applied pathophysiology, anatomy)

This is a representative bladder biopsy which shows Carcinoma in situ. How would you manage this patient?
Key Points for Discussion:
Smoking cessation
Intravesical BCG Discuss regimes - induction and maintainence
Contraindications
Complications
Outcomes

Discuss the evidence that BCG prevents progression of Cis?
Lamm (1991) SWOG group BCG 15% vs Doxorubicin 37%
Herr (1988) Delayed time to cystectomy vs controls
Probably not conclusive in long term

Question 3: (complications of management)
He undergoes a treatment course of six, weekly, intra-vesical instillations of BCG
At check cystoscopy 3 months later there are at least 3 inflamed areas in the bladder and biopsy shows further Cis. What are the treatment options?

Key Points for Discussion:
Further second induction with BCG – success rates Discuss results of further BCG vs risk of metastasis (c 30% response vs 20-50% chance of metastasis
Staging
Role of Cystectomy-results of cystectomy in patients with Cis (90-100% cure).
Discuss results of cystectomy in patients with Cis (90-100% cure).

Question 4:
He elects to undergo cystectomy and is very keen to know about reconstruction without an incontinent stoma. How would you counsel him?

Key Points for Discussion:
Advantages/disadvantages of types of reconstruction/selection criteria
Risks to sexual function
Risks regarding continence
Risks regarding long-term biochemistry
Potential need to self-catheterise
Risks of urethral recurrence
Risks of re-operation