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Post operative voiding dysfunction and the Value of Urodynamics

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Learning objectives:

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- Pathophysiology of post op voiding dysfunction.
- Care pathway for patients affected.
- Short and long term consequences.
- Key elements of Urodynamic testing.

Post op VD

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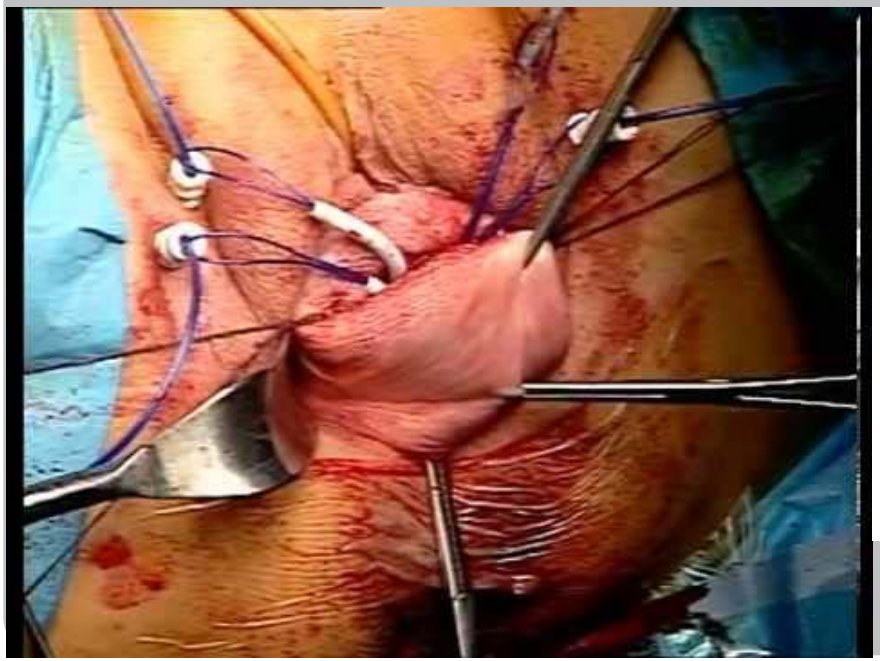
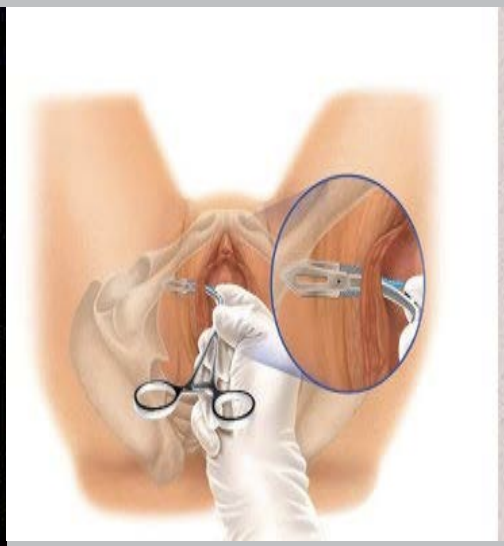
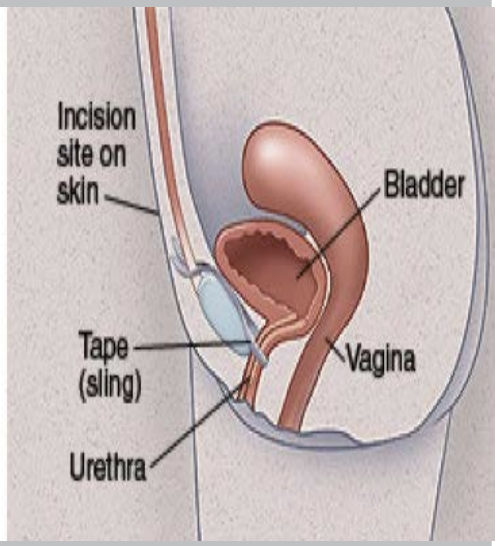
Post vaginal surgery and POP surgery

Post incontinence surgery







Pathophysiology:

- Obstructive
- Inflammatory
- Pharmacological
- Over distension
- Endocrine
- Psychogenic

Incidence

- Very variable between 2.4-24%.
- Impairment of bladder sensation , alteration of the bladder capacity and compliance , compromised detrusor function, reduction in maximal urethral pressure and closure pressure and decrease inn pressure transmission ratio.
- The extent of surgical dissection proportionate to the possible post op void incidence.

Pharmacological

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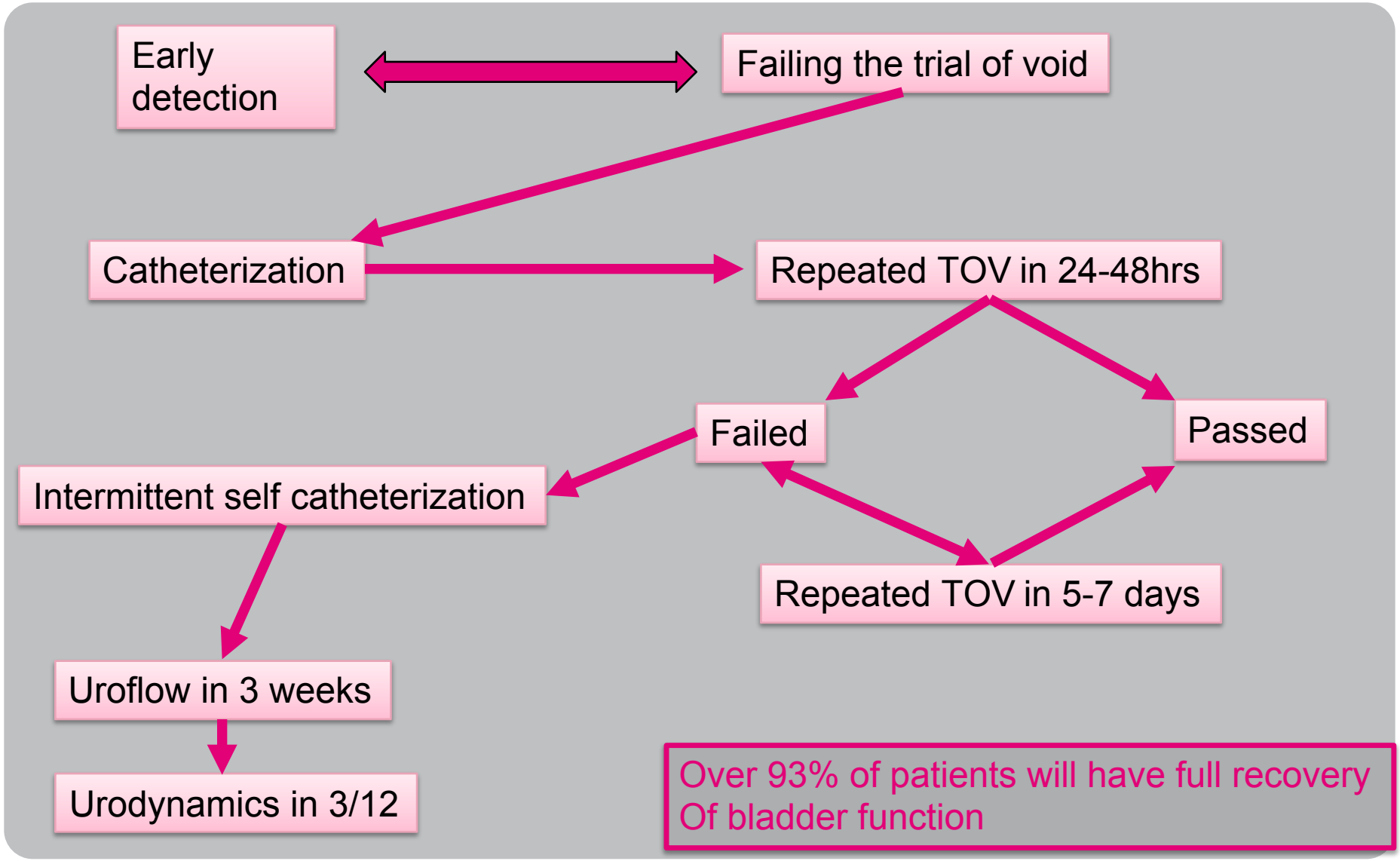
ED and pain relief medications are the most to blame post op.

Over distension

- Beyond certain volume can cause damage, the persistence of distention can cause ischemia and permanent damage of the bladder muscle.

- Distention beyond 1L can cause permanent damage.

Management: Non-Surgical



Surgical

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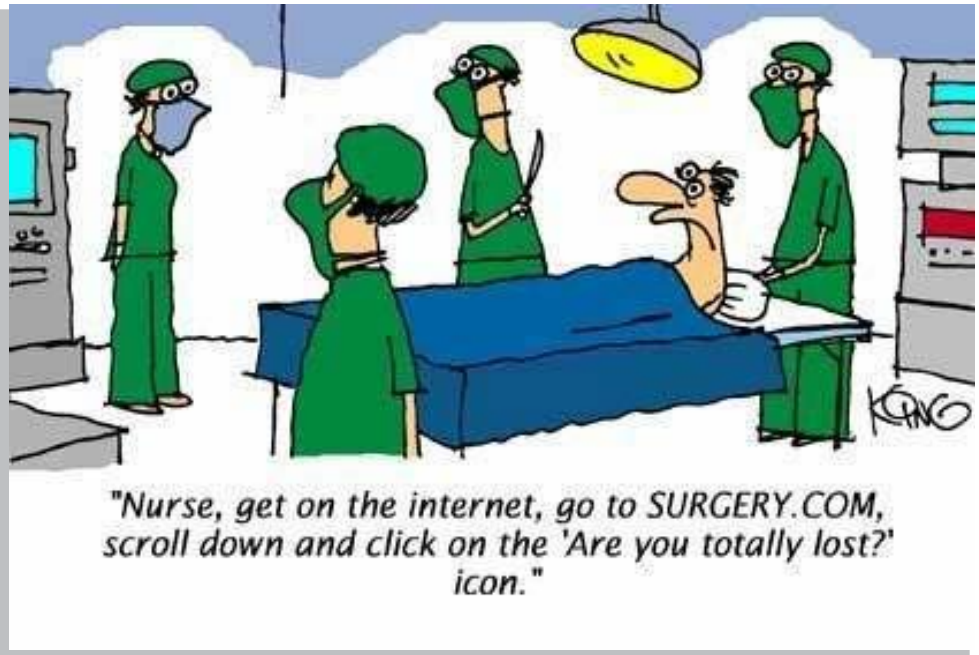
- Tape loosening or division.
- Urethrolysis vaginal or abdominal.
- Bladder neck incision.
- Botox for bladder neck .



"Nurse, get on the internet, go to SURGERY.COM, scroll down and click on the 'Are you totally lost?' icon."

Urodynamics

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Definition:

"The assessment of the function and dysfunction of the urinary tract".

The Role of Urodynamics:

a. To Identify all factors that contribute to the LUT symptoms (e.g. Urinary incontinence) and assess their relative importance.
b. To obtain information about all other aspects of the LUT functions or dysfunction whether or not expressed as a symptom or recognisable as a sign.

Role of Urodynamocs:

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c. To allow a prediction of the possible consequences of LUT dysfunction for the Upper urinary tract.

d. To allow a prediction of the outcome including undesirable side effects of the contemplated treatment

e. To confirm the effect of intervention or understand the mode of action of a particular type of Treatment for the LUT dysfunction especially a new and experimental (pre-routine) one

f. To understand the reasons for failure of previous Rx for urinary incontinence or the LUT dysfunction in general (after unsatisfactory treatment)

When to refer?
And “Who” do you refer to?

- Failed conservative Management.
- Pain, Haematuria or recurrent UTIs (>or=3 in 6/12)
- Voiding difficulty.
- Suspected fistula.
- Neuropathic bladder.
- Significant pelvic organ prolapse.
- Uncertain diagnosis.

Indications for Urodynamics:

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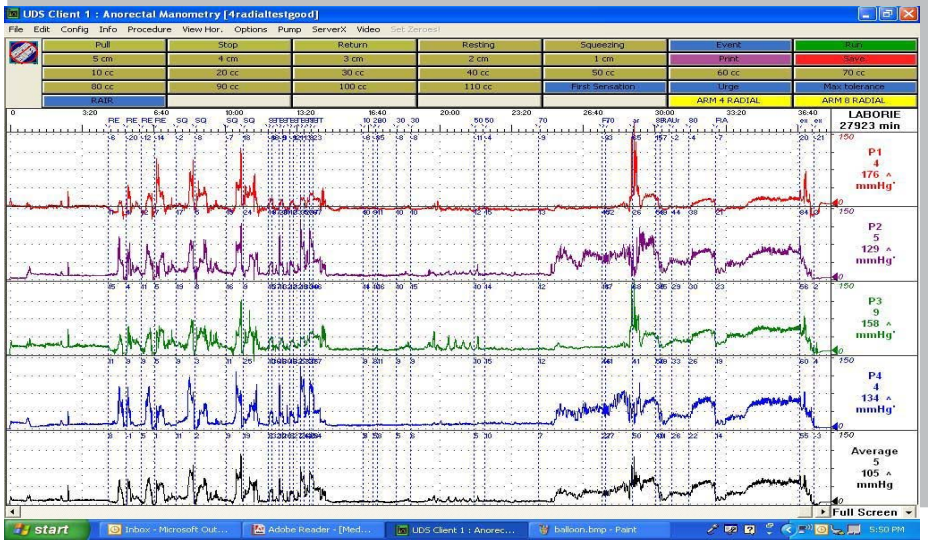
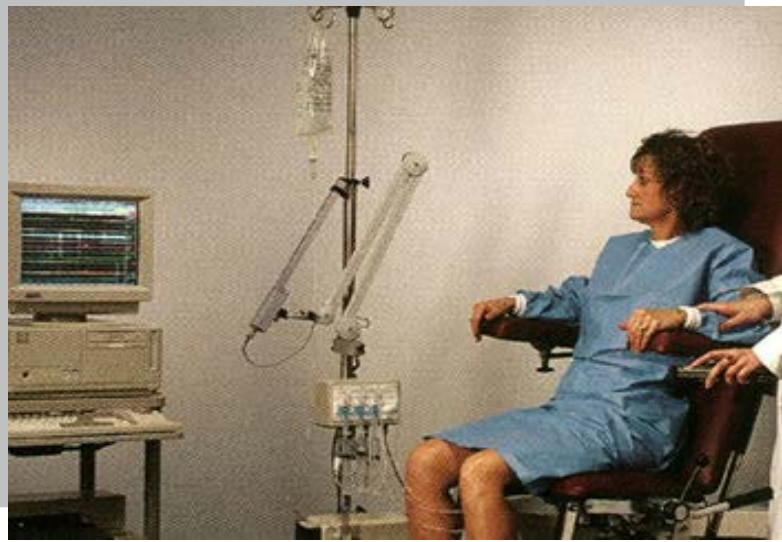
① Failed to respond to empirical treatment.
② Previous continence surgery.
③ Prior to definitive continence procedure.
④ Prior to prolapse repair accompanying stress incontinence.
⑤ Symptoms suggesting of voiding difficulty.
⑥ Presence of neurological disease.





Clinical applications of Uds:

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A. Stress urinary incontinence:

1. MUCP and severity of SI.
2. Choosing the appropriate therapy.
3. Prediction of failure of surgery.
4. Voiding difficulty after surgery.
5. Postoperative Urgency.
6. Occult SI.

B. Urgency and UI: Pathophysiology and severity.

Possible adverse events:

- Physical trauma.
- UTI.
- Ureteric catheterization and renal pain.
- Psychological effect and anxiety.

Postpartum Voiding dysfunction

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Learning Objectives:

Identify how frequent is postpartum voiding difficulty occurs.

Understand some of the pathophysiologies of this syndrome.

Outline the principles in managing these cases and foresee their potential outcomes.

Incidence

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Estimated incidences range from 0.05% to 37.0%.

Similarly, figures varied widely depending on whether studies focused on overt urinary retention (0.2%– 4.9%), covert voiding dysfunction (9.7%–37.0%), persistent urinary retention (0.05%–0.07%) or various combinations of the above.

Pathogenesis and risk factors:

Epidural and regional anaesthesia.

Prolonged 1st and or 2nd stage of labour.

Instrumental deliveries.

Primiparity.

Birth weight of >3.8 kg.

Clinical symptoms

small voided volumes.

urinary frequency.

slow or intermittent stream.

urgency, bladder pain or discomfort, urinary incontinence.

strain to void, or no sensation to void.

Management & Recommendations

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- No patient should be left >6 h without voiding or being catheterized for residual volumes.
- Strict input and output charts should be instituted.
- Timing of voids should be recorded, and voided
- volumes should be measured.
- Timed voiding every 3–4 h in the immediate post-
- partum period.
- Post-void residual volumes should be measured.

Policy and Procedure Manual

Postpartum Voiding Dysfunction: Treatment Algorithm

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Symptoms of voiding dysfunction/retention

- No sensation to void
- Inability to void within 6 hours of giving birth or within 6 hours of catheter removal after caesarean birth
- Frequency, urgency
- Lower abdominal pain
- Palpable bladder
- Overflow incontinence
- Voided volumes of <100ml

If woman experiences any of the above symptoms notify physiotherapist (ext 3160) and continence nurse (ext 3144) and follow flowchart commencing with **STEP 1**.

If patient experiencing severe pain & unable to void, contact medical officer or Continence nurse,for review, patient may require IDC or in/out catheter.

STEP 1: Trial of void

- Commence 24hour fluid balance chart (FBC)
- Measure all voids and document on fluid balance chart
- Commence timed voiding encouraging patient to void every 2-3 hours
- Ensure adequate fluid intake (1.5 – 2litres/day) and adequate analgesia
- Encourage double voiding
- Perform urinalysis to exclude infection and inform medical staff of any abnormalities
- **Women who continue to void <100mL or are unable to void require immediate measurement of residual volumes with in/out catheter. Do not use bladder scanner.**

After completion of 24hr FBC, reassess bladder sensation.
Does the patient have a normal sensation to void?

NO: Patient has no sensation to void.
Continue with **STEP 1.** Measure 2 voids and residual volumes using in/out catheter. **Do not use bladder scanner.**

YES: Patient has normal sensation to void.
No further action.

If residual volumes >150mL on 2 occasions:

- IDC inserted for 24hrs
- If perineum bruised or swollen catheter to remain for 48hrs & apply ice to perineum
- Send CSU

If residuals volumes <150ml on 2 occasions:

- Trial of void successful.
- Refer patient to physio for appointment in one week. Patient to continue timed voiding and double voiding at home.
- Provide fact sheet: 'Difficulty emptying your bladder after childbirth'.
- Provide bladder diary.

After 24-48hrs remove IDC and **STEP 1** is repeated and residual volumes measured using in/out catheter

Residual volumes >150ml on 2 occasions:

- IDC inserted & patient discharged home for 5-7 days.

Residual volume <150ml on 2 occasions:

- Trial of void successful.
- **Does the patient have a sensation to void?**

NO, patient has no sensation to void.

- Refer patient to physio for appointment in one week. Patient to continue timed voiding and double voiding at home.
- Provide fact sheet: 'Difficulty emptying your bladder after childbirth'.
- Provide bladder diary.

YES, patient has normal sensation to void.
No further action.

After 5-7 days patient is readmitted and **STEP 1** is repeated.

Residual volumes >150ml on 2 occasions:

- Patient to be taught intermittent self catheterisation (ISC). Refer to ISC fact sheet. ISC to cease when residual volumes are <100ml on 2 occasions.
- Refer to Continence nurse advisor for follow up in urogynaecology outpatient clinic in 2 weeks (ext 3144).

Residual volume <150ml on 2occasions:

- Trial of void successful
- Review in Urogynaecology outpatient clinic in 6 months.
- **Does the patient have sensation to void?**

NO, patient has no sensation to void.

- Trial of void successful.
- Refer patient to physio for appointment in one week. Patient to continue timed voiding and double voiding at home.
- Provide fact sheet: 'Difficulty emptying your bladder after childbirth'. Provide bladder diary.

YES, patient has normal sensation to void. No further action.

Thank you

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