MALE CATHETERIZATION

URETHRAL CATHETERIZATION IS THE DRAINAGE OF URINE FROM THE BLADDER BY PASSAGE OF A CATHETER INTO THE BLADDER VIA THE URETHRA

ESSENTIAL ANATOMY OF THE MALE URINARY SYSTEM

1. The average length in total of the urethra is about 20cm, on average 15cm runs through the penis.

2. The prostate gland surrounds the male urethra at the junction with the bladder. The prostate often becomes enlarged in older men obstructing the flow of urine and causing problems during catheterization.

3. Other areas of resistance when catheterizing are sphincters, and bends in the urethra, these can be overcome by slight pressure or by asking the patient to cough.

4. When passing a catheter presenting with ‘abnormal’ resistance do not force it, you may damage or rupture the urethra.
INDICATIONS FOR URETHRAL CATHETERIZATION

**Incontinence:** - inability to control the outflow of urine.

**Retention:** - Acute / chronic

1. Bladder outflow obstruction secondary to prostatic hyperplasia.
2. Urinary tract infections (UTI).
3. Surgery after lower abdominal operations.
4. Drug induced-drugs with anticholinergic actions e.g. tricyclic antidepressants are the most common drug causes.
5. Neurological damage to pathways controlling micturition. This may occur at many sites from the cerebral cortex through the spinal cord to the lumbosacral autonomic outflow.

**Symptoms of urinary retention:**
- Inability to pass urine.
- Increased desire to pass urine.
- Supra-pubic pain.
- Lower abdominal distention.
- Leaking urine (retention with overflow).

**Signs of urinary retention**
- Enlarged bladder, (palpable above the pubis + dull to percussion).
- Reduced urine flow rate.
- Restlessness in the semi-conscious patient.

**Special tests**
- Dilated bladder on ultrasound examination of pelvis.
- Raised blood urea (chronic retention).
- Reduced 24-hour urine output measurement.

**Other indications for catheter insertion are:**

1. To monitor urine flow.
2. Investigations: - i.e. cystometry.
3. To monitor urine production and flow during and after surgery.
CATHETER SELECTION

Select the size and type of catheter you need.

SIZE

Sizes range from 10Ch - 18Ch (other sizes available for specialist procedures). If too large a size is used the urethra could be damaged or the procedure may be difficult. If the catheter is too small urine may leak around it. 12Ch and 14Ch are the most frequently used sizes.

TYPE

Materials:

1. **Latex-based catheter** *(short term use, up to one week)*. These need replacing regularly because they cause inflammation, cystitis and encrustation if used for longer.

   Most acute reasons to catheterize will require only short term catheters.

2. **Silicone treated** *(up to one month)*

   These should not be used for longer than one month because the silicone tends to peel off exposing the latex rubber underneath.

3. **100% Silicone or Hydrogel** *(up to three months)*. These catheters cause less inflammation in long term use, but are expensive and not necessary for short periods.

4. **Intermittent** *(cannot be used for continuous drainage)*. Used for ‘one off’ bladder drainage.

Catheters can be provided in male or female length.
Function

1. **Two-way catheters**:- These are suitable for incontinence, retention, maintaining skin integrity, urine flow rate.

2. **Three-way catheters**:- These have a double lumen and are used for bladder irrigation to prevent clot retention after prostate and bladder surgery.

3. **Intermittent**:- Catheters for intermittent use are for use on a single occasion to empty the bladder and sometimes to dilate urethral strictures. Patients use disposable catheters and self-catheterize.
THE PROCEDURE

1. Prepare your equipment, put what you want on to the trolley, choose catheter appropriate for urethral size and check the volume of water needed to inflate the balloon. All this information is written on the end of the catheter and on its container.

1. Explain the procedure to the patient.
2. Obtain the verbal consent of the patient.
3. Ensure patient privacy.
4. Help the patient to get into the supine position. Put an absorbent pad underneath the patient's buttocks.
5. Put on plastic apron.
6. Using aseptic technique open your pack.
7. Wash hands.
8. Put on gloves.
9. Arrange towels so that only the penis is visible.
10. Pick up the penis in a gauze swab and clean the penis and perineum using no touch technique, use a new swab for each wipe, wipe away from the meatus, retract the foreskin if necessary. Explain to the patient what you are doing as you go along.
11. Insert local anesthetic (lignocaine) into the urethra and massage the gel along the penis (wait 2-3 minutes for the anesthetic to work).
12. Place catheter and sterile container between patients legs.

13. Feeding the catheter out of its' sterile pack and insert it into the penis, Negotiate narrowing at the prostatic bend by lifting the penis up towards the pubis while keeping it slightly stretched.

14. Continue to insert the catheter until urine flows back into the container between the patient's legs and then a little further.

15. Inflate the balloon to catheter requirements using sterile water then gently pull the catheter back until you feel the resistance of the base of the bladder.

16. Attach a catheter bag or leg drainage bag using sterile technique.

17. Help to clean the patient up and ask if they are comfortable.

18. Take urine sample if necessary.

19. Inform other members of staff of this procedure and any follow up that may be required.

WHEN YOU HAVE FINISHED, WRITE THE FOLLOWING DETAILS OF THE PROCEDURE IN THE NOTES

- The type/size of catheter used i.e. Latex, 14Ch, and when it should be removed.
- That aseptic technique was maintained.
- That the catheter was easily inserted with no problems at time of insertion, or detail any problems that did arise.
- The volume of solution/and type of fluid used for the balloon to inflate.
- The volume of urine drained and appearance of urine.
- Whether a catheter specimen of urine was sent for report.
- Name and signature of person who performed the catheterization.