



University
of Glasgow

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Medical School

Year 3

Clinical Procedural Skills

MALE CATHERISATION

Aim

GMC Practical Skills and Procedures-(20) *Newly qualified junior doctors should be able to carry out urethral catheterisation of female patients safely under direct supervision*

Learning Outcomes

At the end of this session, students should be able to:

- Define the reasons why male urethral catheterisation may be necessary.
- State the common risk factors that may arise as a result of the procedure being carried out.
- Discuss the reasons why insertion of a urinary catheter in male patients may be contraindicated.
- Describe the process of inserting a urinary catheter in a male patient.
- Describe the information required for the completion of patient care plan documentation.

Indications for male urinary catheterisation

Indication	Comments
Urinary Retention	Retention of urine can be caused by mechanical urethral obstruction or neurological disorders affecting voiding. In male patients- urinary retention is often caused by prostatic pathology. A urinary catheter allows bladder drainage.
Monitoring Urine Output	In a number of different clinical conditions including shock and renal failure it is desirable to accurately measure hourly urine output to calculate accurate fluid balance
Unable to void urine in the normal manner	Unconscious patients, patients undergoing operative procedures or those with particular injuries (for example fractured neck of femur)
Bladder irrigation	Prostatic operative procedures often require post-operative irrigation to prevent clot retention of urine.
Facilitating continence	Urinary incontinence and the use of some continence equipment can result in skin problems
Medication administration	Medication such as chemotherapy agents may require to be administered intravesically.

Male catheterisation is more commonly indicated than female catheterisation and can be procedurally more challenging- especially in patients with prostate pathology.

Contraindications

CONTRAINDICATIONS TO CATHERISATION

- No consent from the patient
- Urethral stricture
- Blood at the urinary meatus following trauma

Urethral stricture is typically caused by scar tissue narrowing the urethral lumen and making passing a catheter difficult or even impossible. Catheterisation should both be routinely attempted on patients with known urethral stricture.

Blood at the urinary meatus in the presence of trauma suggests a possible urinary tract injury and imaging **MUST** be conducted to establish the extent of any such injury before attempting catheterisation.

Pre-Procedure

PRE-PROCEDURE

- Obtain consent from the patient
- Prepare equipment
- Position the patient ensuring dignity

Obtain consent from the patient:

- Explain the indications for the procedure to the patient
- Explain the procedure to the patient
- Explain potential complications
- Estimate how long the catheter will be required
- Check for allergies (latex/local anaesthetic gel)

OBTAIN CONSENT

Prepare equipment

The equipment required for catheterisation includes:

- A cleaned procedure trolley
- Catheter Female catheters are shorter than male catheters reflecting the shorter urethra of females
Catheters are sized using the French gauge (Charriere scale) where 1Ch is 1/3mm. Most male patients require a 12Ch (4mm) or 14Ch (4.3mm) in external diameter
- Dressing pack
- Chlorhexadine for cleaning the patient

- 10mls of water for injection in a 10ml syringe (many catheters have this included)
- 2 pairs of appropriately sized gloves
- An apron
- A urine drainage bag and sterile foil bowl for urine collection
- Local anaesthetic gel (this typically comes in a pre-filled syringe)



Local anaesthetic gel



Catheter shown with the balloon inflated

Irrigation Catheters

When the indication for is bladder irrigation and/or clot retention of urine, a “3-way” or irrigation catheter may be required. These are usually 18Ch (5.4mm) or 20Ch (6mm) and have a port for urine drainage and a port for irrigation.



An irrigation catheter.



A procedure trolley being cleaned before catheterisation

Position the patient ensuring dignity: OFFER A CHAPERONE

Catheterisation is an intimate and invasive procedure which is also frequently uncomfortable for the patient.

Position the patient lying on a bed ensuring that they are comfortable. The patient should remove their underwear or have it removed if they are unable to do so.

The patient is asked to bend their knees and then externally rotate their hips bringing the plantar aspects of their feet together. The patient must remain covered until the moment the procedure is to begin



Patient position for urinary catheterisation

Place an absorbent pad underneath the patient to lessen the likelihood of soiling bed linen.

Procedure

PROCEDURE

- Ensure patient comfort throughout the procedure
- Don apron and 2 pairs of gloves
- Expose the patient and clean the external genitalia
- Identify the external urethral meatus
- Remove the first pair of gloves
- Insert local anaesthetic gel and allow to have effect
- Place the sterile foil bowl between the patient's legs
- Remove the catheter tip from the wrapper
- Insert catheter into urethral meatus gently- no force should be required.
- Advance the catheter whilst gradually removing the catheter wrapper
- When urine is obtained- Inflate the catheter balloon with 10mls of sterile water
- Attach the urine drainage bag and ensure this is below the level of the patient's bladder

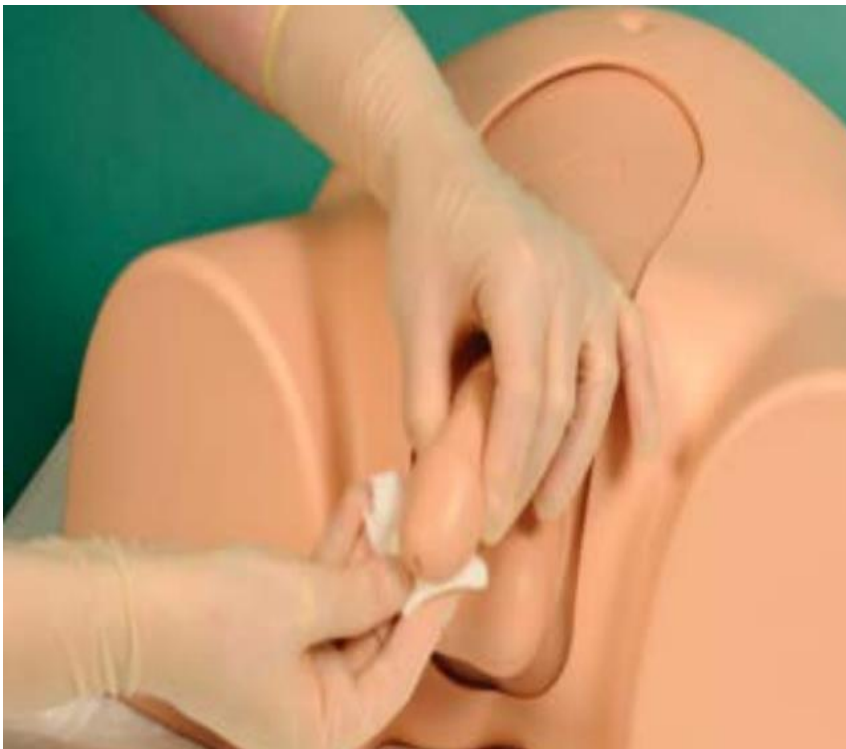


Don apron prior to the procedure



ENSURE STERILE PROCEDURE

- Open the dressing pack
- Open the catheter ensuring it is a female catheter and is of the correct size and is in date.
- Open the urine drainage bag
- Open 2 pairs of appropriately sized gloves



Don 2 pairs of sterile gloves

If the patient has a foreskin ask them to retract it. If they are unable to then provide assistance.

Clean the glans starting at the urethral meatus and spiralling upwards.

Use a second swab to clean the underside of the penis and scrotum where the penis will lie



Remove the first pair of gloves and dispose of them.

Slowly insert the local anaesthetic gel into the penis warning the patient they may experience some discomfort.

Allow the local anaesthetic gel a short period to have some effect



Take the fenestrated sterile drape and place it over the penis.

Take care not to touch the penis during this step.



Place the sterile foil bowl between the patient's legs

Remove the catheter tip from the wrapper being careful NOT to touch the catheter.

Warn the patient that you are about to insert the catheter

Hold the penis in a fully extended position

Insert the catheter into the urethral meatus



Gently advance the catheter whilst simultaneously withdrawing the wrapper.

When urine begins to collect in the bag- gently remove it and allow urine to drain into the sterile foil bowl

The urine in the bowl can be tested using urinalysis and sent for bacteriological examination.



TOP TIPS

If resistance is encountered- this is often due to prostate enlargement.

Strategies to employ:

1. Apply gentle traction to the penis
2. Ask the patient to cough as you apply gentle pressure
3. Rotate the catheter and apply gentle pressure

NEVER USE EXCESSIVE FORCE



When the catheter enters the bladder- urine will flow into the catheter wrapper.

Advance the catheter to the bifurcation and remove the catheter wrapper.

This prevents to balloon from being inflated in the urethra.



Foil bowl used for urine collection

TOP TIP

Beware when inserting a catheter in patients with urinary retention that a large volume of urine can drain very quickly from the catheter.

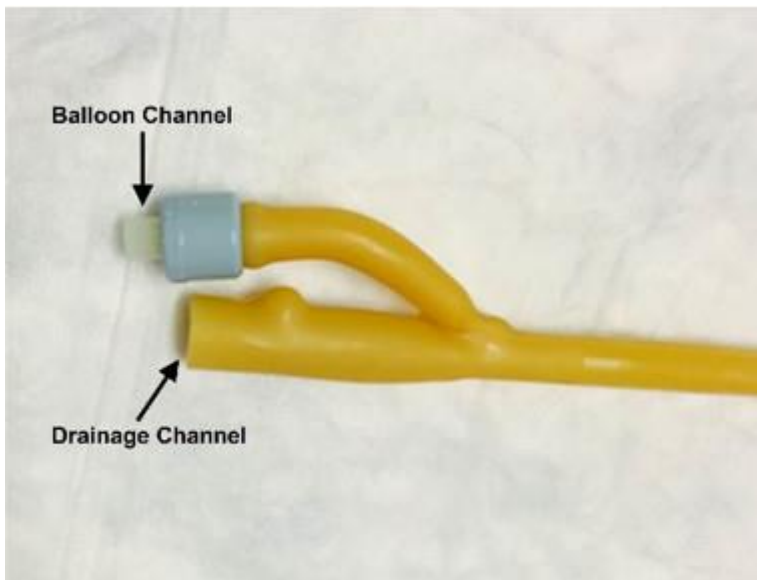


Remove the cap from the urine drainage bag and place it onto the drainage port of the catheter.

In irrigation catheters- this port will be clearly marked

TOP TIP

Urine may flow very quickly from the catheter- to prevent excessive leakage- pinch the end of the catheter with your thumb and index finger until the drainage bag is attached



The balloon needs to be inflated to enable the catheter to remain in position.

Slowly inflate the balloon with 10mls of sterile water.

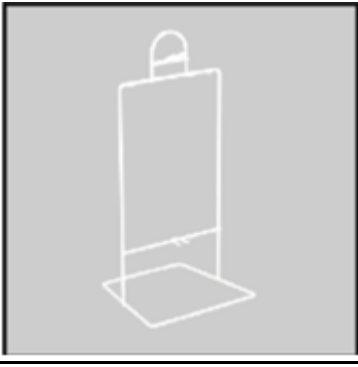
Ask the patient if there is any discomfort on inflation of the balloon.

If the patient complains of discomfort- stop inflation immediately and reposition the catheter and attempt inflation again.



Clean the patient removing excess local anaesthetic gel and ensure that the skin is dry.

If the patient has a foreskin ensure this is reduced



Ensure the urine bag is positioned below the level of the patient's bladder.

A urine bag stand keeps the bag in position.

Post Procedure

Post Procedure

Explain to the patient that the procedure is completed and check on their comfort.

Reassure the patient that any urine will be collected in the urine drainage bag. Patients often report a feeling of urgency to void urine once a catheter is inserted.

Ensure that urine is draining into the urine drainage bag.

Dispose of the equipment following local clinical waste procedures

If required- undertake urinalysis and/or obtain a specimen for bacteriological analysis.

Complete the local catheter care documentation- this varies across different health boards.

Document the procedure in the patient's notes

TOP TIP

Catheter documentation often requires a sticker from the catheter packaging to be attached.

Check local procedures before disposing of equipment



Where hourly urine volume measurement is required- a urometer should be attached to the catheter.

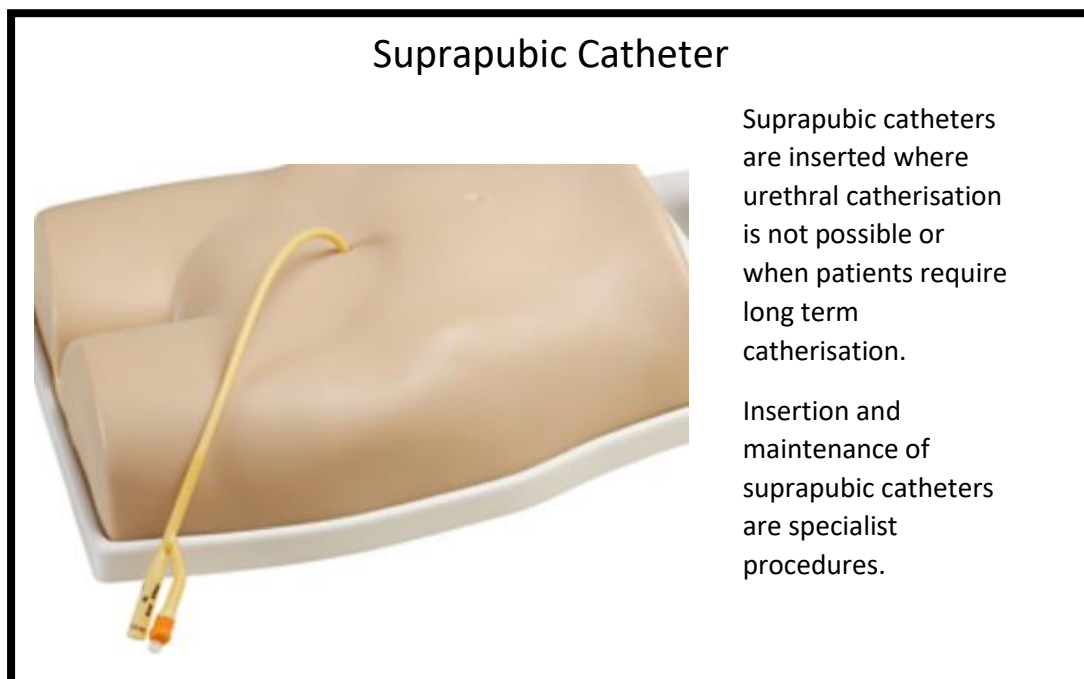
Urometers typically have hooks to attach to the patient's bed.



For ambulant patients- the urine drainage bag can be attached to the patient's leg using straps.

Complications of catheterisation

- Urinary Tract Infection:** This is the most common complication. UTI can be caused by lack of sterile technique during catheter insertion or by prolonged catheter use. In high risk patients (those with compromised immunity or with a significant history of UTI)- prophylactic antibiotics are often administered.
- Bladder spasm/Loss of bladder tone:** Spasms are caused by bladder contraction against the catheter balloon. Bladder tone can be compromised by long term catheter use resulting in difficulty in voiding urine.
- Urethral trauma:** Use of incorrect equipment or anatomical variability can result in urethral trauma during catheterisation. Any evidence of bleeding during catheterisation should result in the procedure being abandoned.
- CATHETERS MUST NOT BE FORCEABLY INSERTED.** This can result in the creation of a “false passage” and can compromise the patient’s capability to void urine in future.



Male catheterisation checklist

- ✓ Explain the indications for the procedure to the patient, what the procedure involves and obtain the patient's consent.
- ✓ Gather the required equipment
- ✓ Position the patient ensuring dignity. Offer a chaperone.
- ✓ Don apron
- ✓ Open the equipment onto a clean procedure trolley ensuring sterility.
- ✓ Don 2 pairs of sterile gloves.
- ✓ If the patient has a foreskin- ask them to retract this otherwise provide assistance.
- ✓ Clean the penis and scrotum disposing of the wipes afterwards. Remove one pair of gloves.
- ✓ Having warned the patient- insert the local anaesthetic gel. Allow a short period for the gel to take effect.
- ✓ Remove the catheter tip from the wrapper. Not touching the tip- insert it into the urethral meatus.
- ✓ Advance the catheter whilst withdrawing the wrapper.
- ✓ If resistance is encountered, ask the patient to cough, rotate the catheter or apply traction to the penis
- ✓ When urine begins to flow, attach the urine bag.
- ✓ Inflate the balloon with 10mls sterile water.
- ✓ Clean and dry the patient. If the patient has a foreskin- ensure this is reduced
- ✓ Dispose of equipment in accordance with local procedures. Make sure the urine bag is below the level of the patient's bladder.
- ✓ Ensure adequate documentation and check on patient comfort.