Institut national d'excellence en santé et en services sociaux
Québec

QUÉBEC'S NATIONAL MEDICAL PROTOCOL

No. 888023

Urinary catheter placement in an adult with functional autonomy decline presenting with symptoms suggestive of acute urinary retention

Developed in collaboration with an advisory committee consisting of Québec clinicians and experts.

CLINICAL SITUATION OR TARGET POPULATION

Person 18 years of age or older with functional autonomy decline possibly due to a major neurocognitive disorder

AND

who presents with the following symptoms:

- The inability to empty their bladder

  AND

- A sensation of bladder fullness **OR** abdominal discomfort

CONTRAINDICATIONS TO THE APPLICATION OF THIS PROTOCOE

- Recent (< 3 months) prostate or bladder neck surgery
- Recent (< 3 months) urethral or prostate trauma
- Pelvic trauma with bleeding from the urinary meatus following a serious accident
- Known or presumed acute prostatitis
- The presence of a penile prosthesis
- The presence of an artificial urinary sphincter
- A history of urethral stenosis

INSTRUCTIONS

1. HEALTH STATUS ASSESSMENT

1.1 Symptoms

Check for:

- The inability to empty the bladder

  AND

- A sensation of bladder fullness

  OR

- Abdominal discomfort
  - May manifest as agitation in a patient who has difficulty communicating or a major neurocognitive disorder.

1.2 Health history

Check for:

- A decline in functional autonomy
  - May be due to a major neurocognitive disorder
- Known benign prostatic hyperplasia
- A history of allergic reaction to latex

Check for the following, all of which are potential contraindications:

- Recent (< 3 months) prostate or bladder neck surgery
- Recent (< 3 months) urethral or prostate trauma
- Pelvic trauma with bleeding from the urinary meatus following a serious accident
- Known or presumed acute prostatitis: fever (or chills) and perineal pain
- The presence of a penile prosthesis
- The presence of an artificial urinary sphincter
- A history of urethral stenosis

Check for the following if a portable bladder scanner is available:

- Known anasarca due to liver or heart failure

1.3 Medication history

Check for:

- A history of allergic reaction to iodine antiseptics

When considering the use of lidocaine hydrochloride anesthetic gel, check for:

- A history of allergic reaction to amide local anesthetics

When considering the use of a lubricating gel containing chlorhexidine, check for:

- A history of allergic reaction to chlorhexidine

1.4 Physical examination

Examine the abdomen:

- Check for:
  - Lower abdominal discomfort on palpation
  - Bladder distention

Examine the external genitalia:

- Check for :
  - Bleeding from the urinary meatus
  - A penile prosthesis

2. OTHER INVESTIGATIONS

If a portable bladder scanner is available:

- Measure the bladder volume
  - A voiding attempt should be made within the 15 minutes preceding the bladder volume measurement.
  - The portable bladder scanner for measuring bladder volume should be used with caution in a patient with anasarca caused by liver or heart failure, as the reading may be falsely elevated.
  - If the measured bladder volume is greater than 300 ml, install a urinary catheter.
  - If the measured bladder volume is 300 ml or less, stop this protocol and do a reevaluation.

Do the following:

- Obtain a pre-referral urine specimen and order a microscopy and a cell count, and a urine culture and sensitivity test for the planned medical follow-up.

3. TREATMENT APPROACH

3.1 Treatment objective

Relieve the symptoms of the acute urinary retention and reduce the risk of the complications associated with it.

3.2 General information on the pharmacological treatment that can be used during urinary catheter placement

The following general information on the pharmacological treatment that can be used during urinary catheter placement is not exhaustive.

LIDOCAINE HYDROCHLORIDE GEL WITH OR WITHOUT CHLORHEXIDINE	
Contraindications	▶ A history of allergic reaction to amide local anesthetics or another ingredient of the preparation (particularly chlorhexidine, if present)
Precautions	▶ Use with caution if there is any mucosal inflammation or trauma in the area of application
Dosage	▶ 5 to 10 ml (100 to 200 mg)
Onset of action	▶ Wait 10 minutes for the maximum anesthetic effect ▶ Immediate lubricating effect
Adverse drug effects	▶ Skin lesions, urticaria or edema
Most significant drug interactions	▶ None

3.3 Placement of a urinary catheter

If the patient is unable to empty their bladder and has a sensation of bladder fullness or abdominal discomfort, and if the residual urine volume is greater than 300 ml as measured with a portable bladder scanner, if available:

- Disinfect the urinary meatus and apply lubricating gel using a sterile technique.

  OR

- If necessary:

  In a male: 10 ml of lidocaine hydrochloride gel (20 mg/ml).

  In a female: 5 to 10 ml of lidocaine hydrochloride gel (20 mg/ml) (the female urethra being shorter).

  - If the patient has a history of allergic reaction to iodine antiseptics, use an iodine-free antiseptic.
  - If the patient has a history of allergic reaction to local anesthetics, use a water-based gel without anesthetic.
  - If the patient has a history of allergic reaction to chlorhexidine, use a chlorhexidine-free gel.

- If an anesthetic gel is used, ideally, leave it on for 10 minutes in order to achieve the maximum anesthetic effect.
- Install a urinary catheter to ensure complete drainage of the bladder AND obtain a pre-referral urine specimen and order a microscopy and a cell count, and a culture and sensitivity test for the planned medical follow-up.
  - If the patient has a history of allergic reaction to latex, use a 100% latex-free urinary catheter.
  - During insertion, do not force the catheter, and stop the procedure if bleeding is observed at the urinary meatus or if there is blood at the tip of the catheter.
  - If available, a coude catheter can be used in males.
- Document the following in the patient's chart:
  - The amount of urine drained during the first 30 minutes after catheterization.
  - The initial appearance of the urine.

4. INFORMATION TO BE PROVIDED

Discuss the following aspects of life habits with the patient, their caregiver or the healthcare team:

- Hygiene and hand-washing
- Constipation prevention

For a patient living at home, ask them or their caregiver to:

- Check the flow of urine into the collection bag (check that there are no kinks in the tubing).
- Keep the collection bag below the level of the bladder and secure it.
- Empty the collection bag regularly so that it does not become full.
- Avoid disconnecting the drainage system.
- Advise them to seek medical attention if there is a catheter-related problem or complication: an obstruction in the catheter, more than 200 ml of urine collected per hour for 4 hours after the initial drainage, bleeding with clots, fever (or chills), general malaise, low diuresis, testicular pain and unilateral swelling or edema, repeated vomiting, leakage from the catheter, catheter expulsion, or an allergic reaction.
- Consult a physician within 7-10 days after the catheter is installed for an evaluation.

5. FOLLOW-UP FOR A PATIENT IN A RESIDENTIAL FACILITY

- Monitor urine flow:
  - An obstruction or leak in the catheter.
  - If more than 1.5 L of urine is drained within 30 minutes after catheterization, monitor hourly diuresis.
- Check for complications: bleeding with clots, fever (or chills), low diuresis, progressive testicular pain and unilateral erythema or edema, repeated vomiting or allergic reaction.
- Consult a physician within 7 to 10 days after catheterization for an evaluation and to consider weaning off the catheter.

6. SITUATIONS REQUIRING FURTHER INVESTIGATION OR AN ASSESSMENT

- Failed catheterization (e.g., technical difficulties or lack of cooperation from the patient).
- Symptoms suggestive of acute urinary retention despite a bladder volume of 300 ml or less as measured with a portable bladder scanner.
- A catheterization-related complication (suspected trauma or hematuria possibly caused by malpositioning of the catheter).
- When more than 1.5 L of urine is drained within 30 minutes after catheterization, followed by hourly diuresis of more than 200 ml/hr for 4 hours.
- An allergic reaction.
- Suspected acute prostatitis: fever (or chills) and perineal pain.
- A suspected urinary tract infection.
- Suspected epididymitis: progressive testicular pain, usually unilateral, and scrotal erythema or edema on the affected side, with or without fever.
- Suspected renal impairment: low diuresis (less than 30 ml/hr for 4 or more hours)
- If weaning off the catheter is being considered.

REFERENCES

This protocol is based on the latest scientific data and best practice recommendations, which were enhanced with contextual information and the perspectives of Québec clinicians and experts. For details on the process used to develop this national medical protocol and to consult the references, see the report in support of this protocol.