



ACI UROLOGY NETWORK - NURSING

BLADDER IRRIGATION

GUIDELINES

The following pages provide examples of clinical guidelines to enable clinicians to develop their own resource material relevant to their hospital and Area Health Service. They have been compiled by clinicians for clinicians. If you wish to use this material please acknowledge those that have kindly provided their work to enable use by others. Revise all material with colleagues before using to ensure it is current and reflects best practice.

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BLADDER IRRIGATION

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CONTINUOUS BLADDER IRRIGATION

PURPOSE

To prevent blood clot formation, allow free flow of urine and maintain IDC patency, by continuously irrigating the bladder with Normal Saline

SCOPE

Medical Officers

Registered Nurses

Accredited Endorsed Enrolled Nurses or under supervision of approved RN

Undergraduate Student Nurses under the supervision of a Registered Nurse

EXPECTED OUTCOMES

- The urinary catheter remains patent and urine is able to drain freely via the indwelling catheter (IDC)
- The patient's comfort is maintained
- Clot formation within the bladder or IDC is prevented or minimised
- The patient's risk of Urinary Tract Infection is minimised, through use of aseptic technique when connecting bladder irrigation to IDC

EQUIPMENT FOR WARD BASED CONTINUOUS BLADDER IRRIGATION (CBI)

- 3way catheter
- 0.9% sodium Chloride irrigation bags as per facility policy
- Continuous bladder irrigation set and closed urinary drainage bag with anti-reflux valve.
- Alcohol wipes
- Non sterile gloves
- Personal protective equipment (PPE)
- Underpad (bluey)
- IV pole

PROCEDURE FOR CBI

1. Explain procedure to the patient and ensure patient privacy
2. Position the patient for easy access to the catheter whilst maintaining patient comfort
3. Ensure that the patient has a three-way urinary catheter.
4. Hang irrigation flasks on IV pole and prime irrigation set maintaining asepsis of irrigation set.

Note: Only one of the irrigation flask clamps should be open when priming the irrigation set otherwise the fluid can run from one flask to another. After priming the irrigation set ensure that all clamps on the irrigation set are closed

5. Don goggles and impervious gown , place underpad underneath catheter connection
6. Attend hand wash and don non-sterile gloves
7. Swab IDC irrigation and catheter ports with alcohol swabs and allow to dry
8. Open the irrigation lumen of the catheter
9. Connect the irrigation set to the irrigation lumen of the catheter, maintaining clean procedure
10. Ensure urine is draining freely before commencing continuous irrigation.
11. Unclamp the irrigation flask that was used to prime the irrigation set and set the rate of administration by adjusting the roller clamp.

Note: The aim of the bladder irrigation is to keep the urine rose' coloured and free from clots. The rate is determined and varied as required, not run at a set rate.

ONGOING MANAGEMENT

- Saline flasks for bladder irrigation do not need to be ordered by a Medical Officer
- Continue irrigation as necessary depending on the degree of haematuria (ensure adequate supply of irrigant nearby)
- After each flask is complete, empty urine drainage bag. Record urine output on the fluid balance chart, prior to commencement of the next irrigation flask
- Regular catheter care is required in order to minimise the risk of catheter related urinary tract infection
- Catheter care provided should be documented in the progress notes and nursing care plan including patient comfort, urine colour/degree of haematuria and urine output. Also presence of clots if any and if manual bladder washout was necessary

RISK OF POLICY NON-COMPLIANCE

- Clot formation
- The catheter becomes blocked requiring Manual bladder irrigation or catheter replacement
- The patient experiences discomfort as a result of urinary retention secondary to catheter blockage and if urinary retention is not resolved quickly, the patient may become diaphrenic, tachycardic, hypotensive and experience vaso-vagal episodes
- The patient develops urinary tract infection as a result of technique during the procedure

EDUCATION NOTES

- Bladder irrigation is a procedure in which sterile fluid is used to prevent clot retention by continuously irrigating the bladder via a three-way catheter. (Scholtes,2002)
- Bladder irrigation is required due to the vascular nature of the prostate, and to a lesser extent the bladder and its potential to bleed in the post-operative period. (Scholtes,2002)
- Sodium chloride 0.9% is recommended in the clearance and prevention of clots. Water is not used as it may be absorbed via the process of osmosis from the bladder and also via open venous sinuses, this may cause dilution of electrolytes in the circulatory system. (Scholtes,2002)
- Irrigation is usually discontinued when the urine has been only lightly blood stained for 24-48hours (Scholtes,2002)

CATHETER BLOCKAGE

- Clot retention (catheter blockage) manifests itself with suprapubic distention, severe discomfort in the lower abdomen and passing of fluid around the catheter (bypassing). Other symptoms include no urine output, and vaso-vagal symptoms ie sweating, tachycardia, hypotension, rectal urgency.
- If the catheter becomes blocked during continuous bladder irrigation, the irrigation should be turned off immediately to prevent further bladder filling and further discomfort to the patient
- Manual bladder irrigation is necessary when the catheter cannot be unblocked
- If the catheter cannot be unblocked using manual bladder irrigation, notify the Urology registrar or CMO immediately. Re-catheterisation should not be attempted by nursing staff following urological surgery (unless the nurse is experienced in Urology nursing and has been authorised to do so by the Urology registrar or CMO)

References

Scholtes, S (2002). Management of clot retention following urological surgery. Nursing Times, 98(8), pp48-50

MANUAL BLADDER IRRIGATION FOR CLEARING CLOT RETENTION

DEFINITION

Manual bladder irrigation is used for clearing clot retention rather than clearing the catheter of encrustation. If the catheter is blocked with encrustation it will require changing. Catheter blockage is a very common complication in long term catheter users. Up to 50% of long term catheters are changed prematurely due to catheter blockages. Manual bladder irrigation can be utilized for the long term catheter patient to prevent recurrent catheter blockage by encrustation.

Manual bladder irrigation involves flushing a urinary catheter manually with a catheter tipped syringe and normal saline.

Caution is required if the patient has had open bladder surgery or renal transplant, as increased pressure on the suture lines can result in suture line disruption and extravasation of urine

Signs of a blocked catheter

- No urine flow from the catheter
- Patient complaining of suprapubic pain, becoming more pronounced as the bladder fills
- If unrelieved vaso-vagal symptoms may develop ie sweating ,tachycardia and hypotension
- Bypassing around the catheter

OPTIMAL OUTCOME

The clots are removed from bladder and the urine is draining freely

SUB-OPTIMAL OUTCOMES

- Catheter is unable to be unblocked requiring catheter replacement
- Patient develops a UTI (urinary tract infection) secondary to contamination during the procedure and break in closed urinary system

HAZARDS TO PATIENT

- Manual irrigation must proceed with caution on patients who have had the bladder opened, as any excess pressure can cause disruption of the bladder suture line and extravasation of urine. Irrigation must be gentle
- If in the first 24hrs post TURP (trans-urethral resection of prostate gland) the catheter cannot be unblocked the urology registrar or CMO must be notified. Nursing staff and RMOs must not attempt recatheterisation unless authorised by Urology Registrar or CMO as there is a danger of prostatic capsular perforation or subtrigonal catheter placement on re-instrumentation

HAZARDS TO STAFF

- Splash injury

INFECTION CONTROL

- Standard precautions and personal protective equipment (PPE)

EQUIPMENT

- Dressing pack x1
- Catheter tip 50ml syringe x1
- Chlorhexidine swabs 70% alcohol
- Blue undersheet
- Unsterile jug
- 500ml bottle Normal Saline
- PPE ie sterile gloves, goggles and apron

STAFF

Registered Nurse or Endorsed Enrolled Nurse assessed as competent, or student nurse under supervision.

PROCEDURE

- Explain to patient
- Maintain asepsis (this is done as an aseptic procedure to prevent a UTI as the closed urinary drainage system is being broken)
- Place blue sheet under the catheter and drainage bag connection
- Prepare sterile setup with 500ml N/S in kidney dish
- Place unsterile jug on bottom of trolley
- PPE and sterile gloves
- Place sterile towel under site where urinary catheter and drainage bag attached
- Clean catheter and drainage bag connection with chlorhexidine wipes, disconnect and wrap the drainage bag end in a chlorhexidine swab and if possible give to the patient to hold. If not keep the end wrapped in clean packaging or gauze.
- Using 50ml volumes of normal saline, irrigate the catheter by flushing in and drawing back to evacuate any clot or debris. If resistance is encountered reasonable pressure can be used, (except following renal transplant or bladder surgery). Empty each returned syringe directly into the unsterile jug on the bottom of the trolley

- Continue to irrigate with 50ml volumes until you achieve a clear or clot free return
- Reconnect catheter to drainage bag without contaminating either
- Calculate the difference between volume infused and volume returned and record on the fluid balance chart.

DOCUMENTATION

- Record in the progress notes
 - a) Date and time of procedure
 - b) Indication for the manual irrigation including the patients clinical symptoms
 - c) Result of irrigation ie volume of return, describe output/clots/debris and also colour of urine
 - d) On the fluid balance chart record volume infused, volume returned and the difference being urine volume

EDUCATIONAL NOTES

- Catheter blockage can occur secondary to blood clot, excessive build up of sediment in the urine or catheter lumen encrustation (encrustation requires catheter change rather than irrigation)
- Patients who require bladder irrigation ideally have a 3-way catheter in situ which is specifically designed for both continuous and intermittent irrigation.
- A 3-way catheter has a larger bore which can facilitate easier evacuation of clots or debris. The lumen is reinforced so that it does not collapse when pressure is applied during manual irrigation. It has a 3rd lumen to facilitate a continuous irrigation line and has large eyelets to facilitate evacuation of clot.¹
- The catheter support device should be positioned appropriately to reduce direct traction and catheter movement. This measure is important in reducing the risk of bladder spasm and trauma.

¹ Medical Education Package. Prepared by: Mater Education Centre, Mater Health Services
<http://www.matereducation.com.au/ssl/1/idcs.pdf>