SESLHD PROCEDURE COVER SHEET

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FUNCTIONAL GROUP(S)	Surgery, Perioperative and Anaesthetic
KEY TERMS	Alum, bladder, irrigation, haematuria
SUMMARY	To provide instructions for prescribing and administration of Alum irrigated through the bladder for uncontrollable haematuria secondary to radiation cystitis, bladder carcinoma or haemorrhagic cystitis.

Alum Bladder Irrigation – Prescribing and Administering Instructions

SESLHDPR/704

1. POLICY STATEMENT

South Eastern Sydney Local Health District (SESLHD) has identified the need to develop a procedure for the administration and prescribing of Alum to treat uncontrollable haematuria. Therefore, this procedure ensures the provision of high quality health care and appropriate triage, early diagnosis and management of these patients in line with the following NSW Ministry of Health Policy Directives:

- NSW Ministry of Health Policy Directive PD2013_043 - Medication Handling in NSW Public Health Facilities
- NSW Ministry of Health Policy Directive PD2017_013 - Infection Prevention and Control Policy
- NSW Ministry of Health Policy Directive PD2017_032 - Clinical Procedure Safety
- NSW Ministry of Health Information Bulletin IB2020_010 - Consent to Medical and Healthcare Treatment Manual
- ACI - Guide to Bladder Irrigation: Management of Haematuria

2. BACKGROUND

Alum irrigation for intractable haematuria is a safe, well tolerated and relatively cheap non invasive therapy. Alum 1% (aluminium potassium sulfate) works by the astringent action of protein precipitation at the cell surface and superficial interstitial space in the bladder which may cause the formation of an insoluble solid clot.

3. RESPONSIBILITIES

3.1 Employees will:

All employees of SESLHD will act in accordance with this procedure.

3.2 Line Managers will:

Ensure this procedure is followed by relevant staff.

3.3 District Managers/ Service Managers will:

Provide support to staff in the implementation of this procedure as required.

3.4 Medical staff will:

Ensure the prescribing and administration as outlined in the procedure will be followed when treating their patients.

4. PROCEDURE

4.1 ASSESSMENT AND PREPARATION

- The Medical Officer (MO) must explain the Alum bladder irrigation procedure to the patient and obtain informed consent (written or verbal), documented in eMR.
- The MO is to arrange baseline full blood assessment (FBE), electrolytes (UEC) and coagulation studies prior to commencement of instillation.

- Prior to commencing Alum irrigation into the bladder the MO may order a gentle manual wash out of the bladder or the patient may require a cystoscopy and removal of any existing blood clots. Blood clots may also form with slower irrigation, flow rate should be managed on an individual basis to reduce the chance clots forming.
- The MO is to order Alum 1% bladder irrigation solution through the facility pharmacy, including an external prescription (used for ordering purpose and not to be used for administration). Alum 1% is compounded by an external pharmacy and there is a lead time of one to two business days. Where possible, MO should notify the facility pharmacy by 10:00am or as soon as the decision to prescribe has been made. Alum has a limited shelf life once prepared.
- The Alum solution **must be** refrigerated until ready for instillation
- MO is to prescribe Alum 1% unambiguously on the hand-written *Adult Fluid Order Form* (SMR 120.003). The prescription must state the concentration of Alum solution to be used, the volume, the rate at which to be instilled and that it is to be instilled through an indwelling catheter (IDC) into the bladder.
    - E.g.: “Alum 1% in sterile water, 1 L to be irrigated through the bladder at 250 mL/h”
- MO may prescribe pain relief and antispasmodic medications for use as required.
- MO is to ensure the patient has a 3-way IDC in situ.
- Nursing staff are to gather equipment for instillation:
    - Alum solution
    - Double-spike continuous bladder irrigation set
    - 0.9% Sodium Chloride irrigation bag
    - In-line burette attached to the Alum solution (to control flow)
    - Urinary drainage bag
    - IV pole

4.2 INSTILLATION OF ALUM INTO THE BLADDER

- Aseptic Non-Touch Technique (ANTT) principles must be maintained.
- Perform hand hygiene in accordance with current policy
- Connect the drainage bag to the larger lumen of the 3-way IDC
- Ensure the IDC is draining prior to commencing continuous irrigation.
- Connect the Alum solution to the irrigation lumen of the 3-way IDC using aseptic/non touch technique
- Label irrigation tubing as ‘bladder irrigation only’
- Commence Alum bladder irrigation by opening the roller on the giving set and adjusting to the rate prescribed (usually 250-300 mL/h)
- Continue Alum bladder irrigation for the duration prescribed (usually 24-72 hours).

4.3 SIDE EFFECTS/ADVERSE REACTIONS

- Mild side effects of Alum bladder irrigation are common, including bladder spasm and/or irritative voiding symptoms
- Severe adverse reactions to Alum bladder irrigation are rare; however, there are six reported cases of acute aluminum toxicity in patients with chronic kidney disease who received Alum bladder irrigation for haemorrhagic cystitis
- Patients receiving Alum bladder irrigation must be reviewed by the urology/surgical registrar at least once every 24 hours, and if nurses identify any clinical indication for review, it will need to be escalated as per the CERS criteria SESLHDPR/283 - Patient with Acute Condition for Escalation (PACE): Management of the Deteriorating Adult Maternity Inpatient)
- Patients receiving Alum bladder irrigation must be monitored for clinical manifestations of aluminum toxicity such as mental status changes, malaise, speech changes, and seizures. Serum aluminium levels may be requested at the discretion of the MO
- Accurate input and output must be recorded on the bladder irrigation chart. Urine output target should be the volume of irrigation **plus** a minimum of 30mL/hr urine or as per PACE criteria
- Observe frequently to check that the irrigation is running freely and ensure irrigation is continuous at all times; signs of catheter obstruction/blockage include sudden onset of or increasing flank/abdominal pain, decreased urine output, presence of large clots in the tubing
    - If catheter blockage occurs, turn irrigation fluid off and perform a manual irrigation – refer to local guidelines
    - If catheter obstruction/blockage is unable to be relieved by manual irrigation, request an urgent MO review and initiate a rapid response.

5. DOCUMENTATION

- Outside script
- Bladder irrigation record chart
- Fluid balance chart
- Clinical notes / eMR / Bedside handover tool

6. AUDIT

Sites will action any iims related to this procedure.

7. REFERENCES

- NSW Ministry of Health Policy Directive PD2013_043 - Medication Handling in NSW Public Health Facilities
- NSW Ministry of Health Policy Directive PD2017_013 - Infection Prevention and Control Policy
- NSW Ministry of Health Policy Directive PD2017_032 - Clinical Procedure Safety
- NSW Ministry of Health Information Bulletin IB2020_010 - Consent to Medical and Healthcare Treatment Manual
- SESLHDPR/283 - Patient with Acute Condition for Escalation (PACE): Management of the Deteriorating ADULT and MATERNITY Inpatient

- ACI- Guide to Bladder Irrigation: Management of Haematuria
- SGH-TSH CLIN191 Labelling Injectable Medicines, Fluid and Lines
- SGH-TSH CLIN 139 Manual Irrigation for Obstructive Haematuria
- SGH-TSH CLIN143 Urinary Catheterisation
- SGH-TSH CLIN027 Aseptic Technique
- Jhingran. A. (2019) Complications of Radiation Oncology in Principles of Gynaecologic Oncology Surgery, Chapter 23, 318-329.
- Updated 2016 EAU Guidelines on Muscle-invasive and Metastatic Bladder Cancer Witjes, JA., Lebret, T., Compérat, EM., et al.
- European Urology, 2017-03-01, Volume 71, Issue 3, Pages 462-475.
- Kong Ho, C., Zainuddin, Z. (2009) Alum Irrigation for the Treatment of Intractable Haematuria. Malays J Med Sci. 16(4): pp66–68.
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8. REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
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May 2021	DRAFT	Feedback incorporated. Final version approved by Executive Sponsor. To be tabled at Clinical and Quality Council for approval.
June 2021	0	Endorsed by Clinical and Quality Council