

PAIN MANAGEMENT IN MUCOSITIS - SCH

PRACTICE GUIDELINE[®]

DOCUMENT SUMMARY/KEY POINTS

- Mucositis is a common and painful side effect of anti-neoplastic therapy which can have significant impacts on a patient's activities of daily living. It requires both nursing and medical assessments and interventions in relation fluid/nutrition status, pain management and infection.
- The assessment and management of mucositis is outlined in this document, covering topics such as mouth care, physical assessment, analgesia and other interventions.
- This document is to be used in conjunction with the Opioid Intravenous Infusions –SCH Practice Guideline (Guideline No: 1/C/12:7011-01:01).

CHANGE SUMMARY

- SCH Document due for Mandatory review: Rescinds SCH document SCH.C.18.M.1
- Inclusion of the World Health Organisation (WHO) oral muscositis grading scale and associated treatments.
- Updates made for mucositis interventions in relation to WHO grading category.

READ ACKNOWLEDGEMENT

- Clinical Nurses and Medical staff who care for oncology patients should read and notify local manager that they have read this document. Other staff as determined by local manager should read this document.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy Procedure & Guideline Committee	
Date Effective:	1 st December 2014	Review Period: 3 years
Team Leader:	Clinical Nurse Consultant	Area/Dept: CCC & BD SCH

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1 Introduction^{1,2,5}

Mucositis is a common, complication of chemotherapy GI/head and neck radiotherapy and/or total body irradiation or all. It is described as a toxic inflammatory reaction of the gastrointestinal tract (GI) mucosa from mouth to anus, manifesting typically as erythematous lesions as early as 3 days after exposure to chemotherapy/radiotherapy with progression to burn-like or ulcerative lesions within seven to twelve days. While the clinical syndrome usually involves the oro-pharynx, symptoms can be due to oesophageal, gastric or intestinal ulceration (odynophagia, dyspepsia, diarrhoea). Potential sequelae of mucositis include pain, compromised oro-pharyngeal function, increased risk for infection (local and systemic), bleeding, and inability to meet adequate fluid and nutritional requirements by mouth. The main local infective risks are candida and herpes simplex virus.

Oral mucositis most commonly occurs in the setting of myeloablative chemotherapy and total body irradiation prior to blood and marrow transplantation, high dose chemotherapy regimes, and radiotherapy for head and neck cancers.

2 Pain^{1,5}

Severity of pain experienced by patients with mucositis can range from mild to severe. The level of pain coincides with the severity of the mucositis. Mucositis pain can be divided into two categories: rest pain, which relates to the effects of mucositis; and incident pain, induced by patient activities such as mouthcare or swallowing.

3 Assessment^{1,2,3,5}

In order to provide effective individualised treatment for the prevention and management of mucositis, a thorough assessment is required. Initial oral assessment and education of patient is necessary before the commencement of treatment is important. This will assist in early identification of toxicity and initiating oral hygiene measures designed to potentially reduce further complications of mucositis, followed by daily (or as necessary) assessment of the oral cavity with oral care/management for the duration of the mucositis.

The World Health Organisation (WHO) oral toxicity scale should be used to assess the extent and severity of oral mucositis in children. The WHO oral toxicity scale has 5 grades and should be used to assess the extent and severity of mucositis⁵:

- Grade 0 = No evidence of mucositis, soreness or erythema.
- Grade 1 = Presence of soreness +/- erythema.
- Grade 2 = Presence of erythema, ulcers that do not prevent the patient swallowing food.
- Grade 3 = Presence of ulcers with extensive erythema that prevent the patient from swallowing food.
- Grade 4 = Presence of ulcerations +/- necrosis to the extent that alimentation by mouth is not possible.

See [Table 1](#). Recommended Mucositis Interventions for more information

3.1 Post Chemotherapy Assessment⁵

- Diet
 - Assessment by dietician
- Oral cavity.
 - Daily assessment by medical/nursing staff using the WHO oral toxicity scale
- Oral care/management.
 - Strict oral care regime as per care plan.
- Pain
 - Assess level of mucositis
 - Use age appropriate Pain Scoring tool.
- Mucositis treatment.
 - Assess level of mucositis, using the WHO oral toxicity scale & Table 1. Recommended Mucositis Intervention as a guide.
 - Ongoing assessment of current treatment and alter accordingly.

4 Management^{1,2,3,5}

- Oral paracetamol or oxycodone can be used in the early stages where intake of the solution is still tolerated, but rectal preparations are not recommended due to the risk of trauma and/or bacteraemia. Intravenous paracetamol may be used when oral preparations are not tolerated. Oral local anaesthesia (mouthwash) can also be used – see: 4.2. 4. [Topical analgesia](#) for further details.
- If the above measures do not provide adequate pain relief, intravenous opioids may be necessary. Morphine is traditionally the first line opioid to use in mucositis treatment. If uncontrolled side effects develop, rotation to fentanyl or hydromorphone can be organised in consultation with the Acute Pain Service. It is recommended that Patient Controlled Analgesia (PCA) be the method of choice at the initiation of opioid if the patient understands and is co-operative in its use. PCA should be considered for children over 5 years of age, but may not be widely applicable in those with mucositis younger than 9 years. Morphine infusions or PCA may be prescribed by the oncology RMO in consultation with the Oncology consultant. The Acute Pain Service can be notified during working hours, or the on call anaesthetic registrar after hours, for assistance with further pain management.

4.1 Table 1. Recommended Mucositis Interventions⁵

Recommended Mucositis Interventions		
Grade/Score	Description	Recommended Interventions
0	No evidence of mucositis, soreness or erythema	Continue with daily assessments and usual oral hygiene practices
1	Presence of soreness +/- erythema	<ul style="list-style-type: none"> • Provide oral pain relief such as paracetamol or topical analgesia
2	Presence of erythema, ulcers that do not prevent the patient swallowing food	<ul style="list-style-type: none"> • Provide oral pain relief such as paracetamol or topical analgesia • Consider oral or intravenous opioids
3	Presence of ulcers with extensive erythema that prevent the patient from swallowing food	<ul style="list-style-type: none"> • Use of intravenous opioids and topical analgesia • Paracetamol maybe used in conjunction with intravenous opioids at medical officer discretion • Monitor intake/output and consider nasogastric or parenteral nutrition and intravenous fluids • Consider addition of 1% cocaine mouthwash
4	Presence of ulcerations +/- necrosis to the extent that alimmentation by mouth is not possible	<ul style="list-style-type: none"> • As for grade 3 and may require escalation to intravenous/subcutaneous analgesia

4.2 Post Chemotherapy Treatment Management^{4,5}

1. Oral Care

- Clean teeth and gums after meals and before bed time using soft toothbrush or swabs as tolerated. Toothbrushing is not permitted in children who are neutropenic and thrombocytopenic due to risk of bleeding and infection.
- Rinse mouth with water regularly
- Daily inspection of mouth by health professionals
- Report any redness, tenderness or sores on lips or mouth.
- Lip lubricant.

2. Mouthwash:

- Sodium Bicarbonate 1% mouthwash, q6hrly

3. Antifungal:

- Nystatin drops 1mL q6h or
- Miconazole gel 2%: Infant – ¼ measuring spoon provided - q6hrly
Child+Adult - ½ measuring spoon provided - q6hrly.or
- Amphotericin lozenges – one lozenge every 6 hours

4. Topical analgesia ^{4,5}

- Ice to suck
- **Topical lignocaine**
 - Lignocaine 2% viscous plain. Can dab onto affected areas undiluted with swab. As has no alcohol and has neutral pH, so does not affect normal flora.
Dose: 0.04mL/kg/dose = 0.8mg/kg/dose q2hrly prn
Dose Limit: 0.5mL/kg/day = 10mg/kg/day
 - Lignocaine 2% viscous + warm water +/- Mylanta® mouthwash

Formula to make 50mL = Lignocaine 0.4%			
	Xylocaine 2% viscous ®	10mL	Stir well until thin liquid before adding Mylanta®.
+	Warm water	30/40 mL	
+/-	Mylanta® or Gastrogel®	10mL	

* Can be swallowed

Dose: 0.2mL/kg/dose = 0.8mg/kg/dose 2nd hrly PRN

Dose Limit: 2.5mL/kg/day = 10mg/kg/dose

- **Cocaine 1%** (10mg/ml) mouthwash (S8 drug)4:
 - Use in severe cases only and only after consultation with Oncology and Pain teams.
 - May be absorbed systemically, thus toxicity can be a concern (agitation, tachycardia)
 - Aim: qid dosing = less than 3 mg/kg/day
 - Instruct patient to hold in mouth for 2 to 3 minutes and do not swallow.

5. Systemic analgesia ^{3,5}

- Oral morphine may be considered in certain cases or where oral intake is preserved)
- Paracetamol is a useful adjunct, given orally /via NGT when tolerated, otherwise intravenously. Prescription of Paracetamol is at the discretion of the medical officer due to increased risk of hepatotoxicity in some patients
- NSAIDS are contraindicated due to their anti-platelet effects and deleterious effects on gastrointestinal mucosa
- In cases of severe pain and opioid tolerance, analgesia and reduced tolerance can be achieved with an intravenous or subcutaneous ketamine infusion (consult Acute Pain Service)
- Consider Morphine or Fentanyl PCA in those over 5-6 years and cognitively suitable.

5 Associated Documents

- [Opioid Intravenous Infusions - SCH](#) Guideline (No: 1/C/12:7011-01:01) for complications and management of opioid infusions.

6 References

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3. James PJ, Howard RF & Williams GF. The addition of ketamine to a morphine nurse-or patient controlled analgesia infusion (PCA/NCA) increases analgesic efficacy in children with mucositis pain. *Pediatric Anesthesia*. 2010; 20 : 805-811
4. Australian Medicines Handbook Pty Limited. 2008.
5. Bensinger, W., Schubert, M., Ang, K., Brizel, D., Brown, E., Eilers, J.G., Elting, L., Mittal, B.B., Schattner, M.A., Spielberger, R., Treister, N.S., Trotti, A.M. 'NCCN task force report: prevention and management of mucositis in cancer care', *Journal of the National Comprehensive Cancer Network*. 2008; 6:S1-S24.

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