Department of Haematology-Oncology, Medical & Clinical Oncology – Cancer CAU

Mouth Care Guidelines

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1. Introduction

Oral Mouthcare is fundamental for oncology patients due to the risk of damage to the mucosal lining during or after chemotherapy. This can be distressing to the patients and can increase risk of secondary infections. Therefore preventative measures are put in place to reduce the risk of this occurrence. This guideline details basic Mouthcare that should be maintained for all at-risk patients and patients on chemotherapy and radiotherapy.

2. Treatment Overview

Risk Assessment Tool

A Risk Assessment should be used for all patients. This should be carried out and recorded once daily for all in-patients, and at each chemotherapy appointment for all out-patients, using Eilers (1988) Oral Assessment Tool (Appendix 1). The Risk Assessment Tool can be accessed by clicking here: Based on the Risk Assessment score, initiate treatment according to the Risk Level for the patient; see detailed information below.

All patients should receive counselling and basic Mouthcare advice regardless of their Risk Assessment. See below for basic Mouthcare advice that should be provided to all patients.

Patients on chemotherapy or radiotherapy should be directed to:

- Chemotherapy patients should be directed to the CancerBACKUP leaflet “Mouth care during Chemotherapy”
- Radiotherapy patients receiving radiotherapy to the head, neck or mouth should also be directed to the CancerBACKUP leaflet “Dry Mouth”

BASIC MOUTHCARE ADVICE
Toothbrushing 1. Brush natural teeth for 90 seconds using a soft-textured toothbrush and a pea-sized amount of fluoride-containing toothpaste twice daily *i. Fluoride helps to prevent dental caries and if patients have their natural teeth, the toothbrush is the most effective tool for oral hygiene. There is evidence that good oral care regimen four times daily results in 50% fewer oral infections* 2. Ensure toothbrush is changed <u>at least</u> every three months 3. Dental floss can be used to remove plaque carefully; it should NOT be used if patients have platelets of less than 40
Dentures 1. Remove dentures/partial plate and brush them thoroughly with denture toothpaste after each meal and before soaking them overnight in cold water 2. Disinfect once or twice a week using a cleaning agent such as Steridient® 3. Rinse mouth vigorously for 30seconds using saline 0.9% (or tap water if preferred) after meals and before going to bed *i. Ensure a ballooning and sucking action is employed to effectively remove debris* *ii. This does not irritate the mucosa or change salivary pH. It is thought to promote healing and formation of granulation tissue* *iii. A salt solution can be made by the patient, if preferred, using ¼ - ½ teaspoon salt dissolved in a cup of warm water* 4. When dentures are removed, clean inside of mouth, floor, palate, cheeks and tongue using a small-headed soft toothbrush & toothpaste

Prophylaxis

Primary & Secondary PROPHYLAXIS

ALL Patients should receive counselling and Basic Mouthcare Advice regardless of their Risk Assessment

MOUTHWASHES/SUPPORT – Chemotherapy & Radiotherapy

- ***Any patient that develops severe mucositis resulting in hospital admission with previous chemotherapy cycle should be managed as a High Risk Patient, for Secondary Prophylaxis***

LOW RISK PATIENTS (Score 13-20) – Level 1 Care *(Click here to access Risk Assessment Tool)*

1. **No mouthwashes recommended**
2. Aqueous cream / petroleum jelly / yellow paraffin to lips to moisten (if necessary)
3. Artificial saliva e.g.: Glandosane spray if required for dry mouth

LOW – HIGH RISK PATIENTS (Score 21-26) – Level 2 Care *(Click here to access Risk Assessment Tool)*

1. Rinse mouth vigorously for 30seconds every **TWO-FOUR HOURS** with saline 0.9% and after every meal (or tap water if preferred)
2. Aqueous cream / petroleum jelly / yellow paraffin to lips to moisten (if necessary)
3. Artificial saliva e.g.: Glandosane spray if required for dry mouth

HIGH RISK PATIENTS (Score 27-39) – Level 3 Care *(Click here to access Risk Assessment Tool)*

1. Rinse mouth vigorously for 30seconds every **ONE HOUR** with saline 0.9% and after every meal (or tap water if preferred)
2. Aqueous cream / petroleum jelly / yellow paraffin to lips to moisten (if necessary)
3. Artificial saliva e.g.: Glandosane spray if required for dry mouth
4. Caphosol is recommended for patients that fit any of the following criteria:
    a. Autologous Transplant
        i. BEAM
        ii. HD Melphalan (140mg/m^2, 200mg/m^2)
        iii. Busulfan/Cyclophosphamide
    b. Allogeneic Transplant
        i. Sibling/MUD Cyclophosphamide / TBI
        ii. Sibling/MUD Busulphan/Cyclophosphamide
        iii. Mini Allo FMC (Fludarabine/Melphalan/Alemtuzumab)
    c. High Dose Methotrexate
        i. CODOX-M/IVAC (Methotrexate 300mg/m^2 followed by 2700mg/m^2)
        ii. GMALL Cons
        iii. GAMEC
        iv. HD MTX for Osteosarcoma
    d. Any patient that develops severe mucositis resulting in hospital admission with previous chemotherapy cycle

Note: If patients are eligible for Caphosol, saline mouthwashes are not required

Dose: 15mL phosphate solution mixed with 15mL calcium solution. Prescribed as: 30mL to be rinsed up to TEN times a day

<table>
<tr><th colspan="2">TREATMENT</th></tr>
<tr><td colspan="2">If a patient develops mucositis or stomatitis whilst on basic Mouthcare for the appropriate level as detailed above, please commence one of the following options below.
Note: The below options are to be used in addition to continuation of the above prophylactic regimens</td></tr>
<tr><td colspan="2">MOUTHWASHES/SUPPORT – Chemotherapy & Radiotherapy</td></tr>
<tr><td colspan="2">FIRST LINE OPTIONS</td></tr>
<tr><td>ADJUNCTIVE TREATMENT
(Can be added at any stage of treatment)

To Protect mucosal lining
1. Sucralfate liquid 1g/5mL
Dose: 1g (5mL) FOUR TIMES DAILY

2. Caphosol solution
Dose: 30mL up to TEN times a day (in restricted patients as detailed in Prophylaxis Table)

NOTE: If more than one mouthwash is prescribed, these can be mixed together prior to rinsing as part of a 'magic mouthwash' – this will reduce the number of rinsings of individual agents and increase compliance. See 'Magic Mouthwash' below</td><td>Inflamed Oral Mucosa and/or sore mouth
1. Benzydamine mouthwash / spray (Difflam®)
Dose – Mouthwash: 15mL up to every 1½ hours to provide local pain relief. It may be diluted with a little water if stinging occurs
Dose – Spray: 4-8 sprays every 1½ - 3hours as required
2. Lidocaine 5% ointment or 10% spray (Xylocaine®)
Dose – Ointment: Apply a small amount to the affected area(s) as required
Dose – Spray: Spray ONE to TWO sprays to the affected area(s) as required
3. Aspirin 300mg soluble tablets
Dose: 1-2 tablets dispersed in mucilage or water FOUR TIMES DAILY
a. Not recommended use in haematology-oncology patients
b. Recommended for radiotherapy-induced mucositis
c. Can be swallowed if there are no contraindications e.g.: risk of thrombocytopenia, history of peptic ulcers

Ulcerated oral mucosa
There are several options for treatment of ulcerated oral mucosa. Use the most appropriate option from each section and then add one from each section as required if initial treatment is not sufficient.
Steroid Options (Only to be used if WITHOUT Active Candidiasis)
1. Single Ulcer – Hydrocortisone (Corlan®) pellets
Dose: ONE pellet (2.5milligrams) dissolved in the mouth in direct contact with the ulcer
2. Multiple Ulcers – Betamethasone (Betnesol®) tablets
Dose: 500microgram tablets dispersed in 20mL water and rinsed FOUR TIMES DAILY

Antimicrobial Options
1. Doxycycline 100milligram capsules
Dose: Open one capsule (100milligram) and disperse the contents in water. Use this to rinse for 2-3 minutes as a mouthwash FOUR TIMES DAILY</td></tr>
</table>

	Bleeding Tranexamic Acid Tablets Dose: Crush and disperse TWO x 500milligram tablets in water and use this to rinse for 2-3 minutes as a mouthwash THREE times daily
	Dry mouth Artificial Saliva - Glandosane® spray Dose: Use ONE to TWO sprays as required
	Oral Thrush Miconazole (Daktarin®) oral gel Dose: Apply 5-10milliLitres of gel to the affected areas in the mouth, retained near oral lesions FOUR TIMES DAILY after food *Note: miconazole is absorbed to the extent that potential interactions need to be considered*

<table>
<tr><th colspan="2">SECOND LINE OPTIONS – Systemic Analgesia</th></tr>
<tr><td colspan="2">• Systemic Analgesia can be <u>added</u> if the first line options detailed above are not effective
• Do <u>not</u> discontinue first-line treatment options unless due to adverse reaction.
• Use a step-wise approach as below to ensure the minimum effective opiate dose is used
• Remember to co-prescribe a laxative and anti-emetics according to Trust policy for patients on opiate-based medications</td></tr>
<tr><td rowspan="4"><u>ADJUNCTIVE TREATMENT</u>
(Can be added at any stage of treatment)

To Protect mucosal lining
3. Sucralfate liquid 1g/5mL FOUR TIMES DAILY

4. Caphosol 30mL up to 10x/day (in restricted patients as detailed previously)</td><td>1. <u>Co-codamol 30/500milligram dispersible tablets*</u>
Dose: TWO tablets (dissolved in a little water) and swallowed up to FOUR times daily. Remember to co-prescribe a laxative as required.
*Note: Paracetamol may be substituted if codeine is contra-indicated

Note: Regular paracetamol should not be used in neutropenic patients</td></tr>
<tr><td>2. <u>Morphine sulphate liquid 10milligrams/5milliLitres (Oramorph®)</u>
Dose: 2.5milligrams - 5milligrams AS REQUIRED
(Maximum dose based on individual patient tolerance and medication history)</td></tr>
<tr><td>3. <u>Oxycodone liquid 1milligram/milliLitre (Oxynorm®)*</u>
Dose: 1.25milligrams – 2.5milligrams AS REQUIRED
(Maximum dose based on individual patient tolerance and medication history)
*Note: Can be used if suffering side- effects from morphine</td></tr>
<tr><td>4. <u>Morphine subcutaneous infusion*</u>
*Only to be used if oral route is not tolerated
Dose: Initiate at lowest effective dose and titrate according to response
Note: Ensure an overlap period is established for patients on oral opiates and refer to the Pain Team or pharmacist if further advise is required</td></tr>
</table>

'Magic mouthwash' – a single combination of any of these ingredients:

1. Betamethasone soluble tablets (Betnesol®)
2. Doxycycline capsules
3. Nystatin suspension or Sucralfate liquid

Note: If a patient is prescribed THREE or more mouthwashes and each mouthwash is to be used four times a day, the mouthwashes can be combined before rinsing in order to reduce administration burden and increase compliance

References

1. MASCC (Multinational Association of Supportive Care in Cancer) and ISOO (International Society for Oral Oncology. Summary of Evidence-based Clinical Practice Guidelines for Care of Patients with Oral and Gastrointestinal Mucositis (2005 Update)
2. Peterson DE *et al*. Management of oral and gastrointestinal mucositis. ESMO Clinical Recommendations. *Annals of Oncology* 2009; 20 (Suppl 4): iv174-iv177.
3. Worthington HV *et al*. Interventions for preventing oral mucositis for patients with cancer receiving treatment (Review). *The Cochrane Library* 2009; Issue 3.
4. Papas AS *et al.* A prospective, randomized trial for the prevention of mucositis in patients undergoing haematopoietic stem cell transplantation. *Bone Marrow Transplant* 2003; 31: 705-712.
5. Barkvoll P and Attramadal A (1989) Effect of Nystatin and Chlorhexidine Digluconate on Candida Albicans: *Oral Surgery, Oral Medicine, Oral Pathology*, 67: 279-281

Appendix 1: Eilers (1988) Oral Assessment Tool*

Date:								
Voice Converse with patient	1. Normal 2. Deeper/raspy 3. Difficulty							
Swallow: Observation	1. Normal 2. Pain on swallowing 3. Unable to swallow							
Mucous Membrane: Observe appearance with pen torch	1. Pink and Moist 2. Reddened/coated 3. Ulcerations +/- bleeding							
Saliva: Touch centre of tongue and floor of mouth with spatula	1. Watery 2. Thick/ropy 3. Absent							
Tongue: Feel and observe with a pen torch	1. Pink and Moist 2. Coated/shiny +/- bleeding 3. Blistered/cracked							
Lips: Feel and observe	1. Smooth pink and firm 2. Dry/cracked 3. Bleeding/ulcerated							
Gums: Gently press with tip of tongue depressor. Use pen torch.	1. Pink and firm 2. Oedematous +/- redness 3. Spontaneous bleeding							
Teeth Dentures: Observe appearance with pen torch	1. Clean, no debris 2. Localised plaque, debris 3. Generalised plaque debris							
Nutritional Status: Ask patient	1. Normal 2. Soft diet 3. Fluids only/NBM							
Analgesic requirement For mouth	1. None 2. Topical analgesia 3. System analgesia							
Complications: Observation with pen torch	1. No evidence 2. Haemarrhagic mucositis 3. Infection (viral/fungal)							
Self Care assessment:	1. Performs oral care by self 2. Needs encouragement and education 3. Refuses/unable to perform oral care							
Taste: **Ask Patient**	1. Normal 2. Impaired/changed 3. No taste							
Total assessment score								
Initials:								

**Adapted from Eilers 1988*

INTERVENTION LEVELS

Score 13-20 = Level 1 care

Score 21-26 = Level 2 care