Pan Birmingham NHS
Cancer Network

Guideline for the Management of Chemotherapy Induced Oral Complications

Version History

Version	Date	Summary of Change/Process
0.1	23.04.07	First Draft for discussion
0.2	02.05.07	Including comments from Chemotherapy and Haematology NSSG's
0.3	21.05.07	Including comments from Chemotherapy and Haematology NSSG's
0.4	04.06.07	Reviewed by Chemotherapy NSSG Chair and final revisions made
0.5	09.08.11	Reformatted by Rachel Loveless
0.6	31.08.11	With Lara Barnish comments
0.7	06.09.11	Julie Bliss accepted Lara Barnish comments
1.0	20.09.11	Reviewed and endorsed by Guidelines Sub Group

Date Approved by Network Governance	**September 2011**

Date for Review	**September 2014**

ENDORSED BY GOVERNANCE COMMITTEE

1. Scope of the guideline

This guideline has been produced to support the management of chemotherapy induced:

- Mucositis
- Stomatitis
- Other oral complications, for example: xerostomia, ageusia

2. Guideline background

2.1 Mucositis and stomatitis occur in around 40% of patients (Wilkes et al 2003).

- **Mucositis** is the erythematous, erosive, inflammatory and ulcerative response of the oral cavity and gastrointestinal tract to certain chemotherapy agents. (Shih et al 2003)

- **Stomatitis** is the inflammation of the oral cavity resulting from damage to the mucous membrane (Holmes 1993) e.g. lips, gums, tongue, palate, floor of mouth and throat.

- Mucositis can occur in all patients undergoing chemotherapy. Mucositis occurs when there is a reduction in the renewal rate of the base epithelium, resulting in atrophy, inflammation and ulceration of the mucosa. Mucositis usually occurs 5-7 days following the commencement of chemotherapy and can take 2-3 weeks to heal. The evidence suggests that mucositis is not preventable but the severity can be minimised through the implementation of effective oral health practices.

2.5 Mucositis and stomatitis can be:

a. Direct: Drug induced; whereby the specific drugs used affect oral integrity.

b. Indirect: Occurs around the NADIR (10-14 days after treatment with chemotherapy) and is believed to occur as the lymphocytes and oral mucosa cells rates of reproduction are similar.

2.6 Chemotherapy drugs that commonly cause mucositis\stomatitis:

a. Antimetabolites
- 5-FU
- Capecitabine
- Methotrexate
- Fludarabine
- Gemcitabine
- Cytosine Arabinoside

b. Anti-tumour antibiotics

- Dactinomtcin
- Daunorubicin
- Doxorubicin
- Idarubicin
- Mitozantrone
- Epirubicin
- Mitomycin-C

2.7 Other factors that will affect incidence include:

a. age
b. combination treatment with chemotherapy, radiotherapy, antimicrobials and corticosteroids
c. smoking
d. alcohol intake

3. Guideline statements

3.1 The aims of oral care are to:

a. Keep the mucosa clean, soft, moist and intact to prevent infection.
b. Keep the lips clean, soft, moist and intact.
c. Remove food debris as well as dental plaque without damaging the gingival.
d. Alleviate pain and discomfort and enhance oral intake.
e. Maintain a pink and moist tongue free from ulceration and avoid a dry mouth.

3.2 Rationale for care

3.2.1 A healthy mouth is relevant to the care of all patients, however, for a patient receiving chemotherapy where oral complications are common side effect, it is imperative.

3.2.2 Oral care is one of the eight benchmarks in the proposed nursing strategy of 'Essence of Care Document' (DOH 2001). Oral care is essential, and skilled practitioners must be able to intervene by identifying which patients are at risk of developing oral complications, adopt preventative measures, detect any changes and initiate prompt treatment.

3.3 Oral Assessment

3.3.1 For patients undergoing chemotherapy, an oral assessment tool (appendix 1) must be used. Eilers et al (1988) oral assessment tool is useful although slightly limited, as it does not take into account the patient perspective. The Network Chemotherapy Group has adapted this tool (appendix 1) to take into account these issues.

3.3.2 All cancer patients should have an oral assessment performed prior to each cycle of chemotherapy. Appropriate treatment must be initiated promptly.

3.3.3 Patients should be given education, and verbal and written information relating to oral care, and should be encouraged to:

a. Assess their own mouths and report any complications so treatment can be initiated early and severe complications avoided.
b. Understand the importance of good oral hygiene prior to and during chemotherapy treatment:
    i. brush teeth after meals and at bed time with soft tooth brush
    ii. remove dentures when not necessary
c. Use mouthwash if soreness develops: Difflam (4 hourly) when symptomatic.
d. Avoid mouthwashes containing alcohol .
e. Consider salt gargles.
f. Consider aspirin gargles (although this is not recommended for haematology or thrombocytopenic patients).
g. See a dentist prior to start of treatment for a check up for any known complications.
h. Use appropriate analgesia.
i. Use a barrier e.g. sucraflate.
j. Consider lignocaine ice cubes, as prescribed, if effective.

3.3.4 Patients should be given dietary advice (as below) and referred to a dietician where more specialist input is required:

a. take a high protein diet
b. take 3 litres orally per day (unless contraindicated)
c. avoid hot, spicy food or food with high sugar content
d. avoid alcohol
e. avoid tobacco

3.3.5 Advice should be sought from pharmacy staff regarding changing medications to liquid formulations for patients with swallowing difficulties.

Monitoring of the Guideline

Implementation of the guidance will be considered as a topic for audit by the Network Site Specific Group in 2012.

References

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5. Shih A, Miaskowski C, Dodd M, Stotts N and Macphail L (2003) Mechanisms for radiation induced oral mucositis and the consequences. Cancer Nursing. 26 (3) 222-229.
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7. Wilkes, G.M. Ingwergen, K. Barton-Burke, M. (2003) Oncology Nursing Drug Handbook, Sudbury, Massachusetts, Jones and Bartlett

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Approval Signatures

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Appendix 1 - Pan Birmingham Cancer Network Chemotherapy Oral Assessment Tool – page 1

		Date	Date	Date	Date	Date	Date	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 with pen torch**	1. Pink and moist 2. Reddened/coated 3. Ulcerations+/-bleeding							
Saliva	1. watery 2. Thick / ropey 3. absent							
Tongue	1. pink and moist 2. coated / shiny+/- reddened							
Lips	1. smooth, pink, moist 2. dry/cracked 3. bleeding/ulcerated							
Gums	1. Pink and firm 2. oedematous 3. spontaneous bleeding							
Teeth / Dentures	1. clean, no debris 2. localised plaque, debris 3. generalised plaque debris							
Nutritional status	1. normal 2. soft diet 3. fluids only/nbm							
Analgesic requirement	1. none 2. topical analgesia 3. systemic analgesia							
Complications	1. no evidence 2. haemorrhagic 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
Score 27 + Level 3 care

Mouth Care Regime for Chemotherapy

All cancer patients must receive a high level of care based on an individual assessment. To identify appropriate level of care please calculate score using oral assessment tool and implement care as guided.

For prophylactic management of patients at high risk of mucositis, please commence care at level 2.

Level One Care

Score – 13 - 20

ASSESS AT EACH OUTPATIENT VISIT AND:

1. Advise brushing teeth with soft toothbrush to avoid trauma to gums using fluoride toothpaste twice daily. After food either repeat brushing or rinse with saline mouthwash.
2. If dentures are worn remove from mouth and rinse thoroughly twice daily and after food. Soak overnight in fresh denture solution.
3. Apply aqueous cream or yellow soft paraffin to lips to moisten (if necessary).
4. Advise against citrus or spicy foods.
5. Offer smoking cessation advice if appropriate.
6. If patient receiving bolus 5FU, consider cryotherapy commencing 5 minutes before delivery and continue for duration of 30 minutes.

Level Two Care

Score – 21 - 26

Continue level 1 mouth care and:

1. Substitute saline mouthwashes for difflam mouthwash, which has anti-inflammatory, analgesic, anti-microbial qualities.
2. Avoid eating/drinking for 30 minutes following mouthwash. If mouthwash causes burning sensation dilute with an equal volume of water and rinse for one minute, or consult health care professional for alternative.
3. Provide with regular analgesia as required. This can be soluble/topical. i.e. Aspirin/oramorph or gelclair.
4. Observe for signs of fungal infection and treat as appropriate. i.e. nystatin/fluconazole.
5. Consider prophylactic anti-fungal treatment for subsequent cycles of chemotherapy.
6. If patient is experiencing dry mouth, provide them with artificial saliva replacement: i.e. Biotene products or glandosene.
7. The oral cavity must be assessed daily by the patient or carer and health care professional contacted for advice if condition worsens.

Level Three Care

Score – 27 – 29

1. Increase frequency of level 2 care to 1-2hrly.
2. Introduce treatment for specific problems as necessary; these may include pain, ulceration, infection, altered saliva and bleeding.