Prophylaxis and Treatment of Systemic Anti-Cancer Therapy (SACT) Induced Oral Mucositis in Adults

TARGET AUDIENCE	Secondary care.
PATIENT GROUP	All patients receiving SACT.

Clinical Guidelines Summary

- Mucositis in patients receiving SACT can be a distressing side effect of treatment and can lead to treatment delay, therefore it's important patients are assessed throughout treatment for this common toxicity.
- Preventative measures should be started prior to commencing SACT.
- There are various options available for the treatment of mucositis.
- At any stage of mucositis patients should be encouraged to have good oral hygiene and regular fluid intake, nutritional status should also be monitored.

Introduction

Cancer and its treatments can directly affect the oral mucosa, dental health and a patient's well-being. The incidence of oral mucositis (OM) in cancer patients is high (up to 40% in patients treated for solid tumours) and some have rated it as the most distressing side effect from their cancer treatment (Bellm et al. 2000). It can lead to treatment delays, dose reductions and treatment interruptions. Therefore, it is important that the whole multidisciplinary team act to anticipate and minimise any oral side effects from cancer treatment.

Assessment

Good assessment of the oral cavity is very important. This should be carried out by suitably trained healthcare professionals using a recognised grading system both pre and post chemotherapy. The UK Oral Mucositis in Cancer Group (UKOMiC) recommends the World Health Organisation (WHO) oral toxicity scale (see table 1).

Grade	Clinical Presentation
1	Soreness +/- erythema, no ulceration
2	Erythema, ulcers. Patients can swallow solid diet
3	Ulcers, extensive erythema. Patients cannot swallow solid diet.
4	OM to the extent that alimentation is not possible.

Table 1.

Prevention of Oral Mucositis

Risk Classification	Risk Factors
Low Risk (WHO grade 1)	• No prior oral mucositis • Receiving treatments not known to cause oral mucositis
Moderate Risk (WHO grade 2)	• Previous history of grade 2 mucositis • Patients receiving treatments known to cause oral mucositis *(fluorouracil, docetaxel, cyclophosphamide, methotrexate, anthracyclines, capecitabine, sunitinib, EGFR inhibitors)* • Elderly • Palliative radiotherapy to head and neck region
Severe / High Risk (WHO grade 3)	• Previous history of grade 3-4 mucositis • Undergone surgery to oral cavity/ head/ neck • Receiving high dose chemotherapy (e.g. prior to autologous HSCT, high dose methotrexate/ cytarabine) • Radical radiotherapy to head/ neck region

Table 2.

Start preventative measures before and during early cancer treatment to reduce the number of oral complications that follow chemotherapy and radiotherapy.

Self-care of the mouth before, during, and after treatment with chemotherapy reduces the severity of mucositis and helps prevent secondary infection. Patients should be encouraged to maintain good oral hygiene.

Dental Health

- Teeth should be brushed twice daily and after meals using a soft toothbrush and fluoride containing toothpaste (minimum 1000-1500 ppm).
- A fresh toothbrush should be used if any infection develops.
- Any pre-existing dental problems should be addressed; refer to dentist if necessary.
- Dental flossing once a day can help reduce plaque build-up but is contraindicated for patients with thrombocytopenia or a clotting disorder and patients undergoing radiotherapy.
- Dentures should be cleaned regularly, removed and soaked overnight.

Diet

- Patients should maintain adequate oral fluid intake and a well-balanced diet.
- Alcohol should be minimised and tobacco should be avoided.
- Care should be taken with spicy foods which can cause irritation and rough/crunchy foods which can damage the oral mucosa.

Dry Lips

- Normal lip salves can be used to moisten the lips.
- Use a water based lubricant for patients receiving oxygen or radiotherapy to the head or neck region.

Dry Mouth

The incidence of ulceration or infection of the oral mucosa also increases with dry mouth; medications that can contribute to dry mouth include, but are not limited to: opioids, diuretics and anticholinergics.

- Oral hydration should be encouraged for all patients, and intervention made early if dry mouth develops.
- Dry mouth can be relieved in many patients by simple measures such as frequent sips of cool drinks, sucking pieces of ice or sugar-free pastilles.
- Sugar-free chewing gum and chewing fresh pineapple chunks can stimulate saliva production.
- Taste disturbances: patients should be educated and encouraged about simple dietary changes and to vary their diet.
- Saliva substitutes (e.g. Oralieve Gel, Biotene Mouthwash) may be used if other measures are insufficient.
- Saliva replacement and stimulating spray products (e.g. Saliveze, Glandosane) are not routinely recommended as these are acidic and can be irritant; consider if other measures have failed and patient is edentulous.

Mouthwash

- Salt water mouthwash is recommended for all patients in the prevention and management of mucositis. Patients in hospital may use 10ml 0.9% Sodium Chloride from a vial to be followed by rinsing with cold or warm water four times daily. For patients at home, 1 teaspoon of salt may be added to a pint of cooled boiled water. A fresh supply should be made daily.
- There is now little evidence for using Chlorhexidine 0.2% mouthwash to prevent mucositis however it may still be used to treat patients with gingivitis.

- Benzydamine 0.15% (Difflam®) mouthwash, 10mls rinsed around mouth and expelled four times daily, can help prevent oral mucositis. For treatment use, the dose can increase to 15ml every 1 ½ - 3 hours as necessary. It may not be tolerated in some patients e.g. head and neck, however it may be diluted with an equal amount of water if stinging occurs. Benzydamine 0.15% spray is also available, and can be of use for treatment of inflammation at the back of the mouth or throat.
- Caphasol mouthwash can be used in both the treatment and prevention of mucositis in patients on chemotherapy or radiotherapy. A dose of 30ml (1 clear ampoule mixed with 1 blue ampoule) rinsed around the mouth for 1 minute, half the solution expelled, and then to be repeated with the remainder of the solution. Dose can be increased to 10 times daily if required.
- Gelclair may be used as a mucosal protectant, 1 sachet to be mixed with 40ml of water, rinsed and gargled then spat out, to be used 3 times daily or as necessary. To be used 1 hour before or 1 hour after food. It can also be used undiluted and applied directly to ulcers.
- For some patients receiving treatment with mTOR inhibitors such as everolimus, a steroid mouthwash may be beneficial in the treatment of mucositis. Using betamethasone soluble tablets, dissolve 500 micrograms in 20ml water and rinse around the mouth 4 times a day.

Other Treatments

- Sucking crushed ice or frozen tonic water particularly pre- 5 fluorouracil bolus or high dose melphalan. Note this may be contraindicated in patients who already have developed mucositis in the head and neck setting and patients undergoing radiotherapy.

- Antacid and Oxetacaine (unlicensed) is indicated for painful swallowing and oesophagitis associated with radiotherapy, 15ml four times daily to be taken 30 minutes prior to meals and bedtime.

For more detailed advice on oral care see Scottish palliative care guidelines: https://rightdecisions.scot.nhs.uk/scottish-palliative-care-guidelines/symptom-control/mouth-care/

Treatment of Oral Mucositis

*At any stage of mucositis**:***

- Ensure good oral hygiene, regular fluid intake and monitor nutritional status, refer to dietician when appropriate.
- Observe for signs of oral infection, swab and treat if required (consider prophylaxis as per WoSCAN guidance).
- Optimise analgesia as per current guidelines, note liquid preparations may be preferable.
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GRADE 1: Soreness +/- erythema, no ulceration

- Increase the frequency of salt water mouthwash.
- For dry mouth consider saliva replacement with a current NHS Lanarkshire formulary recommended product. e.g. Oralieve Gel, Biotene Mouthwash.
- For pain on eating/swallowing, commence Benzydamine mouthwash (Difflam®).

GRADE 2: Erythema, ulcers, patients can swallow solid diet

- Switch from salt water mouthwash to Caphosol® four times a day.
- Consider Gelclair® for mucosal protection and management of lesions of the oral mucosa. When erythema and ulcers resolve stop Gelclair®.

GRADE 3/4: Ulcers, extensive erythema, cannot swallow solid diet/alimentation not possible

- Increase the frequency of Caphosol® mouthwash up to ten times a day.
- Consider tranexamic acid to treat localised bleeding.
- Consider referral to a palliative care specialist or dentist with consent if there is refractory oral pain or severe mucositis

(Where there are supply issues please substitute with another suitable product as per availability.)

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Appendices

1. Governance information for Guidance document

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