ORAL HYGIENE AND MOUTH CARE PROTOCOL

Background

The oral cavity is a frequent site of complications:

- Chemotherapy may cause mucositis (see below)
- Gingivitis or gingivostomatitis may be due to bacterial (α-haemolytic Strep, anaerobes), viral (most commonly HSV) or fungal infection (most likely candida albicans)
- Focal mucosal ulceration (usually HSV)
- Dental abscesses
- Bleeding

Rationale for mouthcare

Good mouth care is important because:

1. Infection in the oral cavity is a potential source of Gram +ve and anaerobic bacteraemia
2. Overgrowth by candida may allow the yeast to become invasive (candidaemia) which has extremely serious consequences
3. Infection in the mouth (in addition to chemotherapy-induced mucositis) produces pain, reduces oral intake and has implications for adequate nutrition

Aims of mouthcare

The aim of good mouth care is to maintain:

- the oral mucosa in a clean, moist condition
- free of infection
- teeth hygiene
- good control of pain caused by mucositis

Education of parent and child

The role of the nurse is pivotal in achieving these aims:

- implementing the guidelines
- hands-on help with mouth care if mucositis severe or patient uncooperative
- initial (*and continuing*) education of child and parents

Mucositis

This occurs following the administration of some types or combinations of chemotherapy due to interruption in the replication of mucosal epithelial cells leading to "rawing" of the oral surface.
The incidence and severity of oral mucositis is related to:

- prior oral hygiene and presence of pre-existing dental disease
- type of chemotherapy particularly anthracyclines
- dose of chemotherapy – mucositis is much more likely with high-dose chemotherapy
- combination of mucositis-inducing chemotherapy eg. doxorubicin + cyclophosphamide
- schedule of chemotherapy – more likely to occur when chemotherapy "spaced out" eg. given weekly rather than a number of days in a row

Typically occurs when the patient becomes neutropenic ie. 7 – 10 days after start of chemotherapy block

Prevention of Infection

All newly diagnosed patients require a complete dental evaluation but defer any dental therapy until the neutrophil count is $> 1.0 \times 10^9/l$ unless it is very urgent.

Good basic oral hygiene is an important aspect that should not be overlooked even when the child is not eating much eg. vomiting/nauseated, drowsy.
Teeth should be cleaned 2 times daily with a small headed, soft toothbrush and fluoride toothpaste.
Rinse mouth with water following brushing and everytime following eating and drinking (tap water is fine).

The majority of children will only require basic oral hygiene

When an inpatient, all children should have a daily oral assessment- refer oral assessment guide (OAG)

Prophylactic Mouth care Protocol

- Teeth should be cleaned 2 times daily with a small headed, soft toothbrush and flouride toothpaste.
- Floss teeth once a day (this will be dependant on child's ability to perform this and can continue regardless of neutraphil and platelet counts)
- Rinse mouth with water following brushing and everytime following eating and drinking (tap water is fine).

Treatment of Established Mucositis

In addition to the preventative measures described above, the following should be considered:
Nutrition – mucositis is not a contraindication for nasogastric feeds so preferentially use this route.
Pain control - consider: Paracetamol and/or morphine

Treatment of Established Thrush

Mycostatin – 5 mls swish and swallow twice daily
and/or oral fluconazole (if available) 3 mg/kg once a day
(maximum prophylactic dose 150mg daily).

Oral Assessment Guide (OAG)

CATEGORY	Method of Observation	Rating .1.	Rating .2.	Rating .3.
VOICE	Converse with patient. Listen to crying	Normal	Deeper or raspy	Difficulty talking, crying, or painful
Ability to Swallow	Ask patient to swallow	Normal swallow	Some pain on swallowing	Unable to swallow
LIPS	Observe and feel tissue	Smooth, pink and moist	Dry or cracked	Ulcerated or bleeding
SALIVA	Insert depressor into mouth, touching centre of tongue and the floor of the mouth	Watery	Thick or ropy. Excess salivation due to teething	Absent
TONGUE	Observe appearance of tissue	Pink, moist and papillae present	Coated or loss of papillae with a shiny appearance with or without redness. Fungal infection	Blistered or cracked
Mucous Membrane	Observe appearance of tissue	Pink and moist	Reddened or coated without ulceration. Fungal infection	Ulceration with or without bleeding
GINGIVA	Gently press tissue	Pink and firm	Oedematous with or without redness, smooth. Oedema due to teething	Spontaneous bleeding or bleeding with pressure
Teeth (If no teeth, score 1)	Visual. Observe appearance of teeth	Clean and no debris	Plaque or debris in localised areas (between teeth)	Plaque or debris generalised along gum line

(Adapted from Eilers et al, 1988)

The scores of the eight categories are summed.

A normal mouth will receive a score of **8**.

The highest possible score is **24.**

An OAG score of **>10** indicates a need for specific management of signs and symptoms.