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Question: What are the treatment options for the management of dry mouth?

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Summary:

Dry mouth is a sensation of oral dryness that may be associated with diminished or arrested salivary secretion. Any underlying causes of dry mouth should be identified before proceeding with management interventions. Oral hygiene is essential in the care of patients with or at risk of dry mouth, and should be carried out twice daily. Simple interventions such as sipping cold water, sucking an ice cube or chewing sugar free gum can help to alleviate symptoms. Artificial saliva products are poor substitutes for natural saliva and should only be considered where a main salivary duct blockage is the cause of dry mouth. In all other cases, saliva stimulants such as pilocarpine may be considered.

What is Xerostomia?

Xerostomia, the sensation of a dry mouth, is a common symptom affecting patients with palliative care needs, with 80% of patients experiencing this symptom due to reduced saliva production in advanced disease.[1] It can alter a patient's taste and may make it difficult for patients to chew and swallow.[1,2] Dry mouth which arises in terminally ill patients can impact quality of life and contribute to functional decline and failure to thrive[3]. There are a number of causes of xerostomia including cancer and its treatment, certain classes of medications, dehydration and underlying co-morbidities.[1,2]

Management of Xerostomia:

Prevention

Maintenance of good oral hygiene is imperative in the prevention of complications associated with dry mouth. Oral hygiene should be carried out twice daily for all

patients.[3]Maintenance of open nasal passages to avoid mouth breathing can help to prevent mouth dryness[2].

Correct the correctable[1]

There are multiple causes of dry mouth.[1] Smoking, alcohol (including in mouthwashes), acidic beverages including tea and cola drinks and caffeine can all dry the mouth.[1,2] Underlying disorders should be treated to manage possible causes of dry mouth e.g. diabetes, infection, oral candidiasis.[1] The patient's medications should be reviewed to identify agents which may be associated with xerostomia.[1]

Drugs commonly associated with xerostomia include:[1,3]

Alpha adrenergic blockers
Alpha adrenergic agonists
Anticholinergics (Antimuscarinics)
Antidepressants
Antihistamines
Antiparkinsonian medications
Antipsychotics
Benzodiazepines
Beta adrenoceptor blockers
Diuretics
Glucocorticoids
H2 receptor antagonists
Lithium
Non-Steroidal Anti-Inflammatory Drugs
Opioid analgesics
Proton Pump Inhibitors
Sucralfate

Non-Drug Treatment

<u>Simple Interventions</u>

For the initial treatment of a dry mouth frequent routine mouth care is suggested. The mouth can be moistened every 30 minutes with water e.g. with sips or sprays of cold water or sucking ice-cubes. However, patients should be advised that sipping water too often may be

counter-productive, reducing the mucus film in the mouth and possibly worsening symptoms[2].

Chewing gum can also offer symptomatic relief by stimulating salivation in patients with residual salivary function.[1,5] Chewing gum should be sugar-free and, in patients with dentures, low tack e.g. Orbit® sugar-free gum. Vaseline® can be used around the lips every 4 hours to prevent lip cracking and a room humidifier may help when the weather is dry and hot.[1]

Lemon and glycerine mouth swabs should not be used to clean or freshen the mouth, because the lemon flavouring is known to have a drying effect. Equally, though thought to stimulate salivary flow, acid drops or acidic boiled sweets may ultimately have a drying effect on the mouth. Citrus flavoured, sugarless oral drops (containing malic acid) may be used cautiously in patients with limited treatment options[2].
In the past, pineapple chunks were used for debriding the mouth, due to their protease enzyme content. However, such use is now considered poor practice as pineapple is acidic, and thus may exacerbate a sore or inflamed mouth, contribute to the demineralization of teeth, and predispose to oral infections. If the tongue appears furred, specific debridement may be achieved by gentle brushing with a baby's soft toothbrush several times per day until the tongue is clean[4]. The use of ascorbic acid effervescent tablets for debridement is no longer favoured owing to the product's acidity and its potential to exacerbate a sore or inflamed mouth[4].

It has been suggested that a small amount (0.5mL) of butter, margarine or vegetable oil may provide additional relief in terms of moistening the oral mucosa.[1] Equally, it has been proposed that the addition of a small amount of liquid omega-3 oil to water used to freshen the mouth (¼ to ½ teaspoon per pint) may enhance the wetting effect[2].

Drug treatment

<u>Saliva Stimulants</u>

Saliva stimulants encompasses systemic therapies which, when administered, stimulate the salivary glands to release endogenous saliva. Most of the proposed therapies act via anti-

cholinergic properties. As artificial saliva is considered to be a poor substitute for natural saliva, unless a main salivary duct is blocked causing a dry mouth, a saliva stimulant is the preferred therapy.

Saliva stimulants such as pilocaprine, bethanechol, cevimeline or Saliva Stimulating Tablets (SST) may also be used in the management of dry mouth.[1, 6] However, bethanechol, cevimeline and SST tablets do not appear to be available in Ireland.

Pilocarpine is a parasympathomimetic agent with mild beta-adrenergic activity which stimulates secretion of saliva from exocrine glands.[1,5] Pilocarpine is particularly beneficial in the management of drug-induced dry mouth with up to 90% of patients seeing benefit immediately.[1] Adverse effects, particularly increased sweating, may, however, limit its use.[5] For further information, see Palliative Meds Info document 'Can pilocarpine eye drops be used to treat a dry mouth?'

Artificial Saliva

Artificial saliva acts to mimic the patient's own saliva and can provide useful relief of dry mouth.[4] However, artificial salivas are considered a poor substitute for natural saliva. The Palliative Care Formularly now advises that unless a main salivary duct is blocked, saliva substitutes should not be considered as first-line therapy.[6] Often, a coated ("furred") tongue is indicative of inadequate salivary gland function.[1] Generally, mucin-based saliva products are more effective than cellulose-based ones, with some patients finding cellulose-based products to be no better than frequent sips of water.[7,8] Unfortunately, no mucin based artificial saliva products are available in Ireland at present, thus limiting their use further.

For maximum effect, artificial saliva needs to be taken every 30-60 minutes and before and during meals as products seldom give relief for more than 1-2 hours.[8] Artificial salivas with a neutral pH are preferable for long-term use.[1]

Biotene®, BioXtra® and Glandosane® are some of the artificial saliva products available in Ireland. BioXtra® mouth spray and mouth-rinse contain fluoride which is beneficial in dentate patients[8].

References:

1. Twycross R, et al. Symptom management in advanced cancer, 4th Edition. 2009.
2. Bruera E, at al. Overview of managing common non-pain symptoms in palliative care. Available from www.uptodate.com. Accessed on the 12/07/2019.
3. Treister NS, et al. Palliative care: Overview of mouth care at the end of life. Available from www.uptodate.com. Accessed on the 12/07/2019.
4. Monograph Mouthwashes. Palliative Care Formulary. Accessed online on 12/07/2019. Available from www.medicinescomplete.com
5. Monograph Dry Mouth. British National Formulary. Available from www.medicinescomplete.com. Accessed on the 12/07/2019.
6. Monograph Artificial Saliva. Palliative Care Formulary. Available from www.palliativedrugs.com. Accessed on the 14/10/16.
7. Monograph Dry mouth (Xerostomia). Palliative Care Matters. Accessed online on 23/07/2019. Available from www.pallcare.info
8. Saliva substitutes: Choosing and prescribing the right product. UKMI Q&A 190.8. Published September 2015.