Mouth Care

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Abstract
Mouth care is very commonly neglected in people with life-limiting illness and in the elderly and frail. However, people with life-limiting illnesses, the treatments required to manage them and the medications used for symptom management, have significant effects on the mouth. The focus of this chapter will be
on good oral assessment and care of the mouth in order to maximize quality of life, maintain self-esteem, feelings of well-being and comfort at the end-of-life. The compartmentalization involved in viewing the mouth separately from the rest of the body must cease because oral health affects general health by causing considerable pain and suffering and by changing what people eat, their speech, and their quality of life and well-being (Sheiham 2005).

1 Introduction

Palliative care is an interdisciplinary medical specialty that focuses on prevention and relief of suffering, and yet mouth care is often seen by health professionals as of minor importance despite the high incidence of oral discomfort and infection. People, therefore, do not perceive these symptoms as clinically important and will not always report them and subsequently suffer significant discomfort (Oneschuk et al. 2000). Mouth problems can make a person miserable and prevent them enjoying a healthy diet.

The intraoral structures: the tongue, palate, and teeth serve a number of important functions such as defense, mastication, incision, and signaling with facial expressions. Good oral health is vital for carrying out activities of daily living such as speaking, eating, swallowing, and socializing. It maintains self-esteem, dignity, and respect, providing quality of life. People at the end-of-life are susceptible to a range of oral complications including pain, salivary gland dysfunction, dysphagia, and oral mucosal infections (Wilberg et al. 2012).

The aim of this chapter is to raise awareness of the importance of mouth care for all health professionals involved in the care of people with life-limiting illness and in the older person and those with dementia as oral care is often a neglected area of care. It has distressing implications for quality of life for these people if poorly managed and must therefore become part of individualized care plans. Mouth care is an important indicator as to the quality of care a person is receiving.

2 Anatomy and Function of the Mouth

The oral cavity includes the lips, cheeks, palate (roof of the mouth), floor of the mouth, and the part of the tongue in the mouth, and ducts of the salivary glands. A mucous membrane lines and protects the inside of the mouth. All these organs work together to aid in the ingestion and digestion of food. The structures in the mouth also play an important role in speech, taste, and the first steps of digestion.

Saliva from the salivary glands enters the mouth through ducts. There are four pairs of salivary glands. The submandibular glands are under the jaw, the sublingual glands are under the tongue on the floor of the mouth, the parotid glands are between the ear and the jaw, and the buccal glands are in the mucous membrane in the cheeks and mouth, but they only produce a small amount of saliva. Saliva plays an important role in digestion and is made up of electrolytes, mucus, antibacterial compounds, enzymes, and the main component is water, which forms 98% of the saliva. The saliva moistens the mouth and helps a person chew and swallow food.

Saliva is important for maintaining a healthy mouth by cleansing and lubricating it. It is antimicrobial so reduces the risk of oral infection. It is important for taste and the enzymes it contains helps with the breakdown of food and digestion. Saliva helps maintain mucosal integrity. Saliva maintains oral hygiene.

Taste is another major function of the mouth as the tongue, a strong muscle which moves food around, also has around 10,000 sensory structures (taste buds) located at the sides and base of the tongue. This helps us distinguish four main flavors: sweet, sour, salty, and bitter. It lets us distinguish flavors and warns us when food should not be eaten.

The gingiva (gums) is the pink soft tissue that surrounds the teeth and covers the jaw bone. Gums are a delicate tissue that can easily get irritated, inflamed, and start to bleed if infected by the bacteria.
3 Why Worry About Mouth Care?

1. People at the end-of-life are vulnerable to oral problems.
2. The impact of oral discomfort impacts on many aspects of the lives of people – the ability to communicate, socialize, and enjoy food and drinks.
3. People at the end-of-life are frequently exposed to compromising factors – the disease process, medications, and the inability to maintain oral fluids.
4. Research has ranked xerostomia in people with advanced disease as the third most distressing symptom (Sweeney and Bagg 2000).

3.1 Risk Factors for Mouth Problems

Preventive mouth care is essential for people receiving palliative care. In a study looking at nursing knowledge and attitudes concerning preventive mouth care, 1 in 20 nurses did not think that mouth care was his/her duty. This care was considered unpleasant and difficult (Bellior and Riou 2014). As disease advances, people become frailer and more debilitated and so the oral mucosa becomes more vulnerable. Medications for symptom management, for example, opioids and anticholinergics, and treatments such as irradiation or chemotherapy can lead to dryness of the mouth allowing the entry of infection through damaged mucosa. The person may be less able to maintain oral intake leading to dehydration and dryness of the mouth. Regular dental appointments may not be a priority, and damaged teeth and dental caries are an added risk for mouth problems.

3.2 Physical Effects of Poor Oral Care

- The person’s comfort is compromised.
- Loss of enjoyment of food.
- Loss of appetite and inability to maintain nutrition.
- Swallowing difficulties.
- Poor protection from infection.
- Communication difficulties.

3.3 Psychological Effects of Poor Oral Care

- Frustration.
- Loss of taste means lack of enjoyment of food and fluids.
- Prolonged periods of eating pureed foods.
- Unbearable at times.
- Frustration gives way to annoyance and anger.
- Being misunderstood because of slurred speech.

3.4 Social Effects of Poor Oral Care

- Difficulties in communication leading to embarrassment.
- Social impact of not being able to enjoy and share meals with family and friends.
- Limits social outings and participants at special occasions.
- People avoid close physical contact.

4 Assessment of the Mouth

4.1 Individualized Care

As with all palliative care, planning must be holistic and individualized to be effective. Timely oral care assessment and an individualized regime are required to establish the frequency and type of care required in order to limit the occurrence of oral complications (McGuire 2003).

The key questions to assess oral care are: Is there infection present? Is the mouth dry? Is the mouth dirty? Is the mouth painful? Inspect the mouth carefully and gently using a torch or light source and a spatula to depress the tongue. Listen carefully to what the person has to say about their mouth and the issues they are experiencing physically, psychologically, and socially.

The use of an oral assessment tool is recommended, and there are many available.
When deciding on an oral assessment tool, ensure that it assesses the lips, tongue, mucosa, gingiva, saliva, and teeth or dentures. It should also assess the four phases of oral health: when the mouth is healthy, any early warning signs of problems developing, problems that are present, and any serious problems that need urgent and more intensive treatment. Ensure it is appropriate to the setting where it will be used. (Links to some examples are in the appendix at the end of the chapter). This will ensure better planning of an individualized care regimen.

4.2 Oral Assessment Guide

- Listen to the person’s voice – Has it changed?
- Are they able to swallow or are they experiencing any difficulties?
- What is the texture of their lips? (dry, cracked, bleeding?)
- Look at the tongue – Is it coated, blistered, red, dry or sore?
- Do they have saliva? What is the consistency?
- Look at the mucous membrane – Is it coated? Are there any ulcers?
- What does the gingiva look like? (edematous, red, bleeding?)
- Check the teeth/dentures (plaque or debris, broken or cracked?)

4.3 Dry Mouth (Xerostomia)

This is a common symptom causing significant morbidity and distress as a result of a lack of saliva. There are multiple causes and each needs careful consideration (Figs. 1 and 2).

- Dehydration
- Psychological such as fear and anxiety
- Medications such as antidepressants, anticholinergics, morphine
- Radiation to head and neck
- Diabetes mellitus
- Liver cirrhosis
- Infections
- Sjogren syndrome
- Oral candida must be excluded or if present treated

To manage a dry mouth, it is necessary to keep it moist and to replicate or stimulate saliva production. The oral cavity, including the lips, requires moisture for its integrity. Several options may need to be tried to gain relief.

- Treat any causes that are treatable such as candida
- Have frequent sips of water and/or artificial saliva spray/drops
- Sucking on sugar-free candy or chewing sugarless gum
• Drinking diet drinks which have a low pH
• Reducing caffeine and alcohol
• A cool mist humidifier at night may provide some relief
• Eat soft, moist foods that are cool or at room temperature
• Moisten dry foods with broth, sauces, butter, or milk
• Semifrozen fruit juice or pieces of fruit
• Moisten lips or apply lip balm
• Clean teeth after each meal with a soft toothbrush
• Dental referral as necessary
• Medications such as pilocarpine (check drug information before using)
• Avoid dry, coarse, or hard foods
• Avoid acidic or spicy foods that can burn the mouth
• Avoid glycerine and thymol mouthwash as this is hygroscopic

Oral pain needs to be treated with both systemic and topical treatments. Opioids may be necessary especially when there is severe mucositis or candida infections. Local anesthetics can be used topically.

### 4.4 Care Plan Summary

Meticulous documentation of the assessment and plan of care for managing any identified problems is important to ensure continuity of oral care. Mouth care should be offered at least four times a day: after each meal and at night. The oral assessment should be repeated daily and management changed as needed.

### 5 Oral Care for People with Dementia

The number of people with dementia is increasing as the population ages. Dementia is a life-limiting illness, and these people need a palliative approach to care from diagnosis. Special attention to oral hygiene is therefore important as they may be neglecting it themselves or no longer able to attend to their own oral care. “Poor dental health can affect the person’s comfort, appearance, eating, nutrition, behaviour and general health. Every person with dementia needs an individualised preventive approach to dental care.” (Boyle et al. 2014).

When a person is diagnosed with dementia, an oral hygiene plan should be established. Family and/or carers will need to be part of the planning and ongoing explanations of the importance of good oral hygiene are given to the person with dementia. The use of an assessment tool will be useful as the information provided by the person with dementia may be unreliable.

Dementia is under recognized and therefore oral problems can occur and become problematic. Challenging behaviors may occur in these people as they may have significant pain, infection, and broken teeth or ill-fitting dentures that have not been addressed.

As dementia progresses, communication may also be impaired, and it is vital that an individualized preventive oral hygiene plan is in place and must involve the family, carers, and person’s dentist. Prevention of issues is preferable to the person needing dental procedures as they may cause unnecessary anxiety and pain.

Oral hygiene prevention must be part of care planning for all people with dementia and there needs to be resources, policies, and procedures in place to ensure that this is done.

### 6 Care of the Mouth as Death Is Imminent

The desire to eat or drink at the end-of-life usually decreases. This is a natural response of the body as the organs are slowing down, and it becomes difficult to manage the intake of food and/or fluids and the person can feel quite dry. This is a normal part of having advanced disease – it is not that “they are starving to death.” They are dying from their advanced disease and trying to force them to eat or giving artificial fluids through artificial means will not alter the dry feeling they have.
Communicating this to the family is an important part of palliative care.

The best way to make the person feel better is to provide frequent fluids while they are able to drink and when that is no longer possible to keep moistening their mouth as will be discussed below. Good mouth care is as important as death approaches as at any other time when living with a life-limiting illness.

People at the end-of-life are vulnerable to oral problems, such as candida, no matter how well their mouth is cared for so it is important to assess the mouth regularly as discussed earlier in this chapter.

Xerostomia (the subjective sensation of dryness of the mouth) is the most common oral issue experienced as a person is dying. The options suggested previously can be used but first assess the person’s ability to swallow.

6.1 Dry Mouth Alternatives That May Be Tolerated at the End-of-Life

- Semifrozen tonic water and gin
- Semifrozen fruit juice or pieces of frozen pineapple
- Frequent sips of cold water or water sprays
- Warm tea or coffee
- Warm miso soup or other familiar tastes
- Frozen popsicles made from fluids the person likes
- Lip balm on the lips

6.2 Mouthwashes

There is little conclusive evidence to support the use of many of the proprietary mouth washes, but some people have used them daily for much of their life and may wish to continue to do so, but often towards the end-of-life the taste can be too strong. Outlined are some mouthwashes that may be tried and may need to be used for short periods if there is oral candida or coating in the mouth.

In end-of-life care, it is more important that fluids used are acceptable and palatable to the person.

- Water – is usually acceptable, it is inexpensive, but it will not remove coating.
- Normal saline (salt and water – 1 tsp to 500mls) – is inexpensive, mildly antiseptic but may not be acceptable if a person has altered taste or feels sick.
- Sodium bicarbonate – can clean coated tongue, BUT it has an unpleasant taste and can be irritant. Sodium bicarbonate is sometimes on sponge swabs – these can be used for short periods for a coated tongue but not as the regular mouth swab.
- Cider and soda water 1:1 – pleasant tasting and the effervescence may help in loosening debris.
- Over the counter mouthwashes – often too astringent and painful in sore mouths.
- Glycerine and lemon mouthwashes or mouth swabs should be avoided.
  - INCREASE dryness as they are hygroscopic
  - Exhaust the salivary glands from the effects of lemon
  - Citric acid damages tooth enamel
  - Accelerates decalcification
  - Increases the likelihood of painful tooth sensitivity
  - No evidence of cleaning properties (Milligan et al. 2001)

6.3 Oral Care for the Person Who Is Dying and Can No Longer Drink

This is an important aspect of end-of-life care and is something that family, friends, and carers can be taught to do very easily, if they wish, and this can allow them special time with the person. As food has significant cultural connection to caring for a person, inviting the family to do the oral care can help reduce the feeling that their loved one is being “starved to death.” People with advanced
disease at some point, lose their appetite, stop eating, and drinking and mouth care is a very special way to care and maintain comfort and dignity until death.

- Find out from the person and the family what fluids they like.
- Mouth care should be done two hourly or more frequently if required to keep the mouth moist.
- Use large plain swabs not swabs that are impregnated with sodium bicarbonate or other substances.
- Teeth can be gently cleaned with a soft toothbrush.
- Use any fluids familiar to the person to swab the mouth – cooled tea or coffee, fruit juice, carbonated drinks, alcohol, cooled clear soups, ice cream, or yogurt. This will allow family to provide special things for their loved one. The familiar fluids and touch of family or friends will lessen the shock for the person, of having something placed in their mouth, particularly if they are not fully awake.
- Avoid iced water – this can be a shock for a person especially if they have sensitive teeth.
- It is the act of moistening the mouth and NOT the fluid you use that is important in the last days of life.
- Take care if the mouth is painful or ulcerated and bonjela may be useful to relieve the pain – just put a little on a swab and very gently coat any sore areas. Bonjela is contraindicated if there are bleeding mouth ulcers.
- If a person has a history of high alcohol intake, swabbing their mouth with alcohol may keep them more settled.
- Clean dentures and soak in antiseptic solution overnight.
- Take care not to put a toothbrush or swab near the back of the mouth or it may cause gagging.
- Use gentle pressure with swabs or toothbrush.
- Lip balms are useful to keep lips moist.

7 Changing Practice

Stress the importance of mouth care to all health professionals and provide ongoing education to begin the process of change. Creating guidelines and implementing protocols and procedures for oral assessment and care planning will be imperative and will also provide a way to audit oral care practice.

Ensure resources and products are available. Providing information leaflets for health care professionals and for people and their families about the importance of oral care and how to assess the mouth will give understanding of the significance of oral symptoms by all concerned.

8 Conclusion

Oral problems especially dryness are a significant problem for people at the end-of-life and impact on people’s feelings and affect their quality of life. Oral care must therefore be raised to a clinical priority in hospice, hospital, and community settings to improve standards of holistic palliative care (Rohr et al. 2011). Oral care documentation must be implemented in all settings and audit used to ensure oral care is seen as a priority in order that people are not subjected to unnecessary discomfort and die with dignity and comfort.
Appendix: Oral Health Assessment Tools


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**References**


