ROLE OF ORAL MEDICINE SPECIALIST IN PALLIATIVE CARE

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ABSTRACT

The palliative doctor gives the ‘touch of God’ as he/she takes care of the terminally ill patient. Palliative care for the terminally ill is based on a multidimensional approach to provide whole-person comfort care while maintaining optimal function. The oncologist encounters great difficulties in managing oral cavity problems of these patients. It is ideal that palliative care team should include specialists from various fields to provide comprehensive overall care to the patient. The dental or oral medicine specialist can play an important role in alleviating both the physical and psychological pain of dying and in treating the effects caused due to chemotherapy and radiotherapy. In this article, a brief attempt is made to list a few areas in which an oral medicine specialist can help other members of the palliative care team and also the patient in leading a better life.
KEYWORDS: palliative, morphine, mucositis, xerostomia, candidiasis.

INTRODUCTION
Cancer of the oral cavity is the sixth leading cause of cancer worldwide and India is said to have the major number of oral cancer patients, the leading etiological factor being the use of tobacco which is consumed particularly in the smokeless form. Palliative care is defined by the WHO as “the active total care of the patient whose disease is not responsive to curative treatment”.\[1\]

Palliative care is a specialized area of healthcare which focuses on relieving and preventing the suffering of patients. Patients with oral cancer often have a complex and prolonged course of illness due to both the patterns of disease recurrence and the adverse effects of treatments that is marked by periods of freedom from disease and symptoms interspersed with bouts of serious illness, debility, and numerous physical and psychological symptoms including pain, dysphagia, disfigurement, weight loss, depression, and xerostomia. Although the concept of palliative care is not new, most physicians have traditionally concentrated on trying to cure patients, but alleviation of symptoms and improving the quality of life in such patients is of paramount importance.

Dentists most frequently encounter patients who may be anxious or in pain, and are sensitised by the nature of the profession to be compassionate and excellent communicators. Communication plays a major role in alleviation of symptoms and it involves skills of active listening, obtaining patient’s consent, showing empathy and open frequent dialogue between patient, family and Colleagues.

Palliative care dentistry was defined by Wiseman as “the study and management of patients with active progressive and far advanced disease in whom the oral cavity has been compromised either by the disease directly or by its treatment; the focus of care is quality of life”.\[2\]

Mouth is the most important of expression of any disease and is most affected during the later stages of disease. The consequences of an unhealthy or painful oral cavity have a great impact in the quality of life. Not only are there physical implications of reduced oral intake and weight loss but also there may be psychological effects due to impaired communication
and feelings of exclusion and social abandonment. Good oral hygiene is fundamental for oral integrity and helps to ease most of the symptoms associated with cancer.

DENTAL REFLECTION IN PALLIATIVE CARE

Dental expression in palliative care may be defined as the extended dental services with a central goal of providing feasible oral care to terminally ill or far advanced diseased patients, where oral lesions or conditions greatly impact on the quality of remaining life of patients, the initiation and progression of oral lesions may be related to direct or indirect succession of disease, its treatment or both3. Traditional oral hygiene care may not be appropriate for residents who are terminally ill, unconscious, non-responsive, or acutely sick. Palliative oral care thus focuses on strategies for maintaining resident quality of life and comfort of oral cavity. Oral health goals of palliative care includes quality care, free of pain and infection, relief from dry mouth and clear from dental plaque, calculus or food debris.

A comprehensive clinical examination of the extra and intra oral soft tissues, periodontium and dentition is essential. High patient awareness and motivation are essential to minimize potentially devastating dental complications. Oral care protocols should strive to maintain the integrity of oral mucosa and lips, prevent caries and periodontal disease, alleviate oral pain and discomfort and prevent or treat infectious complications that can further add on to the patient’s distress.

Oral problems in palliative patients may be related to

1. Direct effect of the primary disease
2. Indirect effect of the primary disease
3. Treatment of the primary disease
4. Direct/indirect effect of a coexisting disease
5. Treatment of coexisting disease
6. Combination of the above factors.[4]

The assessment of oral problem is essentially similar to assessment of other medical problems. It involves recording a detailed history, performing an examination, and the use of appropriate investigations which should be preferably cost effective. The oral examination involves a general observation, intra-oral examination, and extra-oral examination including examination of lymph nodes.
COMMUNICATION

Once a decision has been made to start a patient on palliative care the patient and relatives need to be involved in the treatment process. Effective symptom control is impossible without effective communication. Even the most powerful analgesics will be of little help if the doctor does not have an accurate understanding of the patient’s pain and this can only be achieved with effective communication with the patient as well as his family.

Communication in palliative care dentistry is imperative. Communication begins with body language, such as facial expressions, hand positions, body posture etc. All of these can gain a confidence in the patient that the dentist is being forthright, sincere and tolerant. The patient should be more willing to discuss the presence or absence of pain and fear. Only after good communication has been established with the patient should the palliative care dentist suggest conducting an oral exam (Table 1).

Communication in palliative care can be considered under the following headings
- Good listening skills
- Specific communication tasks (breaking bad news and a clear dialogue regarding palliative care goals)
- Communication with family and other professionals

ORAL CONSIDERATIONS IN PALLIATIVE CARE

The basic principle of oral care in palliative care is that good oral hygiene is the fundamental for oral integrity. Care of the oral cavity is considered one of the most basic of nursing activities and palliative care patients are especially susceptible to various oral problems. The management of such problems should be carried out in a systematic way in order to relieve the patient’s symptoms.

Palliative care may be required in the following conditions such as

ORAL PAIN

Pain is the most common and dreaded symptoms of cancer. 90% of cancer pain is directly related to the tumor or its therapy whereas 10% of it is related to any unknown illness. Many oral complications both local and systemic can be associated with pain. The pain is mainly due to mucositis which causes ulceration, inflammation due to the release of various cytokines causing localized pain. The physician should assess the intensity of the pain, its
characteristics, the patient's emotional response to the pain and the effect of the pain on the patient's day to day functional activity.

Pain management may be local, systemic, or both. Patients with severe pain may require parenteral opioid therapy during the maximum period of mouth pain. Pain may be managed by the use of topical analgesics to reduce somatic pain, or topical anaesthetics to numb the painful tissues. The WHO has adapted the three step ladder which is presented as the most efficient way to manage cancer pain.

A) TOPICAL TREATMENT OF ORAL PAIN
I). Localized pain
a. Choline salicylate gel is used if the pain is localized.
b. Topical local anaesthetics have a definite but limited role in the management of oral ulceration and should be reserved for severe pain (e.g. Chemotherapy- or radiotherapy-induced mucositis). Lidocaine (lignocaine) 5% ointment or 10% spray is suitable for use.
c. Carmellose paste provides a protective barrier over the ulcer site.

II) Diffuse oral pain
a. Benzydamine mouthwash or spray (a nonsteroidal anti-inflammatory drug) may be useful if the area is more extensive.
b. Diclofenac dispersible tablets can be used as a mouthwash, and the oral cavity should be rinsed before swallowing.
c. Topical morphine can be considered for severe pain. Morphine sulphate10 mg/5 ml solution can be used as a mouthwash.
d. Carbenoxolone provides a protective barrier over the ulcer site, but there is little evidence for its use.
e. Gelclair is a novel viscous gel that forms a protective film round the entire oral cavity (mechanical protection).

A) SYSTEMIC TREATMENT OF ORAL PAIN
The choice of systemic analgesics depends upon the severity of pain. The WHO has adapted the three step ladder which is presented as the most efficient way to manage cancer pain. If there is inadequate pain control at level 1 of the ladder it is required to move up the ladder for strong analgesics.
Table 1: Commonly used non-opioid drugs (Oral administration)

<table>
<thead>
<tr>
<th>Non-opioid Drug</th>
<th>Initial Oral Dosage</th>
<th>Oral Dosage</th>
<th>Parenteral Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen</td>
<td>500-1000 mg (4-6 hourly)</td>
<td>4000 mg/day</td>
<td></td>
</tr>
<tr>
<td>Diclofenac</td>
<td>50 mg (BID/TID)</td>
<td>150 mg/day</td>
<td></td>
</tr>
<tr>
<td>Ibuprofen</td>
<td>400-600 mg (TID/QID)</td>
<td>3200 mg/day</td>
<td></td>
</tr>
<tr>
<td>Etodolac</td>
<td>200-400 mg (TID/QID)</td>
<td>1200 mg/day</td>
<td></td>
</tr>
<tr>
<td>Indomethacin</td>
<td>25-50 mg (TID)</td>
<td>200 mg/day</td>
<td></td>
</tr>
<tr>
<td>Ketoprofen</td>
<td>25-50 mg (TID/QID)</td>
<td>300 mg/day</td>
<td></td>
</tr>
<tr>
<td>Piroxicam</td>
<td>20 mg (OD)</td>
<td>20 mg/day</td>
<td></td>
</tr>
<tr>
<td>Celecoxib</td>
<td>200 mg (BID)</td>
<td>400 mg/day</td>
<td></td>
</tr>
</tbody>
</table>

If pain relief has not occurred with a NSAID, a weak opioid with or without an adjuvant can be added for additional benefit. Morphine is currently the strong opioid of choice for moderate to severe pain. Dosage of few other opioids along with morphine have been listed in table 2.

Table 2: Opioids used in severe pain

<table>
<thead>
<tr>
<th>Opioid Drug</th>
<th>Initial Oral Dosage</th>
<th>Oral Dosage</th>
<th>Parenteral Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>30 mg every 3 to 4 hours</td>
<td>10 mg</td>
<td>30 mg every 4 hours</td>
</tr>
<tr>
<td>Codeine</td>
<td>180 mg every 3 to 4 hours</td>
<td>-</td>
<td>60 mg every 3 to 4 hours</td>
</tr>
<tr>
<td>Oxycodone (Roxicodone)</td>
<td>30 mg every 3 to 4 hours</td>
<td>10 mg</td>
<td>10 mg every 3 to 4 hours</td>
</tr>
<tr>
<td>Methadone</td>
<td>20 mg every 6 to 8 hours</td>
<td>10 mg</td>
<td>20 mg every 6 to 8 hours</td>
</tr>
<tr>
<td>Levorphanol (Levo-Dromoran)</td>
<td>4 mg every 6 to 8 hours</td>
<td>2 mg</td>
<td>4 mg every 6 to 8 hours</td>
</tr>
<tr>
<td>Hydromorphone (Dilaudid)</td>
<td>7.5 mg every 3 to 4 hours</td>
<td>1.5 mg</td>
<td>6 mg every 3 to 4 hours</td>
</tr>
</tbody>
</table>
Tramadol (Ultram) | 100 mg four times daily | 80 mg | 50 mg every 6 hours
Fentanyl (Duragesic) | 24-hour dose of any of the above is equivalent to 50 μg per hour of transdermal fentanyl | 25 μg per hour patch

**ORAL MUCOSITIS AND STOMATITIS**

Oral mucositis is described as the inflammation of oral mucosa resulting from chemotherapeutic agents for oral cancer or due to ionizing radiation. Mucositis typically manifests as erythema or ulcerations resulting from the exposure of the underlying connective tissue to the oral environment. It is a major cause of morbidity in cancer patients. The oral mucosa in the path of radiation first appears hyperaemic and oedematous and as the treatment continues, the mucosa becomes denuded, ulcerated and covered with a fibrinous exudate leading to mucositis. Oral mucositis can lead to great deal of discomfort, pain, difficulty in mastication, dysphagia and sometimes secondary infection can occur.[8]

Table 3: Certain agents for the management of mucositis are as follows[9]

<table>
<thead>
<tr>
<th>Diluting agents</th>
<th>Saline, Frequent water rinses, Bicarbonate rinses, Ice chips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topical anaesthetics</td>
<td>Xylocaine Hcl, Benzocaine Hcl, Dyclonine Hcl, Diphenhydramine Hcl, Doxepin Hcl</td>
</tr>
<tr>
<td>Lip lubricant</td>
<td>Wax, Water based lubricants, Lanolin</td>
</tr>
<tr>
<td>Coating agents</td>
<td>Kaolin-pectin, Aluminium chloride, Aluminium and Magnesium Hydroxide, Hydroxypropyl cellulose, Sucralfate</td>
</tr>
</tbody>
</table>

**XEROSTOMIA**

Xerostomia is very common in palliative care patients, as a result of medication or radiotherapy to the head and neck. Dry mouth does not always correlate with salivary gland hypofunction, but the clinician should respond to the patient’s chief complaint. The symptoms include oral dryness, burning sensation, altered taste, difficulty in chewing, swallowing etc. Clinical signs that aid in diagnosis include thick ropey saliva, lip stick sign, tongue blade sign, candidiasis, bald and fissured tongue, erosion of teeth, increased rate of dental caries etc.

**Management of xerostomia**[10]

**Symptomatic**
1. Frequent sips or sprays of cold water.
2. Sucking ice cubes.
3. Chewing sugar-free gum.
4. Use of petroleum jelly to prevent sore, cracked lips.
5. Acupuncture and TENS therapy may be useful for resistant cases.
Pharmacological

1. If simple measures are inadequate, artificial saliva containing mucin (AS Saliva Orthana®) or lactoperoxidase (Biotene Oralbalance® and BioXtra®) should be considered.
2. Pilocarpine 5 mg thrice daily.
3. Alcohol free rinses. Eg. Oral B anti-cavity rinse

Most people with drug-induced dry mouth respond after the first dose.

CANDIDIASIS

The incidence of candidiasis in palliative care patients has been estimated to be 70% to 85%. Poor oral hygiene, xerostomia, immunosuppression, use of corticosteroids or broad-spectrum antibiotics, poor nutritional status, diabetes and the wearing of dentures are considered as predisposing factors for fungal infections. *Candida albicans* is the most common organism in candidiasis.

Higher salivary levels of candida are more frequently encountered in denture wearers than in dentate patients. Soaking the denture in bleach (15 mL) and water (250 mL) for 30 minutes will help rid of the denture odours. Dentures can also be soaked in benzalkonium chloride (1:750) for 30 minutes. Benzalkonium chloride should be formulated daily as Gram-negative bacteria can proliferate within 24 hours. Dentures should be stored in solutions of water or mouthwash like 0.12% chlorhexidine. Candidiasis may be treated by a combination of topical and systemic applications[^11]^ (Table 4).

**Table 4 (Topical and systemic anti-fungal agents for management of candidiasis)**

<table>
<thead>
<tr>
<th>TOPICAL</th>
<th>SYSTEMIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clotrimazole troche, 10 mg, 5 times a day for 14 days</td>
<td>Fluconazole, 100–200 mg on day 1, then 50–100 mg/day orally for 7–14 days</td>
</tr>
<tr>
<td>Clotrimazole cream 1%, applied to denture 3–4 times a day for 7 days</td>
<td>Ketoconazole, 200–400 mg orally for 7–14 days</td>
</tr>
<tr>
<td>Nystatin suspension, 200 000–500 000 IU, swished and swallowed 3–5 times a day</td>
<td>Itraconazole, 100–200 mg/day orally for 7–14 days</td>
</tr>
</tbody>
</table>

NAUSEA AND VOMITING

Nausea and vomiting in palliative care patients may be attributed to many causes like opioid use, chemotherapy, bowel obstruction, pancreatitis and electrolyte imbalance, or they may be movement induced or even an emotional reaction. Vomiting can increase the morbidity of mucositis and also has a caustic effect on the hard tissues. It may also delay healing if the...
patient is not able to consume nutrients essential for tissue repair. Although the oral effects of the antiemetics are great, the inability to consume foods and medications orally has more serious implications. Emotional reactions are treated by the palliative care team by listening to the patient’s concerns, communicating with the patient and suggesting relaxation techniques.

Due to the association of adverse effects like tardive dyskinesia and xerostomia, conventional drugs like metoclopramide and hyoscine are not used recently in the context of palliative care. Drugs which are categorized under the selective 5HT3 receptor antagonists exert their antiemetic effect via blockade of peripheral and central 5-HT3 receptors. Ondansetron is among the oldest selective 5HT3 receptor antagonist. Newer agents include granisetron, tropisetron, dolasetron, and palonosetron. The recommended dose of ondansetron for chronic nausea is 4–8 mg once or twice daily. Doses of the other agents are 1 mg twice daily for granisetron, 200 mg once daily for dolasetron, and 0.25 mg intravenously once daily for palonosetron. Side effects of these agents are usually mild and transient compared to other class of anti-emetics.[12]

NUTRITION, HYDRATION AND TASTE DISORDERS

Nutrition is the most important aspect of health and well-being. Nutrition is required for physical and an active mental status. However it is compromised in people suffering from end stage disease and patients undergoing therapy for the same. Development of malnutrition is usually a slow process, and is most often neglected aspect in management of palliative patients. Such compromised nutritional status can lead to severe neural, muscular, bony, hematological and mental disorders which can affect the general health and well-being of the individual. The most common causes of malnutrition in palliative patients are xerostomia, taste and olfactory dysfunction, mucositis and stomatitis and compromised dental status, halitosis etc.

The role of a dental professional is to assess the nutritional status, oral implications causes of complaints provide guidelines and refer to appropriate provider. A detailed diet history provides a clue to the patient’s baseline nutritional status and may identify subclinical nutrient deficiencies or toxicities. Questions can be asked regarding chewing or swallowing problems, changes in appetite or taste, avoidance of eating due to abdominal pain as well as use of a special diet or nutritional supplements. General physical examination should be focused on assessment of muscle mass and strength, check for any signs of vitamin or
mineral deficiency. Accordingly patients can be classified as well nourished, moderately malnourished and severely malnourished. Nutrition risk may be minimized or avoided with early intervention, proper diet instructions and referral to appropriate health professiona.[13]

DENTAL CARIES AND PERIODONTITIS
Patients with end stage disease are usually prone to caries and periodontitis, common reasons being radiation therapy which in turn leads to changes in salivary flow, increased viscosity, decreased pH, reduced buffering capacity, reduced cleansing action and debris accumulation predisposing to increased rate of caries and periodontitis. The best method of reducing caries is by combination of restorative dental procedures, topical application of sodium fluoride and adequate oral hygiene. Avoidance of dietary sucrose further reduces concentration of streptococcal mutants and lactobacillus in the oral cavity. Teeth which are grossly decayed and periodontally compromised should be extracted based on patient’s health status, as it improves patients comfort for proper food intake. Prescription of mouthwashes can help in patients who are not able to brush their teeth on a regular basis. Alcohol free mouthwashes can hence be advised for palliative care patients. Rehabilitation of missing teeth can be done to improve masticatory efficiency depending upon the patient’s compliance.[14]

PSYCHOLOGICAL CHANGES IN PALLIATIVE PATIENTS
The most common psychological problems for patients requiring a palliative approach are depression, confusion and anxiety. It is important to distinguish between normal levels of sadness and abnormal levels of depression. Therefore, the interactive effects of psychological and physical well-being need to be duly considered. By the time the patients reach palliative care stage, they would have already gone through the process of investigation, diagnosis and treatment with varying degrees of pain and trauma, dependency and disfigurement, following the diagnosis of their illness.

Cancer patients who undergo high dose chemotherapy or radiation can experience fatigue, either related to their disease or its treatment. These can produce insomnia or metabolic disorders, which collectively contribute to compromised oral status. It is prudent to support the patient during the periods of fatigue and frustration. Reassurance that the feelings are normal and that it will improve in time should be balanced with gentle but firm encouragement and the patients must be encouraged to continue the mouth care practices even when they seem to have no energy. Demonstration of empathy by eye contact or gentle
touching of the patient’s hand or shoulder can help to a great extent in gaining patient’s confidence and it helps to support patient emotionally.\textsuperscript{[15]}

Palliative care psychiatry focuses on social and emotional issues that arise in someone who is receiving hospice or palliative care. Depressed patients are prescribed antidepressants which are also used as adjuvants for pain palliation and many of these medications cause xerostomia. Dentist should guide the physician in choosing a saliva sparing antidepressant like amitriptyline which is more xerogenic\textsuperscript{16}. Because of lack of proper oral hygiene depressed patients often present with increased rate of dental caries, periodontitis and halitosis. Due to these conditions, even the near and dear ones will often refrain them which in turn imposes severe negative impact. Therefore, it is imperative for a dentist to promote good oral hygiene and referral to a specialist for psychological counselling.

**CONCLUSION**

Palliative care dentistry is an evolving branch and gaining immense importance in this advancing world. In terminal care, examination and re-examination of the mouth is a very important task. Oral problems are common complications of cancer treatments, and are highly prevalent in palliative care patients. They are often overlooked, or perceived as trivial, but if ignored causes great distress, pain and discomfort, interfere with appetite, taste, chewing, swallowing, nutrition, speech, social interactions, and sleeping. The palliative care dentist should focus on the elimination of these problems and appropriate actions must be instituted to alleviate symptoms, minimize pain and suffering and provide symptom control.

Dental professional are the important members of extended palliative team\textsuperscript{17} and they have number of key roles, including (a) training of palliative care professionals, (b) management of complex oral problems, and (c) management of specific oral problems. Increased awareness by all health care professionals of palliative oral care would go a long way in providing relief, comfort, and consolation to terminally ill patients as well as their families. It should be kept in mind that palliative care of such patients should also involve a multidisciplinary approach that addresses the physical, emotional, social and spiritual concerns of the patient.

**REFERENCES**