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Review Article

ORAL MEDICINE SPECIALIST AND PALLIATIVE CARE: A REVIEW

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A B S T R A C T

Palliative Care is the active total care of patients with incurable diseases. Palliative care responds to physical, psychological, social and spiritual needs of the patients and theirfamilies and extends if necessary to support the family in bereavement. It is patient centred, and not disease focused. An Oral Medicine specialist is a part of the multidisciplinary team and plays a crucial and important role in the palliative care of the patients undergoing therapy for head & neck cancer.

INTRODUCTION

The number of cancer patients are ever-growing in the world today. Cancer rates could increase by 50 % to 15 million new cases in the year 2020.[1] About 7 million deaths per year occur in the world due to cancer, of which, approximately 0.8 million occur in India. More than 70% of all cancer patients in India require palliative care for relief of pain, other symptoms and psychosocial distress.[2] In Toto it has been projected that by 2031, the number of people requiring this type of accommodation (Palliative care) will increase from 520,000 to 1.4million.[3] Oral physician plays a pivotal role in the diagnosis, treatment, and management of diseases which need palliative care.

Palliative Care

World Health Organization define palliative care as the active total care of the patient whose disease is notresponsive to curative treatment. Control of pain, other symptoms, and psychological, social and spiritual problems is paramount. The goal of palliative treatment is the achievement of the best possible quality of life for patients and their families.[4]

Principles of Palliative Care

- Non-maleficence
- Beneficence
- Autonomy
- Justice

And these principles should be applied against a background of:

- Respect for human life
- Acceptance of the fact that ***"Death is inevitable, suffering is optional".***
- The potential benefits of treatment as against the potential risks.
- Striving to preserve life, but when the burden of life sustaining treatments outweigh potential benefits, then withdrawing and withholding such treatments and providing a comfortable death.
- Individual needs balance against those of society.[5]

Need For Palliative Care

India is estimated to have more than one million people diagnosed to have cancer every year. More than 80% of them are incurable at the time of diagnosis. With the rapid ageing of the Indian population the highest number of patients needing palliative care in the future will be from among the elderly terminally ill.[6] The need of palliative care lies behind the saying that *" **A Good Physician treats the disease but a Great Physician treats the patient who has the disease"*** which means it not only relieves the signs & symptoms of the disease but also the physical & mental stress of the patient associated with the disease. It is very much needed to show to the patient that the doctor is not only concerned about the symptoms of the disease but about the patient as a person.Thus making it a multidisciplinary approach in treating a patient. So the palliative care is of immense importance here as it provides an additional support and can be used as an adjuvant to the curative treatment.

Conditions Requiring Palliative Care by an Oral Physician

Oral manifestations are caused either due to the disease itself or due to the side effects of the medications used in treating the

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disease. There are several conditions in which the oral cavity is affected and require curative treatment along with palliative care.[7]

Mucositis & Stomatitis -Mucositis and stomatitis are common in patients who receive chemotherapy and radiotherapy.An average of 40% of chemotherapy patients suffer from mucositis. Chemotherapy acts on tissues that have a high rate of mitosis & reduced mitosis causes atrophy of tissues leading to ulceration, which may be further complicated by microbial invasion. Mucositis occurs after 5-7 days after chemotherapy with the drugs like 5-fluorouracil & methotrexate.[8] Clinically it may present as red or white lesionin the mucosa, pseudo membrane formation and ulceration in the initial stages although late changes include fibrosis of connective tissue and hypovascularity.[9] Fractionated dose of 180-220 cGy/day results in mucositis within 12 weeks and increases throughout the courseof therapy to maximum in 4 to 5 weeks.[10] The symptoms include severe pain, compromised oropharyngeal function, oral bleeding, nutritional deficiencies that effect quality of life.[3]

Severity of mucositis can be assessed by World health organization mucositisgrading:

- Grade 0: None
- Grade 1: Erythema, painful ulcers, mild sore throat.
- Grade 2: Painful erythema and ulcers, oedema of oral mucosa, but able to eat solid food.
- Grade 3: Painful erythema and ulcers, painful oedema of oral mucosa that interferes with eating solid food.
- Grade 4: Needfor parenteral or enteric support due to severe stomatitis.[11]

The prime objective in the treatment ofmucositis and stomatitis is aimed at relieving pain. The treatment regime includes the use of –

- **Opiod analgesics** such as morphine & **Topical anesthetics**-DyclonineHcl, XylocaineHcl, Benzocaine Hcl, Diphenhydramine Hcl, Doxepin Hcl.
- **Diluting agents -** Saline, Bicarbonate rinses, Frequent water rinses, Ice chips.
- **Coating agents-** Kaolinpectin, Aluminum chloride, Aluminum and Magnesium Hydroxide, Hydroxypropyl cellulose, Sucralfate.
- **Lip lubricants**- Wax, Water based lubricants, Lanolin.[3]

Prevention of mucositis following chemo and radiotherapy can be done by administration of **Amifostine** that scavenges free radicals generated in the tissues which are known to potentiate mucositis and promote repair of damaged DNA.[12] Besides this, maintenance of proper oral hygiene, good nutrition and hydration is also needed. It is also important to identify local traumatic factors such as fractured restorations or teeth, or an impinging removable prosthesis.

Xerostomia- Radiotherapyor medications used in treating head & neck cancer can results in xerostomia due to destruction of salivary gland tissues in the targeted area.The dryness of the mucosa leads to decrease in lubrication and thus rendering the oral tissues more susceptible to trauma.[13] The symptoms include oral dryness, burning sensation, difficulty in chewing, swallowing, altered taste etc. Clinical signs that aid in diagnosis include thick ropy saliva, lip stick sign, tongue blade sign, bald and fissured tongue, candidiasis, increased rate of dental caries and erosion of teeth etc.[14]

Treatment includes

Artificial saliva, water-soluble lubricants, plenty of fluid-intake, frequent moistening of lips should be used tolubricate the oral tissues. Saliva substitutes are beneficial for the patient and should be used before eating to improve swallowing.

Systemic secretogogues like Bromohexine, Anetholitrithione, PilocarpineHcl and CevimelineHcl can also be given.

Meticulous mouth-care every two hours is indicated by effervescent mouthwash tablets containing peppermint oil, clove oil, spearmint, menthol etc. 0.12% Chlorhexidine can also be given as it has got antibacterial activity. Chewing gums, flavoured candy and pineapple chunks may be tried.

Topical use of malic acid, vitamin C and citric acids can stimulate saliva; however, their low pH contributes to tooth demineralization.

Preventive therapy includes maintenance of meticulous oral hygiene, frequent visits to dentist, supplemental fluoride, remineralizing solutions and non-cariogenic diet. Patients should also be advised to avoid spicy foods, smoking and alcohol.[15]

Candidiasis- The incidence of candidiasis in palliative care patients has been estimated to be 70% to 85%. Predisposing factors include poor oral hygiene, xerostomia, immunosuppression, use of corticosteroids orbroad-spectrum antibiotics, poor nutritional status, diabetes and in the denture wearers.[16]Candidiasis infections are presented as pseudomembranous, erythematous or hyperplastic candidiasis or angular cheilitis. The most common type in terminal end stage immuno-compromised patients is pseudomembranous type which presents as loosely attached membranes comprised of fungal elements and debris, which on scraping leaves erythematous area. In palliative care patients, candidiasis isprimarily a result of xerostomia.[13]

Treatment includes

Antifungal agents like nystatin (topical), ketoconazole, fluconazole (systemic) etc provide good symptomatic relief. Candidiasis may be treated by a combination of topical and systemic applications.

Preventive therepy includes rinsing with water, cleansing with a soft tooth brush and regular soaking of dentures in a weak nontoxic solution are the most effective oral cleansing agents. Dentures should be stored in vessels in solution of water, mouth wash 0.12%chlorhexidine or 100,000 IU of nystatin suspension.[17]

Nausea & Vomiting- Nausea and vomiting in palliative care patients may be caused due to chemotherapy, opioid use, bowel obstruction, pancreatitis and electrolyte imbalance, movement induced or even an emotional reaction.

Treatment suggests the use of Antiemetic drugs but these drugs also have side effects among which inability of food consumption & oral medications are of more serious concern. Emotional outbursts are treated by the palliative care team by listening to the patient's concerns and suggesting relaxation techniques.[13]

Nutritional & Taste disorders- Nutrition is most commonly compromised in people suffering from terminal illness and patients undergoing treatment for the same. Development of malnutrition and its consequence is usually a slow process, and is most often neglected aspect in management of palliative patients.[18] Palliative care patients are unable to consume food or fluids as their oral cavity is compromised. These patients do not generally expend large numbers of calories and usually eat lightly. Diarrhoea, fever, swallowing difficulties and anorexia may cause dehydration, which in turn can lead to xerostomia.[19] The most common causes of malnutrition in palliative patients are xerostomia, taste and olfactory dysfunction, stomatitis and compromised dental status.[3] Chemotherapy or head and neck radiotherapy can also cause dysgeusia in many palliative care patients.[13] It may be due to decreased sensitivity of taste buds, decreased number of taste buds, toxic dysfunction of taste buds, nutritional deficiencies or poor dental hygiene. Compromised nutritional status can lead to severe neural, muscular, bony, haematological and mental disorders affecting the general health and rarely proved to be fatal.[3]

Treatment includes

- Zinc supplementation.
- Monosodium glutamate can be used to improve the taste of food.
- To improve the patient's appetite, suggest that foods be served with gravy, which aids in swallowing for the xerostomic patient.
- Patient should be advised to reduce urea content of diet; to eat white meats, eggs, dairy products; to drink more liquids; to eat cold food; and to have fresh fruits and vegetables.

Preventive therepy suggests that nutrition risk may be minimized or avoided with early intervention, proper diet instructions and referral to appropriate health professional.[20]

Halitosis - Many cancer patients develop halitosis i.e. feeling of unpleasant or foul smelling breath. Causes may be any infection, gastric outlet obstruction, smoking, or ingestion of substances like garlic, onion, alcohol.

Treatment possibilities include attention to orodental hygiene, adequate fluid intake, treatment of oral candidiasis & use of mouthwashes.[21]

Dental caries & Periodontitis-Patients with terminal end stage are usually more prone to caries and periodontitis, with most common reasons being radiation therapy which in turn causes changes in salivary flow,decreased pH, reduced buffering capacity, increased viscosity, reduced cleansing action of saliva and debris accumulation leading to increased rate of caries and periodontitis.

Treatment includes

- Restorative dental procedures,proper oral hygiene and topical application of Sodium fluoride.
- Teeth whichare grossly decayed and severely periodontally compromised should be extracted based on patient's health status, as it improves patients comfort for intake of food.
- Rehabilitation of missing teeth should be done to improve masticatory efficiency.

Prevention includes avoidance of dietary sucrose which further reduces concentration of streptococcal mutants and lactobacillus.[3]

Osteoradionecrosis of the jaw-Osteoradionecrosis is best defined as a slow healing radiation induced ischemic necrosis ofbone with associated soft tissue necrosis of variable extent occurring in the absence of localprimary tumour necrosis, recurrence or metastatic disease.[22] Most common cause for osteoradionecrosis preclude radiation dose higher than 65-75 Gy.[23] Trauma can be a pathophysiology in theory of infection and radiation. Unrepairable teeth due to caries, periodontal disease or root lesions can cause infection tobone and progress to osteoradionecrosis. Abuse of alcohol and tobacco are identified as risk factor for the same.[24]

Treatment includes-Combination of Antibacterials, Antifungals and Antivirals as the combined pharmacological therapy.

Preventive therepy includes

- Weekly dental check-ups during radiation therapy and three month dental check-ups, possibly lifelong.
- Oral prophylaxis.
- Restoration of all dental caries & endodontic treatment in case of pulp involvement.
- Extraction of teeth having caries, periapical lesions, more than 4-6 mm pockets, grade II mobility, furcation involvement & partially erupted third molars.
- Antibiotics may be necessary for surgical procedures.
- Avoid removable or fixed prosthesis for six months before or after radiotherapy.
- Antibiotics may be necessary for surgical procedures.[25]

Anxiety & Depression-The prevalence of anxiety and depression is about 25% in all cancer patients and 77% in those with advanced disease.[26] The most common psychological problems for patient requiring a palliative approach are depression, confusion and anxiety, with depression being one of the most prevalent psychiatric problems.[27] By the time the patients reach palliative care stage, they have typically gone through the process of investigation, diagnosis and treatment with varying degrees of pain and trauma, dependency and disfigurement, following the diagnosis of life threatening illness, many patients experience shock punctuated by periods of dysphoria, anxiety, fatalism and grief.[28]

Treatment includes

- Use of supportive therapy, hypnosis, relaxation therapy, and pharmacological drugs.
- Lorazepam, Alprazolam and Diazepamare the common Anxiolytics.
- Amitryptiline, imipramine and fluoxetine are the commonly used Antidepressants.[29]

CONCLUSION

Palliative care has become a multidisciplinary approach and it has been understood among the healthcare professionals that it cannot be complete without the participation of Oral Physician. An Oral physician not only diagnose & treats a disease but also spread high patient awareness and motivation to minimize potentially devastating dental complications thus serving as an *'Helping hand'* in improving the quality of life of

the patient with terminal illness. Oral physicians are better equipped to interact with patients at their terminal stage of life and can provide utmost comprehensive with empathy as they works on the principle behind the saying that "Even if it's a little thing do something for those who have need of a man's help, something for which you get no pay but the privilege of doing it. Remember you don't live in a world all your own. Your brothers are here too."

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