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REVIEW ARTICLE

ORAL CARE AND PALLIATIVE DENTISTRY AT HOME IN POST-OPERATIVE ORAL CANCER TO IMPROVE QUALITY OF LIFE - A REVIEW

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ABSTRACT

Oral health is vital for overall health. Oral squamous cell carcinoma (OSCC) causes significant mortality and morbidity. The treatment options for OSCCs include a combination of surgery, chemotherapy and radiotherapy depending on the final histopathological results. Even with advanced reconstructive techniques, the cosmetic deformity is marked, especially if the lateral commissure of the lips has to be sacrificed, thus compromising on the Oral health related Quality of Life (OHRQOL). Palliative care dentistry is the management of patients with active, progressive, advanced disease in whom the oral cavity has been compromised by the primary disease or by its treatment. This review was based on the purpose to study the Oral Care at Home in post-operative (op) Oral cancer patients. Literature search was done using key words, followed by inclusions and exclusions. The search was based on palliative care in oral cancer and home interventions in post-op oral cancer. Relevant articles were searched from various databases such as PubMed and Google Scholar. These articles were assessed by experts. The strong impact of disease stage on the prognosis spotlights the necessity of palliative care in these patients especially as a home care, since most patients suffer from painful swallowing and rely on artificial feeding with Nasogastric tube or have geriatric neuro symptoms and patients might also be bed bound with deteriorating activities of daily living (ADL). Hence, this review highlights the oral care at home in post-op oral cancer patients with future research implications in Palliative Dentistry.

KEY WORDS: Oral Cancer, Palliative Care, Palliative Dentistry, Quality of Life

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INTRODUCTION

The Global increased incidence of Oral Cancer due to deleterious habits such as tobacco leads to an increase in the chronic critical illness patients in need of Palliative Care (PC) at home. Oral squamous cell carcinoma (OSCC) causes significant mortality and morbidity[1,2]. The treatment options for OSCCs include a combination of surgery, chemotherapy and radiotherapy depending on the final histopathological results. The condition is not pliable to reversal at any stage of the disease process, even after complete cessation of the habit. Large buccal mucosal tumours will frequently require surgery with through-and-through excision of the cheek and often resection of a part of the adjacent maxilla or mandible. Even with advanced reconstructive techniques, the cosmetic deformity is marked, especially if the lateral commissure of the lips has to be sacrificed, thus compromising on the OHRQOL[3].

In the end, it's not the years in your life that counts, It's the life in your years- Sir Abraham Lincoln.

MATERIALS AND METHODS

A schematic search was conducted to obtain appropriate articles for critical appraisal. Relevant articles were searched from various databases such as PubMed and Google Scholar. Then, they were combined, and duplicate articles were subsequently removed. By examining the bibliographies of retrieved articles, additional articles were identified and using the inclusion and exclusion, the titles of the retrieved articles were read independently. Based on the above literature search and the author's experience, the current review article aims at highlighting the oral care at home in post-op oral cancer.

SEARCH DATABASE

- PubMed
- Google Scholar
- Hand research of reference list of archived articles.

INCLUSION CRITERIA

- Invivo studies
- English
- Human trials
- Article titles with palliative care in oral cancer and home interventions in post-op oral cancer
- Primary and tertiary publications

EXCLUSION CRITERIA

- Non-English articles
- Paid articles since the review is self-funded
- In vitro-studies
- Non-human studies

DISCUSSION

PALLIATIVE CARE AND PALLIATIVE DENTISTRY

According to the World Health Organization (WHO), palliative care is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment, and treatment of pain and other problems – physical, psychosocial, and spiritual. Palliative care services should be provided from the time of diagnosis of life-threatening illness and it should be integrated into the existing health system at all levels of care, especially community and home-based care and it should be strategically linked to cancer prevention, early detection, and treatment services[4,5].

Palliative care dentistry is the management of patients with active, progressive, advanced disease in whom the oral cavity has been compromised by the primary disease or by its treatment[6,7]. Five-year survival rates, after exclusive surgical treatment in OSCC, vary from 77% and 65%in Stage I and II lesions to 27% and 18% in those with Stage III and IV lesions, respectively. 3 The strong impact of disease stage on the prognosis spotlights the necessity of palliative care in these patients especially as a home care, since most patients suffer from painful swallowing and rely on artificial feeding with Nasogastric tube or have geriatric neuro symptoms and patients might also be bed bound with deteriorating activities of daily living (ADL). Giles and colleagues predicted that till 2031, there is likely to be a 70% increase in the number of older people with profound disability associated with musculoskeletal, nervous system, circulatory, respiratory conditions and stroke8. Post-treatment, the maintenance of oral health at home in oral cancer survivors, is of utmost importance, as the oral lesions and dental problems are disease indicators and oral cavity serves as the window for overall health[9].

PC programs mostly function as inpatient treatment units and consultation services in hospitals[10]. As the need for PC services increases, many healthcare systems have been developing novel programs that integrate PC to their healthcare services in the hospital, outside the hospital,

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and home-based settings[11]. In recent years, PC services have been suggested to be integrated into the patient's routine care along with therapeutic approaches beginning from the diagnosis of the disease[10, 12, 13]. Today, too, PC services are provided in hospitals, polyclinics, nursing homes, or home environments, and they are considered as a basic care model especially in the end-of-life period[14, 15].

ORAL CARE AT HOME IN POST-OPERATIVE ORAL CANCER

"All along we have been constantly taught to 'Dispose the patient as early as possible' due to an overflowing out-patient unit. We had a forced attitude to increase patient volume with decreased compassionate care, commitment and empathy".-Dr. S.R.Chandra

We've been wrong about what our job is in medicine. We think our job is to ensure health and survival. But really it is larger than that. It is to enable well-being.'- Atul Gawande Being Mortal: Illness, Medicine and What Matters in the End

The primary care giver should be taught all the basic nursing oral care to daily assess patient's mouth hygiene with empathy and regular house visits should be planned by the oral physician. Systematic oral examination is essential using a glove, torch, tongue depressor and removing any dentures. Brushing and rinsing teeth every 12 hrs, soaking dentures overnight, lip balm applied to lips, use of soft brush and syringe for gentle mouth wash, homemade saline solution with 500 ml water + one teaspoon of common salt for frequent oral rinse are few of the commonly advised measures for oral care in home care[16,17].

Majority of the oral problems in palliative setting results due to decreased fluid intake and nutritional status, polypharmacy causing dry mouth, treatment associated (radiotherapy and chemotherapy), decreased personal hygiene and usual attitude that oral problems are not that serious. Chewing pineapple pieces is also recommended, as it is a salivary stimulant and contains Ananse- a mouth cleansing enzyme16. Other evidence-based measures to combat dry mouth is frequent sips or sprays of cold water/ice cubes/crushed ice, mints, sugar free chewing gums, water-based lubricants, alcohol free mouthwashes and use of topical salivary stimulants.

Home-made dressing for extraoral wound/ or to manage bedside saliva drooling in neurologically compromised geriatric patients can be made with pieces of old cotton cloth, steamed sterilised for 1 hour.

Topical miconazole, clotrimazole or nystatin is the preferred first choice in oral candidiasis which can be used along with topical non opioid analgesics like benzydamine, choline salicylate and xylocaine. For painful mouth, topical opioid analgesia- morphine can be used- 5 mg morphine sulphate in 15 ml of diluents solution given every 2 h and instructed to keep it in mouth for 5 min and then spit it out. Patient should be taught to expectorate completely[17-19].

Severe aphthous ulcers can be managed with topical corticosteroids or doxycycline mouthwash. Sucralfate suspension 1 g (5 mL) diluted with 5 mL water as a mouthwash may be an option for use with bleeding ulcers. According to NICE guidelines, Metronidazole is not only recommended for cutaneous malignant ulcers, but also for malignant oral ulcers as well. As per the guidelines, Topical metronidazole can be applied liberally to the ulcer once or twice a day for 7. If there is response, consider continuing treatment for a further 7 days. Oral metronidazole —400 mg, three times a day, for 7 days can be given. If there is response, consider continuing oral treatment for a further 7 days. If odour recurs after a course of metronidazole, repeat treatment with another 14-day course. If odour continues to recur after intermittent treatment, give indefinitely, either orally (200 mg twice a day) or topically (once or twice a day at dressing changes).

Causes of halitosis should be assessed. Mouth should be checked for tongue coating, poor oral hygiene, any necrosis or sepsis in mouth, ANUG and overall periodontal status. Other general home care measures include avoidance of too hot or too cold foods, adding more liquid to diet, giving mashed and soft palatable food by adding butter/cream/ghee, use of straw.

Oral Hard Tissue	Tooth Decay, Gum problems, Bone loss, Fracture tooth, Pulpal pain, Periodontal pain, Root stumps, grossly decayed, Missing teeth, ill-fitting dentures, Sharp tooth, Discoloured tooth
Oral Soft Tissue	Oral Ulcers, Dry mouth, Bad breath, Bleeding gums, Trismus, Angular Cheilitis, Maggots in Oral wound, Mucositis, Candidiasis, Infectious diseases, Ulcerative conditions, Denture stomatitis, Persistent tobacco induced oral lesions like Smoker's palate and tobacco pouch keratosis.

Table 1- Oral problems in Post-operative Oral cancer patients

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S. No	Characteristics	Evaluation/Proceedings
1	Patient's Home environment	Assess living conditions such as nutrition, cleanliness, ambient temperature, access to water, electricity, and telephone, safety, and the availability of equipment
2	PC Team	Patient and family focused care by a multidisciplinary team consisting of a trained physician, nurse, social worker, and psychologist, physiotherapist, a dietician, a spiritual care specialist and home health assistant according to patient needs.
3	Frequent Home visits	By all team members, including physicians to provide pain control, other symptom management, psychosocial support, and training to meet patient and family needs,
4	Continuous monitoring	24/7 phone support
5	Focussed care with adequate resources	Tailor-made treatment plan with the available resources
6	Training	Employing and training of volunteers or community health workers, promoting wider participation, contacting local health providers
7	Advocacy	Inclusion of wider community groups (association members, students and politicians

Table 2- Basic characteristics in a Home-based Oral Care in Post-Op OC patients

Table 1 enumerates the various oral problems which a post-op OC patient can encounter, which needs prompt assessment and home care.

Table 2 shows basic characteristics of Home-based Oral Care and Palliative Dentistry in Post-Op OC patients.

In terminal stage, avoid giving water by mouth. Privacy should be provided and oral hygiene can be maintained at Semi fowler's or side lying position and head turned toward the side, and by use of a padded tongue blade or spoon to open the patient mouth to separate the upper and lower teeth and soaked gauze or sterile cotton clothes in solution can be squeezed and used to clean. In unconscious patient, mouth should be moistened once an hour and if patient is on oxygen, lips can be lubricated with non-petroleum lubricants[9,20,21].

The importance of dental care is often overlooked due to the omission of the Dentist as a member of the palliative care team, also every oral physician should possess knowledge and skill on palliative care principles and they should not restrict themselves to curative dental treatments alone, to improve overall QOL of patients.

The main goal of maintaining mouth hygiene at home care includes quality care, pain and infection free, comfortableness, moist mouth, free from plaque, calculus and food debris, free of maggots in oral wound by prevention/management of dry mouth/excessive salivation, mucositis, candidiasis, infectious diseases and ulcerative conditions of oral cavity.

CONCLUSION AND FUTURE RESEARCH IMPLICATIONS

Author also believes in further promising research scope in improving feeding in patients with restricted mouth opening by innovative lever operated devices to push crushed food inside mouth, and the integrated alternative therapy of use of herbal drugs like curcumin in symptomatic management of oral aphthous ulcerations, thus aiding in proper timely nutrition, and improved quality of life[22,23]. Artificial type of salivary glands with use of irradiated NIH 3T3 fibroblasts which serve as feeding layer are also in process. Extensive use of mobile dental units for home care to detect dental pathology including infected root stumps, bony spicules or sharp edges and hopeless teeth might also be possible in the near future.

Along with addressing physical discomfort, it is also the duty of the oral physician to manage the total suffering of the patient as they face emotional and social embarrassment within family and society due to inability to express feelings like kissing, loss of sexual life, family avoidance, cultural believes thinking that cancer is a stigma and it is communicable, social isolation and embarrassment due to avoidance by family members during a group gathering or at the dining/coffee table, loss of family role, depression and feeling of helplessness, hopelessness and worthlessness. Love and empathy should come from within. Medicine is a societal service to humanity and time spent with patient should not be judged in terms of revenue. Patient care should be prioritized rather than time and money. Routine home care follow up should be implemented at the grass root level- as a part of speciality curriculum in Oral Medicine to explore various dimensions of holistic care research

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and practical approach in oral care in home care in post-operative oral cancer patients to improve their oral and overall quality of life.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

REFERENCES

1. Raman P, Gayathri P. Dentist's Delay or Dexterity to Diagnose the Deadly: A Clinico-radiological Series of Oral Malignancies Exhibiting Varied Presentations in the Tamil Nadu Rural Belt. Cureus. 2019;11(2): e4051.
2. Raman P, Pitty R. Tobacco Awareness with Socioeconomic Status and pictorial Warning in Tobacco Cessation: An Exploratory Institutional Survey in a Semi-urban Population. J Contemp Dent Pract 2020;21(10):1122–1129.
3. Gayathri P, Gopal K, Vardhan B, et al. Tooth and Advanced Oral Submucous Fibrosis Obscuring Buccal Squamous Cell Carcinoma: A Case Report and Literature Review. Cureus. 2018;10(12): e3802.
4. Palliative Care. Cancer control: Knowledge into action: WHO guide for effective programmes; module 5.
5. Raman P. Communication, Counseling and Compassionate Care: The least explored and challenging Palliative Care approaches among Primary Care Physicians - Clinical Case series of Oral Potentially malignant disorders in Tamil Nadu. J Family Med Prim Care 2021;10:572-7.
6. Wiseman MA. Palliative care dentistry. Gerodontontology. 2000; 17:49-51.
7. Bhatia V, Bhatia G. Palliative care dentistry- A boon for the elderly. Palliative Care Med. 2012;126.
8. Giles LC, Cameron ID, Crotty M. Disability in older Australians: projections for 2006-2031. Medical Journal of Australia. 2003; 179(3):130-3.
9. Saini R, Marawar PP, Shete S, Saini S, Mani A. Dental expression and role in palliative treatment. Indian journal of palliative care. 2009 Jan;15(1):26.
10. Rabow M, Kvale E, Barbour L, Cassel JB, Cohen S, Jackson V, et al. Moving upstream: a review of the evidence of the impact of outpatient palliative care. J Palliat Med 2013;16:1540-9.
11. Meier DE, McCormick E. Benefits, services, and models of subspecialty palliative care. UpToDate; 2015.
12. De Lima L, Radbruch L. Palliative care in the global health agenda. J Pain Palliat Care Pharmacother 2014;28:384-9.
13. Hughes MT, Smith TJ. The growth of palliative care in the United States. Annu Rev Public Health 2014;35:459-75.
14. Connor S, Bermedo M. Global atlas of palliative care at the end of life London: Worldwide palliative care alliance and world health organization. 2014. 11.
15. Bond C, Lavy V, Wolldridge R. Palliative care toolkit: improving care from the roots up in resource-limited settings. Help the Hospices. 2008.
16. Regnard C, Allport S, Stephenson L. ABC of palliative care: Mouth care, skin care, and lymphoedema. BMJ. 1997 Oct 18;315(7114):1002-5. http://cks.nice.org.uk/palliative-cancer-care-oral#azTab
17. Saroja G, Devi PS, Namrata R. Oral morphine solution as an oral rinse or mouth gargle for mucositis pain. Indian J Palliat Care. 2010 Jan;16(1):54-55.
18. Wiseman MA. The treatment of oral problems in the palliative patient. J Can Dent Assoc. 2006 Jun;72(5):453-8.
19. Sweeney MP, Bagg J. The mouth and palliative care. Am J Hosp Palliat Care. 2000 Mar-Apr;17(2):118-24.
20. Mulk BS, Raja Lakshmi Chintamaneni PM, Gummadapu S, Salvadhi SS. Palliative dental care-a boon for debilitating. Journal of clinical and diagnostic research: JCDR. 2014 Jun;8(6):ZE01.
21. Raman P, Pitty R, Krithika CL, et al. Topical Curcumin and Triamcinolone Acetonide in Recurrent Minor Aphthous Ulcers: A Pilot Trial. J Contemp Dent Pract 2020;21(8): 884–890.
22. Raman P, Pitty HR. Correlation of pain score with ulcer size in oral aphthous ulcers using 2% curcumin gel and 0.1% triamcinolone oral paste - A parallel comparison study. J Indian Acad Oral Med Radiol 2021;33:53-9.