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REVIEW ARTICLE

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Major clinical approaches to palliative care and nutrology in dentistry: a systematic review

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Abstract

Introduction: Poor oral health is a common and neglected concern in palliative care (PC), negatively impacting patients' quality of life. There is a significant gap in the knowledge and practices of primary care physicians regarding oral health due to various barriers, with few documented support strategies in this area, as well as an information gap on the nutritional aspects that complement palliative practices in oral care. **Objective:** It was to carry out a concise systematic review in order to present the main clinical approaches to palliative care in dentistry, as well as showing the associated nutritional importance. **Methods:** The systematic review rules of the PRISMA Platform were followed. The search was conducted from December 2025 to January 2026 across the Web of Science, Scopus, Embase, PubMed, ScienceDirect, SciELO, and Google Scholar databases. The quality of the studies was assessed using the GRADE instrument, and the risk of bias was evaluated according to the Cochrane instrument. **Results and Conclusion:** According to the GRADE instrument, most studies presented homogeneity in their results, with X^2=77.8%>50%. A total of 136 articles were found and submitted for eligibility analysis, with 12 final studies selected to compose the results of this systematic review. Considering the Cochrane tool for risk of bias, the overall assessment resulted in 33 studies with a high risk of bias and 26 studies that did not meet GRADE and AMSTAR-2 standards. It was concluded that early palliative care intervention can be effective in reducing psychological suffering and improving the quality of life of critically ill dental patients. Dentists can play a key role in linking tertiary and community care to promote patient well-being. Weight loss and impaired oral intake were associated with psychosocial distress affecting patients and caregivers. Future research is needed to explore the experiences of patients, caregivers, and healthcare professionals regarding nutrition and to evaluate the effectiveness of alternative nutritional strategies.

Keywords: Oral health. Palliative care. Quality of life. Nutritional aspects. Nutrology. Critical patients.

Introduction

Poor oral health is a common and neglected concern in palliative care (PC), negatively impacting patients' quality of life. There is inconsistent knowledge, varied practices, and limited prioritization of oral health. There is a significant gap in the knowledge and practices of primary care physicians regarding oral health due to various barriers, with few documented support strategies in this area, as well as an information gap on the nutritional aspects that complement palliative practices in oral care **[1,2]**.

In this context, PC in dentistry consists of providing dental care to patients who are in the terminal phase of some disease. This care aims to reduce the pain and suffering of these patients. During the treatment of systemic diseases, patients may develop oral diseases that cause pain and suffering, in addition to reducing their quality of life. The oral

condition can also impact the patient's systemic health, potentially aggravating an existing disease or even causing new systemic diseases to develop as a result of oral cavity issues **[3,4]**.

It is imperative to demonstrate the role and importance of the dental surgeon in the multidisciplinary palliative care team. Due to the reduction in birth rates and the decrease in infant mortality, there is consequently an increase in life expectancy and an increase in the elderly population. It is believed that there is an increase in the rate of dependency of people, also due to an increase in the prevalence of Non-Communicable Chronic Diseases. Therefore, the need for palliative care is noted to promote quality of life and dignity **[5-7]**.

Palliative care consists of caring for patients from the diagnosis of the disease to the terminal phase of the disease, providing them with quality of life. The professional treats and prevents diseases that, if established, can cause even more pain and suffering to the patient. Often the oral cavity is compromised by manifestations of systemic diseases or may present lesions resulting from the treatment of these diseases **[2,8,9]**.

Furthermore, the palliative care team supports not only the patient, but the entire family involved in the treatment, accompanying them during the period of diagnosis, illness, end of life and bereavement. It is necessary for the professional to have excellent communication with the patient and family members; interpersonal relationships are essential for those who deal with palliative care. It is necessary to understand the expectations, fears, and anxieties of people with life-threatening illnesses, as well as their caregivers, especially through listening and dialogue **[9,10]**.

In this respect, the dentist must develop an oral care protocol for patients, with the aim of reducing bacterial colonization in the oral cavity and preventing systemic complications. This protocol is individualized according to the needs of each patient. With the practice of dental palliative care, the aim is to maintain oral health, preserving the periodontium, teeth, restorations, prostheses, and implants, since with the worsening of the disease, the patient has difficulties in performing proper hygiene or even the impossibility of doing so. Furthermore, when oral complications have already developed, the professional must instruct family members and the care team on the correct way and importance of oral hygiene care **[8-10]**.

Thus, the present study aimed to carry out a concise systematic review in order to present the main clinical approaches to palliative care in dentistry, as well as to show the associated nutritional importance.

Methods

Study Design

This study followed the international systematic review model, following the PRISMA (preferred reporting items for systematic reviews and meta-analysis) rules. Available at: http://www.prisma-statement.org/?AspxAutoDetectCookieSupport=1. Accessed at: 01/17/2026. The AMSTAR 2 (Assessing the methodological quality of systematic reviews) methodological quality standards were also followed. Available at: https://amstar.ca/. Accessed at: 01/17/2026.

Search Strategy and Search Sources

The literature search process was carried out from December 2025 to January 2026 and developed based on Web of Science, Embase, Scopus, PubMed, Lilacs, Ebsco, Scielo, and Google Scholar, covering scientific articles from various periods to the present day. The following descriptors were used in health sciences (DeCS/MeSH terms): *"Oral health. Palliative care. Quality of life. Nutritional aspects. Nutrology. Critical patients",* and the Boolean "and" was used between the MeSH terms and "or" between the historical findings.

Study Quality and Risk of Bias

Quality was classified as high, moderate, low, or very low regarding the risk of bias, clarity of comparisons, precision, and consistency of analyses. The most evident emphasis was on systematic review articles or meta-analyses of randomized clinical trials, followed by randomized clinical trials. Low quality of evidence was attributed to case reports, editorials, and brief communications, according to the GRADE instrument. The risk of bias was analyzed according to the Cochrane instrument by analyzing the Funnel Plot graph (Sample size versus Effect size), using Cohen's test (d).

Results and discussion

Summary of Findings

A total of 136 articles were found and submitted to eligibility analysis, with 12 final studies selected to compose the results of this systematic review. The listed studies were of medium to high quality (Figure 1), considering the level of scientific evidence of studies such as meta-analysis, consensus, randomized clinical, prospective, and observational. Biases did not compromise the scientific basis of the studies. According to the GRADE instrument, most studies presented homogeneity in their results, with X^2=77.8%>50%. Considering the Cochrane tool for

risk of bias, the overall assessment resulted in 33 studies with a high risk of bias and 26 studies that did not meet GRADE and AMSTAR-2.

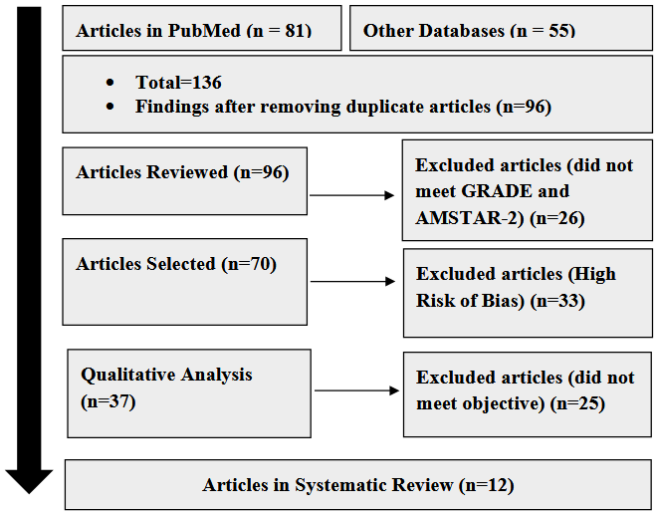

Figure 1. Flowchart showing the article selection process. Source: Own Authorship.

Figure 2 presents the results of the risk of bias of the studies using the Funnel Plot, showing the calculation of the Effect Size (Magnitude of the difference) using Cohen's Test (d). Precision (sample size) was determined indirectly by the inverse of the standard error (1/Standard Error). This graph did not have a symmetrical behavior, suggesting a significant risk of bias, both among studies with small sample sizes (lower precision) that are shown at the base of the graph and in studies with large sample sizes that are presented at the top.

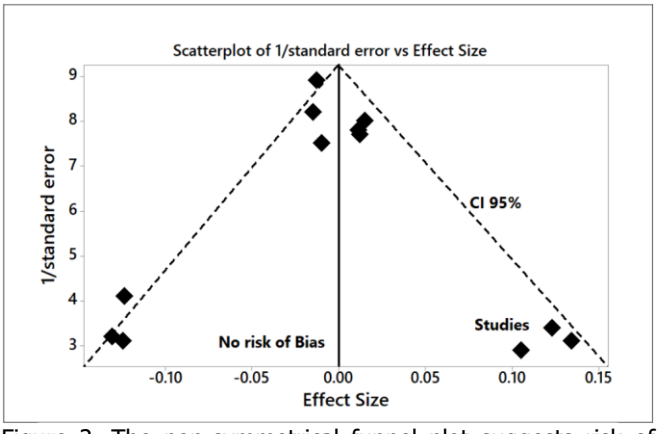

Figure 2. The non-symmetrical funnel plot suggests risk of bias among the studies with small sample sizes that are shown at the bottom of the graph. High confidence and high recommendation studies are shown above the graph (n=12 studies). Source: Own Authorship.

Development – Major Outcomes

The authors Ratnasekera et al. (2026) **[7]** evaluated, through a non-randomized controlled clinical trial, the effectiveness of an early palliative care intervention in improving psychological distress and quality of life (QoL) in oral cancer patients in Sri Lanka. Eligible participants were oral cancer patients who had received a definitive diagnosis, reported psychological distress (score ≥ 4 on the Sinhala version of the Distress Thermometer), were awaiting surgery as a first-line treatment modality, and were married with at least one family caregiver able to communicate in Sinhala. Exclusion criteria included oral cancer recurrence, formal psychiatric diagnosis, or prior receipt of early palliative care. Participants were allocated to the intervention group (n =55) or the control group (n=55). All 110 eligible participants completed the intervention and follow-up. At baseline, there were no significant differences between the groups regarding distress (p=0.7) or quality of life. Over time, the intervention group showed greater reductions in distress (mean difference = -2.26; 95% CI: -3.35 to -1.07; p=0.0001). After adjusting for baseline scores and potential confounding factors, the intervention group reported a higher overall health status (17.1; 95% CI: 6.9-27.3; p=0.001) and a higher functional status (23.6; 95% CI: 5.7-41.5; p=0.01), as well as a lower symptomatic status (23.2; 95% CI: 5.6-40.8; p=0.01) and a lower symptom burden (16.8; 95% CI: 6.8-26.8; p=0.001) compared with the control group.

Regarding nutritional aspects and palliative care, the authors Smith et al. (2025) **[11]** showed that patients with advanced head and neck cancer are susceptible to malnutrition due to disease progression and the side effects of cancer treatments. Current evidence on the effectiveness of nutritional interventions is limited. Enteral feeding was the most common intervention for managing malnutrition; however, other interventions, such as dietary counseling, oral nutritional supplements, and parenteral nutrition, were also employed.

Furthermore, basic hospital dental care includes diagnosis of oral lesions and assistance in the treatment of oral manifestations resulting from systemic diseases; diagnosis and treatment of oral diseases that may generate hemorrhagic, infectious, neurological, or cardiovascular complications, both as a result of the local and systemic condition, and as a function of the treatment the patient is receiving; diagnosis and treatment of oral conditions that may contribute to the continuation or worsening of serious systemic disorders; prior action to treatments that may generate orofacial or systemic complications in the future; care for hospitalized individuals who manifest infection or pain of odontological origin, and care for any condition that requires intervention in the hospital environment, due to the risk of infectious or

hemorrhagic complications, whether at the systemic or local level [1-3].

In addition, it is important to emphasize that PCs are not based on protocols, but on principles such as providing relief from pain and other unpleasant symptoms; affirming life and judging death as a normal process of life, neither hastening nor postponing death; Integrate spiritual and psychological conditions into the care of the individual, promote a support system that makes it possible for the patient to live as actively as possible until the arrival of their death, provide a support system to help the family during the course of the illness and in bereavement, ensure a multidisciplinary approach focused on the needs of patients and their families, especially bereavement support, improve quality of life and have a positive influence during the course of the illness, and implement as early as possible, along with other therapeutic measures [3-6].

Adequate control of symptoms resulting from diseases or their treatments is an essential strategy in palliative care at all stages of critical illness, whether as a complement to the therapy plan or as the main focus of care. Control should be multidisciplinary and based on both pharmacological and non-pharmacological measures, such as physiotherapy, social and psychological support, and religious support [7,8].

Regarding pain, care is based on its assessment, administration of opioids, preferably orally, according to the World Health Organization's analgesic ladder, prescription of the rescue dose (a percentage of the total daily dose that the patient uses), assessment of the need to increase the dose, anticipation of adverse effects caused by opioids, and, if necessary, the association of adjuvants [9,10].

Treatment of respiratory symptoms is essential for high-quality palliative care. Care involves an interdisciplinary team, as well as pharmacological and non-pharmacological strategies, just as with pain symptoms. In management, it is essential to consider the patient's functionality, desires, and values, as well as the goals to be achieved with treatment. Both cough and dyspnea have therapy that addresses the symptom factor, whenever it is proportional to the situation [8-10].

In the case of massive terminal hemorrhage, a sudden and fatal condition, the use of palliative sedation is indicated, with midazolam being the medication used. Local measures include compression, tampons, topical hemostatic agents, endoscopy, surgery, radiotherapy, embolization, and balloon tamponade. Systemic measures include antifibrinolytic agents, vitamin K, octreotide, vasopressin analogs, blood products, and hyperbaric oxygen therapy [10].

Regarding mucositis and stomatitis, the main goal of treatment is pain relief. Topical anesthetics, such as lidocaine and diclonin, provide comfort but should be used with caution, as they block the gag reflex and increase the risk of aspiration. As for candidiasis, therapy can be done with a combination of systemic and topical applications. Nystatin is a topical agent that can be administered in different ways. Because some patients with fungal infections complain of burning in the mouth, cryotherapy and antifungal therapy can alleviate pain and provide additional hydration to the patient [6].

In this scenario, when palliative care is introduced in the early stages of the disease, it makes it possible to prevent symptoms, as well as provide a smooth transition from the curative phase to the symptom control phase, through a comprehensive care plan, from diagnosis to the death of the patient. Patients benefit from receiving a combination of life-prolonging treatments, making symptom palliation, rehabilitation when possible, and comfort for caregivers possible [7,8].

Finally, the authors Mattavelli et al. (2025) [12] summarized the clinical benefits of oral nutritional supplements for malnourished cancer patients. Several barriers hinder full coverage of oral nutritional supplementation as part of a supervised clinical plan, including a lack of adequate training for healthcare professionals and standardized protocols for nutritional care. Nutrition is essential for recovery from oral cancer and makes access to it dependent on patients' financial capacity.

Limitation

Larger studies, encompassing diverse populations, are needed to better understand the true benefits of palliative care associated with nutrition for critically ill dental patients.

Conclusion

It was concluded that early palliative care intervention can be effective in reducing psychological suffering and improving the quality of life of critically ill dental patients. Dentists can play a key role in linking tertiary and community care to promote patient well-being. Weight loss and impaired oral intake were associated with psychosocial distress affecting patients and caregivers. Future research is needed to explore the experiences of patients, caregivers, and healthcare professionals regarding nutrition and to evaluate the effectiveness of alternative nutritional strategies.

CRediT

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Conflict of Interest

The authors declare no conflict of interest.

Similarity Check

It was applied by Ithenticate[@].

Application of Artificial Intelligence (AI)

Not applicable.

Peer Review Process

It was performed.

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