REVIEW ARTICLE

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Clinical considerations in hospital-based palliative dentistry for critically ill or cancer patients: a systematic review

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Abstract

Introduction: Palliative care (PC) in dentistry consists of providing dental care to patients who are in the terminal phase of an illness, mainly cancer. This care aims to reduce the pain and suffering of these patients. **Objective:** To list the main clinical considerations of hospital palliative dentistry in critically ill patients or those with cancer. **Methods:** The systematic review rules of the PRISMA Platform were followed. The search was conducted from October to December 2025 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=82.3%>50%. A total of 90 articles were found and submitted for eligibility analysis, with 16 final studies selected to compose the results of this systematic review. Considering the Cochrane tool for risk of bias, the overall assessment resulted in 11 studies with a high risk of bias and 20 studies that did not meet GRADE and AMSTAR-2 standards. It was concluded that the understanding of palliative dental care has changed and redefined oncological treatment by dentists. Currently, palliative dental care is defined as the comprehensive care of a patient experiencing intense health-related suffering due to a serious, life-threatening illness. The goal of palliative dental care is to improve the quality of life of patients, their families, and their caregivers. Based on the literature reviewed, it can be concluded that the most common oral conditions among palliative patients are cancer, xerostomia, candidiasis, mucositis, dysphagia, and dysgeusia. These conditions reduce the patient's quality of life, causing pain and discomfort. Furthermore, xerostomia has proven to be an important factor in the development of other conditions. It was possible to conclude that the presence of a dental surgeon on the palliative care team is indispensable for improving the patient's quality of life.

Keywords: Palliative care. Dentistry. Hospital. Cancer. Critical patients.

Introduction

Palliative care (PC) in dentistry consists of providing dental care to patients who are in the terminal phase of an illness, mainly cancer. This care aims to reduce the pain and suffering of these patients [1,2]. 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 interfere with the patient's systemic health, potentially worsening an existing disease or even causing new systemic diseases to arise as a result of the oral cavity [1,3,4].

It is imperative to demonstrate the role and importance of the dental surgeon in the multidisciplinary palliative care team. The specific objectives are to describe what palliative care is; to study the main oral conditions associated with palliative patients; and to demonstrate how the dental surgeon acts in palliative care [1,2].

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].

PC is defined as comprehensive care for a patient who presents intense healthrelated suffering as a result of a serious, life-threatening illness. The objective of PC is to improve the quality of life of patients, their families, and their caregivers [6]. PC consists of caring for patients in the terminal phase of an illness, providing them with a 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 [7].

For a long time, palliative care was understood as an approach taken with the terminal patient "when there was nothing more to be done". The current understanding is that palliative care can be a defined therapeutic option even at the time of diagnosis of a life-threatening illness, and is therefore a decision to be made jointly by the patient, their family or closest trusted individuals, and the healthcare team involved [8].

PC is a right of patients, focusing on the control of functional and symptomatic issues, palliative care shifts the focus from treating an incurable disease to caring for the patient as a whole, and in conjunction with their family [9]. It is an approach that improves the lives of people affected by chronic or acute life-threatening illnesses. Palliative care preserves human dignity and promotes quality of life through the relief of biopsychosocial and spiritual suffering [5].

Therefore, this systematic review study aimed to list the main clinical considerations of hospital palliative dentistry in critically ill or cancer patients.

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: 11/21/2025. The AMSTAR 2 (Assessing the methodological quality of systematic reviews) methodological quality standards were also followed. Available at: https://amstar.ca/. Accessed at: 11/21/2025.

Search Strategy and Search Sources

The literature search process was carried out from October to December 2025 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): *"Palliative care. Dentistry. Hospital. Cancer. 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 90 articles were found and submitted to eligibility analysis, with 16 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=82.3%>50%. Considering the Cochrane tool for risk of bias, the overall assessment resulted in 11 studies with a high risk of bias and 20 studies that did not meet GRADE and AMSTAR-2.

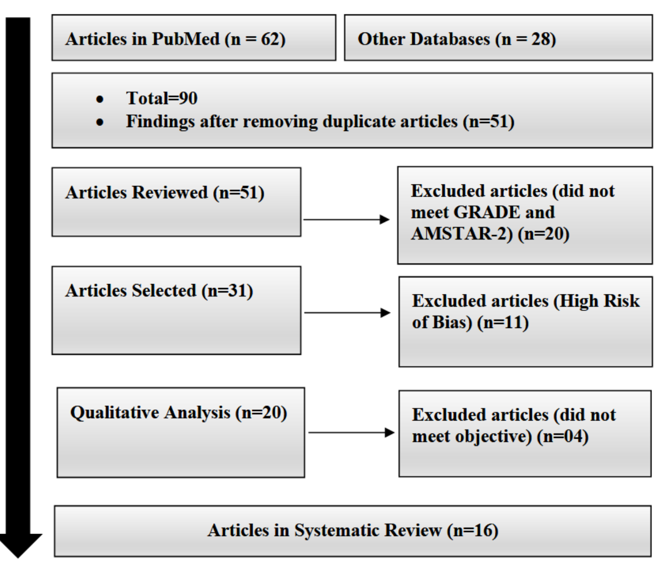

Figure 1. Flowchart showing the article selection process. Source: Own Authorship.

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 had a symmetrical behavior, not 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.

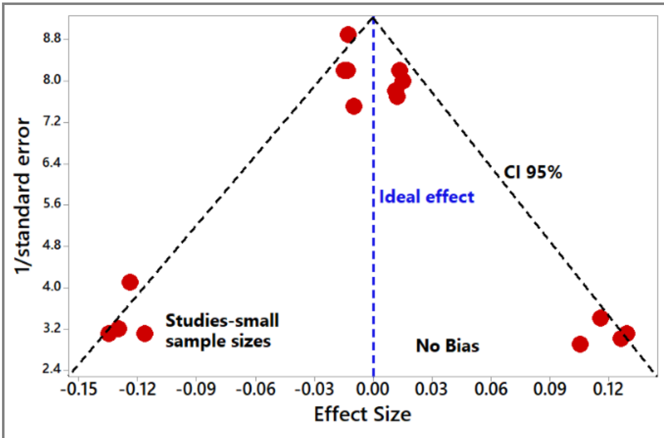

Figure 2. The symmetrical funnel plot suggests no risk of bias among the studies with small sample sizes that are shown at the bottom of the graph. High confidence and high recommendation studies are shown above the graph (n=16 studies). Source: Own Authorship.

Major Results – Palliative Care and Dentistry

The authors Serra et al. (2025) [10] examined the effectiveness of oral hygiene in managing oral symptoms in cancer patients receiving specialized palliative care. Six studies (2 randomized clinical trials, 2 quasi-experimental studies, and 2 qualitative studies) were included, involving 451 participants. Studies with methodological quality equal to or greater than 75%, based on affirmative responses in the respective critical appraisal tool, were included in the review. The evidence indicated that oral hygiene can be effective in managing oral symptoms. Patients reported a reduction in oral symptoms, such as xerostomia, accompanied by a reduction in oral mucositis and retention of oral debris. Oral hygiene can be performed by the patients themselves or by third parties, but it is not considered a priority by some of them. The integrated evidence corroborates that oral symptoms affect oral functions and that oral hygiene can help in managing various symptoms.

Also, the authors Suzuki et al. (2025) [11] analyzed the impact of oral health care provided by nurses trained by dental professionals on the oral health of patients with terminal cancer and determined the ideal cutoff value of the total score of the Oral Health Assessment Tool (OHAT) for screening patients who need oral health care by dental professionals. 115 patients with terminal cancer (66 men and 49 women; mean age 73.5 ± 10.9 years) who received oral health care during palliative care at the Tokyo University Medical and Dental Hospital were included. Oral health care was provided by dental professionals (group D) or by nurses trained by dental professionals (group Ns). Both groups showed significant improvement in the total OHAT score and in the OHAT sub-items related to lips, tongue, gums and tissues, saliva, oral hygiene and toothache. However, the sub-items of natural teeth and dental prostheses showed significant improvement only in group D.

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 [12].

Regarding pain, care is based on its assessment, the administration of opioids, preferably orally, according to the World Health Organization's analgesic ladder, the prescription of the rescue dose (a percentage of the total daily dose that the patient uses), the assessment of the need to increase the dose, the anticipation of adverse effects caused by opioids, and, if necessary, the association of adjuvants [1,2,19].

The treatment of respiratory symptoms is essential for the practice of high-quality palliative care. Care involves an interdisciplinary team, as well as pharmacological and non-pharmacological strategies, and pain symptoms. In management, it is essential to consider the patient's functionality, desires, and values, as well as the objectives to be achieved with treatment. Both cough and dyspnea have therapy that addresses the symptom factor, whenever it is proportional to the situation [2,3]. There has been an increase in the availability of palliative care team services; initially, the practice of PC was directed to cancer patients, and gradually it has been implemented in other specialties involving chronic diseases [6].

Despite the increasing availability of PC compared to other specialties, there is a need to adopt the practice in some hospitals, as in Brazil there is still controversy regarding the practice of palliative care, since health institutions focus on curative treatment, which aims to treat and cure the disease, thus the

practice of PC is still neglected in several institutions, compromising the patient's quality of life [1,2,9].

The practice and discussion of palliative care is still somewhat scarce because it deals directly with death, and people usually do not feel prepared for this moment, since death is generally associated with pain and suffering, and not as the end of a life cycle. Due to this, there are difficulties in implementing measures in all hospitals and ensuring that all patients with terminal illness have access to care, minimizing their pain, and allowing them a dignified death [6].

The first approach to the palliative patient must be carried out with great care and discretion. The professional should introduce themselves and begin the approach gradually, demonstrating empathy and being open to dialogue. The patient should be given the feeling that the treatment goes beyond just treating the oral cavity. The patient must feel safe and comfortable to report the presence of pain and fear. Only after the patient feels safe and establishes good communication should the oral assessment be carried out [7].

It is necessary to conduct a detailed anamnesis with medical and dental history, and a thorough intraoral examination, evaluating teeth, soft tissues, and possible painful conditions. The salivary glands are also examined because reduced saliva production can lead to a number of oral complications. Periodontal probing is performed to assess the condition of the teeth present and the need to perform exodontia, restorations, and scaling procedures. The priority of palliative dental care is to maintain good oral hygiene, pain relief, and infection prevention [3,4,7].

The palliative care team must examine and be attentive to the possible signs that patients present, thus being able to direct the appropriate dental treatment for this patient. In some cases, they are unable to communicate their suffering and oral needs. There are also cases where patients may be able to communicate pain or discomfort, but do not do so because they think it may be a consequence/effect of the treatment of their systemic disease [13].

Not all patients are willing to undergo dental treatment, as they have already undergone several treatments and often do not know the importance of oral care. There may be refusal of treatment, but with care, the professional should try to carry out the initial care procedures in order to identify the needs of this patient and, according to the oral conditions found, determine the necessary treatment [14]. The professional should listen to the patient and family members, and always communicate in a clear and understandable language, emphasizing solidarity and compassion. Regardless of the situation, the patient or family members have the right to information and autonomy in deciding on the palliative dental treatment to be performed [2,3].

After determining the treatment, several questions may arise, both from the family and from the patient, if the patient is not sedated or in a coma. The dentist should clearly explain the treatments to be performed and the importance of each one, for the physical and psychological well-being of the patient and their family [15]. Even after the patient's diagnosis, it should always be reassessed, as the patient's clinical picture may change. It is of great importance to emphasize that the treatment plan must be determined according to the priority of each procedure [4,5].

For basic dental care, a physical and mental assessment of the patient must be carried out in order to assess whether he or she is able to perform satisfactory oral hygiene. This assessment is carried out according to the patient's level of consciousness; it must be analyzed whether the patient is breathing with the aid of devices, whether he or she is awake or sedated. Based on these criteria, the care protocol is determined. If the assessed criteria are favorable, oral health promotion is carried out with oral hygiene instructions, so that the patient can perform his or her own tooth brushing and basic oral health care. If the assessed criteria are unfavorable and the patient has any of the conditions that prevent him or her from performing basic care procedures, these must be performed by someone properly trained to perform such a function [16].

Oral health promotion and dental prophylaxis are simple procedures that have a great impact on the patient's quality of life. Prophylaxis in unconscious patients should be performed using a mouth opener throughout the entire appointment. The oral cavity should be brushed with a children's toothbrush and tongue cleaner. Subsequently, the oral mucosa and teeth should be cleaned with gauze soaked in chlorhexidine, and all excess antimicrobial and saliva should be removed using vacuum suction [3,4,16].

The chlorhexidine solution is a highly effective substance in the prevention and control of oral diseases. It has good substantivity, thus inhibiting biofilm formation for a long period of time. Its bacteriostatic effects last up to 12 hours after its use. Unlike antibiotics, chlorhexidine does not generate resistance to its use. This work by the dental surgeon also brings relief and security to the palliative care team, specifically to the nursing team, in addition to reducing the workload, since if these procedures are not performed by the dental surgeon, they must be

performed by the nursing team [16].

The purpose of palliative care in dentistry is pain relief, maintenance of oral hygiene, and maintaining healthy teeth, making it as comfortable as possible for the patient to maintain their oral health. In cases where patients are experiencing severe dysphagia, healthy teeth must be preserved to maintain the patient's dignity until the end of life [1]. Dental treatment can present challenges such as "lack of knowledge / routine, patient cooperation, resources, priority given to oral problems, in addition to difficulty accessing the mouth and gagging" [13].

Despite these challenges, it is extremely necessary that it be carried out, as the work of the dental surgeon can help in the prevention and treatment of oral diseases, pain relief, and promote quality of life for the patient. The dentist must be prepared to act in this context, knowing how to interact with the team, the patient, and family members, contributing to pain relief and reducing patient suffering [17,18].

Conclusion

It was concluded that the understanding of dental palliative care has undergone changes and redefined oncological treatment by dentists. Currently, dental palliative care is defined as comprehensive care for a patient who presents intense health-related suffering as a result of a serious, life-threatening illness. The objective of dental palliative care is to improve the quality of life of patients, their families, and their caregivers. Based on the literature reviewed, it can be concluded that the most common oral conditions among palliative patients are cancer, xerostomia, candidiasis, mucositis, dysphagia, and dysgeusia. These conditions decrease the patient's quality of life, causing pain and discomfort. In addition, xerostomia has proven to be an important factor in the emergence of other conditions. It was concluded that the presence of a dental surgeon on the palliative care team is indispensable for improving the patient's quality of life.

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Conflict of Interest

The authors declare no conflict of interest.

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Application of Artificial Intelligence (AI)

Not applicable.

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It was performed.

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