

Analysis of hospital dental care in a pediatric center**Análise da assistência odontológica hospitalar em um centro pediátrico**

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ABSTRACT

Oral health promotion in hospitalized patients aims to improve the general clinical conditions and reduce the length of hospital stay. This study's objective was to analyze the role of the dentist inserted in the multidisciplinary staff in hospital environment, in order to improve the general conditions and well-being of hospitalized infant patients. The sample consisted of 180 (60%) males and 120 (40%) females, with a mean age of 5.6 years \pm 156 months. The analysis of the dental condition found in these patients was good in 30% of the cases (n = 90), regular in 45% (n = 135) and poor in 25% (n = 75). Most of the visits were preventive (79.57%), and curative procedures (20.43%) contributed to the improvement of clinical conditions. It is concluded that the insertion of the dentist in the hospital, both in the context of the wards and in the intensive care units, are beneficial to the hospitalized patients.

Keywords: hospital dentistry, hospitalized children, oral health.

RESUMO

A promoção da saúde bucal em pacientes hospitalizados visa melhorar as condições clínicas gerais e reduzir o tempo de internação hospitalar. O objetivo deste estudo foi analisar o papel do dentista inserido na equipe multidisciplinar no ambiente hospitalar, a fim de melhorar as condições gerais e o bem-estar dos pacientes hospitalizados. A amostra consistiu de 180 (60%) homens e 120 (40%) mulheres, com idade média de 5,6 anos \pm 156 meses. A análise da condição dental encontrada nestes pacientes foi boa em 30% dos casos (n = 90), regular em 45% (n = 135) e má em 25% (n = 75). A maioria das visitas foi preventiva (79,57%), e os procedimentos curativos (20,43%) contribuíram para a melhoria das condições clínicas. Conclui-se que a inserção do dentista no hospital, tanto no contexto das enfermarias como nas unidades de terapia intensiva, é benéfica para os pacientes hospitalizados.

Palavras-chave: odontologia hospitalar, crianças hospitalizadas, saúde bucal.

1 INTRODUCTION

Hospital dentistry (HD) is a set of activities that, through the care of the oral cavity, aims to contribute in multidisciplinary and integral assistance, for the improvement of the general state of the hospitalized individual.¹ In the hospital environment, people find themselves in a state of vulnerability, requiring procedures from teams of high complexity to give them a whole evaluation, thus contributing to the reduction in the hospitalization period.²⁻⁴

Over the years, studies have shown how oral condition can influence the evolution and response of systemic conditions, as well as pharmacological interactions and changes in the pattern of normality present in the patient can also compromise oral health.⁵⁻⁶ Dental treatment can influence by decreasing the incidence of respiratory infections and the need for antibiotic therapy, resulting in significant savings in tertiary care, one of the reasons for implementation of HD.⁷⁻⁸ Therefore, the presence of the dental surgeon in the multidisciplinary team working with interventions and health promotion practices, when necessary, aims not only at prevention, but also at the prognostic improvement of the general clinical condition.⁹⁻¹²

When dealing hospitalized individuals, the evaluation of the oral cavity of children and adolescents is relevant, as it presents a complex microbiota, containing microorganisms that when in harmony are responsible for homeostasis and protection of the host against external pathogens, but when unbalanced may be responsible for the appearance of oral pathologies, susceptible to dissemination and systemic involvement.¹³⁻¹⁶

Hospitalized patients are more susceptible to oral diseases, as they are exposed to several factors, besides to the disease itself which can negatively contribute to oral health, such as hospitalization stress, change of routine, medications, inability or ignorance of the hospitalized patient and/or companion^{9, 16-18}

Oral conditions of hospitalized children are worrying for several reasons, among them the correlation between increased susceptibility of tooth decay, periodontal disease and the period of hospitalization, since the frequency of oral hygiene during hospitalization being mostly only once a day.¹⁶ Poor hygiene leads to the bigger accumulation of biofilm on the teeth, with the occlusal surface generally being mostly affected.¹⁹ The positive relation of biofilm concentration has revealed that children hospitalized in the age group of 05 and 07 years old are those with high caries rates, and children from 02 to 05 years old had unfavorable gum health.¹⁶ In addition to the main oral problems mentioned, the tongue

coating is also favored by negligence hygiene, which may predispose pneumonias as possible complications during hospitalization.¹⁹⁻²⁰

Research has already shown that the improvement of oral hygiene (OH) and the monitoring by a qualified professional perceptibly limit the development of respiratory illnesses among adult patients classified as high risk and maintained in palliative care and, mainly, patients admitted to the Intensive Care Units (ICU).²¹ Pursuing a qualified and multidisciplinary care, when parents or guardians are asked about the presence of the dental surgeon in the hospital, the majority (98.3%) think its important for prevention and promotion of children's oral health.²⁰

The aim of this study is to analyze the role of the dentist inserted in the multidisciplinary team in the hospital environment, providing subsidies for the planning and development of future actions aimed at education and prevention in oral health in tertiary care, as well as curative performance, seeking improvement in the general conditions and well-being of hospitalized children.

2 METHODOLOGY

The study carried out had an exploratory, descriptive and cross-sectional profile for defining the profile and outlining the appointments, being approved by the Research Ethics Committee (CEP) under number [#1,040,294]. Three hundred pediatric patients hospitalized at the Instituto da Criança do Amazonas (ICAM), in the infirmary and ICU beds, were monitored from February to December 2019. The evaluations were documented in the multiprofessional forms already used in the health unit, where specific dental care files were added from the project (Figure 1).

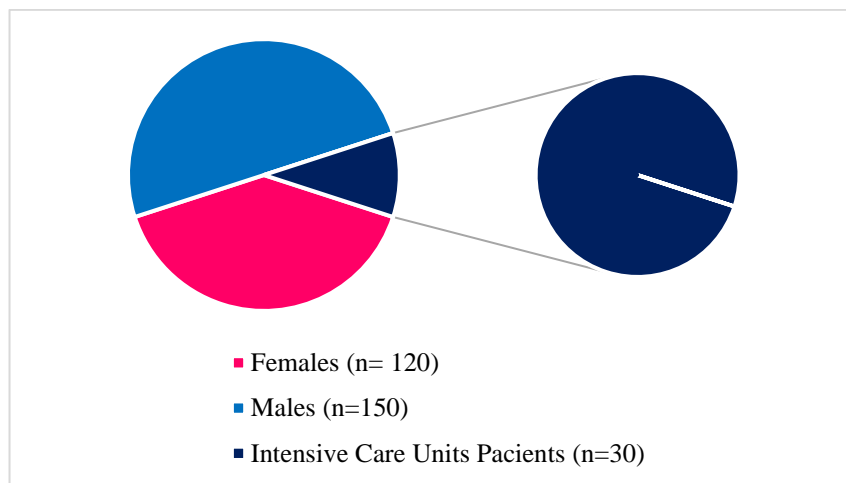
All individual dental needs of each patient and oral hygiene guidelines transmitted to them and their respective companions and were recorded in the medical records. Through the analysis of medical records and collected data, the probable diagnosis of children's hospitalization was also investigated.

Once the needs for dental treatment at the hospital level were detected, preoperative exams were requested and care was scheduled at the bed or surgical center, aiming to remedy the patient's dental needs and reduce infectious focus. If the patient was about to be discharged, a referral for outpatient care at the Special Care Dentistry clinic of Amazon State University (UEA) was performed.

3 RESULTS AND DISCUSSION

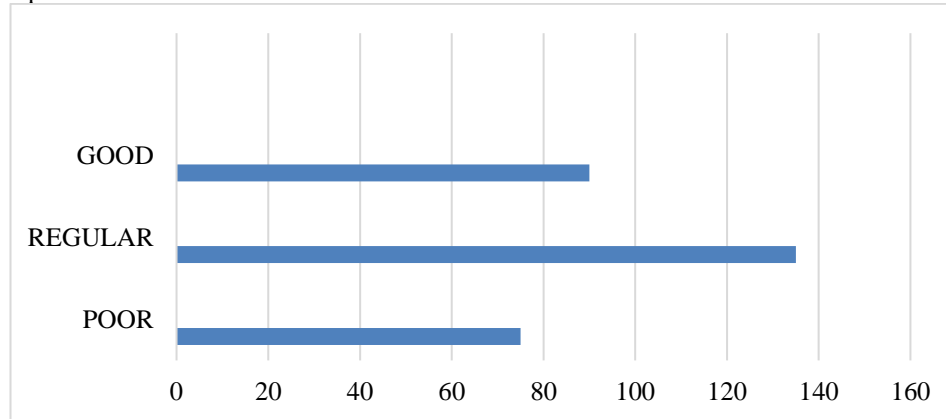
The study evaluated 300 hospitalized pediatric patients, the male gender (n = 180; 60%) being greater than the female gender (n = 120; 40%), as can be seen in Graph 1. The age range ranged from 3 to 13 years, corresponding to an average age of 5.6 years. The results of this study corroborate the epidemiological data described in the literature, where the average age of hospitalization in the pediatric ward generally varies from one to 156 months.²⁰

Graph 1- Distribution of patients according to gender



Analyzing the dental condition found in these patients (Graph 2), it was found that it was good in 30% of the cases (n = 90), regular in 45% (n = 135) and poor in 25% (n = 75), diverging most data found in other studies such as Melo NB et al⁹, Ximenes et al²³ and Rodrigues et al²⁴, which show the prevalence of an unfavorable oral condition correlated with lack of guidance on oral health care. It is inferred that the data found in the sample is probably since ICAM has a hospital dentistry extension project instituted since 2014, with the presence of dental surgeons and dentistry students, who through the project guide to children, parents and the hospital's multidisciplinary staff, as well as performing dental interventions when necessary, unlike the aforementioned studies in which hospitals did not have a dental surgeon directly or indirectly on the staff, reinforcing the importance of the presence of this professional in the hospital staff.

Graph 2 - Dental Condition of Pediatric Patients Admitted to the Child Institute of Amazonas



Dental plaque or biofilm is the accumulation of bacteria from the oral microbiota on the surface of the teeth, and it plays a very important role in the emergence of caries injury, some authors say it is the only cause cavities. Stating that "dental caries is a multifactorial disease, but dental plaque is the only cause".^{9, 19} The survey's results are controversial regarding the latest studies carried out in a hospital environment, in which were reported as the accumulation of plaque and poor oral hygiene as the most evident problems found during a dental hospital evaluation.⁹ It's showing 85% of the favorable cases regarding gingival health, and 25% root debris unrelated to any periodontal changes. Another favorable point regarding the care offered was the wide promotion of oral health.

Another notable factor is that 20% of the patients had reddish gingival swelling in the anterior region of the maxilla and mandible, in some cases the both arches completely, preventing their tooth eruption. These are mainly those patients who have been tracheostomized.

Dentist's presence in the ICU becomes relevant, as patients are totally dependent on the achievement of efficient oral hygiene and they need a professional who can help restore oral health.²⁵⁻²⁶

In this survey, root debris were found in 20% of patients, whose etiological factor was due to extensive carious fractures or injuries, and poor oral condition, with the presence of biofilm and calculus. These findings, although at a much lower level percentage, are in accordance with studies by Cruz et al.²⁷

Due to the great stress load that patients find when hospitalized, as mentioned by Souza Júnior AM et al.¹⁹, 5% of those same patients presented great dental wear in, triggered by the parafunctional activity of bruxism. Since these parafunctional activities can lead to Temporomandibular Disorder and/or cervical impairment (Craniocervicomandibular

Dysfunction) to an exacerbated and disabling pain²⁸⁻²⁹, the dentist's intervention must be also performed in these cases.

Besides, other injuries were also found, such as enamel hypomineralization in 5% of the patients, and these presented good oral health, which according to them, the orientations given by the academics who were part of the project had helped them a lot. Proving once again the importance of the dentist in the hospital environment.

Some injuries of interest to stomatology were also found in hospitalized patients. There was outpatient intervention in a 01-month-old newborn with Riga-fede disease with a wound in the lingual belly, due to the presence of a natal tooth. The injury was making breastfeeding difficult for the mother, besides the element showing mobility that could be swallowed by the patient, so we opted for the extraction recommended in the literature in these circumstances.³⁰

Dentist presence is fundamental, for example in the approach of biopsies from oral cavity with lesions that, if left untreated, can compromise the patient's general health. An example of this statement was the intervention in the surgical center of a patient who, after histopathological analysis, presented a diagnosis of myofibroblastic sarcoma, requiring transference to a public oncology hospital. In the absence of a professional to perform the procedure, the surgery would be postponed and could delay the patient's diagnosis and treatment. In injuries of this nature, early diagnosis is essential to reduce the patient's chances of morbidity and mortality.³¹

In total, from February to December 2019, three hundred preventive and seventy seven curative care appointments were performed, including scaling, tooth extraction, restorations, biopsies, abscess drainage, and dental advice, with some of these procedures performed at the bedside and others in the operating room (Table 1). Preventive care was predominant compared to curative care, showing that prevention helps to reduce the number of interventions, improve oral conditions and, consequently, contribute to the general conditions and well-being of hospitalized patients.

TABLE 1: ICAM 'S APPOINTMENTS FROM FEBRUARY TO DECEMBER 2019

| | |
|--|------------|
| Preventive care | 300 |
| Curative care | |
| Medical Findings | 41 |
| Bedside care | 16 |
| <i>Restoration</i> | 5 |
| <i>Simple Extraction</i> | 8 |
| <i>Endodontic curettage</i> | 2 |
| <i>Abscess drainage</i> | 1 |
| Service in the operating room | 20 |
| <i>Biopsy</i> | 3 |
| <i>Multiple extractions, periodontal scaling and teeth restoration</i> | 17 |
| TOTAL | 377 |

4 CONCLUSION

Oral health of hospitalized patients was mostly from good to regular, and parents and professionals reported the importance of guidance and evaluations regarding oral hygiene care. It can be observed that the development of projects with dentist in the hospital, in the wards and in the intensive care units are beneficial to hospitalized patient. The professionals of the hospital's multidisciplinary already recognized the importance of having dentists allied to the team, corroborating with the well-being and improvement of patients' prognosis.

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