

Importance of Bucal Manifestations in Systemic Diseases: AIDS in Pediatric Dentistry

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Abstract

Introduction: Acquired immunodeficiency syndrome (AIDS) is considered pediatric when AIDS infection occurs from 0 to 13 years of age. AIDS infection is characterized by the appearance of a set of diseases considered as indicators and may be in the form of oral manifestations. Oral manifestations are very common and may be the first signs and symptoms of systemic change. These oral lesions may indicate the onset or evolution of some disease, and thus may function as an early warning system for some disease.

Objective: The objective of this study is to show to the health professional the importance of early recognition of oral manifestations of systemic diseases in HIV infected children. Methodology through literature review. We had the conclusion that the earlier the diagnosis of the disease, the better the patient's quality of life.

Methods: Experimental and clinical studies were included (case reports, retrospective, prospective and randomized trials) with qualitative and/or quantitative analysis. Initially, the key words were determined by searching the DeCS tool (Descriptors in Health Sciences, BIREME base) and later verified and validated by MeSh system (Medical Subject Headings, the US National Library of Medicine) in order to achieve consistent search.

Conclusion: The oral cavity represents an area of manifestations of AIDS, and that candidiasis and periodontal diseases represented the lesions most occurring.

Keywords: Acquired Immunodeficiency Syndrome; Pediatric Dentistry; Symptoms; Systemic Diseases

Introduction

The oral cavity in childhood may present several physiological phenomena, or changes in development, or pathogenesis, and this cavity becomes an invested organ of enormous complexity [1,2]. When the child's oral cavity is compromised, a great deal of discomfort can occur, being essential knowledge of the factors that can cause oral pathologies, to seek a better prognosis and treatment, or even prevent the onset of the disease [1,3].

Human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome, a disease more commonly known as AIDS, have reinforced the need for constant updating of the dentist and his team in the prevention and treatment of diseases, as well as promotion and oral health maintenance of pediatric patients in particular [2-4].

The objective of the present study was to make a literary search to discuss the participation of dentists in the treatment of oral dis-

eases in children with AIDS.

Methods

Experimental and clinical studies were included (case reports, retrospective, prospective and randomized trials) with qualitative and/or quantitative analysis. Initially, the key words were determined by searching the DeCS tool (Descriptors in Pubmed, Health Sciences, BIREME base) and later verified and validated by MeSh system (Medical Subject Headings, the US National Library of Medicine) in order to achieve consistent search.

Mesh Terms

The words were included *Acquired immunodeficiency syndrome; Pediatric Dentistry; Symptoms; Systemic Diseases*. The literature search was conducted through online databases: Pubmed, Periodicos.com and Google Scholar. It was stipulated deadline, and the related search covering all available literature on virtual libraries.

Series of Articles and Eligibility

A total of 45 articles were found involving Computed tomography; Cone Beam Computed Tomography; Dental Examinations. Initially, it was held the exclusion existing title and duplications in accordance with the interest described this work. After this process, the summaries were evaluated and a new exclusion was held. A total of 28 articles were evaluated in full, and 17 were included and discussed in this study.

Literature Review and Discussion

Some authors define Pediatric AIDS as the one that occurs in children under 13 years of age. Over thirteen years, patients are included in adult statistics because they present similar patterns [1-3].

Worldwide, many children are affected by HIV - either because they themselves are HIV positive or because they have a close relative in that condition [4].

It has been proven that in the diagnosis of the seropositivity or developmental status of the pediatric or child AIDS/HIV syndrome, the potentially destructive repercussions for both the child and the family to which it belongs are common [2-5]. After diagnosis and in the daily hospitalization for acquired immunodeficiency disease, children and family caregivers begin to live with the weakness and the possibility of death as part of their previously intact realities [5].

This new reality is often reconstructed under the notion that it is not a momentary state, but a new way of living, a differentiated condition of life that requires special care [8]. Therefore, it understands pediatric AIDS/HIV as a human and social tragedy for both the child and the family, who strive to cope with the presence of the virus and/or manifestations of the syndrome [8].

HIV/AIDS infection in children and adolescents is already considered a global public health problem [10]. Vertical transmission accounts for 85.0% of pediatric cases reported in the United States and around the world [11]. The remaining 15.0% included children with hemophilia, clotting disorders, recipients of blood transfusions and other unidentified risks. There is similarity between adult and child lesions, but there are also differences, including risk factors, primary mode of transmission, serum-conversion pattern, natural history of disease, spectrum of disease and manifestations affecting the oral cavity [13].

These differences led the CDC (Centers for Disease Control - USA) to develop a specific classification for children in 1987, initially adopting clinical and laboratory criteria. Subsequently this classification system was revised and, in 1994, another classification was published, based now on the infection status, clinical status and immunological status of the children [12]. The clinical categories of children with HIV infection are described below [11].

Dental surgeons are also responsible for the diagnostic suspicion of AIDS/HIV, since the literature points out lesions due to opportunistic infections, be it fungal, viral or bacterial, in the head and neck region, and especially in the mouth, usually as the earliest, and these professionals should be aware of and aware of these manifestations resulting from HIV infection [13].

However, caring for children with HIV can be difficult for many health care providers because of the lack of information or the lack of resources to care for sick children and support the caregivers [14]. However, with good preventative care and early treatment of common infections, HIV-positive children can live well beyond their first year. To achieve this, caregivers need to know how to prevent infections, as well as help to deal with HIV and a supportive environment where HIV-positive people are not discriminated against [15].

Some considerations about oral manifestations

Oral manifestations may be due to compromised immune systems, which may be caused by bacteria, fungi and viruses, or are neoplastic in nature [13]. The oral cavity is an important source of information for the diagnosis and prognosis of some diseases, such as those associated with HIV infection, diabetes mellitus, neoplasms cardiovascular alterations among others. Diabetic patients, for example, present high prevalence of oral alterations such as candidiasis, xerostomia, halitosis, caries and periodontopathies [13]. During the hospitalization of diabetic patients, it is essential to implement oral care to avoid the onset of local and/or systemic diseases due to biofilm and dental accumulation, since some oral diseases make diabetic patient compensation difficult [2,3].

Severely immunosuppressed individuals, such as patients with HIV, have immune system deficiencies, determining the onset of oral manifestations [1,3]. In general, the main oral manifestations present in pediatric HIV-infected patients found in the literature were: caries, candidiasis, angular cheilitis, linear gingival erythema, mucosal lesions, salivary gland diseases, Kaposi's sarcoma, non-Hodgkin's lymphoma, diseases fungal diseases, viral diseases, periodontal disease, enamel hypoplasia and condylomata acuminata. Traditionally, the mucosa of the buccal cavity has been viewed as a reflection of the general state of health [2,3].

Numerous oral mucosal changes can be found in children, so health professionals should be able to detect them to establish the correct diagnosis and appropriate treatment [4].

Oral manifestations in children with HIV/AIDS infection

The clinical presentation of HIV infection in children differs from that in adults. One of the main differences is the great susceptibility to developing bacterial repeat infections [2-4]. The prognosis of HIV infection in children varies according to the route of

transmission, age at which the infection was acquired, presence of symptoms and age at which the symptoms appeared [5].

However, the prognosis seems to be worse in children less than one year of age where the disease is most fulminant. The diagnosis of oral lesions will be used to select antibiotic prophylaxis and therapeutic intervention, which would improve the survival of HIV-infected children [6]. They concluded that intra- and extra-oral lesions were found in the majority of the children who presented positive serology; in addition, cervical lymphadenopathy and pseudomembranous candidiasis were the most common lesions [7].

Many infected children remain asymptomatic for a long time, but it is believed that in cases of congenital infection most children become symptomatic in the first two years of life, rapidly evolving to death. However, nowadays, thanks to the new medicines, this seems to be changing and the survival of these children is increasing [8].

Dental care in the pediatric seropositive patient. The main objective of dental treatment in this group of patients is to improve their quality of life and for this it is fundamental to review their medical history. In addition, it is important to talk to the patient's family to evaluate their expectations regarding treatment (removal of pain, improvement of aesthetics), their emotional and financial conditions [6,7]. The child's emotional state is directly reflected in his ability to adhere to treatment, attending consultations and doing a good oral hygiene [8,9].

The financial condition influences the patient's ability to feed properly (improving or worsening their nutritional status and therefore their general condition) and even buying a single dental floss [12]. In summary, the treatment plan should be as simple as possible that can meet the needs and expectations of the patient. Talking with the family and knowing how to speak using children's language, relating them properly, are of fundamental importance when it comes to explaining that poor oral hygiene favors the appearance of lesions and infections that can affect your overall health is of fundamental importance. The discovery of seropositivity by the child and his/her relatives impacts on the life of these subjects, insofar as it threatens their physical and psychological integrity, as well as their safety and future perspectives [14].

In addition, child HIV/AIDS is a disease in which other family members may find themselves HIV positive. The way in which the professional develops care is a relevant factor, since dental treatment, even in milder cases, should be carried out with caution to minimize damage to the oral tissues. Some important modifications are suggested, such as lubrication of the lips, lip mucosa, gloves and instruments, positioning of the sucker and fingers on hard tissue, drainage of hemorrhagic blisters, and careful manipulation to avoid tissue separation [15-17].

Infection control in dental practice

AIDS, as an object of symbolic representation, generates divergent and obscure behaviors. By evaluating the possible relations of the subjects, in case of care for patients with HIV, there are many

confusions and ambivalences about what should be the correct conduct, both in relation to the infection control measures and the patient's reception [13].

More than 50.0% of Brazilian dentists are not able to treat seropositive patients, representing a high proportion. However, it further clarifies that the dentist needs to be aware that the risk of contamination is significantly reduced by the use of protection methods during clinical care. In this perspective, the Permanent Education in Health (EPS) emerges as an investment strategy in the professional qualification to overcome the deformations and deficiency in the formation of health work [2].

Although there is no cure for HIV/AIDS infection, one cannot deny a major advance in the treatment that has occurred in recent years, offering patients more years and better quality of life [3]. This fact justifies the search for more knowledge about the subject by the health professional, not only for its scientific improvement, but also because knowledge is an instrument to end prejudice against AIDS patients [4].

Conclusion

Periodontal diseases are related to AIDS infection, together with other prevalent oral manifestations, can be an important variable in the diagnosis and prognosis of these conditions. The literature suggests that periodontal diseases are frequent in HIV-positive children and that immunological involvement due to HIV infection is capable of causing changes in the subgingival microbiota with proliferation of opportunistic microorganisms.

Competing Interests

The authors none declare.

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