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PEDIATRIC ONCOLOGY AND ITS ORAL MANIFESTATION

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ABSTRACT

The interprofessional collaborative care of children and adolescents with cancer must include oral health care. During cancer treatment, advice on preventive oral health practices is crucial. All dental work would be finished before immunosuppressive treatments started. If necessary, palliative care should be given along with treatments for mucositis, opportunistic oral infections, discomfort, and other oral side effects of cancer therapy. To screen and treat dental and oral illnesses, pediatric dentists and pediatric oncology teams should collaborate. It is crucial for the dentistry profession to offer this vulnerable demographic the individualized care required as children's cancer survival rates rise. The field of oral health also promotes healthy habits consistent with cancer screening and prevention. This literature will highlight some oral manifestation in pediatric oncology.

Keywords. Pediatric oncology, chemotherapy, leukemia

INTRODUCTION

Childhood cancers are a collection of illnesses that can affect any part of the body and are characterized by the unchecked growth of abnormal cells. Leukaemia's, tumours of the central nervous system, and lymphomas are the three most prevalent malignant neoplasms in children **[1]**.

It is the most common cause of disease-related death in children under the age of 14, despite therapeutic breakthroughs and the

fact that childhood cancer is an uncommon condition. Leukaemia, primarily acute leukaemia (acute lymphoblastic leukaemia, acute myeloblastic leukaemia, central nervous system tumours, lymphomas and neuroblastomas or sympathetic nervous system tumours are the most common cancers in children. Childhood cancer survival rates for children aged 0 to 14 years old have increased considerably in recent years, achieving an international 5-year survival rate of 84% **[2, 3]**.

Oral manifestation

Oral mucositis

An ulcerated and inflamed oral mucosa is referred to as oral mucositis. Adolescents receiving standard-dose chemotherapy, Patients receiving radiation therapy for head and neck malignancies, and Patients receiving bone marrow transplants are likely to develop oral mucositis. Bleeding and bruises more can be seen most commonly in leukaemia patients. Recent research has indicated that the prevention and treatment of radiation-generated or chemically caused mucositis is particularly interesting when using low intensity lasers. Additionally, practising good oral hygiene might help prevent or lessen the severity of oral mucositis **[4-7]**.

It could be important to give toothbrush bristles a few minutes in warm water to soften them in order to make brushing more comfortable. Foam brushes are an option for patients who have severe mucositis and are unable to use a toothbrush. Evidence-based recommendations for the treatment of oral mucositis in cancer patients include sodium bicarbonate rinses, low-level laser therapy, oral cryotherapy, and benzydamine mouthwash. Pain brought on by oral mucositis may be managed with analgesic drugs. Topical anaesthetics temporarily dull discomfort but do not address mucositis **[8, 9]**.

Oral Infections

It could be important to give toothbrush bristles a few minutes in warm water to soften them in order to make brushing more comfortable. Foam brushes are an option for patients who have severe mucositis and are unable to use a toothbrush. Evidence-based recommendations for the treatment of oral mucositis in cancer patients include sodium bicarbonate rinses, recombinant human keratinocyte growth factor-1, low-level laser therapy, oral cryotherapy, and benzydamine mouthwash. Pain brought on by oral mucositis may be managed with analgesic drugs. Topical anaesthetics temporarily dull discomfort but do not address mucositis **[10-14]**.

Xerostomia

According to definitions given by researchers, xerostomia is the "subjective sensation of dry mouth with decrease and/or thickening of saliva". However, the damage to the relevant salivary glands can be

lessened, if not avoided, below a certain radiation dose threshold. The parotid glands, submandibular glands, and oral cavity are three saliva-associated organs at risk that have recently been the subject of clinically verified dosage limits. Importantly, children are not permitted to use saliva-stimulating drugs **[15-17]**.

Xerostomia worsens mucositis and raises the risk of caries. The use of saliva substitutes, mouthwashes without alcohol, sugar-free gum, mints, and lozenges, as well as oral moisturisers, reduces xerostomia. It's also important to advise xerostomia patients to frequently drink water **[18, 19]**.

Neuropathic Pain

Vincristine and vinblastine are examples of plant alkaloid chemotherapy drugs that can cause neuropathic pain in children. This discomfort typically affects the mandibular teeth. In the absence of an odontogenic source of discomfort, these kids report of intense pain in their jaw and teeth. In children, this neuropathic pain typically subsides or disappears after treatment is finished. Palliative care may be offered with over-the-counter painkillers in the absence of a permanent remedy for chemotherapy-induced neuropathic pain **[20]**.

CONCLUSION

In a multidisciplinary team, the dentist's involvement is important for the prevention, diagnosis, and management of pre-existing conditions such as tooth decay, periodontal diseases, and other changes in the oral and perioral tissue. A dental surgeon with experience in survivorship care should do dental exams twice a year as part of the medical follow-up for long-term childhood cancer survivors who are observing late effects **[21]**.

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