

Oral Health Status of Medically Compromised Children Referred for Dental Consultations: A Retrospective Study

Dental Konsültasyon İstenen Sistemik Hastalıklı Çocukların Ağız Sağlığı Durumları: Retrospektif Bir Çalışma

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ÖZET

Amaç: Bu çalışmada, sistemik hastalığı olan çocukların ağız ve diş sağlığı durumlarının belirlenmesi amaçlanmıştır.

Gereç ve yöntem: Hacettepe İhsan Doğramacı Çocuk Hastanesi'nin çeşitli bölümlerinden dental konsültasyon için gönderilen çocukların tıbbi ve dental sağlık durumları retrospektif olarak incelenmiştir.

Bulgular: Dental konsültasyonu istenen 198 çocuk muayene edilmiş ve çocukların %94,7' sinde tedavi ya da takip gerektiren ağız hastalığı veya anomalisi teşhis edilmiştir.

Sonuç: Pediatristler ve pedodontistlerin karşılıklı iletişim halinde bulunması ve sistemik hastalığı olan çocuklarda tedavi protokolünün bir parçası olarak ağız içi muayenesi yapılması bu çocukların sağlığı ve tedavileri için çok büyük önem taşır.

ABSTRACT

Objective: This study was performed to determine the dental health status of medically compromised children who were referred for dental consultation.

Materials and Methods: The medical and oral health status of children who were referred by the various departments of Hacettepe Ihsan Dogramaci Children's Hospital for dental consultation were studied retrospectively.

Results: Disorders or abnormalities in the oral cavity were seen in 94.7% of the 198 children examined.

Conclusion: Communication between the medical and dental colleagues and an integrated medical and dental care should be performed for these children.

ANAHTAR KELİMELER

Dental konsültasyon, Sistemik hastalık.

KEYWORDS

Dental consultation, Medically compromised children.

INTRODUCTION

With the recent advances in medicine over the past decades, many children who would have died in infancy are now living into adult age¹. The prognosis of medically compromised children is becoming better with earlier diagnosis and new treatment principles and children increasingly survive their chronic diseases. Medically compromised children have an increased risk to develop oral disease, because the disease itself may include oral manifestations. Furthermore, the treatment or medication prescribed may result in decreased host resistance and side effects in the oral cavity².

Untreated dental disease in medically compromised children can significantly affect their general health and quality of life. Indeed, in some conditions an acute dental infection can be life threatening. The importance of good dental health is often not realized nor explained to children or their caregivers. When looking from a dental medicine perspective, there are two major problems associated with the medically compromised children: First one is the lack of specialized dental facilities/expertise for these children. Secondly, perhaps inevitably, it is the primary focus of attention of parent/caregiver that has been directed to medical treatment of the child patient.³

The aim of the present study was to retrospectively analyze the dental consultations requested from the Department of Paediatric Dentistry by various departments of the Hacettepe İhsan Doğramacı Children's Hospital.

PATIENTS AND METHODS

The medical and oral health status of children who were referred by the various departments of Hacettepe İhsan Doğramacı Children's Hospital for dental consultation between November 2001 and August 2003 were studied retrospectively. The information on the medical diagnosis, the medication prescribed for each child and the re-

ason for referral were obtained from the medical records and the consultation forms written by the referring doctor. Bedside examinations were performed for the hospitalized patients. Intra-oral examination of each referred patient was performed by one of the authors, and included the assessment of dental caries status and oral pathologies of dental origin. DMF/def⁴ (Decayed-Missing-Filled/decayed-extracted-filled teeth for permanent and primary dentitions) were calculated, respectively, for each child and for all study population. Oral pathologies of dental origin were recorded. The parents were asked if any type of fluoride supplementation was given to the child. The data was analyzed using descriptive statistics with SPSS 10.0.

RESULTS

A total of 198 dental consultation patient records were analyzed retrospectively. The patients, 89 girls and 109 boys, had an age range of 0-13 years with a mean age of 6.92 years. Table I summarizes the age distribution of the pa-

TABLE I

Sex	n	mean	median	SD
Male	109	7,26	7,00	3,122
Female	89	6,52	7,00	3,458
Total	198	6,92	7,00	3,290

ents examined. Bedside examinations in the hospital environment were performed for 12 (6%) children. The most common medical diagnosis were; diseases of the blood and blood forming organs 25.7% (n=51), neoplasms 13.6% (n=27), dental infection (referred from the department of infectious diseases) 14.1% (n=28), and diseases of the nervous system and sense organs 8.5% (n=17). More than one medical diagnosis was present for 6 patients. Table II shows the distribution of children's medical diagnoses. A wide variety of medications were used by the patients: 21,7% (n=43) of the patients used con-

TABLE II

Medical Diagnosis	n	%
Metabolic diseases	8	4,04
Diseases of the nervous system and sense organs	17	8,58
Diseases of the respiratory system	4	2,02
Infectious diseases	1	0,5
Mental disorders	4	2,02
Neoplasms	27	13,6
Diseases of the digestive system	1	0,5
Diseases of the musculoskeletal system and connective tissue	6	3,03
Diseases of the blood and blood forming organs	51	25,75
Diseases of the circulatory system	7	3,53
Diseases of the genitourinary system	3	1,51
Congenital anomalies	5	2,52
Dental infection	28	14,14
Dermatological diseases	3	1,51
Endocrine disorders	7	3,53
Diseases of the immun system	5	2,52
Oral symptoms, signs and ill defined conditions	11	5,5
More than one medical diagnosis	6	3,03
Unknown (can not be diagnosed)	4	2,02
Total	198	100

tinuous medication, %10.6 (n=21) of the patients were under chemotherapy while %1.01 (n=2) of the patients were under radiotherapy. The results of this study showed that the patients were referred for dental check-up, possible infection foci, acute dental infection, periodontal reasons, and for other reasons (Table III). Patients who were referred from the department of infectious diseases were consulted for the determination of the origin of the infection: Ten of these children had buccal cellulitis, 2 had extra-oral fistulae, 5 had deep cervical infection and

TABLE III

Reason of referral	n	%
Dental check-up	92	46,4
Acute dental infection	36	18,1
Determination of infection foci	48	24,2
Periodontal	15	7,57
Other	7	3,53
Total	198	100

11 had lymphadenopathy. Seven of these children were prescribed oral antibiotics, 8 were given parenteral antibiotics while 13 children were not given any antibiotics therapy.

Of the 198 patients, 180 (94.7%) were diagnosed with diseases or abnormalities in the oral cavity requiring treatment or follow-up. The mean DMF and def for 198 patients were found to be 2.15, and 6.11 respectively (Table IV). It was found that only 30 (15.1%) of the children have

TABLE IV

index	n	mean	median	SD	minimum	maximum
DMF	123	2,15	2,00	2,209	0	9
def	177	6,11	6,00	4,646	0	19

visited a dentist before; and only 20 (10.1%) of the children had no caries lesions in their teeth, while 178 (89.8%) of the children had untreated caries lesions. Eighteen (9.09%) children had completely healthy dentitions and with their soft tissues revealing no signs of pathology. Eleven (5.5%) of the children were referred for oral symptoms, signs and ill-defined conditions including natal tooth, congenital parulis, Bohn's nodules, gingival hyperplasia, hypodontia and gingivostomatitis. The medical condition of 4 children in the unknown (can not be diagnosed) group included headache, cervical mass, and various pain complaints. They were not found to be associated with any dental or oral pathology.

DISCUSSION

Dental care of the chronically sick child is often neglected. A preoccupation with the principal medical condition often results in the neglect of other facets of the child's overall health. Children who have a medical disability in the dental situation can be defined as those, whose medical condition is such that their general health is put further at risk if they suffer dental disease⁵. Dental disease itself or the provision of

treatment for dental disease can have serious implications for medically compromised children and their caregivers. Increased exposure to prophylactic antibiotics or hematological factors may be required prior to dental treatment³. Dental disease can negatively effect the success of the medical treatment. Because of this risk to health, or even to life, their dental care is of vital importance.

Dental caries is a multi-factorial infectious disease and can be prevented by tooth brushing, dietary counseling, fluoride supplementation and other oral hygiene procedures⁶. Medically compromised children should be given the highest priority for comprehensive, preventive dental care from as early as an age possible⁷. In this study it was disappointing to see that only 15.2% of the children had visited a dentist before. These children were in the high risk group for caries because of their high DMF and def scores and their medical conditions, as well.^{7,8} Medically compromised children who have high caries risk should have dental check-ups every 3-6 months even if they don't have any problems concerning their teeth.⁹ Oral hygiene is extremely important for the prevention of oral diseases. Unfortunately, the children examined had irregular tooth brushing habits. Another concern is the number of parents who did not give fluoride supplementation to the child since they reside in an area where the fluoride content of water is below 0,3 ppm.¹⁰ Consequently, 84.8% of the patients have never been to a dentist, 96.5% were unaware of fluoride supplementation and 89.8% had untreated carious lesions.

Oral findings of the medically compromised children may be similar to those characteristic of the general population; not being particular to them. However, in the case of medically compromised children prevention of dental disease becomes more important because sometimes, dental disease can be life threatening.² Optimum oral health is always important to the physical well-being of medically compromised children

and contributes to the success of many surgically corrected congenital malformations and organ transplantations. On the contrary, poor oral health and neglect adversely affect the outcome of surgical interventions and the progress of the disorder.¹¹ A baseline dental examination should be included in treatment protocols (e.g. immunosuppressive) to eliminate possible infection foci. It is also very important to instruct parent/patient for oral hygiene procedures.² It is a general clinical impression of dentists that children are not brought to the dentist unless they have oral/dental problems. The pediatrician may be the primary health practitioner responsible for promoting oral health. The customary frequent contact of these health professionals with patients make them ideal people to direct the parents to dentistry and the importance of dental health.¹² The communication between medical and dental colleagues and an integrated medical and dental care should be performed for these children as a part of the treatment protocol.

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