



Etiological Factors and Prevalence of Dental Caries In Preschool Children of Zahran Aljanoub Region Kingdom of Saudi Arabia .

KEYWORDS

-Aetiology and prevalence of caries. -Caries prevalence. -Aetiological factors of caries in preschool children.

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ABSTRACT *The aim of this study is to explore the etiological and prevalence factors of dental caries in preschool children of Zahran Aljanoub sector. It is a descriptive, cross sectional study based on randomly selected 357 of preschool children. The status of dental caries recorded according to the (WHO) criteria. The prevalence of early ECC was 58.8%, while the mean dmft was 3.8. There was slight increase in caries prevalence in male than female and shown to be less in children below two years and high in those older than two years. The most affected teeth were the mandibular second molars, caries prevalence was (35.1%) followed by mandibular first molars (31.5%) and then maxillary central incisor, whereas the maxillary canines were the least teeth affected by -caries(5.7%). The manner of feeding and brushing habits represent the most factors of ECC in Zahran Aljanoub, with most of the children having untreated carious teeth.*

Introduction

Dental caries may affect most population in various age group. Early childhood caries (ECC) represents the most chronic disease affects children and defined as the presence of tooth decay involving any primary tooth in a child younger than 6 years of age. This caries is a complex disease process which involves transmission of infections, dietary habits and oral hygiene, and is very difficult to eradicate due to a complex interaction factors. The child needs healthy teeth to help him in chewing, speaking, and to preserve space for permanent teeth. Dental caries happen when the teeth come in contact with carbohydrates in the presence of bacteria leading to many teeth problems(1). It has been associated with otitis media in the first year of life. If the disease progress, it will become painful resulting in altered chewing, eating and sleeping pattern, in addition to growth restriction (2) . Despite the decline in the prevalence of dental caries in children in the western countries, caries in preschool remains a problem in both developed and un developing countries(3).

In the initial phase, ECC is recognized as a dull, white demineralized enamel that quickly advances to decay along the gingival margin(4). Primary maxillary incisors are generally affected earlier than four mandibular anterior teeth which are often involved concurrently. Caries lesions may be found on either the labial or lingual surfaces of teeth and in some cases, on both(5). It is well accepted that environmental factors influence caries development(6) (7). Mothers are likely to introduce their dietary habits to their children(8). Maternal obesity during pregnancy has been considered to influence appetite control in children(9). Dietary factors influence the availability of fermentable carbohydrates required for caries formation but also influence host susceptibility because primary tooth enamel development is influenced by prenatal and early infant nutrition (10) .

Methodology: -

This study is a descriptive, cross sectional study held in Zahran Al Janoub a town in the Southern part of Saudi Arabia near the border of Yemen. The population around 17,000 in town and in rural area is about 11,653 with approximately total of 28,653 the preschool children around 5,000 .

Study Population :

Preschools, well-baby and sick-baby visiting the clinic, and children who have been visited in their respective villages .

Oral Health status:

The study based on randomly selected 357 of preschool children. The status of dental caries recorded according to the World Health Organization (WHO) criteria. The clinical indices of decayed, missed, and filled teeth (dmft) are recorded, which illustrate on how much the dentition affected by dental caries.

Data collection and instrument:

Data had been collected using dmft indices and self-administered questionnaires the information obtained regarding social background habits .

RESULTS

The sample of study population consisted of 357 children aged range up to five years. These were 201(56.3%) male children and 156(43.7%) female children, for the whole study. The study showed that dmft was 3.8 which is

higher in boys than girls, with slightly increase in children above 2 years. (83.9%).This finding represented due to increase sugars consumption regarding changing in dietary pattern (table 1) .The prevalence of early childhood caries was 58.8% , these illustrated in table2.

In this analysis 66 children with affected caries brushed

teeth once a day, so they showed significantly higher caries prevalence (90.4%), compared to those children who brushed twice a day 9.6% whereas 0% children brushed more than twice a day (table3).

Table 1
dmft by Gender and Age Category
Gender Male/ Female

	Number	Percentage
Female	646	47.57%
Male	712	52.43%
Total	1358	100.00%

	Number	percentage
<2 Years	218	16.05%
>2 Years	1140	83.95%
Total	1358	100.00%

Table 2
2 -Caries Prevalence by Gender Age Group Category

Gender	Number	Percentage
Female	69	46.94%
Male	78	53.06%
TOTAL	147	100.00%

Gender	Number	percentage
Female	87	41.83%
Male	123	58.57%
Total	210	100.00%

Caries prevalence = 58.8%

Table 3

Proportion of Children with Early Childhood Caries According to frequency of brushing .

	Number	percentage
Once	4	7.86%
Twice	79	70.71%
More	187	76.43%
Total	140	100.00%

	Number	percentage
Once	66	90.41%
Twice	7	9.59%
More	0	0%
Total	73	100.00%

1- From the results it can be concluded that caries prevalence was 58.8% while the mean dmft was 3.8 .

2-There was slight increase in caries prevalence in male than female and shown to be less in children below two years and high in those older than two years.

3- There was statistically a strong correlation between manner of feeding especially frequent sugar consumption and caries in preschool children.

4- Frequency of brushing is more effective in cleaning teeth and reducing prevalence of early childhood caries .

5- There was a significant increase in caries prevalence with age and using formula feeding, with less caries in using breast feeding and high parents education.

REFERENCE

1- Douglass JM, Douglass AB, Silk HJ 2004. A practical guide to infant oral health. Am Fam Physician ;70:2113-2120. Dental caries. | | Health;16(6):351-7. | | 3- | HakanÇolak, Çoruh T. Dülgergil, Mehmet Dalli,1 and Mehmet Mustafa Hamidi, 2013 Jan-Jun .Early childhood caries update: A review of causes, diagnoses, and treatments 4(1): 29–38. doi: 10.4103/0976-9668.107257. | | 4- | | | | Drury TF, Horowitz AM, Ismail AI, Maertens MP, Rozier RG, Selwitz,1999. Diagnosing and reporting early childhood caries for research purposes. A report of a workshop sponsored by the National Institute of Dental and Craniofacial Research, the Health Resources and Services Administration, and the Health Care Financing Administration. J Public Health Dent59:1927. | | | | 5- | 55 | Berkowitz RJ. Causes, 2003. treatment and prevention of early childhood caries: A microbiologic perspective. J Can Dent Assoc;69:3047. | 6- Fejerskov O, 2004. Changing paradigms in concepts on dental caries: consequence for oral health care. Caries Res; 38:182-91. | | 7- Armitage JA, Poston L, Taylor PD, 2008. Developmental origins of obesity and the metabolic syndrome: the role of maternal. 36:73-84. doi: 10.1159/0000115355. | | 8- Seward FS, 1965 Natural closure of the deciduous molar extraction | spaces. Angle Orthodontist; 35: 85-94. | | 9- Park K, Jung DW, Kim JY, 2009 Three-dimensional space changes after premature loss of a maxillary primary first molar. Int J Paediatr Dent; 19(6): 383-389. | | 10- Laing E, Ashley P, Naini FB, Gill DS, 2009 Space Maintenance. Int J Paediatr Dent; 19(3): 155-162. s40-5.