

MEAN AGE AND CHIEF COMPLAINT OF THE JORDANIAN CHILDREN ON THEIR FIRST DENTAL VISIT

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ABSTRACT

The objective of the study was to investigate the mean age and the most common chief complaint of the Jordanian children on their first dental visit.

81 patients referred to paedodontic clinic of Princess Haya and KHMC Hospitals formed the study group. An informed consent and patient information sheet were given to the parents to fill prior to dental examination. Patient's date of birth, gender, brushing habits and chief complaint were recorded. Using an explorer and dental mirror and clear illumination, mouth was examined thoroughly and carious teeth were recorded. The reasons for their visit and brushing habit were also noted.

The study group showed mean (\pm SD) age of 61.84 ± 24.38 months. Thirty-nine were male with a mean (\pm SD) age of 60.64 ± 26.24 months compared to 42 female patients with a mean age of (\pm SD) of 62.95 ± 22.79 months. The difference in mean age between both groups was statistically insignificant. Most common chief complaint on the first visit was pain (34%). Second common complaint was dental caries (24%). Fifty three percent of all subjects irregularly brushed their teeth, 27% brushed regularly and 16% never brushed their teeth. No correlation was found between brushing habits and number of carious teeth ($P > 0.05$). Seventy five percent of the subjects had 4 or more carious teeth. There was a significant correlation between advancing in age and increase in number of carious teeth ($P < 0.05$). There was a significant difference in the mean number of carious teeth between the children living in middle part of Jordan (7.58 ± 3.79 , $n=40$) and those living in south of Jordan (4.73 ± 3.65 , $n=41$) ($P < 0.05$, t -test).

This study suggests that the awareness level regarding the importance of the first dental visit was very low in the Jordanian population, with mean age of the child's first dental visit being more than 5 years of age. The commonest reason for seeking dental treatment on the first dental visit was found to be pain and dental caries.

Key words: First dental visit, pain, caries

INTRODUCTION

The two main diseases that are prevalent among children are dental caries and gingivitis.¹ Both are preventable diseases and could be reversible in early stages. Dental caries is five times more common than asthma and seven times more common than hay fever.^{2,3} Furthermore, as Edelstein and Douglas noted, dental caries is not self-limiting, like the common cold, nor amendable to treatment with a simple course of

antibiotics, like an ear infection.⁴ The WHO has pointed out the disastrous consequences of increase in dental caries in developing countries.⁵ Dental caries is an infectious disease and that multiple factors influence the initiation and progression of the disease.⁶ Lack in the prevention of dental caries cause severe dental pain, swelling, poor mastication, poor aesthetics, early loss of dentition, loss of millions of school hours per year and even psychological distress. These consequences not only deteriorate oral and dental health,

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but also affect general health; breaking the rule that “good oral health is an integral component and the gate of good general health.” Early prevention program should be adopted nationally and internationally to control this dilemma for the prosperity of the new generations. Early visit of the child to the dental clinic is considered the corner stone of these prevention programs. It is widely accepted that the timing of dental visits is important in preventing the onset and progression of dental caries⁷ and the first visit to dental clinic should be within the first year of the child life.⁸⁻¹⁴ An early first dental visit makes it possible for interceptive interventions aimed at arresting the progression of caries lesions. The American Academy of Pediatric Dentistry (AAPD) and the American Dental Association (ADA) recommend that ‘a child should visit the dentist within six months of the eruption of the first primary tooth and no later than 12 months of age’.¹⁵⁻¹⁷ A careful dental examination is not possible in very young children, but an inspection of the teeth and gingivae is often possible at one year of age, and has been advocated by a recent Nordic consensus conference.¹⁸ One purpose is to identify children with thick plaque accumulation, which has been shown to be a risk factor for caries in young children.¹⁹

No study is available in Jordan up till now concerning the age of children's first visit to dental clinic, and for this reason, this study was undertaken.

METHODOLOGY

The sample of this clinical prospective study, conducted in 2010 and 2011, comprised a total of 81 patients (39 males and 42 females) referred to paedodontic clinic Princess Haya and KHMC Hospitals/Royal Medical Services-JAFs-Jordan. Inclusion criteria for enrolment in the study were: 1) subjects not having complicating medical condition and using any medicine which may effect the dentition. 2) subjects who are appearing in the dental clinic for the first time in their life. The study subjects according to their age, gender and number of carious teeth are presented in Table 1.

An informed consent and patient information sheet were given to the parents to fill prior to dental examination. Ethical approval was taken from the Jordanian Royal Medical Services ethics committee. Patient's date of birth, gender, brushing habits and chief complaint were recorded. Using an explorer and dental mirror and clear illumination mouth was examined thoroughly. Carious teeth were recorded on the dental chart. The reasons for their visit were divided into the

following five categories: regular check up, dental pain, swelling, dental caries, and trauma. Brushing habits were divided into three categories: regular, irregular and no brushing.

RESULTS

The patient was the unit of analysis in this study. A descriptive statistical study (mean, standard deviation) was carried out on the measurements of variables collected. Normality of the distributions for the variables number of carious teeth and age was measured by test of normality (p-p plot). The metric data (number of carious teeth and age) were averaged for all patients. Statistically significant differences between group means were tested using student t-test. The chi-square distribution or Fisher's exact test where appropriate were used when concerning proportions. Simple Pearson's correlation was used for the study of possible association and interrelationships between brushing habits and number of carious teeth. The level of significance was set at $P < 0.05$.

As shown in Table 1 the study population consisted of 81 patients with a mean (\pm SD) age of 61.84 ± 24.38 months. Thirty-nine were male patients with a mean (\pm SD) age of 60.64 ± 26.24 months compared to 42 female patients with a mean (\pm SD) of 62.95 ± 22.79 months. The difference in mean age between both groups was statistically insignificant ($P > 0.05$, t-test). Age range was 2-12 years. Most common chief com-

TABLE 1: STUDY GROUP ACCORDING TO AGE, GENDER AND COMPLAINT AND NUMBER OF CARIOUS TEETH

	Male	Female	Total
Age (months mean \pm SD)	60.64 \pm 26.24	62.95 \pm 22.79	61.84 \pm 24.38
Gender male/female	39 (48.1)	42 (51.9)	81
Number of carious teeth	6.15	6.12	6.14

TABLE 2: CHIEF COMPLAINT

	Frequency	Percent
Valid regular check up	6	7.4
Dental pain	34	42.0
Swelling	10	12.3
Dental caries	24	29.6
Trauma	7	8.6
Total	81	100.0

TABLE 3: BRUSHING HABITS

	Frequency	Percent
Valid no	16	19.8
yes	22	27.2
irregular	43	53.1
Total	81	100.0

TABLE 4: NUMBER OF CARIOUS TEETH

Patient address	Mean	No	Std. Deviation
Middle of Jordan	7.58	40	3.80
South of Jordan	4.73	41	3.65
Total	6.14	81	3.97

plaint for the visit was pain (34%). Second common complaint was dental caries (24%). Other complaints are shown in the Table 2. Table 3 shows the brushing habits. No correlation was found between brushing habits and number of carious teeth ($P > 0.05$, Pearson's correlation). Seventy-five percent of the subjects had 4 or more carious teeth. There was a significant correlation between advancing in age and increase in number of carious teeth ($P < 0.05$, Pearson's correlation). There was a significant difference in the mean number of carious teeth between middle of Jordan (7.58 ± 3.79 , $n=40$) and south of Jordan (4.73 ± 3.65 , $n=41$) ($P < 0.05$, t-test) as shown in Table 4.

DISCUSSION

It is evident from this study and other studies seen in the literature that most parents take their children to the dentist for curative and not for preventive treatment.^{20,21} Dental caries and gingivitis are the most common diseases in children.¹ Early attendance to the dental clinic leads to detect these lesions early. A growing body of evidence in the literature recommends that the first dental visit for a child should be by the age of one year or as soon as the first primary tooth erupts. It is generally recommended to commence tooth brushing as soon as the teeth erupt, and this is the advice currently being provided to parents through prenatal classes, child health care pamphlets in South Australia.^{22,23}

Some authors recommended that the first dental visit should be around the fourth month of intrauterine life.²⁴ During this visit by the future mother or parents, the dentist has an opportunity to: 1. Explain the

importance of dental visit at 6 months of age. 2. Educate the mother or parents on eruption of teeth and preventive procedures. 3. Provide parents diet counseling. The main objectives of the first dental visit may include: plaque control, diet counseling, fluoride application, preventive resin restoration, managements of trauma and facial injuries and fissure sealant application. The importance of such measures should be explained to the parents who raise the scale of oral and dental health. The major goal in the first visit is to educate and motivate the parent to take all measures to promote oral hygiene and prevent early oral and dental disease. In this study the mean age at the first visit was about 5 years (age range 2-12 years) which is far beyond prevention. The results of the present study support the findings of Meera et al who found that the age range in the first dental visit in the Indian population was 6-12 years (average age about 6 years)²⁵ and the most common chief complaint was dental pain and then dental caries. Present study showed that 75% of the subjects had 4 or more carious teeth. This means that the disastrous effect of dental caries start to be apparent in almost all children which enhance the need for stressing on preventive measures. On the other hand a Scandinavian study by Poulsen showed that the prevalence of caries (initial lesions included) at the age of one year was almost zero, but increased to 8% at the age of 2 years.^{26,27} The minimum age in this study subjects was 2 years on the first dental visit in which the caries become more prevalent among children in this age than youngsters. Brazilian longitudinal studies have reported the increase in dental caries in this age group.²⁸ One study showed that most children are exposed to medical care at an early age but not to dental care.²⁶ Slayton et al in their Iowa Fluoride Study reported that among children between birth to 3 years only 2% of the parents reported that their child had a dental visit by one years of age.²⁸ Nainar and Straffon in their study showed that the first dental visit should be performed at one year of age for all children from a low socioeconomic background.^{13,29} However, it can be an elective visit for infants from middle to high socioeconomic status families.¹³ According to the guidelines of the Australian Academy of Pediatric Dentistry (2002), the first oral examination should follow the eruption of the first primary teeth and be no later than 12 months of age. During first 12 months of the child's life, parents / care gives should receive counseling on appropriate oral hygiene procedures, fluoride supplementation and feeding practice as well as general dietary counseling related to oral health. They should also be counseled regarding trauma and general injuries and oral habits.

It has also been reported that in the Australian context it is evident that most children do not seek dental care till they go to school at 5 years of age. The present study reported that there was a significant difference in the mean number of carious teeth between middle and south of Jordan. This may be due to differences in feeding habits and types of food stuff. In the present study no correlation was found between brushing habits and number of carious teeth. This may be due to delay in first dental visit that resulted in improperly used tooth brush and poor prevention. Neither the children nor the parents knew how to brush properly and effectively. The present study showed a low awareness level in the Jordanian population, as the majority of the children were brought for the first dental visit at 2-12 years of age (the mean age was 5 years) and the commonest reason for seeking dental care was pain and dental caries. It is also evident that parents bring their child for a dental visit only when the disease is apparent and severe.

CONCLUSION

This study suggests that the awareness level regarding the importance of the first dental visit is very low in the Jordanian population, with mean age of the child's first dental visit being 5 years. The commonest reason for seeking dental treatment at the first dental visit was found to be pain and dental caries. No correlation was found between brushing habits and number of carious teeth, therefore first dental visit management should be routinely undertaken for each child before the age of one year for early detection of oral and dental diseases for better management and long-term maintenance of functioning deciduous and erupting permanent dentition throughout childhood.

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