

THE MOST COMMON CHIEF COMPLAINT AMONG JORDANIAN CHILDREN AT FIRST DENTAL VISIT

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ABSTRACT

The main objective of the study was to investigate the most common chief complaints and the mean age of the Jordanian children at which they report for their first dental visit.

The sample of this clinical prospective study, conducted in 2010 and 2013, comprised a total of 166 patients (76 males and 90 females) who were referred to paedodontic clinic of Princess Haya Hospital, Prince Hashem Hospital, Marka Military Medical Centre, King Hussein Medical Centre, Ameer Zaid Hospital / Royal Medical Services-Jordan Armed Forces-Jordan. Inclusion criteria for enrolment in the study were the subjects who were not suffering from any systemic condition nor they were using any pharmacological agent known to affect the dentition. Patients were diagnosed using an examination kit containing dental mirror, explorer, tweezers, facial mask and sterile gloves. Patient's date of birth, gender, brushing habits and chief complaint were recorded.

*The study group consisted of 166 patients with a mean (\pm SD) age of 64.76 ± 23.07 months. Seventy six were male patients with a mean (\pm SD) age of 65.61 ± 24.18 months compared to 90 females with a mean (\pm SD) age of 64.05 ± 22.20 months. The difference in mean age between both groups was statistically significant ($P < 0.05$, *t*-test). Age range was 24-144 months. Most common chief complaint for the first visit was pain (48.8%). Second common complaint was having dental cavities (29.5%). There was noticeable increase in number of subjects who never brushed their teeth. There was a significant difference between different areas in brushing habits ($P < 0.05$, Chi-square test). Good correlation was found between brushing habits and number of carious teeth ($P < 0.05$, Pearson's correlation).*

It was concluded that two most common complaints for seeking dental appointment were dental pain and dental caries.

Key Words: Pain most common chief complaint, first dental visit.

INTRODUCTION

Dental caries is a microbiological multiple factorial disease that has a complicated etiology and the risk factors are many and not completely well known. Presence of mutans streptococci (and the other cariogenic micro-organisms), fermentable carbohydrates, susceptible host teeth are the various etiological factors

involved.¹ The caries process is influenced by multiple genetic, social, economic, environmental, and biological factors.² Although dental caries is largely preventable; it remains largely untreated in young children, especially those under three years of age.³ Mutans streptococci are transmitted from the primary caregiver to the child.⁴⁻¹²

The early acquisition of mutans streptococci by infants occurs mainly via the mother's saliva, and probably also by other sources of transmission. ECC appears in the teeth in the order of their eruption, characterized by first affecting the primary maxillary teeth, then the incisors, followed by the first molars, canines, and finally the second molars. Untoward effects of dental caries mainly affect the masticatory functions due to

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pain and food impaction during mastication as well as poor aesthetics due to dark brown discoloration. As a result, these bad effects of caries negatively affect general health physically and psychologically. In addition, progression of dental caries can contribute to difficulty in eating, weight loss and impaired growth, poor speech development, disrupted sleep, and systemic infection.¹³⁻¹⁶ However, one in every 16 children in the United States – 4.6 million – do not receive needed oral health care because their families cannot afford it.¹⁷ Dental caries is one of the most prevalent disease among children. It can occur early in childhood despite increased preventive measures being implemented for children who have experienced such caries. The American Academy of Pediatric Dentistry recommends that the initial visit, for an oral evaluation, should occur within 6 months of the eruption of the first tooth and not later than the age of one year (American Academy of Pediatric Dentistry 1994).¹⁸⁻²⁰

Very few available studies have been done in Jordan up till now concerning the age of children first visit to dental clinic. A study compared between middle and south of Jordan had been undertaken to evaluate the mean age of children at first dental visit. This study is a continuation of the above study but it has involved more sectors from Jordanian population.

The main aim of the study was to investigate the most common chief complaints and the mean age of the Jordanian children at which they report for their first dental visit.

METHODOLOGY

The sample of this clinical prospective study, conducted in 2010 and 2013, comprised a total of 166 patients (76 males and 90 females) who were referred to paedodontic clinics of Princess Haya Hospital, Prince Hashem Hospital, Marka Military Medical Centre, King Hussein Medical Centre and Ameer Zaid Hospital / Royal Medical Services-Jordan Armed Forces-Jordan. Inclusion criteria for enrolment in the study were the subjects who were not suffering from complicating medical conditions nor they were using any pharmacological agent known to affect the dentition, and that they were appearing first time in the dental clinic and subjects must have no history of previous specialist paedodontic treatment and had no tooth loss. Patients

were diagnosed using an examination kit containing dental mirror, explorer, tweezer, facial mask and sterile gloves. The study subjects according to their age, gender, and number of carious teeth are presented in Table 1.

Prior to dental examination an informed consent was obtained from the parents and patient information sheet were given to the parents to fill them. 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. Carious teeth were recorded on the dental chart. The reasons for their visit were divided into regular check up, dental pain, swelling, dental caries, and trauma. Brushing habits were divided into regular, irregular and no brushing groups.

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 groups were tested using student t-test. The Chi-square distribution or Fisher's exact test where appropriate were used. 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 $P < 0.05$.

RESULTS

As shown in Table 1 the study population consisted of 166 patients with a mean (\pm SD) age of 64.76 ± 23.07 months. Seventy six were male patients with a mean (\pm SD) age of 65.61 ± 24.18 months compared to 90 female patients with a mean (\pm SD) age of 64.05 ± 22.20 months. The difference in mean age between both groups was statistically significant ($P < 0.05$, t-test). Age range was 24-144 months.

Most common chief complaint for the first visit was pain (48.8%). Second common complaint was dental caries (29.5%). Other complaints are shown in Table 2.

TABLE 1: DISTRIBUTION OF AGE, GENDER AND CARIOUS TEETH

	Male	Female	Total
Age (months) (mean \pm SD)	65.61 \pm 24.18	64.05 \pm 22.20	64.76 \pm 23.07
Gender male/female	76 (45.8)	90 (54.2)	166
Number of carious teeth	5.86 \pm 3.88	6.01 \pm 3.71	5.94 \pm 3.78

TABLE 2: CHIEF COMPLAINTS

	Frequency	Percent	Valid Percent	Cumulative Percent
Regular check up	16	9.6	9.6	9.6
Dental pain	81	48.8	48.8	58.4
Swelling	12	7.2	7.2	65.7
Dental caries	49	29.5	29.5	95.2
Trauma	8	4.8	4.8	100.0
Total	166	100.0	100.0	

TABLE 3: PATIENTS LOCATIONS VERSUS BRUSHING HABITS

Count		Brushing Habits		Total
		No Brushing	Brushed Regularly or Irregularly	
Locations	Marka Military & KHM Centres	3	37	40
	Princess Haya	13	28	41
	Prince Hashem	4	32	36
	Ameer Zaid	11	38	49
Total		31	135	166

TABLE 4: BRUSHING HABITS VERSUS NUMBER OF CARIOUS TEETH

Count		Number of Carious Teeth		
		More Than 4	Less Than 4	Total
Brushing Habits		1	0	0
	No Brushing	0	12	19
	Brushed Regularly or Irregularly	1	56	78
Total		2	68	97

TABLE 5: HOSPITAL LOCATIONS VERSUS NUMBER OF CARIOUS TEETH

Count		Number of Carious Teeth		
		More Than 4	Less Than 4	Total
Patient address	Marka Military & KHM Centres	0	4	36
	Princess Haya	0	16	25
	Prince Hashem	0	17	19
	Ameer Zaid	1	31	17
Total		1	68	97

Table 3 shows the brushing habits 81% of all subjects regularly or irregularly brushed their teeth, while 19% never brushed.

There was noticeable increase in number of subjects who had never brushed their teeth. There was a significant difference between different areas in brushing habits ($P < 0.05$, Chi-square test). Good correlation was found between brushing habits and number of carious teeth ($P < 0.05$, Pearson's correlation). Table 4.

Forty percent of the subjects had 4 or more carious teeth. 70% of them were from Princess Haya and Ameer Zaid hospitals. There was a significant difference between different areas in number of carious teeth ($P < 0.05$, Chi-square test). Other differences can be seen in Table 5.

DISCUSSION

The study subjects for this study were taken from five hospitals of Royal Medical Services-Jordan Armed

Forces. This study was a continuation of the previous one titled Mean Age of the Jordanian Children at the First Dental Visit, but the present study include 166 subjects from four different areas. Results of this study are almost similar to those of the previous one. In the present study the mean age at the first dental visit was about 65 months (age range 24-144 months) which is a little bit more than first study. The results of the present study support the findings of Meera et al who found that the age range on the first dental visit in the Indian population was 6-12 years (average age about 6 years)²² and the most common chief complaint was dental pain and then dental caries. Current study showed that 70% of the subjects had 4 or more carious teeth while in the previous one it was 75%. This means that the disastrous effect of dental caries start to appear in almost all children when age increases which enhance the need for stressing on preventive measures and the need for much more earlier visiting the pediatric dental clinics to avoid untoward effects of dental caries. On the other hand a Scandinavian study by Poulsen showed that the prevalence of caries at the age of one year was almost zero, but increased to 8% at the age of 2 years.^{23 and 24} The minimum age of subjects in the present study was 24 months at the first dental visit when caries became more prevalent, Brazilian longitudinal studies have reported the increase in dental caries in this age group.²⁵ In the present study good correlation was found between no brushing habits and number of carious teeth. This may be due to delay in first dental visit that resulted in improperly used toothbrush 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 24-144 months of age (the mean age was 65 months) 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. It is also evident from this study and other studies that most parents take their children to the dentist for curative and not for preventive treatment.^{26 and 27} Dental caries and gingivitis are the most common diseases in children.¹³ Early attendance to the dental clinic leads to detect these lesions early and prevent them. 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 centers and preventive dental health care.

When the most common reason for seeking dental appointment change from curative into preventive, the following objectives can be achieved: 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. The major goal on 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.

CONCLUSION

It was concluded from this study that the most common reasons for seeking dental appointment were dental pain and dental caries.

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