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Research Article

Frequency of Some of Oro-Facial Developmental Disturbances & Abnormalities among the Newborns in Kerman, Iran: A Retrospective Study

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Abstract

Aim: Oro-facial and cranial malformations are important health problems in children. These abnormalities are major cause of infant mortality and childhood complications. The aim of this study was to evaluate oral, facial and cranial abnormalities in newborns in Afzalipour Hospital in Kerman, Iran.

Materials & Methods: All cases of newborns were reviewed, and oral, facial, and cranial abnormalities were recorded in a checklist. The information in the checklist consists of two parts:

a) Information about the mother including age, maternal health status before delivery and type of delivery.

b) Information about the newborn (sex, weight, type of abnormality and health status of the newborn at birth). The results of the case review be analyzed by SPSS21 software.

Results: In this study, 6225 cases were reviewed, which includes 3015 normal deliveries (48.4%) and 3210 cesarean deliveries (51.6%). The most important results:

a) Head, cranium, and neck abnormalities & deformities: 3 newborns (0.048%)

b) Cleft lip and palate: 3 newborns (0.048%). Natal teeth: 2 newborns (0.032%). Facial asymmetry: 3 newborns (0.048%)

Conclusion: The prevalence of cesarean delivery in Kerman is high. Prevalence of natal teeth and cleft lip and/or palate is almost similar to many of countries

Keywords: Abnormality; Cesarean delivery; Newborn; Natal teeth; Cleft lip; palate

Introduction

Examination of the face and mouth should be an essential part of assessing the baby. Early detection of congenital disorders is essential to begin appropriate treatment and prevent complications that can profoundly affect the child's life. Because oral and facial abnormalities attract the attention of parents and dentists due to their diverse clinical features, careful evaluation of infants with

these abnormalities is recommended. Knowing the prevalence of oral and facial abnormalities in newborns will help to treat them in a timely manner and perhaps prevent their occurrence in newborns in the coming years. Haaseli et al. showed prevalence of cleft lip and palate in some cities of Iran is lower than of some Middle East and Asian countries [1]. Sadri Nia and Ahmadi study showed that birth weight less than 2500 g, consanguineous marriage, maternal age, maternal underlying diseases, and large family were the most important factors associated with the occurrence of oral clefts, respectively [2] Ajami et al. study showed natal and neonatal teeth in a group of children in north-east of Iran were more than other countries [3]. Considering that so far, no study has evaluated the frequency of these anomalies in newborns in south of Iran, we examined the frequency of some of the anomalies.

Method

This study is a descriptive, cross-sectional, and retrospective study. The paper files belong to the newborns who were born between April 1, 2020, and the end of October 2021 in Afzalipour Hospital in Kerman were examined. Oral and facial abnormalities mentioned in these files were recorded in the relevant checklist.

Inclusion criteria

The files were fulfilled from April 2020 to the end of October 2021. Exclusion criteria: The files that did not have complete information. The results were analyzed by SPSS 21 software. The information of the files was provided to the reader in a confidential manner. The study was approved by the ethics committee of Kerman University of Medical Sciences with ethical code IR.KMU. REC.1400. 048.

Results

In this study, 6225 cases of newborns were examined. Regarding the type of delivery, 3015 (48.4%) had a normal delivery and 3210 (51.6%) had a cesarean section. Among the studied newborns, 11 cases (0.176%) had head, face, and mouth abnormalities. Table 1 shows the kinds of these anomalies. Although the number of boys with anomalies was more than girls, there was no significant difference between gender and the anomalies. There was no significant difference between the presence or absence of disease in mothers and the abnormalities (P = 0.88). Birth weight was significantly more abnormal in the newborns with malformations (P = 0.037). There was no significant difference between maternal age in infants with and without abnormalities.

Table 1: Frequency of various anomalies recorded in the files.

Anomaly	Frequency	Percent	Pregnancy duration (pre-term/ full-term)
Severe Hydrocephaly	1	0.016	40 W& 5 D
Head & Neck Anomaly	1	0.016	22 W& 1 D
Facial Asymmetry	3	0.048	28 W& 1 D
			39 W&6 D
			34 W& 5 D
Cleft Lip and/or Palate	3	0.048	37 W& 6 D
			39W& 6 D
			34W& 5 D
Natal Teeth	2	0.032	39 W &1 D
			38 W &4 D
Cranial Deformity	1	0.016	38 W
Total	11	0.176	

W=weeks, D=days.

Discussion

It was found that only 48.4% of neonates were born normally. A retrospective study in the center of Iran showed that 46.6% of deliveries were performed by normal method and 53.4% by cesarean section [4], which is very close to the results of the present study. It seems that the prevalence of cesarean section has been increasing in Iran from the past to the present, so that in 1976 the prevalence of cesarean section in some parts of Iran was 19.5% [5]. In 1996 and 1997, respectively 23% and 24% have been reported in parts of the country [6]. In Kerman in 1996, the frequency of cesarean delivery was 37.6% [7]. In 2000, this rate was reported to be 35% in the whole country [8]. In 2005, this statistic has increased to 40% and in 2010 to 48% in the whole country [9]. Studies have shown that babies born by cesarean section are more susceptible to Early Childhood Caries (ECC) in the future and a few other studies didn`t find this relationship [10]. The present study shows that the frequency of natal teeth in newborns is 0.03%. A study in north-east of Iran showed that the prevalence of natal and neonatal teeth in those neonates was 0.66% [11]. In present study only natal teeth were examined, so there is a huge difference between the statistics in the two studies. In that study, natal and neonatal teeth have been studied, so the prevalence is higher.

Nirah has reported prevalence of natal teeth in infants in India 0.09% [12], Bulut et al. have reported prevalence of natal teeth in

Turkey 0.13% [13] and Chun et al. in Taiwan, reported it 0.25% [14]. In pediatric dentistry textbooks, the prevalence of natal teeth is reported as one birth in 3392 births in Canada. In another study this prevalence was reported as one case in 3667 births [15]. In the present study, this prevalence is one case among 3112 births. In general, it seems that the prevalence of natal teeth in Kerman is slightly lower or similar to the prevalence in other parts of Iran and some parts of the world. In the present study, it was found that out of 6225 babies born, 3 babies (0.048%) had cleft lip and/or palate. It means out of every 2075 births, one of them had these abnormalities. In a retrospective study conducted in Tehran, Capital of Iran, prevalence of one of the types of clefts was one case in 1666 children [16]. Another study in Tehran reported one outbreak in 770 births [2].The overall, prevalence of this anomaly worldwide is reported to be between 0.28 and 3.7 births per 1000 births. That is, from at least one case in 270 births to a maximum of one case in 3571 births [15]. Therefore, the prevalence of one of the types of cleft lip abnormalities in Kerman is lower than other regions of Iran and is in the range of global prevalence.

Regarding the discussion of side effects such as skull deformity and abnormalities of the head, face, and neck, it should be said that these disorders were first of all low in prevalence and secondly, they were mentioned in the files in general and not in detail. For example, head, face, and neck abnormalities cover a very wide range of disorders, many of which are not directly related to the work of the dentist, so it was not necessary to discuss them in this article.

Conclusion

Based on the present study, prevalence of cesarean delivery in Kerman is high. Prevalence of natal teeth and cleft lip and/or palate is almost similar to many of countries. However, despite the lower prevalence of the above-mentioned disorders, dentists need to have sufficient theoretical and practical knowledge about the dental problems of children with these disorders.

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