Original Article

Incidence of Natal Teeth and Cleft Lip and Palate among the Newborns in Kerman: A Retrospective Study

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Abstract
Background: Natal teeth and cleft lip and palate are orofacial malformations and important health problems in children. These abnormalities are major causes of parental worry and childhood complications. The objective of this study was to evaluate the incidence of natal teeth and cleft lip and palate as well as other facial and cranial abnormalities in newborns in Afzalipour hospital in Kerman, Iran.
Methods: All newborns who were born from 2020 to 2021 in Afzalipour Hospital were reviewed and their oral, facial, and cranial abnormalities were recorded in a checklist. The information in the checklist consisted of two parts. The first part contained information about the mother including age, maternal health status before delivery, and type of delivery. The second part included information about the newborn (sex, weight, type of abnormality, and health status of the newborn at birth). The results were analyzed by SPSS 21 software.
Results: In this study, 6225 newborns were reviewed, of whom 3015 were born by normal delivery (48.4%) and 3210 by cesarean section (51.6%). Head, cranial, and neck abnormalities and deformities were present in 3 newborns (0.05%), cleft lip and/or palate was present in 3 newborns (0.05%), and natal teeth was present in 2 newborns (0.03%). Three newborns (0.05%) had facial asymmetry. Newborn's gender, mother's systemic diseases, and mother's age were not related with anomalies in the newborn, but newborns with anomalies were significantly heavier than healthy newborns.
Conclusion: The prevalence of natal teeth and cleft lip and/or palate is not high in Kerman.
Keywords: Abnormality, Newborn, Natal teeth, Cleft lip and palate

Introduction

Examination of the face and mouth should be an essential part of assessing newborns. Early detection of congenital disorders is essential for appropriate treatment and preventing complications that can profoundly affect the child's life. Oral and facial abnormalities attract the attention of parents and dentists due to their diverse clinical features. Therefore, careful evaluation of infants with these abnormalities is recommended. Knowing the prevalence of oral and facial abnormalities in newborns will help treat them in a timely manner and may help prevent their occurrence in newborns in the coming years.

Haseli et al showed the prevalence of cleft lip and palate is lower in some cities of Iran than in some Middle East and Asian countries (1). The study by Sadri and Ahmadi indicated birth weight less than 2500 g, consanguineous marriage, maternal age, maternal underlying diseases, and large family size were the most important factors associated with the occurrence of oral clefts, respectively (2). However, the study by Ajami and Talebi showed natal and neonatal teeth were more prevalent in a group of children in northeastern Iran than in other countries (3). Considering that so far, no study has evaluated the frequency of these anomalies in newborns in southern Iran, this study aimed to evaluate the frequency of some of these anomalies.

Methods

This was a descriptive-analytical and cross-sectional study. The paper files investigated in this study belonged to babies who were born from April 1, 2020 until the end of October 2021 in Afzalipour Hospital in Kerman, Iran. The demographic data, including maternal systemic

diseases and oral and facial abnormalities mentioned in these files were recorded in a checklist. Files that did not have complete information were excluded. The results were analyzed by SPSS 21 software. The researchers respected the confidentiality of patients' information. The study was approved by the ethics committee of Kerman University of Medical Sciences under the ethical code IR.KMU.REC.1400.048.

Results

In this study, 6225 newborns were evaluated (Table 1). Regarding the type of delivery, 3015 (48.4%) babies were born by normal delivery and 3210 (51.6%) by cesarean section.

The results showed 17 neonates (0.3%) had head, face, and mouth abnormalities. Table 2 shows the kinds of these anomalies.

The frequency of oral and facial abnormalities based on infant's gender and maternal systemic diseases is shown in Table 3. Although there were more boys with anomalies than girls, no significant relation was found between gender and the anomalies ($P=0.11$). Moreover, there was no significant relation between maternal systemic diseases and the abnormalities ($P=0.88$).

As seen in Table 4, birth weight was significantly higher in the newborns with malformations ($P=0.037$). There was no significant difference between maternal age in infants with and without abnormalities ($P=0.93$).

Discussion

The present study revealed the frequency of natal teeth in newborns was 0.03%. A study in northeast of Iran showed the prevalence of natal and neonatal teeth was 0.66% (4). In the present study, only the natal teeth were examined; thus, it is difficult to compare the results of the two studies since the lower prevalence in the present study might be due to studying only the natal teeth.

Khosravi reported the prevalence of natal teeth in infants in Arak, Iran to be 0.09% (5); Bulut et al reported the prevalence of natal teeth in Izmir, Turkey as 0.13% (6); and Wang et al reported the prevalence of natal teeth in Kaohsiung, Taiwan to be 0.25% (7). In pediatric dentistry

text books, the prevalence of natal teeth was reported as one in 3392 births in Canada. In another study in Tehran, Iran, the prevalence of natal teeth was reported as one in 3667 births (8). In the present study, this prevalence was one in 3112 births. In general, it seems that the prevalence

Table 2. The various anomalies recorded in newborn files from April 1, 2020 until the end of October 2021 in Afzalipour Hospital in Kerman

Anomaly	Frequency	Percent	Pregnancy duration (preterm/ full term)
Severe hydrocephalus	1	0.02	40 W & 5 D
Head and neck anomaly	1	0.02	22 W & 1 D
Facial asymmetry	3	0.05	28 W & 1 D 39 W & 6 D 34 W & 5 D
Cleft lip and/or palate	3	0.05	37 W & 6 D 39 W & 6 D 34 W & 5 D
Natal teeth	2	0.03	39 W &1 D 38 W &4 D
Cranial deformity	1	0.02	38 W
Chromosomal abnormality	1	0.02	38 W
Abnormal cranial sutures	3	0.05	40 W & 5 D 38 W & 1 D 38 W & 5 D
Down syndrome	2	0.03	38 W & 1 D 38 W & 4 D
Total	17	0.3	

W = weeks, D = days

Table 3. The frequency of oral and facial abnormalities based on newborn's gender and maternal systemic diseases

Presence of anomaly	Males No. (%)	Females No. (%)	Total No. (%)	P value*
No	3186 (99.6)	3022 (99.8)	6208 (99.7)	0.11
Yes	12 (0.4)	5(0.2)	17 (0.3)	
Total	3198 (100)	3027 (100)	6225 (100)	

Presence of anomaly	Without systemic diseases (%)	With systemic diseases (%)	Total	P value*
No	3186 (99/6)	2444 (99/7)	6208 (99.7)	0.88
Yes	12 (0.4)	7 (0.3)	17 (0.3)	
Total (%)	3198 (100)	2451 (100)	6225 (100)	

* Pearson chi-square.

Table 1. Mothers' age and systemic diseases and infants' weight and gender

Variable	Mean	SD	Minimum	Maximum
Maternal age	29.43	6.03	13	50
		Frequency	Percent	
Maternal systemic diseases				
No		3773	60.6	
Yes		2452	60.6	
Infant's weight (g)	276.43	655.24	720	4350
Infant's gender				
Male		3198	51.4	
Female		3027	48.6	

Table 4. Frequency of oral and facial abnormalities based on birth weight and maternal age

Presence of anomaly	Number of cases	Birth weight (g) Mean ± SD	P value*
Yes	17	3097.1 ± 583.1	0.037
No	6208	2764.3 ± 658.6	

Presence of anomaly	Number of cases	Maternal age (y)	P value*
Yes	17	29.3 ± 6.0	0.93
No	6208	29.4 ± 6.0	

* Independent samples t-test

of natal teeth in Kerman is slightly higher than or similar to that 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 i.e., one out of 2075 births. In a retrospective study conducted on 1666 children in Tehran, Iran, the overall prevalence of oral clefts was 0.6 per 1000 live births (9). Another study in Tehran reported the prevalence of oral clefts as one per 770 births (2). The overall prevalence of this anomaly worldwide is reported to be between 0.28 and 3.7 per 1000 births; that is, from at least one case in 270 to one in 3571 births (8). Therefore, the prevalence of unilateral cleft lip is lower in Kerman than in other regions of Iran and is in the range of global prevalence.

Conclusion
The incidence of natal teeth and cleft lip and/or palate in Kerman, Iran is almost similar to that of other countries. However, despite the low incidence of the above-mentioned disorders, dentists need to have sufficient knowledge about the dental problems of children with these abnormalities.

Authors' Contribution
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Competing Interests
The authors have no conflict of interest to disclose.

References
1. Haseli A, Hajimirzaie S, Bagheri L, Sadeghian A, Ahmadnia E. Prevalence of cleft lip and cleft palate in Iran: a systematic review and meta-analysis. J Mazandaran Univ Med Sci. 2019;28(168):185-97. [Persian].
2. Sadri D, Ahmadi N. The frequency of cleft lip and palate and the celated risk factors in a group of neonates in the city of Kerman during 1994-2002. J Mashhad Dent Sch. 2007;31(1-2):71-6. doi: 10.22038/jmds.2007.1405. [Persian].
3. Ajami B, Talebi M. A survey on dental anomalies among children with lip and palate clefts in Mashhad Dental School (2000). J Iran Dent Assoc. 2005;17(1):46-51. [Persian].
4. Ajami B, Ebrahimi M, Mohammadzadeh A, Mozaffar Moghaddam S. Frequency of oral lesions in newborns at Mashhad Imam Reza Hospital, in 2001. J Mashhad Dent Sch. 2005;29(1-2):91-6. doi: 10.22038/jmds.2005.1511. [Persian].
5. Khosravi S. The investigation of gross congenital anomalies incidence in newborns in Taleghani and Ghods Hospitals_ Arak. J Arak Univ Med Sci. 2001;4(1):5-9. [Persian].
6. Bulut G, Bulut H, Ortac R. A comprehensive survey of natal and neonatal teeth in newborns. Niger J Clin Pract. 2019;22(11):1489-94. doi: 10.4103/njcp.njcp_152_19.
7. Wang CH, Lin YT, Lin YJ. A survey of natal and neonatal teeth in newborn infants. J Formos Med Assoc. 2017;116(3):193-6. doi: 10.1016/j.jfma.2016.03.009.
8. Mcdonald RE, Avery DR, Dean JA. McDonald and Avery's Dentistry for the Child and Adolescent. 10th ed. St. Louis, MO; Mosby; 2015.
9. Fathololumi MR, Fattahi Bafghi A, Nuhi S, Nasiri Afshar AA, Aghazadeh Naieeni A. Prevalence of cleft palate and cleft lip among 20000 Iranian neonates. Pajoohandeh. 2007;12(1):31-4. [Persian].