



ORIGINAL ARTICLE

Evaluation of Patients with Cleft Lip and Palate in Southeastern Anatolian Region

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ABSTRACT

Objective: Our study included patients with cleft lip and palate who applied to Gaziantep University Dentistry Faculty Orthodontics Department between 2010 and 2014. The aim of this study was to reveal the characteristics of these patients with demographic values.

Methods: In total, 118 patients were included in this study. The patients were pursued by phone calls, and the study was conducted with only 64 patients. The demographic map was created with a statistical expert as a questionnaire.

Results: It was thought that the reason for not being able to include the remaining 54 patients was a change in phone number, designation, or others. One patient who was to be interviewed died because of heart failure. The results revealed that the place of birth of 18.75% patients was a metropolitan region that of 54.68% was a province, that of 21.87% was a district, and that of 4.69% was a village. The majority of patients (93.25%) had a low family income level. The average number of children was 3.28, and readership was 1.47. The rate of working mothers was 1.56%.

Conclusion: It was concluded that the cleft lip and palate patient group had lower economic and sociocultural levels. For this purpose, raising awareness of parents and providing financial support to families are required because of the long-term treatment process. It was thought that the long-term treatment process of these patients in a single-unit authority with the guidance of universities would be appropriate for better patient follow-up and inventory. Otherwise, as seen in this study, contact cannot be established after a while and some problems can arise with regard to follow-up. Lack of communication can lead to the formation of more difficult patients with growth and development.

Keywords: Cleft lip and palate, newborn, southeastern Anatolian region

INTRODUCTION

Cleft lip and palate is a congenital malformation, which cover the lip, palate, and soft palate in the midfacial region, and this is one of the most important developmental disorders (1). The etiology of this defect is based on genetic and environmental factors (2). Although a shock, fear, or worry of mother, lack of food, and various intoxications may play a role as the reason, researchers have recently focused mainly on the genetic aspect (1). The incidence of orofacial clefts is 10 to 22.1 per 10,000 live births in the world (3). In total, 20%–30% of patients have cleft lip, while 35%–50% have cleft lip and palate (4). The follow-up, rehabilitation, and provision of aesthetics and functionality for patients with cleft lip and palate are important and require a careful study (5). Besides, these patients need to be more educated and better motivations because they generally have lower a socioeconomic class and education level and have some complications, which can vary depending on the type of the cleft. The difficulty in breathing, feeding problems because of inability to swallow, ear infections and hearing loss, speech and language delays, and dental problems are among the most common ones observed in clinical practice (6). Therefore, the treatment of this patient group requires a team of doctors specialized in audiology, radiology, genetics, pediatrics, oral and maxillofacial surgery, orthodontics, otolaryngology, psychology, and speech pathology (6).

Analysis of the existing literature revealed many studies on sociodemographic data of patients with cleft lip and palate. Lima et al. (7) stated that an association is present between individuals with nonsyndromic cleft lip and

palate and those without cleft lip and palate with regard to skin color. Kalaskar et al. (8) reported that some environmental risk factors such as nutritional deficiency, anemia, and self-administered medications have an important effect on the development of cleft lip and palate in a Central Indian population with a low socioeconomic status. However, there is no study evaluating the sociodemographic data of patients with cleft lip and palate and their parents in Gaziantep and neighboring cities. This study was conducted in the city of Gaziantep, Turkey. Gaziantep has the 8th highest population in Turkey, according to the 2014 database of the Turkish Statistical Institute. However, in the last decade, this city became popular because of the growth of the industrial area. Therefore, there was migration from other cities. Recently, because of the civil war of Syria, the number has increased further. All these parameters have changed the demographic situation of the city in a short time. The purpose of this study was to investigate the characteristic features of this patient group.

METHODS

The parents of newborns cleft lip and palate who applied to the Gaziantep University Dentistry School Orthodontics Department were included in this study. The protocol for this study was approved by the Ethics Committee of Gaziantep University (24.08.2015/241).

The individuals were selected randomly who visited the clinic between 2010 and 2014. Of the 118 patients identified, 54 were eliminated because of reasons such as a change in phone numbers and addresses of the patients. One of the remaining 64 patients died because of heart disease. In total, 63 patients answered the questionnaire over the telephone.

The survey questions were prepared under the supervision of a statistics expert. Questions regarding the place of birth (metropolitan, province, town, township, or village), gender, age, average monthly income, number of literate persons in the family, occupation of father and mother, living house type (rental, ownership, or public housing), home heating schema (none, stove, central heating, or combi boiler), number of rooms in the house, daily tv viewing time, and annual number of books read were asked to parents by the author (Y.A).

RESULTS

The descriptive statics results are listed in Table 1. According to gender classification, 31% of the patients were girls and 69% were boys. The birth place of the patients was as follows: metropolitan region, 18.75%; province, 54.68%; district, 21.87%; and village, 4.69%. The highest percentage of the study group had a low income (93.25%). The average number of children in each family was 3.28. The rate of working mothers was only 1.56%. The occupation of fathers was as follows: 18.75%, officer; 37.5%, worker; and 43.75%, self-employed. The education level of fathers was as follows: 31.25%, primary school; 37.5%, secondary school; 28.12%, high school; and 3.13%, Bachelor's degree. The education level of mothers was as follows: 59.37%, primary school; 37.5%,

Table 1. Descriptive results of patients

Variables		Cleft lip palate*
Gender	Female	20 (31%)
	Male	43 (69%)
Birth place	Metropolitan region	12 (18.75%)
	Province	34 (54.68%)
	District	14 (21.87%)
	Village	3 (4.69%)
Average number of children		3.28
Average monthly income	Low income (0–1500 ₺)	58 (93.25%)
	High income (+1500 ₺)	5 (6.75%)
Rate of working mothers		1 (1.59%)
Occupation of father	Officer	12 (18.75%)
	Worker	24 (37.5%)
	Self-employed	27 (43.75%)
Education level of father	Primary school	19 (31.25%)
	Secondary school	23 (37.5%)
	High school	17 (28.12%)
	Bachelor's degree	4 (3.13%)
Education level of mother	Primary school	38 (59.37%)
	Secondary school	23 (37.5%)
	High school	2 (3.13%)
	Bachelor's degree	0
Residential house	Rental	41 (65.62%)
	House owner	22 (34.37%)
Home heating system	Stove	43 (68.75%)
	Central heating	20 (31.25%)
Average number of rooms		2.37
Daily television-viewing time (h)		6.27
Annual number of books read		1.45
*number (percentage)		

secondary school; and 3.13%, high school. In total, for 65.62% of the patients, the residential houses were rental, while for 34.37%, the houses were owned; the home heating system was a stove and central heating in 68.75% and 31.25%, respectively. The average number of rooms was 2.37, daily television viewing time was 6.27 h, and annual number of books read was 1.45.

DISCUSSION

Cleft lip and palate with or without a craniofacial syndrome is a malformation that is frequently encountered in orthodontics clinics. This study was designed for creating awareness about sociodemographic data of patients with cleft lip and palate in Gaziantep and surrounding cities. Göymen et al. (9) investigated the cleft and palate width of infants with cleft lip and palate in the same region. However, no study evaluated the social, eco-

nomic, and education data of parents of these patients. Therefore, the present study is important because it is the first study on this subject.

According to the results of this investigation, the rate of boys with cleft lip and palate was higher than that of girls. This is in accordance with the findings of previous studies: Gorlin et al. (10) reported that the incidence of cleft lip and palate is twofold higher in boys than in girls.

The economic incomes of people affects many things in their life. Baysal (11) compared low- and high-income populations. According to that study, the daily meat, chicken, and fish consumption is higher in high-income groups than in low-income groups. A similar result is also true for milk, yoghurt, egg, and cheese. This nutritional deficiency is particularly important during pregnancy. Pregnant women living in rural and low socioeconomic conditions are more prone to anemia (12). Besides, in the literature, it has been shown that the consumption of iron and vitamin in the duration of gestation is associated with the socioeconomic status and personal habits (13). Similar to these findings, in the present study, most families had a low income, did not have their own homes, and did not have working mother. It was considered that low income is associated with vitamin and folic acid deficiency, which are etiological factors of cleft lip and palate (14). In particular, these results suggest the importance of illness prevention before pregnancy. In this area, these steps must be taken by the government to prevent malnutrition that can be a source of cleft palate.

When the findings of study were evaluated, it was observed that the education levels of the parents were low. Although only 3.13% of fathers were university graduates, none of the mothers were university graduates. Frey and Files (15) advocated that the education level affects awareness during pregnancy. Although the education level of parents is unchangeable, we predicted it would be useful to consult a healthcare provider before planning pregnancy. In addition, the number of public awareness programs, which need to be considered during pregnancy, should be increased. All these organizations must be controlled by one authority, which only focuses on patients with cleft palate from birth to adulthood.

The limitation of this study was that data were only related to cleft lip and palate. In the future, there is a need for research that compares healthy control and disease groups containing more members.

CONCLUSION

It was concluded that the cleft lip and palate patient group had lower economic and sociocultural levels. Therefore, raising parent awareness and providing financial support to families are required because of the long-term treatment process. It was thought that the treatment of patients with cleft lip and palate in a single-unit authority with the guidance of univer-

sities would be appropriate for better patient follow-up and inventory.

Ethics Committee Approval: The ethics committee approval for this study was received from the ethics committee of Gaziantep University School of Medicine.

Informed Consent: The verbal consent was obtained from the patients who participated in this study.

Peer-review: Externally peer-reviewed.

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REFERENCES

1. Cornel MC, Spreen JA, Meijer I, Spauwen PH, Dhar BK, ten Kate LP. Some epidemiological data on oral clefts in the northern Netherlands, 1981–1988. *J Craniomaxillofac Surg* 1992; 20: 147-52. [\[CrossRef\]](#)
2. Spritz RA. The genetics and epigenetics of orofacial clefts. *Curr Opin Pediatr* 2001; 13: 556-60. [\[CrossRef\]](#)
3. Derijcke A, Eerens A, Carels C. The incidence of oral clefts: a review. *Brit J Oral Maxillofac Surg* 1996; 34: 488-94. [\[CrossRef\]](#)
4. Shah CP, Wong D. Management of children with cleft lip and palate. *Can Med Assoc J* 1980; 122: 19-24.
5. Sokucu O, Nalcaci R, Ozturk F, Toy S. The evaluation of self acceptance of cleft lip and palate individuals. *CDJ* 2008; 11: 35-9.
6. Farronato G, Cannalire P, Martinelli G, Tubertini I, Giannini L, Galbiati G, et al. Cleft lip and/or palate: review. *Minerva Stomatol* 2014; 63: 111-26.
7. Lima LS, Ribeiro GS, de Aquino SN, Volpe FM, Martelli DRB, Swerts MS, et al. Prevalence of depressive symptoms in patients with cleft lip and palate. *Braz J Otorhinolaryngol* 2015; 81: 177-83. [\[CrossRef\]](#)
8. Kalaskar R, Kalaskar A, Naqvi FS, Tawani GS, Walke DR. Prevalence and evaluation of environmental risk factors associated with cleft lip and palate in a central Indian population. *Pediatr Dent* 2013; 35: 279-83.
9. Goymen M, Isman E, Oksayan R, Topcuoglu T. Yeni doğan dudak damak yarıklı bebeklerin alçı modellerinin değerlendirilmesi. *Selcuk Dent J* 2014; 1: 7-13.
10. Gorlin RJ, Cohen MM, Hennekam RC. *Syndromes of the head and neck*. New York: Oxford University Press, 1990.
11. Baysal A. Sosyal eşitsizliklerin beslenmeye etkisi. *CDJ* 2003; 25: 66-72.
12. Comba A, Mert H. İkinci trimesterdeki gebelerde bazı biyokimyasal ve hematolojik parametreler. *Van Tıp Dergisi* 2014; 21: 210-15.
13. Kiyak Çağlayan E, Kara M, Karaçavuş S, Erdoğan Y, Üstün YE. Orta Anadolu'da yaşayan gebelerdeki demir-vitamin kullanımı ve bunu etkileyen faktörler. *J Turk Society of Obstet Gynecology* 2014; 2014: 94-7. [\[CrossRef\]](#)
14. Murray JC. Gene/environment causes of cleft lip and/or palate. *Clin Genet* 2002; 61: 248-56. [\[CrossRef\]](#)
15. Frey KA, Files JA. Preconception healthcare: what women know and believe. *Matern Child Health J* 2006; 10: 73-7. [\[CrossRef\]](#)