

Case Study in Infants with Cleft Lip and Palate Who Attended the Fundación Operación Sonrisa Consultation in The Period 2015-2019

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Abstract:

Cleft lips and palate are considered congenital craniofacial malformations originating in the early stage of embryo development, due to an incomplete fusion of the medial nasal processes and maxillary processes. A multidisciplinary team is required to carry out the ideal treatment for these childhood patients. Aims: The objective of this study was meant to describe the casuistry of patients with cleft lip and palate in infants who attended the Operation Smile Venezuela Foundation in the period from 2015 to 2019. Subjects and Method: This was a non-experimental and descriptive field research. The sample included medical records from patients with cleft lip and palate that were attended since 2015 to 2019, having in account exclusion and inclusion criteria. A questionnaire was used as an instrument through the Google Form application with 34 closed questions of dichotomous answers. The variables studied were epidemiological characteristics such as: age, gender and origin, also we analyzed types of clefts lip and palate and whether they obtained surgical resolution or not, which were collected and evaluated according to our type of research and the objectives. Results: 618 medical records were analyzed, with an average of showing a prevalence in preschool age (40%), followed by minor infants (29%) and the age with less prevalence was newborns (1%). In terms of gender there was an almost equal distribution, males (58%) and females (42%). Geographically there was a predominance in the Capital District (20%), Miranda (15%), Aragua (13%) and Monagas (12%) during the period studied. But states such as Amazonas, Barinas, Cojedes, Delta Amacuro, Lara and Nueva Esparta had the lowest percentage (0%). Of the cleft lip the most prevalent was the Complete left Unilateral, followed by the Incomplete Left Unilateral and the Complete Bilateral cleft lip. The Complete Bilateral and the Hard and Soft Posterior Palate Cleft were the most common. Conclusions: It is essential to determine the epidemiological variants, as well as to know the etiology of the cleft lip alveolus palatal and how to prevent them. Likewise, through this work, the activity that Operation Smile Venezuela Foundation carried out day by day is made known.

keywords: cleft; lip; palate; epidemiology; case mix; operation smile venezuela

Introduction

Cleft lip and palate (CLP) are the most common congenital craniofacial malformation, originating in the early stage of embryonic development due to an incomplete fusion of the medial nasal processes and maxillary processes (1), associated with genetic and environmental factors. (2).

According to the Operation Smile Foundation, a child is born with HLP every 3 minutes. Likewise, Fundación Operación Sonrisa Venezuela points out that about 1 in every 700 boys and girls are born each year with this condition.

For years, the Fundación Operación Sonrisa Venezuela has sought to provide care through free surgical procedures to children and young people born with facial malformations, especially HLP.

The authors of this research, in compliance with one of the academic requirements demanded by the Santa María University and its Faculty of Dentistry, carried out their urban internships at the aforementioned foundation. During their stay they were able to realize that they did not have an epidemiological record. In this way, it became necessary and of great interest to develop a study of infants who present Cleft Lip and

Palatine, where the activity of the Fundación Operación Sonrisa Venezuela will be observed between the years 2015-2019.

This work will be framed within a quantitative study model whose type of research is field, since the information will be collected directly in the reality where the events occur. The following objectives were established: to identify the epidemiological characteristics and types of lip-palate clefts, and to determine the patients undergoing surgical resolution of infants who attend the consultation of the Venezuela Smile Operation Foundation.

Based on the questions posed, the variables were determined and these were carried out using our instrument which we subclassified into variables, dimension, indicator, and subindicator.

Materials and method:

non-experimental and descriptive field investigation was carried out, whose population was made up of patients who attended Fundación Operación Sonrisa Venezuela from 2015 to 2019. The medical records were analyzed and a total of 618 patients were registered.

However, exclusion and inclusion criteria were established. Regarding the inclusion criteria, patients are between 0 and 18 years old, female and male, from all states of the Bolivarian Republic of Venezuela who present some HLP malformation. Regarding the exclusion criteria, patients with diagnoses of malformations of the nose, fistulas, lips and palates previously repaired, or any other diagnosis other than HLP were not taken into account. Likewise, medical records that lacked any item essential for data collection were discarded.

The instrument used was a questionnaire carried out using a Google form with 34 closed questions with dichotomous answers. An analytical review protocol was carried out for the selected topic in the databases PubMed,

Google Scholar, Bireme, Scielo and Scencedirect, without discriminating for the English, Spanish and Portuguese languages. The key words were used cleft lip and palate, epidemiology, case mix, Operation Smile Venezuela; under combination parameters. The articles obtained were tabulated and analyzed for the selection of information.

Data were collected through an exhaustive, systematic and retrospective review of the clinical records and a total of 618 were obtained. These results were presented in an Excel 2018 table, which incorporated the research variables, thus allowing us to facilitate the evaluation of the results and the creation of the relevant graphs.

Results:

A percentage of preschool age patients of 40% was obtained, thus representing the most prevalent, followed by younger infants with 29% during the 5 years. And the age with the lowest prevalence was the newborn with 1%.

Regarding gender, there was a slight predilection for the male gender with 58% and 42% female in the 5 years studied, however the difference was not significant.

The majority of patients came from the Capital District with a percentage of 20%, Miranda 15%, Aragua 13% and Monagas 12%, which were the states of Venezuela with the highest percentage of cases during the 5 years. But the states of Amazonas, Barinas, Cojedes, Delta Amacuro, Lara and Nueva Esparta presented 0%, these being the ones with the lowest percentage.

Regarding the types of lip clefts, the Left Complete Unilateral Lip Cleft was observed as the most prevalent, followed by the Left Incomplete Unilateral Lip Cleft and the Complete Bilateral Lip Cleft. (Table 1)

LIP	Healthy	57%	51%	72%	64%	3. 4%
	Microform or Congenital Scar	0%	0%	0%	1%	0%
	Left Unilateral Incomplete	13%	7%	16%	twenty-one%	7%
	Unilateral Incomplete right	5%	6%	3%	8%	6%
	Left Complete Unilateral	12%	18%	24%	23%	14%
	Unilateral Complete right	9%	12%	9%	10%	eleven%
	Bilateral Left Complete Right Incomplete	2%	3%	13%	3%	3%
	Bilateral Right Complete left Incomplete	1%	1%	1%	2%	0%
	Incomplete Bilateral	0%	0%	5%	1%	2%
	Complete Bilateral	eleven%	fifteen%	16%	fifteen%	12%
	Lower Lip	0%	0%	0%	0%	0%
Macrostomy	0%	1%	0%	0%	1%	

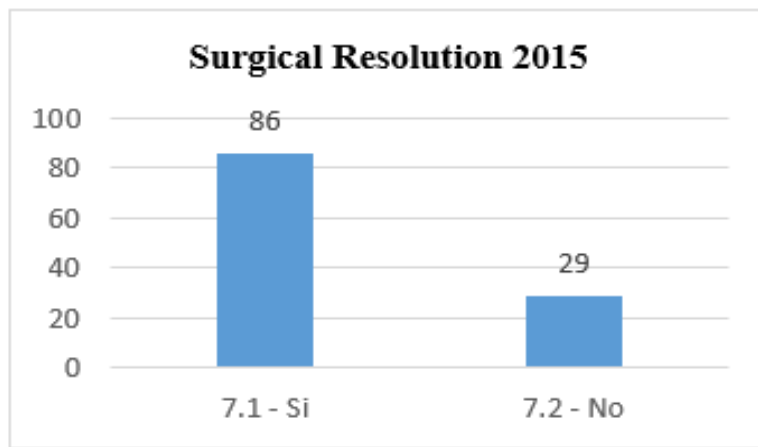
Table 1: Presentation of results obtained for types of HL.

Likewise, there was a predominance of Complete Bilateral Cleft Palate, followed by Posterior Hard and Soft Cleft Palate. (Table 2)

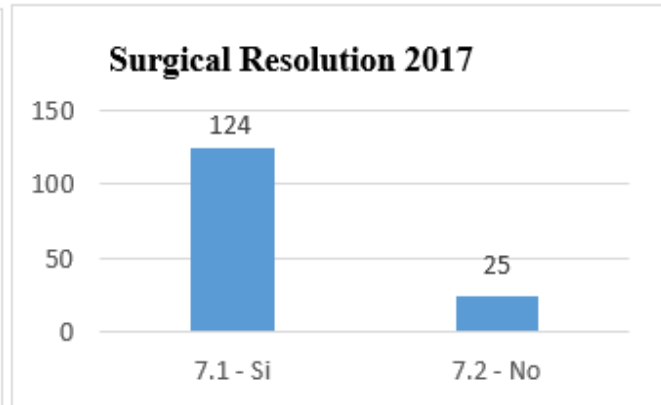
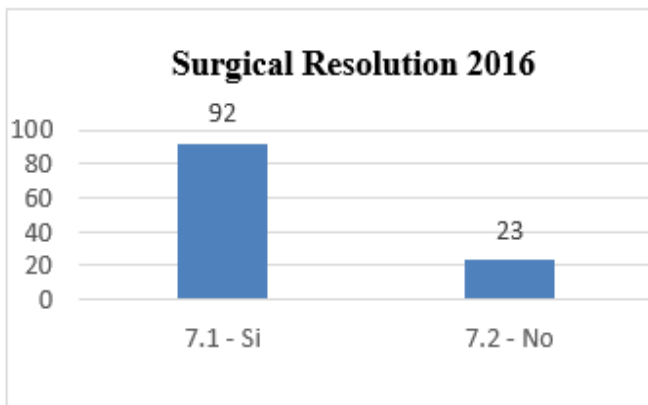
Palate	Type of Malformation	2015	2016	2017	2018	2019
	Healthy	18%	23%	25%	26%	12%
	Left Unilateral Alveolar Incomplete	0%	4%	3%	4%	8%
	left Unilateral Alveolar Complete with alveolar fissure	18%	8%	19%	14%	fifteen%
	left Complete. Der incomplete	3%	1%	6%	3%	0%
	Right Unilateral Incomplete Alveolar	0%	3%	3%	1%	3%

Right Unilateral Alveolar Complete with alveolar fissure	13%	12%	9%	16%	5%
Right. Complete. Left Incomplete	1%	1%	0%	1%	2%
Incomplete Bilateral	0%	0%	0%	1%	1%
Complete Bilateral	fifteen%	18%	twenty-one%	19%	fifteen%
Submucosal	4%	2%	1%	2%	2%
Soft	5%	6%	12%	10%	4%
Hard and Soft Posterior	18%	16%	22%	fifteen%	13%
Left Unilateral complete Hard and Soft	7%	7%	17%	14%	0%
Right. Hard and soft complete unilateral	3%	3%	4%	7%	1%
Complete hard and soft bilateral	10%	10%	7%	14%	8%

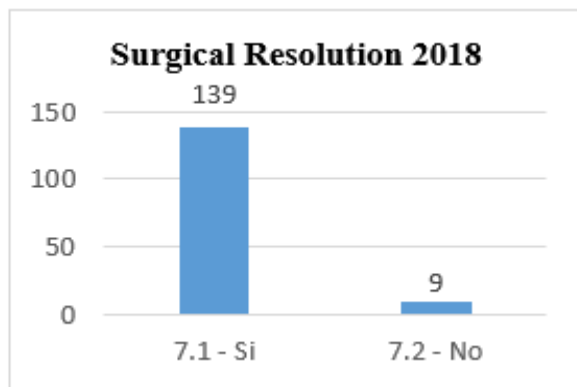
Table 2: Presentation of results obtained for types of HP.



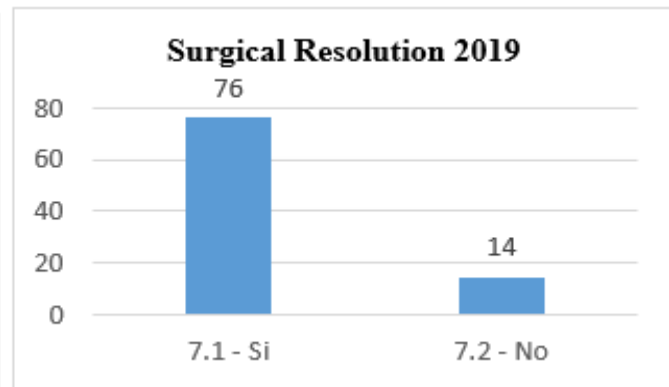
Graph 1: Surgical Resolution year 2015



Graph 2: Surgical Resolution year 2016 Graph 3. Surgical Resolution year 2017



Graph 4: Surgical Resolution year 2018



Graph 5: Surgical Resolution year 2019

Of the 618 patients, 517 did obtain surgical resolution as part of their comprehensive treatment. (Graphs 1 to 5)

Discussion:

Regarding epidemiological characteristics, the highest percentage of patients presented between 2 and 5 years of age. This resembles the data published by Jac-Okereke et al. (2), where the age distribution of patients with orofacial cleft was 34.7% of pediatric patients aged 2 years, demonstrating the importance of early care.

In relation to gender, it was observed that during the five years there is a slight prevalence in the male population, which agrees with the works published by Barrios et al., (3) and Jack Okereke et al., (2) Likewise, in the work carried out by José Mena Olade et al., (4) demonstrated that of a total of 800 clinical records, 460 (57.5%) were male patients and 340 (42.5%) were female. However, Hernández et al., (5) Solano et al., (6) and Aizpurua et al., (7) describe a predominance of the female gender in their studies. This discrepancy maintains the discussion in the literature about which gender is the most prevalent associated with this anomaly.

As described by Solano et al., (6) within the epidemiological characterization, a fundamental factor to take into account is the region of origin and the demographic and social characteristics of the individuals that make up the study population, which can have great influence on the prevalence of different types of cleft. This author describes that of the affected population in the region of influence of his care center (Zulia state, Venezuela), 39.5% came from rural areas. Which coincides with our study, where the majority of cases came from rural areas of the 24 states of Venezuela. This allows us to determine that although the majority of patients come from the capital or the central region of the country, HLP is a condition that affects patients throughout the national territory.

Olade et al. reported a predominance of the presence of unilateral cleft lip and palate on the left side, which agrees with our research.

In our study, the majority of patients did carry out surgical resolution, which is a significant and important result, since it shows that parents are really interested in the correction and well-being of their children.

Conclusion:

Finally, it is essential to determine the epidemiological variants, as well as know the etiology of HLP and how to prevent them. Likewise, through this work the activity of the Fundación

Operación Sonrisa Venezuela is made known, a center where they provide care to patients with various types of malformations, in addition to raising

awareness among parents of the importance of going to the consultation at an early age and even during pregnancy.

Thanks

Operation Smile References

Venezuela Foundation

Dr. María Daniela Viamonte Specialist in Oral and Maxillofacial Surgery; Professor of the Chair of Surgery at the Santa María University.

Dr. Silvia Cruz MSc/ Dentist. Teacher of the Department of Oral Biology; Department of Research and Biostatistics.

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