

ASSOCIATION OF GENDER DISTRIBUTION IN PATIENTS WHO UNDERWENT CLEFT SURGERIES

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ABSTRACT

INTRODUCTION: Gender based differences in medical treatment has been recognised due to conscious or unconscious reasons. The epidemiological study of a defined geographic population can serve as a means of establishing data important for the diagnosis, treatment, and counseling of patients with cleft lip and cleft palate. These conditions are sensitive topics of conversations, often affected by the stigma of physical birth deformities and cultural myths.

AIM: The aim of the present study is to analyse the association of gender distribution in patients who underwent cleft surgeries.

MATERIALS AND METHODS: The study was done in a hospital setting. The data was collected from the patient software system of Saveetha Dental College and the samples included patients who have undergone cleft surgeries. The data collected was tabulated and statistically analysed using SPSS software. The results were tabulated and graphically represented.

RESULTS: In the present study, a total of 212 patients were included among which 102 patients were male and 110 patients were female. 48% of male patients and 51% of female patients have undergone cleft surgeries.

CONCLUSION: This study constitutes that no significant difference has been observed with respect to gender in patients who have undergone cleft surgeries.

KEY WORDS: Cleft lip, cleft palate, gender, primary repair, innovative study,.

INTRODUCTION

Cleft lip and/or cleft palate are one of the most common craniofacial anomalies. It's incidence has been increasing due to decrease in post - natal mortality and post - surgical morbidity and increase of genetic and environmental epidemiological factors. (1-3) Epidemiologically, the number of children born with a cleft condition is a major challenge in less developed countries because of the high population and high birth rates in these countries. It is estimated that almost 250,000 children are born with a cleft lip and/or palate in less developed countries every year; in developed countries, 17,000 children are born with a cleft every year.(4)

Cleft surgeries were ranked as the most important missionary activity in low and middle income countries.(5) Cleft lip and cleft palate anomalies are considered as non communicable diseases. (6) The caused disability is usually considered to be ended with primary repair. Hence, corrective surgery is not considered. (6,7) The corrective surgery includes a variety of procedures like lip scar correction, lip reoperation, closure of fistula in the alveolus, closure of holes in the alveolus, vestibuloplasty, secondary rhinoplasty, closure of fistula in the palate, alar wing correction, etc.

Treatment of patients affected with cleft lip or palate is a multidisciplinary process from birth into adolescence and adulthood. Therefore, cleft lip or palate may inflict a large burden on the financial, emotional, and psychosocial status of affected individuals and their family members.(8,9) In general terms, the incidence of cleft lip or palate is estimated to be between 0.8 and 1.7 cases per 1,000 live births. (10) Most of the epidemiological studies on CL/P have been conducted in the USA, Europe or Asian countries. (10,11)

MATERIALS AND METHODS

This is a retrospective cross sectional study. The study was done under a university setting. The similar characteristics of the study is that it was done with the available data and under similar ethnicity of the population. The disadvantage of the study can be the geographic isolation. The study was approved by the Institutional Ethics Board. The samples include

patients who underwent cleft surgeries. To minimize error, the duplicate and invalid records were excluded. The internal validity included convenience sampling and the external validity of the study is questionable when considered for the entire population. The data collection was done from the dental archives of the patient management software system patented by Saveetha Dental College. If invalid or duplicate records were entered, they were excluded from the study. The data was reviewed by an external reviewer and tabulated using excel and was imported to SPSS (version 26) and the variables were defined. The independent variables included the age and gender. The dependent variable included the type of cleft surgery. Chi square test and pearson correlation was done on the data obtained using SPSS software.

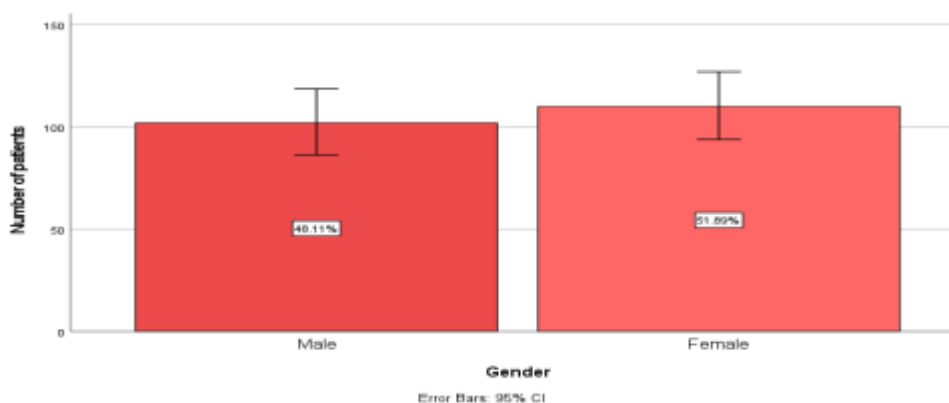
RESULTS

A total of 212 patients were included in the study among which, 102 were male patients (48%) and 110 were female patients (51%). (Graph 1) A total of 105 patients (49%) have undergone cleft lip surgery and 107 (50%) patients have undergone cleft palate surgery. (Graph 3) Majority of the patients who underwent cleft surgeries were below one years of age. (45%) (Graph 2)

Among the male patients, 57 patients (26%) have undergone cleft lip surgery and 45 patients(21%) have undergone cleft palate surgery. Among the female patients, 48 patients(22%) have undergone cleft lip surgery and 62 patients (29%) have undergone cleft palate surgery.

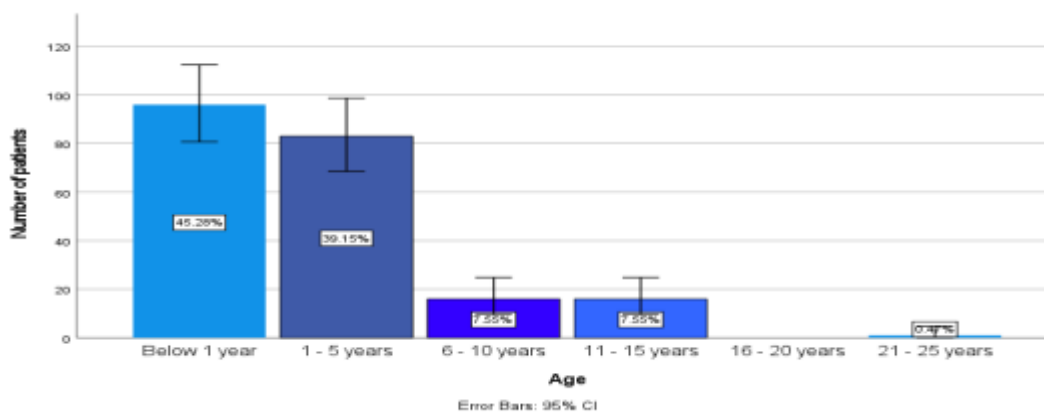
25% of male patients and 20% of female patients who have undergone cleft surgeries are below one year of age. Between 1 - 5 years of age, 14% of male patients and 25% of female patients have undergone cleft surgeries. In 6 - 10 years of age, 4% of male patients and 2% of female patients have undergone cleft surgeries. In 11 - 15 years of age, 3% of male patients and 4% of female patients have undergone cleft surgeries. In 21 - 25 years of age, 0.47% of male patients have undergone cleft surgery. No female patients have undergone surgery in this age category.

Graph 1: Gender distribution in cleft surgeries.



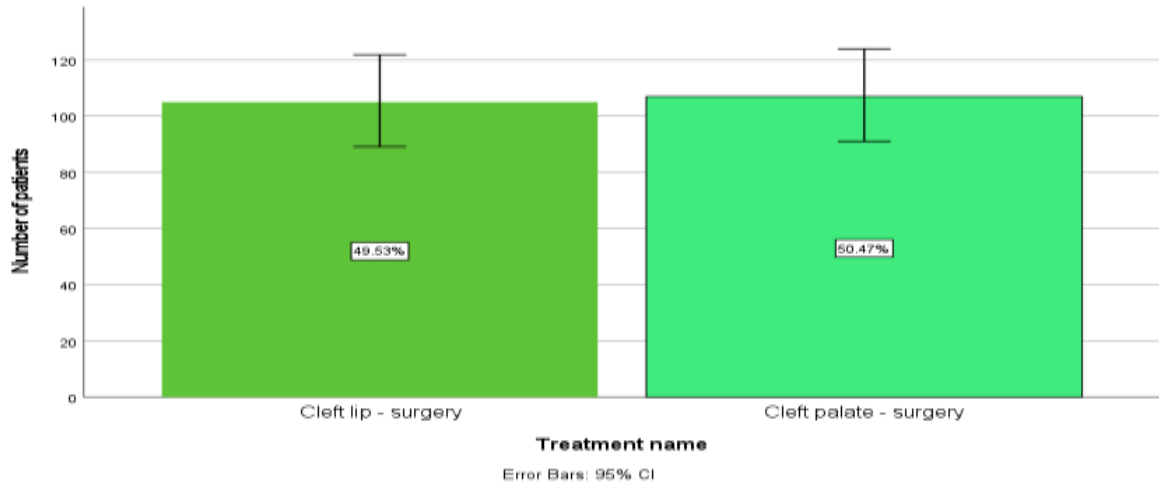
Graph 1: Bar chart representing the gender prevalence of patients who underwent cleft surgeries. X - axis represents the gender and Y - axis represents the percentage of the patients who underwent cleft surgeries. 48% of the male patients and 51% of female patients have undergone cleft surgeries which shows more female predilection

Graph 2: Age distribution in cleft surgeries.



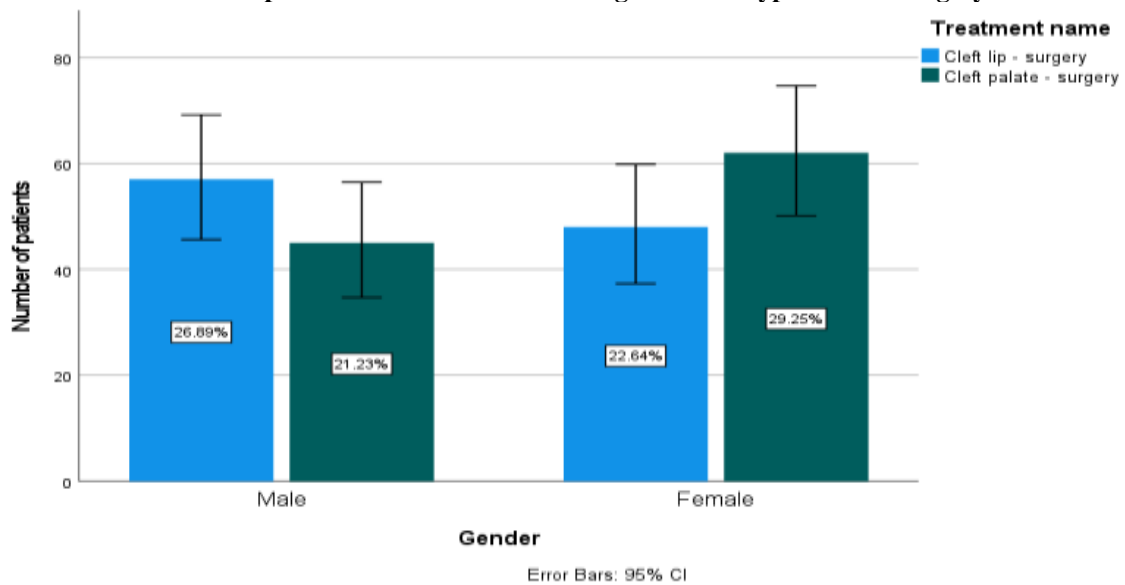
Graph 2: Bar diagram representing the age distribution of patients who underwent cleft surgeries. X - axis represents the age group and Y - axis represents the percentage of patients who underwent cleft surgeries. From the graph, it is inferred that patients with age group of less than one year were more commonly underwent cleft surgeries when compared to other groups.

Graph 3: Distribution of type of cleft surgery.



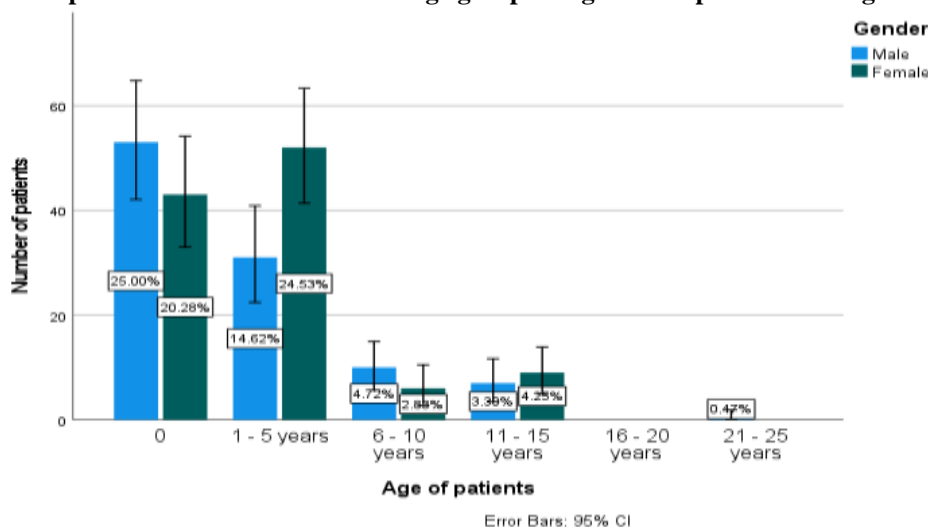
Graph 3: Bar graph representing the frequency of types of cleft surgeries. X - axis represents the type of cleft surgery and Y - axis represents the percentage. From the graph it shows that cleft palate surgeries are more commonly performed compared to cleft lip surgeries.

Graph 4 : Association between the gender and types of cleft surgery.



Graph 4: Bar graph representing the association between the gender and types of cleft surgery. X - axis represents the gender and type of cleft surgery and Y - axis represents the percentage. Blue bar represents cleft lip surgery and green bar represents cleft palate surgery. From the graph, it is inferred that cleft lip surgeries are more commonly performed among males whereas cleft palate surgeries were more commonly performed in females.

Graph 5 : Association between the age group and gender of patients undergone cleft surgeries.



Graph 5: Bar graph representing the association between the age and gender of the patients who have undergone cleft surgery. X - axis represents the age group and gender of patients and Y - axis represents the percentage of the patients. Blue bar represents male patients and green bar represents female patients. From the graph it is inferred that males were more common among less than 1 year age group and females were more common among 1-5 years age group.

DISCUSSION

Cleft repair is a challenging procedure for cleft surgeons to teach, and in research, it can be difficult to evaluate different techniques and develop new treatments, especially treatment outcome evaluations. The optimal design, time, and execution of this surgical operation are difficult to emulate in studies, thus, animal models are essential for addressing these issues. (12)

In all these surgical repairs, there is difficulty in stimulating the physiological structures of the congenital cleft along with associated developmental characteristics of the maxillofacial region. (13) The treatment of cleft lip and palate has been dependent on surgical operations, however due to variations in surgical timings and methods, the development of maxillary structures and speech may be inadequate in some cleft palate patients. Over the past four decades, a multitude of investigators have sought to develop congenital and iatrogenic models of cleft palate in an attempt to develop new treatment strategies. (14)

In the present study, there was no significant gender difference in cleft surgeries. A study by Anna Paginini also stated that, no gender differences were identified in the primary surgery of cleft lip and cleft palate. (15) A study by Hossein Mahboubi also stated that there was no much difference in patients who underwent cleft surgery. (15,16) A study by H N Yilmaz stated that males were more prone to cleft lips and females were more prone to cleft surgeries. (15–17) A study by H Kianifer also stated that clefts were found to be more common in male than female births. (8).

Our team has extensive knowledge and research experience that has translated into high quality publications(18–25)(26),(27–29).(30-37). The current study aims at estimating the incidence of dentigerous cysts among patients visiting a private dental setting and in provision of a detailed statistical report.

CONCLUSION

From the present study we can conclude that no significant difference was observed in relation to gender in patients who have undergone cleft surgeries. However these results may differ due to various factors like ethnicity, geographic location, etc

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Conflict of interest:

The author declares no conflict of interest.

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