

Research Article

Experience of Primary Cleft Lip And Palate At A Tertiary Care Hospital in Pakistan: A 4 Year Retrospective Review

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Abstract

Objectives: To retrospectively review our experience of primary cleft lip and palate surgery at a tertiary care hospital

Methods: This was a retrospective study, reviewing the records of all patients with cleft lip and palate operated in, from September 2012 to October 2016. Data analysis was done using SPSS (16.0).

Results: During this period, a total of 316 patients were seen (149 males and 167 females). 60 had isolated cleft palate, 83 had isolated cleft lip and 173 had combined cleft lip and palate. Patient age was meansd(15 days-33 years). A total of 349 procedures were performed out of which, 205 were primary repairs (118 primary lip repairs and 87 primary palate repairs).

Conclusion: Majority of the patients of cleft lip and palate presented at later ages; efforts should be made for an earlier repair.

Key Words | Cleft lip, cleft palate, primary repair.

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Introduction

Cleft deformities pose both functional and aesthetic challenges to the patient. Although cleft lip deformity poses obvious aesthetic problems, cleft palate is linked with the more functional dilemma of speech and hearing. The goals of cleft palate surgery are to improve speech; whereas that of cleft lip repair, are to improve the aesthetic looks.^{1,2,3}

Literature is evident that cleft lip and palate is the commonest presentation, whereas left sided clefts are twice as frequent as the right side. Also, female gender is associated more with the isolated palate.^{4,5} However, little information is available regarding the patterns of presentation of clefts in Pakistan. Another problem of developing countries is the late presentation of patients delaying the management and thus hampering the quality of life of the affected person.⁶

Again, there is lack of data regarding the age of presentation of clefts in our country.

Our department treats large volumes and all varieties of cleft and of all ages. Here we share our experience of this grave problem at a large tertiary care hospital in a developing country presenting the patterns of cleft, age of presentation and corrective techniques used at our center.

Methodology

The record of all patients with cleft lip and palate seen in from September 2012 to October 2016 were reviewed retrospectively. All the cases were included. Patients having incomplete data entry in files were excluded. Data collection included demographics (patient's age at presentation, gender, socioeconomic background). We also looked at the type of cleft, side of cleft. The surgical procedures done were also noted

and that if they were primary or secondary.

Data entry was done in SPSS version 16. Data was analyzed to identify the patterns of cleft. Ratios of different types of clefts and sidedness in unilateral clefts were calculated. Which cleft was more common in each gender was also identified. Further, age at presentation was also looked into to see if patients were presenting early or late.

Results:

Data of all patients were included as none of the files were found to be incomplete. During this period, a total of 316 patients were operated on ((149 males and 167 females) and a total of 349 procedures were done. 60 had isolated cleft palate (ICP), 83 had isolated cleft lip (ICL) and 173 had combined cleft lip and palate (CLP)(Table 1).

We found the ratio of isolated cleft palate (ICP) to isolated cleft lip (ICL) to cleft lip and palate (CLP) to be 2:3:6. The ratio of left to right side clefts was 2:1. In case of isolated cleft palate (ICP) male to female ratio was almost 1:2. In case of isolated cleft lip (ICL) and cleft lip and palate (CLP) male to female ratios were similar.

Age at presentation ranged from 15 days to 33 years.

Table 1: Types of Cleft (In Detail)

Cleft type	Sidedness	Male	Female	Total
Isolated cleft palate		18	42	60
Isolated cleft lip	Bilateral	6	3	9
Isolated cleft lip	Right	15	11	26
Isolated cleft lip	Left	23	25	48
Cleft lip and palate	Bilateral	30	19	49
Cleft lip and palate	Right	24	20	44
Cleft lip and palate	Left	33	47	80
Total		149	167	316

Most of the patients presented at later ages (Table 2).

A total of 349 procedures were performed, out of which 205 were primary repairs (118 primary lip repairs and 87 primary palate repairs). The most frequently used technique for lip repair was Millard or its modified form (Table 3). The most frequently deployed technique for palate repair was Two flap palatoplasty followed by Langenback (Table 4).

Almost all patients belonged to low income class backgrounds.

Discussion

It is evident from our study that combined cleft lip and palate (CLP) is more common than isolated cleft lip

Table 2: Age at Presentation

	Age at presentation			Total
	Before 3 months	4 – 6 months	After 6 months	
Primary Cheiloplasty	10	51	57	118
Primary Palatoplasty	Before 1 year	1 – 2 years	After 2 years	87
	15	28	44	

Table 3: Techniques Used in Primary Lip Repair

	Technique	No of Repairs
Cheiloplasty	Millard Type Variant	90
	Straight Line	14
	Fisher	11
	Mulliken	3
	Total	118

Table 4: Techniques Used in Primary Palate Repair

	Technique	No of repairs
Palatoplasty	Two Flap Palatoplasty and Variants	37
	Langenback Variant	34
	Furrow's Procedure (Double Opposing Z-plasty)	7
	Pushback Variant	6
	IVVP	3
	Total	87

(ICL) or palate (ICP). Overall Left to right side cleft lip ratio (with or without palate) is 2:1. However, left sided is more common in females and right sided in males. Such a pattern has been reported in other studies as well.^{4,5,7}

In developing countries, a patient with craniofacial deformities inevitably present very late. The most notable reasons are a lack of finances, unawareness of the availability or need for repair, remoteness of available services, and fear of surgery.^{6,8} Our study also showed that the majority of patients presented at later ages than recommended. However, we did not document the reasons for late presentation but postulate them to be similar to what is stated in literature.

According to our guidelines, cleft lip should be repaired by 3 months of age and cleft palate, by 9

months of age. For lip repair we use the rule of 10 i.e., at least 10 week age, 10 pound weight and 10g/dL haemoglobin.⁹ It is our experience that usually by 3 months of age the baby would have achieved this criterion. We have also seen that by 9 months of age, the baby's breathing has improved and the airway patency has also improved so palatoplasty can be done. These factors are counterbalanced by the need for normal speech at the appropriate age.

If there is combined cleft lip and palate, a 2 staged repair is warranted. Concomitant repairs potentially compromises airway and can lead to excessive blood loss.

However some studies suggest that simultaneous repairs should be done to reduce the chances of drop out especially in developing countries like Nigeria. There is sufficient evidence to suggest that the outcome is not worse if both cheiloplasty and palatoplasty are done as a single staged procedure.^{6,10,11,12}

Cleft lip is a social stigma because it is more apparent and evident from birth; though it does not have major functional adverse effects. However, cleft palate is more of a function related problem which poses difficulties later in life; predominantly velopharyngeal insufficiency that causes speech, hearing problems and upper respiratory tract infections. That's why cleft lip should be repaired early to increase social acceptance.¹

Early palate repair has positive effects on speech. Studies have suggested that late repairs have adverse effects on speech.^{13,14}

We recommend efforts to increase public awareness of the problem and how to get it addressed; it can comprise of TV advertisement, surgical expeditions to the far flung areas and holding seminars there, educating the rural doctors to play their role by reporting new cases or educating the patients about possibility of repair. Regarding the financial constraints, patients should be made aware of free of charge services that the public hospitals in Pakistan provide. Moreover, Doctors should counsel patients regarding their fear of surgery.

Lastly, our study is not without its limitations. Ours is a single center experience. Patterns of the presenting age might be different for other cleft centers or groups practicing cleft surgery by doing regular surgical camps. They may be seeing patients early after birth. Also, reasons of late presentation was not part of the initial file work. We recommend large multicenter

studies to see the patterns. Moreover, the patterns of patients treated at the cleft camps should be compared to those treated at hospitals. Further, reasons of late presentation should be identified and documented in the initial data entry so that they can be addressed in future.

Conclusion

Patterns of cleft lip and palate seen at our institute are quite similar to what is reported in literature. More patients present late at our center which is similar to what is found by researchers from other developing countries as well. Multicenter studies should be carried out to see the patterns of cleft at the provincial, national level and efforts should be made to treat these patients early by identifying and dealing with reasons of late presentation.

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