

A 21 YEARS PERSPECTIVE OF CLEFT LIP AND PALATE AND OUTCOME OF SURGICAL PROCEDURES AT JAMSHORO, PAKISTAN

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ABSTRACT

OBJECTIVES: To evaluate the presentation and commonest variety of cleft lip and palate and the outcome of surgical procedures in our set up.

SETTING: Plastic surgery ward, Liaquat University Hospital, Jamshoro, Pakistan from February 1978 to March 1999.

METHODS: This Descriptive observational study included 302 cases of cleft lip and palate. All the characteristics of patients, surgical procedures offered and the outcome were noted. Data was then collected and analysed.

RESULTS: Complete cleft lip and palate was more common in males than females. Unilateral cleft lip was more common on left side. Meanwhile, Millard's repair had superior cosmetic results than other surgical techniques.

CONCLUSION: Pushback palatoplasty has beneficial effect on the speech. W.K. pushback palatoplasty is an ideal procedure and the early palatoplasty has less speech problems than the late age.

KEY WORDS: Cleft lip and palate. Surgery. Pakistan.

INTRODUCTION

Congenital cleft lip is a relatively common malformation with an incidence of 1 per 762 live births.¹ While cleft palate has incidence of 1 per 8000, and cleft lip and palate combine to be 1 per 1000.² Problems associated with cleft lip and palate are feeding, nasal regurgitation, speech, appearance, hearing, dentition, and facial growth. It is also reported that children who have such conditions, their intelligence development is also affected due to many factors.³ Cleft lip and palate cover a wide group of patients requiring different approaches and treatment depending on the severity of problem and the structures involved. The techniques used range from simple closure to alveolar bone grafting and facial osteotomies.⁴ The lip repair is performed by Millard's procedure⁵ both in unilateral and bilateral cleft lip while palate repair is performed by Von Lengenback and Pushback procedures. Meanwhile, the proper timing for the cleft lip and palate surgery has also been an issue of controversy as the timing proposed by Michael J. Earley mentions that lip repair should be usually done within 8-12 weeks, and palate repair in 6-12 months.

In this study, an effort has been made to evaluate the presentation and commonest variety of cleft lip and palate and the outcome of different surgical procedures in our set up so that awareness is created in the masses for early treatment of the problem.

METHODS

This descriptive observational study included 302 cases which were operated at plastic surgery ward of Liaquat university of medical and health sciences Jamshoro, Pakistan during the period of February 1978 to March 1999.

As per criteria, all the patients with cleft lip and or palate who visited outpatient department (OPD) and admitted in the hospital for staged surgery were included in the study. On the first visit, information about each patient was recorded, which included name, age, sex, address, problems regarding sucking, speech, cosmetic, dentition, hearing abnormality, family history, other congenital abnormality and history of any previous surgery. The type of the cleft and associated anomalies, if present were also noted. Patients operated belonged to age group of one month to 30 years. Operative

procedures included Millard's procedure for cleft lip, Von Lengenback technique and Wardill Kliner – view, Pushback procedure, Furlow's technique and Pharyngoplasty for cleft palate. A written informed consent was taken from the patients or their parents before conducting any surgical procedure to meet the ethical considerations.

RESULTS

A total of 302 cases were operated during 21 years period for cleft lip and palate. Out of these, 202 (66.88%) were males and 100 (33.11%) females with a sex ratio of 2:1. Age distribution of the cases is shown in **Table I**. Due to lack of awareness and economical problems only 3 (0.99%) patients were brought in OPD under age of one month while majority (31.12%) of the patients came in between 2 to 12 months. Family history was positive in 25 (8.27%) cases.

Out of 302 cases, only cleft lip was present in 194 (64.23%), cleft palate in 16 (5.29%) and combined cleft lip and palate in 92 (30.46%) cases. Cleft lip only unilateral cases were 168 (86.59%) and bilateral 26 (13.41%). In unilateral cleft lip cases, there were 54 (32.14%) left sided and 114(67.85%) right sided. While bilateral cases included 46.15% incomplete, 30.76% complete and 23% both complete and incomplete. In cleft palate only cases, 68.75% were incomplete and others were complete and the site involved was right in 56.25% and left in 43.75%. In 16 only cleft palate cases, 5 (31.25%) were complete and 68.75% incomplete. As far as combined cleft lip and palate are concerned, unilateral were 53 (58.69%) and bilateral 39 (41.30%). Meanwhile, 62.29% cases of unilateral combined cleft lip and palate were males and 48.38% were females. In bilateral combined cases, males were 37.70% and females 51.61%.

Out of 194 cases of cleft lip only, Millard's repair was done in 82.98% unilateral cases and Triangular flap technique in 3.60% cases, while in bilateral cases, Millard was done in 7.73% cases and Manchester technique in 5.67% cases. Meanwhile, operative procedures for 16 cleft palate only cases included Von Lengenback palatoplasty (31.25%), W. K. View pushback palatoplasty (56.25%), Furlow's technique (6.25%) and Pharyngoplasty in 6.25% cases. For cleft lip, Millard's repair was done in 96.73% cases and lower triangular technique in 3.26% cases. Von lengenback was conducted in 1.30% cases of cleft palate, Pushback palatoplasty in 77.17% and Pharyngoplasty in 6.52% cleft palate cases. Most of the problems seen associated with cleft lip and palate were sucking, speech, dentition and hearing. In few cases, bilateral squint and blephrophimosis, small

penis and undescended testes along with polydaetyly were also noted (Refer **Chart**). Cosmetic problems were seen in 54.96% cases. Post operative complications are mentioned in the **Table II**.

Table I showing age distribution of cases

Age	No. of Cases	Percentage
Upto 1 month	03	0.99
Upto 1 year	94	31.12
01-03 years	56	18.54
04-10 years	74	24.50
11-20 years	63	20.86
21 years and above	13	04.30
Total	302	100

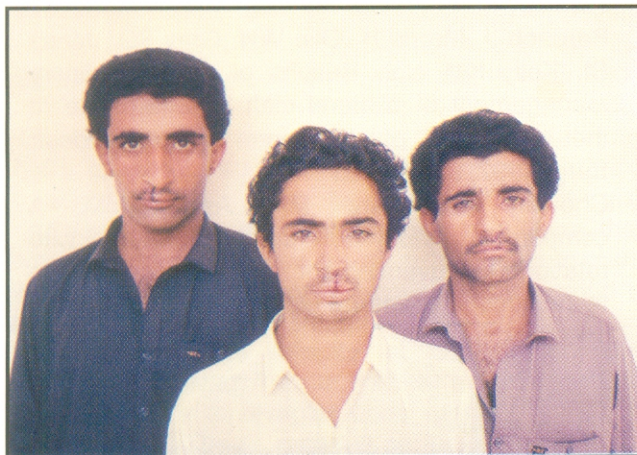
Fig. no. I and II showing pre-operative and post-operative (MILLARD) condition of a case



Table II showing post operative complications of surgical procedures (N=302)

Complication	No. of Cases	Percentage
Hemorrhage	05	1.65
Infection	04	1.32
Partial Dehiscence	15	4.96
Complete Dehiscence	03	0.99
Vermillion notchns	06	1.98
Wide scar	12	3.97
Nasal deformity	33	10.92
Fistula formation	26	8.60

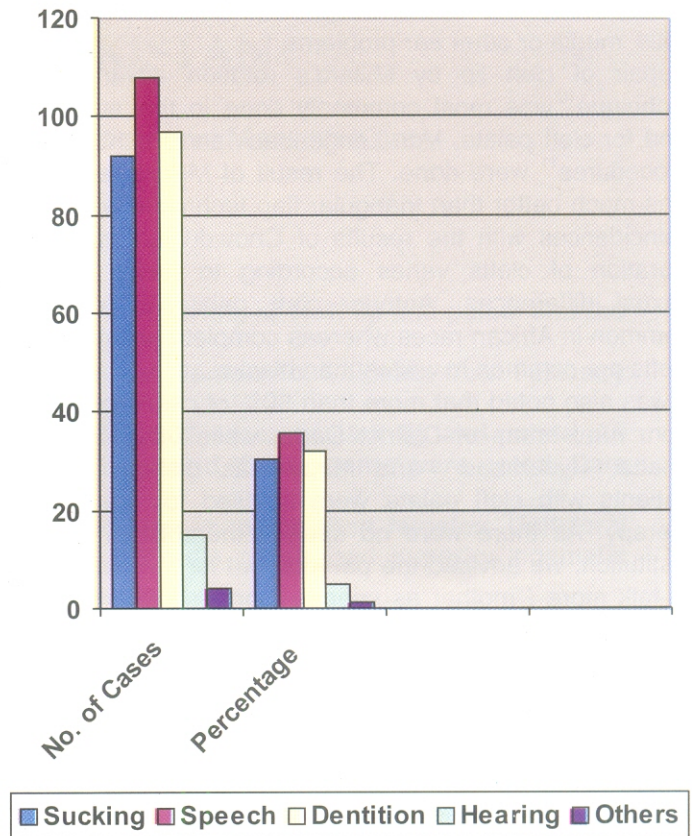
Fig. no. III and IV showing pre-operative and post-operative (MILLARD) condition of three brothers



DISCUSSION

Cleft lip and palate are the common congenital anomalies and the problems associated with these are speech, feeding, dentition, appearance, hearing, disturbance of facial bone growth, psychological trauma to child and parents. So, the multidisciplinary management for correction of deformity is necessary from birth to adult age, by the Plastic Surgeon,

Chart showing problems associated with cleft lip and palate



Orthodontist, Prosthodontist, Speech therapist, Otorhinolaryngologist and Pediatrician. Repair of the cleft lip by rotation advanced technique of Millard's is most commonly used, triangular flap operation as described by Randal P.⁶ is also used in some wide clefts. Other procedures include Le-Mesurier⁷ and Skoog⁸ methods. For cleft palate, modified Von Lengenback and pushback procedures are done. A male predominance is already described in a series of studies²⁻⁹ as in our study, male predominance in all types of clefts was seen. Late presentation in developed countries is very rare while in our country majority of the patients came late. Only 3 (0.99%) patients were seen in the age of one month during 21 years, while 94 (31.12%) patients were seen during first year of age. Patients came late because of multiple factors like illiteracy, poor socioeconomic conditions, improper transportation, inadequate health services, unawareness of surgical correction, improper guidance by medical personnel attending the born babies etc. Management of delayed cases is more difficult regarding speech and dental problems in clefts palate. Family history is more predominance

in cleft lip than in cleft palate. As respiratory tract infection is more common in cleft palate patients than in cleft lip so, every patient with cleft palate was sent to Ear Nose and Throat Surgeon to assess serous otitis media or other ear problems.

Repair of cleft lip by Millard's rotation advanced technique¹⁰ was most commonly done in this study. And for cleft palate, Von Lengenback and Pushback procedures¹¹ were done. The result of Millard repair was much better than triangular flap technique which coincidences with the results of Chowdri NA etal¹². Duration of clefts varies according to facial and sexual differences. Anterior cleft palate is more common in African races whereas complete unilateral clefts are common in whites than blacks.

It was also noted that more than 50% of cases came from rural areas of District Dadu, while other from Thatta, Hyderabad and Mirpurkhas districts. All patients with cleft palate were advised for speech therapy. As there were no speech therapist in our institution, we advised the parents that let the babies to talk more (mother as speech therapist) and also cleft lip patients should join Madrassah to learn Islamic Education.

CONCLUSION

Millard's repair is ideal for cleft lip, specially incomplete type as final scar come along philtral column and nasal sil so it remains inconspicuous. Pushback palatoplasty has superior results than Von - Langenback procedure. Speech problem was comparatively less in V K View pushback palatoplasty than Von - Langenback palatoplasty. Early palatoplasty also results in better speech than late operated cases.

RECOMMENDATIONS

1. There is a dire need to create awareness of these conditions in the masses and the medical profession specially Obstetricians and Family physicians at large, so that they can send these patients for early treatment, management and rehabilitation of the cases.
2. Plastic surgery units should start separate clinics for cleft lip and palate.

REFERENCES

1. Hixon EH. A study of incidence of cleft lip and palate in Ontario. *J Public Health*. 1951; 42: 508
2. Balgir RS. Parental age and incidence of cleft lip and palate anomalies. *Act Anthropogent*. 1984;8:231-5
3. Chen Z, Chen J, Wu J. Factors involved in intelligent development of children with cleft lip and palate [Article in Chinese] *Hua Xi Kou Qiang Yi Xue Za Zhi*. 2001;19:174-7
4. Bardach J, Morris HL. (Eds) *Multidisciplinary management of cleft lip and palate*. Toronto: WB Saunders, 1990.
5. Millard DR. *Cleft Craft, Voll*. Boston: Little Brown, 1976
6. Randal P. A triangular flap operation for primary repair of unilateral cleft of the lip. *Plast Reconstr Surg*. 1959; 23: 331
7. LeMesurier AB. A method of curing and suturing the lip in the treatment of complete unilateral clefts. *Plast Reconstr Surg*. 1949; 4: 311
8. Skoog TA. Design for the repair of unilateral cleft lips. *Am J Surg* 1958; 95: 223
9. Kim S, Kim WJ, Oh C, Kim JC. Cleft lip and Palate Incidence Among the Live Births in the Republic of Korea. *J Korean Med Sci*. 2002; 17 : 49- 52
10. Millard DR, Jr. Embryonic rationale for the primary correction of classical congenital clefts of the lip and palate. *Ann R Coll Surg Eng*. 1994; 76: 150
11. Bardach J, Morris H, Olin WH, Gray SD, Jones DI, Kelly KM etal. Results of multidisciplinary management of bilateral cleft lip and palate at the Iowa Cleft palate Centre. *Plast Reconstr Surg*. 1992; 89: 419-35
12. Chowdri NA, Darzi MA, Ashraf MM. A comparative study of surgical results with rotation - advancement and triangular flap techniques in unilateral cleft lip. *Br J Plast Surg*. 1990; 43: 551-6

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