CLEFT LIP AND PALATE IN N.W.F.P.

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SUMMARY

Cleft Lip and Cleft Palate are common congenital anomalies making about 2% of E.N.T. patients admitted to our Ward. The study includes 60 patients. The problem is common in Northern Districts of N.W.F.P. and in Yousafzai Tribe of Pathans. The age of presentation is from first week of life to 25 years of age. As a whole male children are affected more often than female. Most of the mothers, of cleft babies are younger. Facial clefts are multifactorial in origin, having definite role of heridity, consanguinity and drugs. It is relatively common in people with poor socio-economic status. The commonest presenting symptoms of cleft lip is aesthetic defect and that of cleft palate are difficulty in suckling, nasal regurgitation and hyper nasality. Combined cleft lip and palate are commoner than isolated cleft lip and palate. The incidence of associated congenital anomalies mainly cardiac is 8.3%. The association of middle ear problem is 41.5%. The various techniques of repair designed for a particular problem and the difficulties and complications encountered during treatment and the results of management are not included in this particular aspect of the study.

INTRODUCTION

Cleft Lip and palate is one of the oldest and commonest congenital anomaly noted in human generation.[1-2] Being evident on the very first day of life, in case of cleft lip, it is a problem of great concern and anxiety for the parents and a social stigma for the child throughout his life. These easily recognisable anomalies occur throughout the world. Their incidence varies among different races and nations being highest in Americans, Indians and Japanese and lowest in black Americans.[3] Efforts have been made from time to time to investigate its etiology, prevent its occurrence and improve the results of surgery and other rehabilitation procedures. Despite the rapid advances in the field of teratology, the exact cause of many congenital anomalies including cleft lip and palate is not known. About 10% of congenital anomalies are caused by genetic and chromosomal factors, 10% are the result of environmental factors and the rest are caused by complex interplay of several environmental and genetic factors.[4] Until recently it was thought that cleft lip and palate was multifactorial in origin but recent segregation analysis have suggested that autosomal dominant/co-dominant genes may cause facial clefting.[5]

We designed and conducted this study in our department to study the various aspects of the problem including incidence, tribe and regionwise distribution, sex, and age of presentation, possible aetiological factors, the type and extent of anomaly and associated congenital anomalies of other systems.

MATERIAL AND METHODS

The study was conducted in E.N.T. Department of Postgraduate Medical Institute, Lady Reading Hospital, Peshawar in a duration of 9 months from January 1989 to

TABLE – I

GEOGRAPHICAL DISTRIBUTION OF CLEFT LIP AND PALATE IN NWFP

S. No.	District	Number of Cases	Percentage
1.	Peshawar	9	15%
2.	Mardan	6	10%
3.	Charsadda	3	5%
4.	Nowshera	3	5%
5.	Swabi	3	5%
6.	Kohat	4	6.7%
7.	Bannu	2	3.3%
8.	Karak	0	0
9.	D.I. Khan	0	0
10.	Malakand	2	3.3%
11.	Dir	1	1.7%
12.	Swat	8	13.3%
13.	Mansehra	0	0
14.	Khyber Agency	3	5%
15.	Kurram Agency	4	6.7%
16.	Waziristan Agency	2	3.3%
17.	Afghan Refugees	6	10%
	TOTAL	60	100%

September 1989. The study include 60 patients with Cleft Lip and Palate. After recording particulars of the patients like age, sex, number in family, race, address, a detailed history was taken to know about visible aesthetic defect, suckling problem, regurgitation, aspiration, hyper nasality and articulation defect, depending on the age of patient and degree of anomaly. Deafness, otorrhea and complaints related to other systems were enquired. A detailed family history and obstetrical history was asked, particularly exposure to radiation, consumptions of alcohol, drugs, and viral infection in pregnancy. History of consanguinity, dietary habits, smoking and socio economic status was asked. A detailed clinical examination was done. In the local examinations it was noted whether the cleft involved only the lip, lip and alveolus, the palate only or extending from the lip to the soft palate. It was noted whether the cleft was unilateral, bilateral, complete or incomplete; width of the cleft, the degree of hypoplasia and protrusion of prolabium was also recorded.

In case of cleft palate it was noted whether the cleft was submucous or overt, complete or incomplete, unilateral or bilateral. Associated feature in the form of hypernasality, nasal escape of air, compensatory speech defects like pharyngeal friction, nasal grimices, glottal stops and tongue positioning were also observed. Rest of

TABLE – II

RACE-WISE DISTRIBUTION OF CLEFT LIP AND PALATE

S. No.	District	Number of Cases	Percentage
1.	Yousafzai	15	25%
2.	Afridi	3	5%
3.	Khattak	2	3.3%
4.	Tovi	4	6.7%
5.	Chitral	3	5%
6.	Ahmad Zai	3	5%
7.	Hindki	1	1.7%
8.	Jadoon	1	1.7%
9.	Shinwari	2	3.3%
10.	Bangash	2	3.3%
11.	Awan	1	1.7%
12.	Qureshi	1	1.7%
13.	Ma'asud	1	1.7%
14.	Marwat	1	1.7%
15.	Mohmand	3	5%
16.	Afghan Refugees	6	10%
17.	Gujar	1	1.7%
18.	Khalil	1	1.7%
19.	Bitani	1	1.7%
20.	Others	8	13.3%
	TOTAL	60	100%

TABLE – III

AGE OF PRESENTATION

AGE GROUPS IN YEARS	NO. OF CASES AND SEX		
	TOTAL (%)	MALE (%)	FEMALE (%)
BELOW 1	19(31.7)	11(18.3)	8(13.3)
2 – 5	24(4)	16(26.7)	8(13.3)
6 – 10	7(11.7)	3(5)	4(6.7)
11 – 20	8(13.3)	4(6.7)	4(6.7)
ABOVE 20	2(3.3)	0	2(3.3)
TOTAL	60(100)	34(56.7)	26(43.3

E.N.T. examination and systemic examination particularly musculo-skeletal and CVS were carried out to exclude other congenital anomalies and syndromes. The patients were grouped according to the "University of IOWA classification". Special investigation like echo-cardiography beside base line, routine investigations was done only in those patients where cardiac anomalies were suspected. All the relevant information were duely recorded on a proforma.

RESULTS

Total admissions in E.N.T. Unit of Postgraduate Medical Institute, Lady Reading Hospital, Peshawar from January 1989 to September 1989 were 3105. Total number of patients with cleft lip and palate admitted during this period were 60 including 34 male and 26 female, making 1.93% of ENT admissions. The study shows that maximum number of cases come from Peshawar district followed by Mardan and Swat districts (Table-I).

The study reveals that maximum number of patients came from Yousafzai Tribe of Pathan (25%) followed by Afghan Refugees (10%) most of whome are also Yousafzai (Table-II).

Most of the patients (71.77%), included in the study, were below the age of 5 years and only 3.3% were above the age of 20 years (Table-III).

Sex ratio of our study reveals that male patients predominated making 57% (34) of total (Table-III).

Sixty percent (36/60) of mothers, of anomalous children were younger and in majority of cases (66.7%), 3rd and 4th pregnancies were affected (Table-IV).

The presenting feature of cleft lip was evidently aesthetic defect but the most common presenting feature in isolated cleft

TABLE –IV

NO. OF THE SIBLINGS IN THE FAMILY EFFECTED BY CLEFT ANOMALY

NO. IN THE FAMILY	IST	2ND	3RD	4-10TH	10TH ONWARD
NO. OF PATIENTS	10	8	18	22	2
% AGE	16.7%	13.3%	30%	36.^%	3.3%

TABLE – V

FAMILY HISTORY, CONSANGUINITY AND EXPOSURE TO ENVIRONMENTAL HAZARDS

FACTOR	TOTAL NO.	+VE CASES	% AGE	
FAMILY HISTORY	60	16(SIBLING-7	26.7%	(11.7%)
		OTHERS -9)		15%
CONSANGUINITY	60	22(14 1ST COUSIN)	36.7%	(23.3%)
ENVIRONMENTAL	60	9		15%

palate was nasal regurgitation of fluids in infants and very young children and hypernasality in older children and grown up patients.

In this study 27% had strong family history of clefting where 11.7% had other sibling affected in the same family and one family had 4 effected members. Consanguinity of parents was positive in 36.7% cases. Other risk factors like drugs, radiation was noted in 15% cases; five mothers had clear history of contraceptive injections at the start of affected gestations. Two mothers had history of antiepiliptic and psychotrophic drugs (Table-V).

Most of the patients (80%) were belonging to poor families usually farmers, labourers and lower grade government servants.

The distribution of the type and degree of clefting using modified "University of LOWA Classification" was as shown in Table-VII The overall incidence of associated congenital anomalies mainly cardiac was 8.3% (Table-VI).

The prevalence of middle ear problems associated with cleft palate was 41.5%.

DISCUSSION

Though literature is rich in techniques designed for repair of cleft lip and palate, little is known about the aetiology, pathogenesis and prevention of this common congenital anomaly. Our study is only hospital based; yet it gives us valuable information about the possible risk factors and prevalence of the disease as we received patients from all over the Province. The geographical distribution of disease shows that it is most common in Northern Districts of NWFP which could be due to high educational awareness and better health facilities in this area. The Afghan refugees also make high percentage probably due to high consanguinity, and greater exposure to environmental hazards.

Racial distribution reveals high prevalence in Yousafzai Tribe just like certain major races of the world.[3,5]

Majority of the patients presented at the age between 2-5 years reflecting ignorance on the part of parents. Majority of our patients were male which is consistent with studies made elsewhere.[3] Sixty percent of the mothers of cleft babies were younger indicating major role of heridity in aetiology of cleft lip and palate. This is in contrast with other congenital anomalies which are common with increasing age of mother.[7] Baired and Sadovnick also observed that the incidence of oral cleft malformation does not increase with increasing maternal age.[8]

We observed that heridity had major role in facial clefting as 27% had strong

TABLE – VI

DISTRIBUTION OF THE TYPES AND DEGREES OF CLEFTS AND ASSOCIATED CONGENITAL MOMELIS

TYPE	NO. OF CASES	%AGE	ASSOCIATED CONGENITAL ANOMALES
CLEFT LIP	11 (Rt. 3 (Lt. 5 (Bil. 2 (Median 1	18.3% (Rt. 5% (Lt. 8.3% (Bil. 3.3% (Med 1.7%	1-ASD IN ONE CASE
CLEFT PALATE	15	25%	1-VSD 1-VSD +, Lt. ear deformity+congenital Lt. facial plasy
CLEFT LIP AND PALATE	25 (Rt. 3 (Lt. 11 (Bil. 11	41.7% (Rt. 5% (Lt. 18.3% (Bil. 18.3%	1-Left ear congenital anomaly
ALVEOLAR CLEFTS WITHOUT CLEFT PALATE	5	8.3%	0
SUBAUCOUS	2	3.3%	One case having macroglossia and mental retardation
OTHERS	2	3.3%	0

family history and in 11.7% cases other siblings in the same family were affected. Consanguinity of parents was positive in 36.7% cases where 23.3% had first cousin marriages. These findings support other studies which claim that cleft lip and palate has genitic basis.[9] On the other hand the clear history of the use of antiepiliphic drugs and contraceptive injections at the start of affected gestations strongly support the theory of multifactorial origin.[1,9] Christensen and Anderson, also claim that genetics has major role but environmental factors are also contributory.[2] This study showed that combined cleft lip and palate was commonest presentation than isolated cleft lip and palate, an observation also made by Owins[10] et al. The incidence of associated congenital anomalies was 8.3% which is consistent with that quoted by Charrow.[1]. The association of middle ear problems including secretory otitis media was 41.5% which is well consistent with observation made by Durr and Shapiro,[11] but in sharp contrast with studies by other.[12-14]

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