A STUDY OF CRANIOFACIAL CONGENITAL ANOMALIES IN THE MALWA REGION (MADHYA PRADESH)

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ABSTRACT

Development of foetus is a complex chain of events, millions of factors affect it. The rapid decline in the infant mortality & morbidity in the developed countries has focused the attention of pediatricians on the problems of congenital malformations. It is impossible to know all the factors at this juncture. But so far we have come to know some factors responsible for these congenital malformations.

A study was done to detect various craniofacial congenital anomalies in Malwa region (M.P.) with the aim to know various etiological factors and to emphasize importance of early treatment to prevent disfigurement and functional defects; 120 patients with craniofacial congenital anomalies attending government and private hospitals of the Indore city during the period of 01/06/2009 to 31/12/2010 were taken for the study.

These patients were examined for different craniofacial congenital anomalies. A detailed history and examination was carried out to evaluate relationship of sex, religion, socioeconomic status, environmental factors, maternal age, parity, occupation of parents with various craniofacial anomalies.

We detected various craniofacial congenital anomalies ranging from cleft lip and palate, ear deformities, macrostoma, nose deformities, ptosis, facial nerve paralysis and vascular malformations. Most common anomaly was cleft lip and palate followed by haemangioma, hairy naevus, ear deformities and ptosis.

These anomalies were significantly high in children belonging to low socioeconomic group. Exposure of pregnant mothers to agricultural chemicals and smoking were other significant factors. This study also shows that incidence of cleft lip and palate was relatively high in children who were born to mothers having age less than 20 years.

KEYWORDS

Craniofacial, Congenital, Anomalies, Macrostomata, Haemangioma, Naevus, Torticollis, Hypoplasia, Ptosis, Malformation, Antenatal.

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INTRODUCTION

Development of fetus is a complex chain of events, millions of factors affect it. The incidence of congenital defects is 1 per 50 births, so the problem is not small and needs attention. (Ref. European Surveillance of congenital anomaly 2010) Measures should be taken to prevent and correct them. Studies carried out at different places have reported several factors affecting the incidence, viz. race, parity, maternal age, genetic pattern, nutritional status and environmental factors. Early diagnosis might help to correct some serious congenital defects at an early stage and to minimize the morbidity. It might also help to reduce the anxiety of parents, especially if the defect is a minor one. Keeping these factors in mind we have done a study.

AIMS AND OBJECTIVES

1. To detect various craniofacial congenital anomalies in Malwa region.
2. To evaluate relationship of sex, religion, socioeconomic status, environmental factors, maternal age, parity, occupation of parents to various craniofacial congenital anomalies.
3. To find out any other etiological factor.
4. To emphasize importance of early treatment to prevent disfigurement and functional defect.

MATERIALS AND METHOD

One hundred and twenty patients with craniofacial congenital anomalies attending government and private hospitals of the Indore city from 01/06/2009 to 31/12/2010 were taken for the study. A detailed history and examination was carried out to detect different craniofacial congenital anomalies. They were classified as per part of face involved and tabulated.

OBSERVATIONS

	Low socio-economic group	Middle socio-economic group	Total
Urban	18	30	48
Rural	66	06	72
Total	**84**	**36**	**120**

Table 1: Distribution of Study Population

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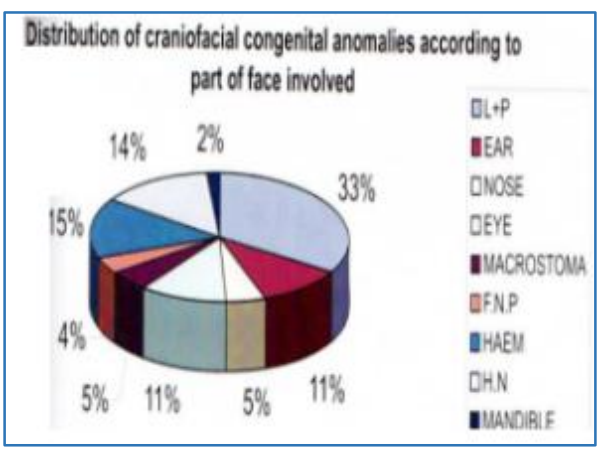
Distribution of cases of craniofacial congenital anomalies according to part of face involved

Part of face involved	Number of cases	Percentage
Lip and palate	40	33.33
Ear deformity	13	10.83
Nose deformity	06	5
Eye (Ptosis)	13	10.83
Macrostoma	06	5
Facial Nerve Paralysis	05	4.16
Haemangioma	18	15
Hairy Naevus	17	14.16
Mandible	02	1.66
Total	**120**	**100**

Table 2



CLEFT LIP AND CLEFT PALATE

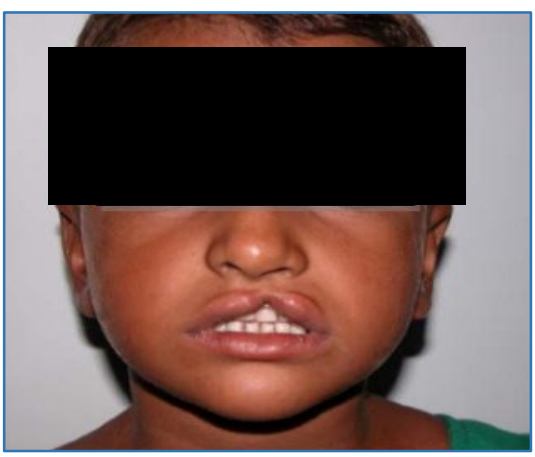


Fig. 2: Partial Cleft Lip

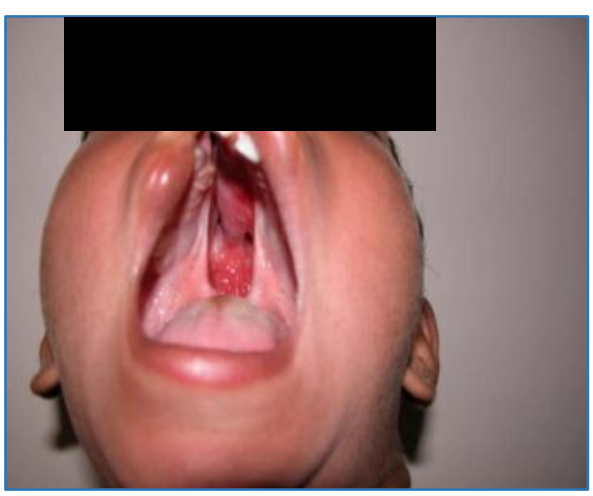


Fig. 1: Deep extended Cleft Lip and Palate

Fig. 3: Unilateral Cleft Lip extended deep

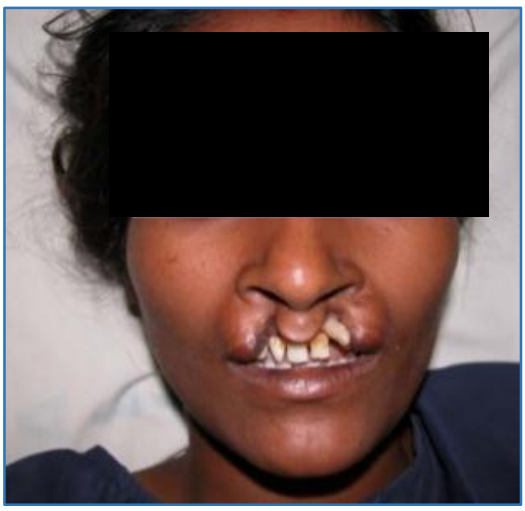


Fig. 4: Midline Cleft Lip–extended deep

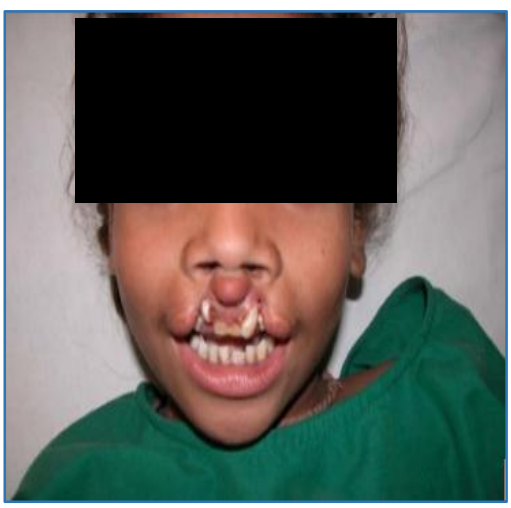


Fig. 5: Midline Cleft Lip

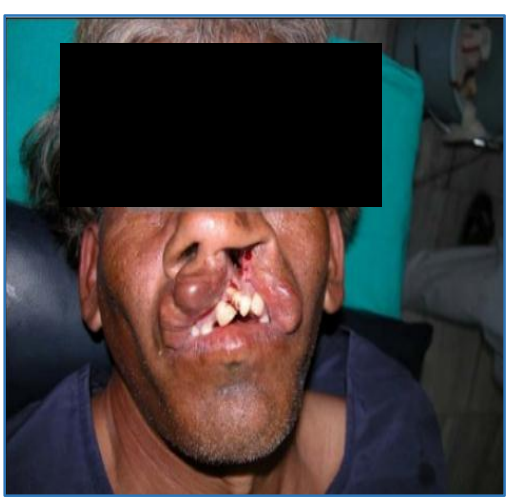


Fig. 6: Cleft Lip and Cleft Palate-unilateral deeply extended

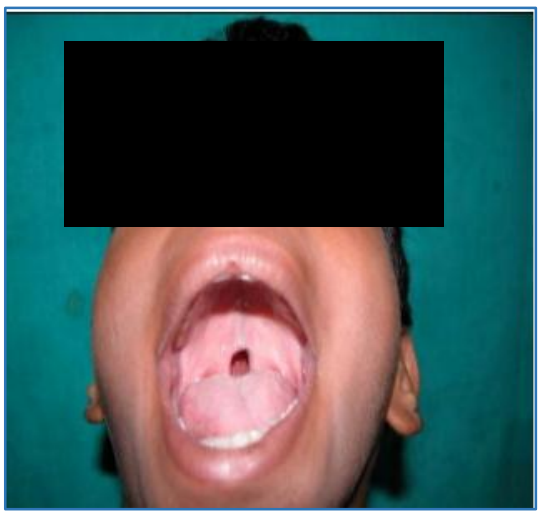


Fig. 7: A hole seen in posterior part of palate

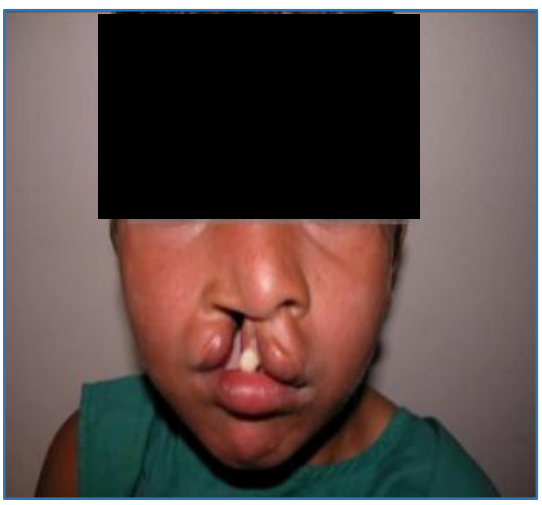


Fig. 8: Right sided Cleft Lip and Palate

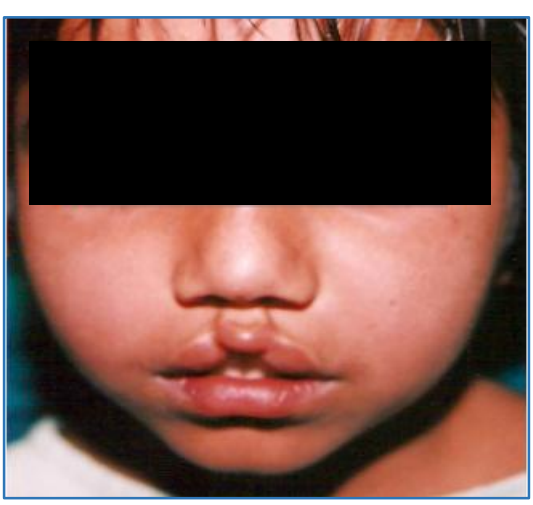


Fig. 9: A Fused type of Cleft Lip

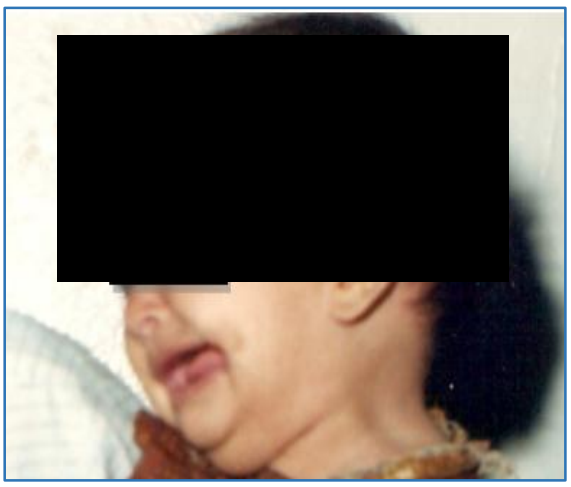


Fig. 10: Macrostoma (Lateral cleft)

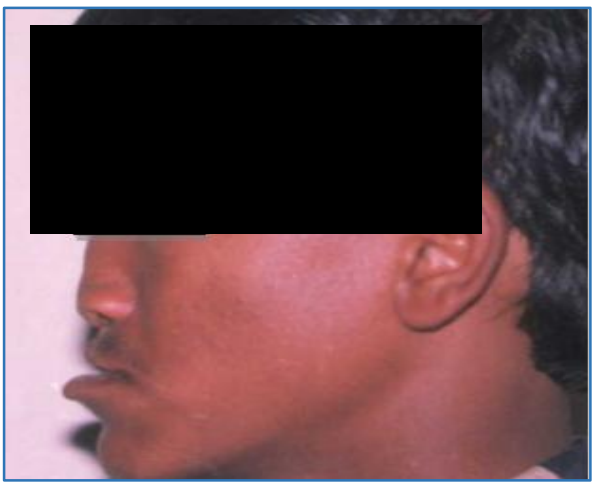


Fig. 13: Macrostomata flattening of nose and protrusion of lower lip (Lateral view)

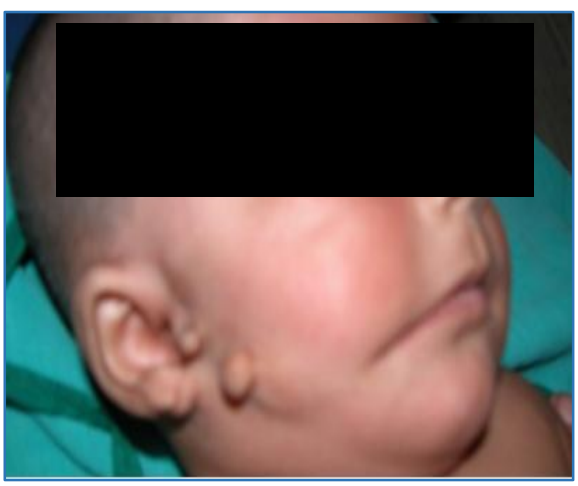


Fig. 11: Macrostoma (Lateral cleft)

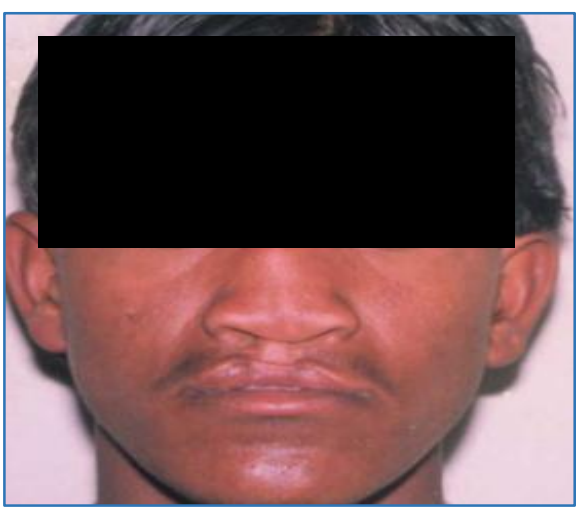


Fig. 14: Front view of Fig. 13 showing partial cleft

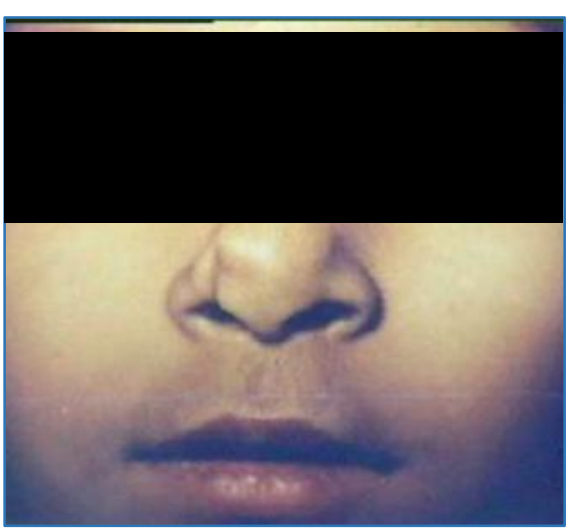
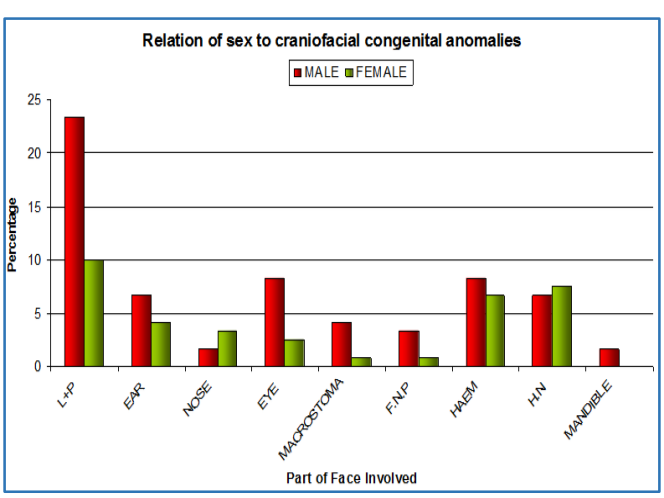
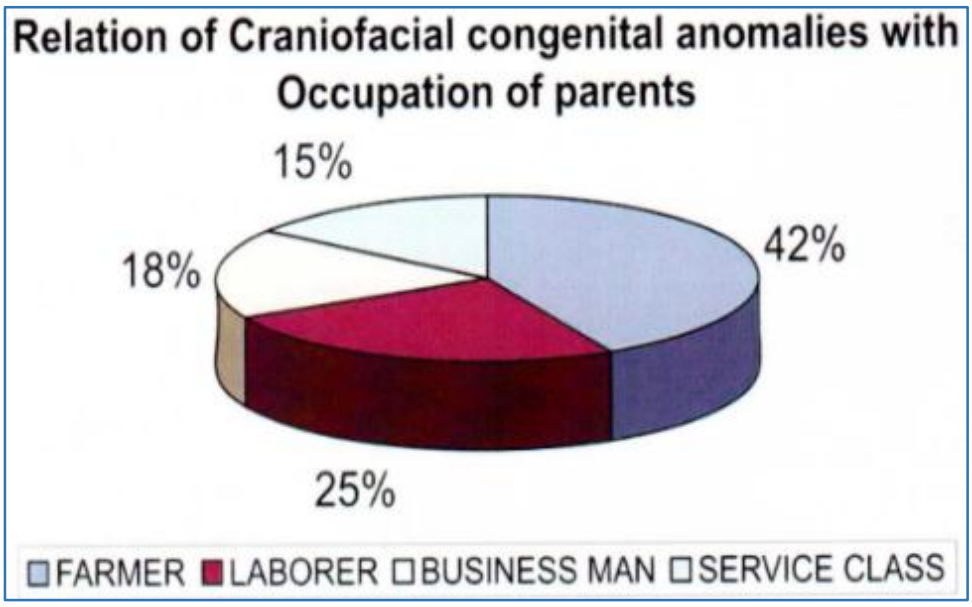


Fig. 12: Macrostomata involving right side of nose





Relation of Craniofacial congenital anomalies with maternal age

Part of face involved	Maternal age					
	<20		>20		total	
	No.	%	No.	%	No.	%
LIP + PALATE	22	18.33	18	15	40	33.33
EAR	04	3.33	09	7.5	13	10.83
NOSE	03	2.5	03	2.5	06	5.0
EYE(Ptosis)	05	4.16	08	6.66	13	10.83
MACROSTOMA	02	1.66	04	3.33	06	5
FACIAL NERVE	02	1.66	03	2.5	05	4.16
HAEMANGIOMA	10	8.33	08	6.66	18	15
HAIRY NAEVUS	06	5	11	9.16	17	14.16
MANDIBLE	01	0.83	01	0.83	02	1.66
TOTAL	55	45.83	65	54.16	120	100

Table 3

Relation of Craniofacial congenital anomalies with maternal parity

Part of face involved	parity					
	Primi		Multi (> 1)		Total	
	No.	%	No.	%	No.	%
LIP + PALATE	05	4.16	35	29.16	40	33.33
EAR	05	4.16	08	6.66	13	10.83
NOSE	02	1.66	04	3.33	06	5.0
EYE(Ptosis)	02	1.66	11	9.16	13	10.83
MACROSTOMA	01	0.83	05	4.16	06	5
FACIAL NERVE	01	0.83	04	3.33	05	4.16
HAEMANGIOMA	10	8.33	08	6.66	18	15
HAIRY NAEVUS	06	5	11	9.16	17	14.16
MANDIBLE	01	0.83	01	0.83	02	1.66
TOTAL	33	27.5	87	72.5	120	100

Table 4

CONCLUSION

Most common anomaly was cleft lip and palate followed by haemangioma, hairy nevus, ear deformities and ptosis.

RESULTS

1. These anomalies were significantly high in children belonging to low socioeconomic group.
2. Exposure of pregnant mothers to agricultural chemicals and smoking were other significant factors.
3. This study also shows that incidence of cleft lip and palate was relatively high in children who were born to mothers having age less than 20 years.
4. This study throws light on certain definite preventive approaches to the problems of craniofacial congenital anomalies.(1)
5. The importance of proper antenatal care with special attention to avoid exposure to certain agricultural chemicals, smoke of tobacco (Either active or passive smoking) should be taken into consideration in awareness programs.(2)
6. Child birth should be avoided in too early (Age <20) or too late (After 40 years) an age.(3)
7. National programs for maternal and child health care should also focus on reducing the incidences of craniofacial congenital anomalies.
8. There is a need to establish centers capable of counseling and providing antenatal diagnosis of anomalies at a peripheral level.(2)

Fig. 15: Cleft Lip

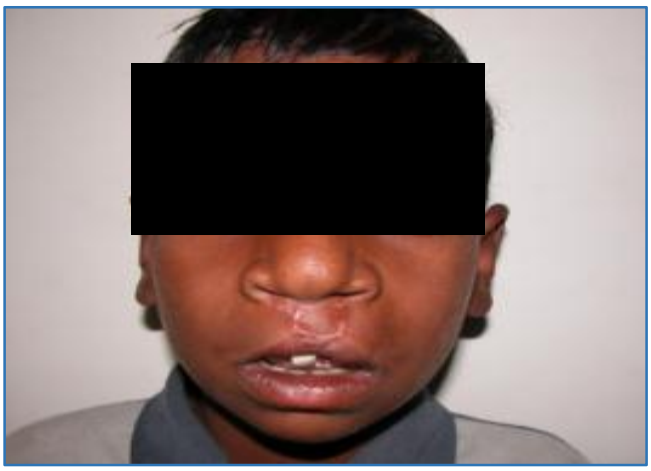


Fig. 16: Corrected After Surgery

SUGGESTIONS

We want to emphasize upon the fact that most of the facial congenital anomalies are treatable by surgical correction and cosmetically and functionally good results can be achieved.

By spreading awareness of this fact, psychological trauma of parents can be reduced to a great extent and also the financial burden of the family and the society at large.

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3. Slavkin HC. The surgeon general's report and special-needs patients: a framework for action for children and their caregivers. Spec Care Dentist 2001;21:88–94.