



Patterns and ENT Manifestations of Cleft Lip and Palate in Sudanese Children in Khartoum State

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Abstract

Background: Craniofacial anomalies, and in particular cleft lip and palate, are major human birth defects with a worldwide frequency. Based on World Health Organization report, about 3 million fetuses and infants are born each year with major malformations. Several large population based studies place the incidence of major malformations at about 2-3% of all live births [1]. Early detection and proper management of these conditions will improve the outcome.

Objectives: To study patterns and Clinical Presentations of Cleft Lip and cleft Palate in Sudanese children in Khartoum state.

Patients and methods: This is a prospective cross-sectional; hospital-based study for patients who presented with Cleft lip And Palate in Khartoum ENT hospital and Maxillofacial Department at Dentistry Hospital Khartoum during the period from December 2017 to September 2018. The data was collected through Well-structured questionnaire and analysed using SPSS program version 22.

Results: Seventy-one patients were included in this study. Patients age ranged from 2 months to 15 years, (mean age 66 month \pm STD 59 months). The most affected age group was group (0 - 5 years) Male to female ratio 1.15:1.00. Most of the patients came from Rural communities (59.2%). The commonest deformity encountered was cleft palate deformity with (47.9%) followed by Cleft lip deformity (29.6%), Cleft lip and palate deformity (19.7%) and submucous cleft palate deformity (2.8%). The commonest presentation was feeding difficulties (73.2%) followed by speech disorders (47.9%), decreased hearing (8.5%) and recurrent attacks of otitis media (7%). The presentation of Feeding difficulty was the most common associated symptom with the cleft Palate and cleft lip deformity, it was distributed among patients as follow: Cleft lip only 71.4%, Cleft palate only 70.5%, Cleft lip and palate 92.8 %. The Hearing loss presented in all patients with submucous cleft variety (100%).

Conclusion: Cleft lip and cleft palate are relatively rare conditions among population. Cleft palate is the commonest deformity among Sudanese children with male dominance and it is more common in rural communities. Feeding difficulty is the commonest presentation among affected patients.

Recommendations: Raise the awareness of the community about antenatal care among pregnant women to take supplements which guard against foetal deformities. Provide good centres for management and rehabilitation of such patients.

Keywords: ENT Manifestations; Cleft Lip; Sudanese; Children

Introduction

The World Health Organization implies the term congenital anomaly to include any morphological, functional, biochemical or molecular defects that may develop in the embryo and fetus from conception until birth, present at birth, whether detected at that

time or not. Based on World Health Organization report, about 3 million fetuses and infants are born each year with major malformations [1]. Murray JC, stated that craniofacial anomalies, and in particular cleft lip and palate, are major human birth defects with a worldwide frequency of 1 in 700 and substantial clinical impact. Specific causes have now been identified for some forms of cleft

lip and palate, and we are at the beginning of a time in which the common non-syndromic forms may also have specific aetiologies identified. Mouse models' have an especially important role in disclosing cleft etiologies and providing models for environmental cotriggerers or interventions. An overview of the gene-environment contributions to nonsyndromic forms of clefting and their implications for developmental biology and clinical counseling is presented [1]. Leslie EJ., *et al.* that complications of clefting in early life are particularly devastating in developing countries where access to medical care may be limited [3-27].

Materials and Methods

This is a prospective, Cross-sectional hospital-based study conducted at Khartoum State Hospitals during the period from December 2017 to September 2018, 71 patients were included. All patients who are presented with Cleft lip, Cleft Palate and Cleft Lip and Palate in Khartoum ENT hospital and Maxillofacial Department of Khartoum Dentistry Hospital whose age below 16 yrs and accepted to participate in the study.

Data collection and management

The data is collected using questionnaire. Statistical analysis was performed via SPSS software version 22. Chi-square test was used (x2) when appropriate. A P value of < 0.05 was considered statistically significant.

Ethical clearance

I explained verbally to the patients the aim of the study, data collection, and the need of investigations and regular follow up. All patients have written consent, and the privacy of patients represents top priority to us. The hospital ethical committee approved the study.

Result

This is prospective, hospital based, cross-sectional study, that was done in Sudanese patients with cleft lip and palate deformities, in Khartoum ENT hospital and Khartoum Dentistry hospital (in Maxillofacial department) in the period from June 2017 to March 2018. In this study seventy-one patients were included. Patients age ranged from to 2 months to 15 years, (mean age 66 month ± STD 59 months). The most affected age group was group (0 - 5 years) with 42 patients (59.2%) followed by age group from (11 - 15years) with17 patients (23.9%) and from (6 - 10years) with 12 patients (16.9%) (Figure 1). The number of male patients was 38(53.5%) and females were33 (46.5%). Male to female ratio 1.15:1.00. Regarding residence, it was found that twenty-nine patients (40.8 %) were from urban area and forty-two were from rural areas (59.2 %) (Figure 2). The commonest deformity encountered was cleft palate only with 34 patients (47.9%) followed by Cleft lip only 21 patients (29.6%), Cleft lip and palate 14 patients (19.7%) and submucous cleft palate 2 patients (2.8 %) (Figure 3).The commonest presentations were feeding difficulties in 52 patients (73.2%) followed by speech disorders in 34 patients (47.9%) (Table 1), decreased hearing in 6 patients (8.5%) and recurrent attacks of otitis media in 5 patients (7%). Regarding the cleft palate only, there was 34 patients: 19 patients had complete cleft (26.8%) whereas 15 patients had incomplete cleft (21.1%). In our study patients of Cleft lip and palate were divided into Bilateral and Unilateral with a total number of 14 patients, Bilateral were 4 patients (1 patient was of complete variety and 3 patients were of incomplete variety) and Unilateral 10 patients (3 patient were of complete variety and 7 patients were of incomplete variety). All patients with submucous cleft palate have had recurrent OM (100%), (Figure 4) this finding was found in small percentage in Cleft lip and palate (7.6%) Cleft palate only (5.8%) but no patients with Cleft lip only had recurrent OM (0%).

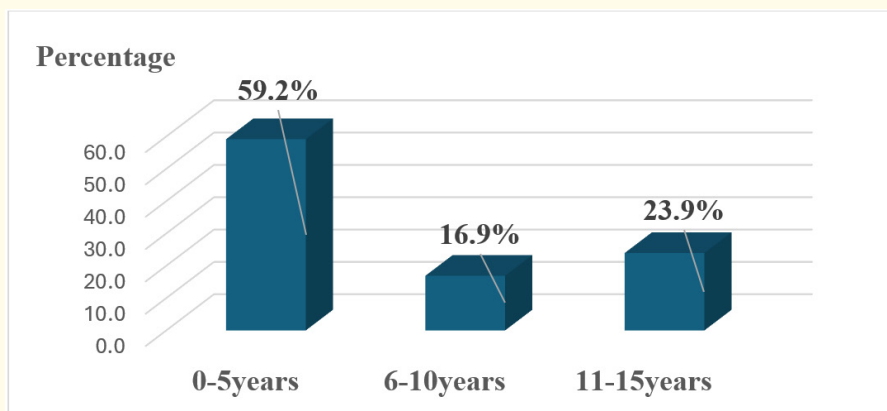


Figure 1: Distribution of age among patients in the study of Patterns and ENT manifestations of Cleft lip and Palate in Sudanese Children.

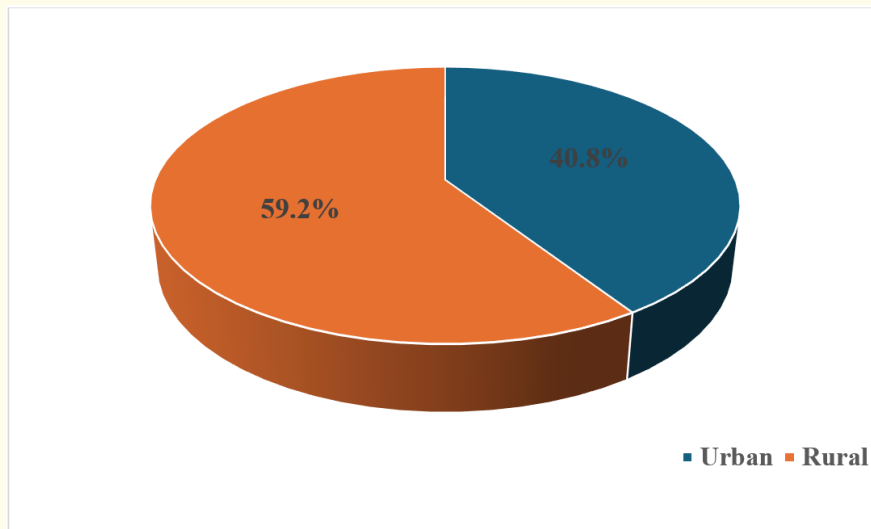


Figure 2: Distribution of residence among patients in the study of Patterns and ENT manifestations of Cleft lip and Palate in Sudanese Children.

Deformity	Feeding		Total
	Present	NOT present	
CL	15	6	21
CP	24	10	34
CL/P	13	1	14
Submucous cleft palate	0	2	2
Total	52	19	71

Table 1: The correlation between Deformity and feeding problems in the study of Patterns and ENT manifestations of Cleft lip and Palate in Sudanese Children.

P value 0.03.

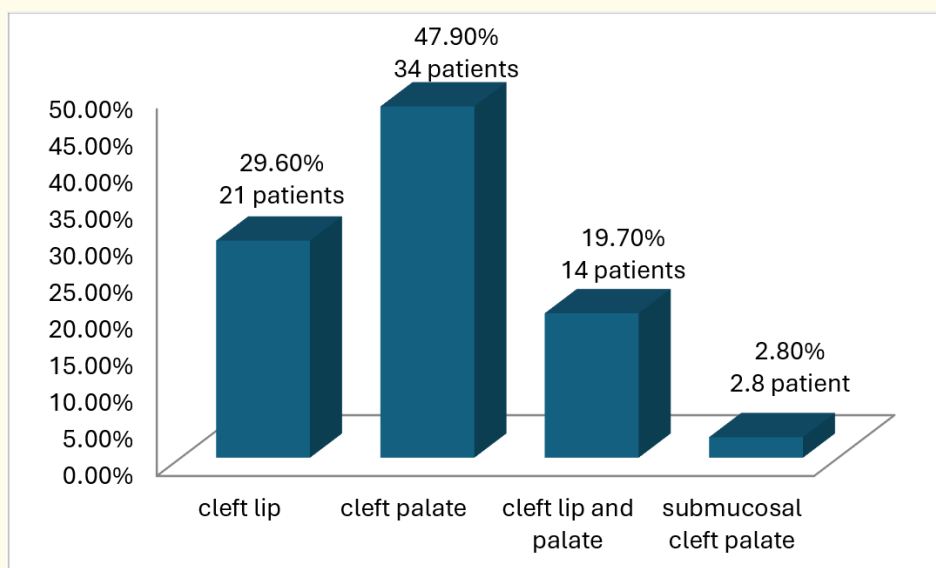


Figure 3: Distribution of deformities among the patients in the study of Patterns and ENT manifestations of Cleft lip and Palate in Sudanese Children.

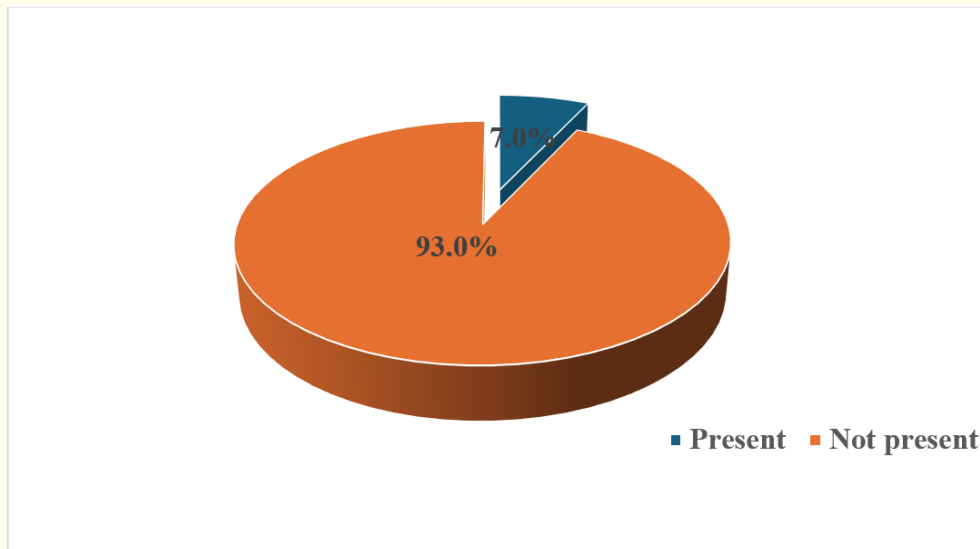


Figure 4: Ear infection among patients in the study of Patterns and ENT manifestations of Cleft lip and Palate in Sudanese Children.

Conclusion

Cleft lip and palate are relatively rare conditions among population. Cleft palate is the commonest deformity among Sudanese children with male dominance and it is more common in rural communities. Feeding difficulty is the common presentation among affected patients. Complete cleft palate is the commonest presentation within patients with cleft palate. Early case detection will provide prompt management and prevent further lifelong suffering.

Recommendations

High attention should be given for medical and paramedical staff for early pick up of these deformities immediately after delivery. An expanded program of research and management protocols should be established.

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