

Original Research Article

Cleft Palate survey in Omdurman Teaching Hospital (2013- 2015)

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Abstract: This study reports the results of operations performed on cleft palate with or without cleft lip of 52 patients underwent longneck procedure during the period of one and half years from June 2013 – Jan 2015 in Omdurman Teaching Hospital at Plastic and Reconstructive unit . The main objective of this study is cleft palate survey and to determine predisposing factors, complications and outcome of repair. Among them there were 27 females and 25 males, age range from 24 days to 33 years. There were 44 patients associated with cleft lip, 4 patients have cleft palate alone, 2 patients have congenital heart disease, one has neurological disorder and another has tongue tie. Common presentation is difficulty in feeding. Most patients 94% presented before first year. Maternal use of folic acid has strong relation to cleft palate. Approximately half of patients from middle Sudan .we follow the patients for 6 months for complications and outcome of repair, symptoms will improve after early repair than late repair, senior trainee has better outcome than junior trainee. Fistula is common complication over all age group. Most patients repaired one time. family satisfaction very excellent .in conclusion early repair before first year has better outcome and less complications than late repair, Speech disorder is long term complication occur mainly if delay the repair after first year . The study recommends maternal use of folic acid and early repair before first year.

Keywords: cleft palate, early repair, speech disorder, fistula

INTRODUCTION

Cleft palate represents the third most frequently occurring congenital deformity after clubfoot and cleft lip. Among the cleft lip and palate population, the most common diagnosis is unilateral cleft lip and palate (46%), followed by isolated cleft palate (33%). Cleft palates affect 1:2,000 live births worldwide regardless of race. This is in contrast to cleft lips, which show racial variability with the highest incidence in Asian and Native Americans (1:450 live births) and the lowest incidence in African Americans (1:2,000 live births). Isolated cleft palate occurs more in females (57%) than in males (43%). Gender differences may be related to differences in timing of embryologic development [14].

OBJECTIVE

Survey of cleft palate in Omdurman Teaching Hospital

Patients and methods

Cohort prospective descriptive study, all these patients underwent cleft palate repair by langenbeck procedure which Bipedicle mucoperiosteal flaps of both the hard palate and the soft palate are used to repair the defect. After their elevation, the flaps are advanced medially to close the palatal cleft,

INCLUSION CRITERIA

Any patients with cleft palate, Preoperative criteria for surgery patient weight should be more than 10 pounds, hemoglobin more than 10 gm/ dl and upper respiratory tract free from infection

RESULTS

In this study there were 52 patients, 22 (42.3%) in age group less than 1 years, 17 (32.7%) between 1-5 years and 13 patients (25%) more than 5 years. According to sex there was 25 males (48.1%) and 27 females (51.9%), According to age of presentation there was 49 patients (94.2%) presented before first years and 3 patients (5.8%) presented after first year. According to associated anomaly 44 patients (84.6%) associated with cleft lip alone , 4 patients (7.7%) has

cleft palate alone without any anomaly, 2 patients (3.8%) associated with cleft lip plus other anomaly congenital heart disease and neurological disorder, one patients(1.9%) has congenital heart disease and another patients(1.9%) has tie tongue, According to maternal use of folic acid there were 29 patients (55.8%) had no history of maternal use of folic acid and 23 patients (44.2%) had positive history of maternal use of folic acid. According to number of repair there was 32 patients (61.5%) repaired one time and 20 patients

(38.5%) repaired two times. According to outcome there were 38 patients (73.1%) complete healing, 13 patients (25%) developed partial dehiscence and one patients developed total dehiscence. Number of repair according to age of repair there was 21 patients less than one year 13 patients had one repair and 8 patients had two repairs. Number of repair according to age of repair there were 31 patients more than one year 19 patients had one repair and 12 patients had two repair.

Table 1: Shows: Level of Operator and outcome

Operator		Outcome			Total
		Complete .heal	Partial .dehiscence	Complete .dehiscence	
	consultant	26	7	0	33
	Senior trainee	8	1	0	9
	Junior trainee	4	5	1	10
Total		38	13	1	52

P value 0.049

Table 2: Show maternal use of folic acid

Folic acid		Frequency	Percent
	Yes	23	44.2
	No	29	55.8
Total		52	100.0

DISCUSSION

In this study 52 patients had cleft palate with or without lip age range between 24days to 33 years common distributed in less than one year age group (42%) this percentage is low comparison to other study that show (75%) presented before first year [6], late presentation of cleft palate due to decrease public awareness of cleft palate in the country and the medical services not available at that time before decades. In this study palate group common in females than males group similar to study done in Korea [2], These patients distributed over Sudan mainly in the middle Sudan (40%) followed in the western Sudan (26%) then in the north Sudan (17%) and lastly in the eastern Sudan (15%) and most patients in the middle were migrated from the western Sudan that may reflect ethnic group may play main role in etiology. Despite of (94%) of patients presented before first years only (40%) repaired on the first year because (84%) associated with cleft lip and One stage repair would apply to all patients with cleft palate only and repair to cleft lip first then followed by cleft palate repair in cleft lip associated with palate cases. Cleft palate had multifactorial epidemiology on this study, positive family history in (21%) of patients, (55%) had negative maternal use of folic acid and (42%) (table 2) of patients had positive maternal use of amoxicillin , that indicate that maternal

use of folic acid has strong relation to cleft palate that agree with other studies [9], Taking folic acid may partially prevent cleft lip and palate , they are particularly relevant for GPs [16]. In this study 61% of patients repaired one time that reflect good experience in cleft palate repair on these center. Common complication of repair is fistula in (44%) of patients in all age groups as mentioned in literature [6], oronasal fistula has been attributed to the surgical technique, expertise of the surgeon, large width of cleft palate, poor wound healing, tension or absence of multilayered closure, or infection of the operated site. speech disorder occur in 15% of patients whose had delayed repair after one year old, early timely closure of cleft palate has demonstrated improved speech outcome so delayed hard palate repair technique is abandoned by many hospital centers because of worse speech outcome [8].

Dehiscence is more in repaired patients above one year old than below one years old. There is no difference in number of repair according to age of repair that reflect surgical technique and operator experience play main role than age of repair in outcome. The outcome of repair is better in senior trainee with less dehiscence but junior trainee had more dehiscence that mean experience is corner stone in repair (table1).

CONCLUSION

Maternal use of folic acid is very mandatory to prevent oro fascial clefts especially if patients have positive family history of Orofacial clefts. Early repair in the first year is better than late repair after first year in outcome and complications. Senior trainee has excellence outcome than junior trainee.

Recommendation

Encourage all pregnancy to use folic acid .Early repair is preferable than late repair, Complete and bilateral cleft palate should be done by senior because it had high number of fistula formation and dehiscence.

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