

Treatment Outcome and Complications Post Cleft Lip and Palate Repair In Khartoum Teaching Hospital

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Abstract:

Background:

It is crucial to measure the surgical outcome and complications in order to assess the success rate of cleft management. This study evaluated the surgical outcome. Cleft lip and palate surgery can cause complications.

Materials and Methods:

Cross-sectional evaluations were done at least one week after surgery on 103 consecutive patients who had cleft palate and lip surgeries in February 2017 and April 2017. The data collected included information on the patient's age, gender, type of cleft defect, surgery performed, as well as any complications that may have occurred afterward. The Pennsylvania lip and nasal (PLAN) score was used for cleft lip surgery. For cleft palate repair, the integrity of the closure was used.

Results: There were 103 subjects in the study, including 62 (60.2%) males and 41 (39.8%) women. Unilateral cleft lip was the most common type of cleft. It was 39.8%. Sixty-four subjects (62.1%), had cleft lips repair, while 39 subjects (37.9%), had cleft palate and lip repair. All cleft lips were repaired using the Millard technique. Nose was better than lip and palatal overcome. There were no pre- or post-operative deaths. 95 (92.2%) cases of post-operative complications were observed.

Conclusion: Hypertrophic scar and high post-operative complications rate are the most common complications. There is no difference in post-operative complications between males and women. The palatal score and the nasal score are good.

Key Word: Non-syndromic orofacial clefts, Multidisciplinary care, Mortality and morbidity, Cleft lip and palate surgery, Timing and methods of repair, and Nasolabial appearance.

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I. Introduction

Non-syndromic orofacial clefts, encompass cleft lip, cleft lip and palate, and cleft palate solely, comprise a number of problems affecting the lips and oral hollow space, the reasons of which remain in large part unknown. Long-term negative effects on speech, hearing, cognition, and cognition may have long-lasting consequences for health and social integration. Children with cleft lips and palates require multidisciplinary care from birth to maturity. They have a higher rate of mortality and morbidity than those who are not affected.^{1,2} Cleft lip and palate surgery can be performed using a variety of techniques. However, surgeons may not agree on the timing and methods of repair.⁵ In assessing the success of cleft control or first-class improvement, it is crucial to measure the outcome. Modern medical practice has made evidence-based hospital treatment and pointers about the best practice a critical component of its modern practice.⁶ There are many consequences to comparing cleft lips and palate treatment. These include facial appearance, speech, nasal respiration and hearing.^{5,6} However, it is not possible to agree on which professionals are most important in cleft care. Cleft patients and their parents are most likely to be interested in improving the appearance of the nose and lip.⁷ However, it has been a challenge to develop a reliable score for the size of the nasolabial appearance. There are two types of techniques that can be used to evaluate nasolabial appearance.⁶ The latter seeks to objectively determine the degree of disproportion and strange morphology through facial measurements.⁸ While the former (qualitative methods) analyze facial aesthetics and evaluate the use of scales, scores structures, and scores. There is a lot of variation in facial clefts' presentation. Children and adolescents with orofacial deformities require a group approach to ensure the best possible outcomes. For a successful control of cleft palate and lip from infancy through adolescence, a multidisciplinary approach is required by specialists.^{3,4} It is becoming more common to measure the outcomes of cleft repair in order to predict surgical outcomes, generate policies regarding safe clinical care, allocate resources, and make decisions about how best to treat patients.

II. Material And Methods

Study design:

This is a cross sectional study

Study Duration:

From February 2017 to April 2017

Study Population:

Patients with cleft lip & palate who were seen at the surgical unit at follow-up date in the khartoum teaching hospital

Study area:

Khartoum teaching Hospital

Sample size:

A total of 103 patients divided into 64 males and 39 females

Variables

dependent: Age, gender, gestational history, type of cleft deformity, delay in surgery, surgical procedure, parents satisfaction, complication (pain, fever, fistula, whistling, notching, hypertrophic scar and dehiscence)

Independent: father age, father occupation, mother age, mother occupation, post-operative medication,

Data collection:

A questionnaire was designed that covered the variables being studied. The survey consisted of five main sections. The initial section gathered general information about the patient, such as their age, gender, and place of residence. The second part focused on the mother's gestational history. The third part examined the family history of cleft-related issues. The fourth part explored the specific type of cleft deformity. Finally, the fifth section delved into the patient's surgical history, including any complications that may have occurred during or after the procedure. The data was collected through direct interviews with the parents or the patient (when possible), clinical examinations, and the completion of the questionnaire.

Data analysis:

Data was analyzed using computer analysis by the SPSS ® program. A descriptive analysis was chosen. Tests of significance were used where appropriate, (mainly X 2 test) then results were gathered according to the objectives of the study. Results were presented in tables designed using Microsoft Excel® program

III. Result

There were 103 patients in the study, including 62 (60.2%) men and 41 (39.8%) women. The average age at presentation was 121.91m, and the mean age at surgery was 134.65m. The average age of the patients was 45.37y for their fathers and 37.32 years for their mothers.

Table no1: demographic distribution (n=103)

	Mean	Count	Column N %
age at time of persentation	121.91		
age at time of surgery	134.65		
Sex	Male	62	60.2%
	Female	41	39.8%
age of the father	45.37		
age of the mother	37.32		

Each subject had at least one procedure. Sixty-four (62.1%) subjects underwent cleft lips repair, while 39 (37.9%) had cleft palate and lip repair. There were 3 (2.9%) cases of congenital anomalies. 3 (37.9%) subjects had cleft lip and palate repair. All cleft lips were repaired with the Millard technique. The von-lagenbeck technique was used to treat cleft palate. Due to socioeconomic status, 1 (01%) subject experienced delay in surgery.

Table no2: Surgery characteristics (n=103)

		Mean	Count	%
age at time of surgery		134.65		
cleft lip surgical technique	Millard		103	100.0%
cleft palate surgical technique			67	65.0%
	von-langenbeck		36	35.0%
delay of surgery	No		102	99.0%
	Yes		1	1.0%

Unilateral cleft lips (39.8%), bilateral cleft lips (13.6%) and bilateral cleft palate (11.7%), respectively, were the most common cleft defects. Median lips (8.7%), unilateral cleft palate and lip on right (6.8%), and bilateral cleft lips and palates (11.7%) were next.

Table no3: Cleft lip and palate deformity characteristics (n=103)

		Count	%
Unilateral cleft lip		41	39.8%
bilateral lip		14	13.6%
median lip		9	8.7%
right lip & palate		7	6.8%
left lip & palate		20	19.4%
bilateral lip & palate		12	11.7%
any others congenital anomalies	No	100	97.1%
	Yes	3	2.9%
associated health problems	No	100	97.1%
	Yes	3	2.9%

This study did not record any cases of post-operative or pre-operative mortality. However, 95 (92.2%) cases of post-operative complications were observed. These included 79 (76.7%) cases of hypertrophic scar, 44 (42.7%) cases, 39 (38.8%), whistling, 9 (87.8%), infection, 6 (5.8%), pain, and 5 (4.9%) cases, respectively.

Table no4: Distribution of post-operative complications (n=103)

		Count	%
post operative complication	No	8	7.8%
	Yes	95	92.2%
Pain		5	4.9%
Infection		9	8.7%
hypertrophic scar		79	76.7%
Notching		44	42.7%
Whistling		40	38.8%
Fever		6	5.8%
Dehiscence		2	1.9%

There is a statistical difference p-value is 0.311 between gender and post-operative complications.

Table no5: (n=103)

			post operative complication		Total	P-value
			No	Yes		
Sex	Male	Count	6	56	62	0.311
		%	9.7%	90.3%	100.0%	
	Female	Count	2	39	41	
		%	4.9%	95.1%	100.0%	
Total		Count	8	95	103	
		%	7.8%	92.2%	100.0%	

Normal p-value is 0.05

There is a statistical difference P-value is 0.423 between age at time of surgery and post-operative complications.

Table no6: (n=103)

Post-operative complication		N	Mean	Std. Deviation	P-value
age at time of surgery	No	8	100.4	120.09037	0.423
	Yes	95	137.7	126.31619	

Normal p-value is 0.05

IV. Discussion

This is only the second study in this area. There was not much information on the internet about it. This cross-sectional study was done to examine the surgical outcomes among patients with cleft palate and lip surgery. Comparing with the study by riitta H.lithovius et al, the results showed no difference in post-surgical complications among males and females. The rate of secondary surgery for girls was significantly higher (27%) than it was for boys (13%).

This study found that unilateral cleft lips were the most common type of cleft. It was followed by unilaterally cleft palate and lip on the left.

This study found that the pre-operative and postoperative complications rate was high (92.2%) compared to the study by et al at lagos University Teaching Hospital in Nigeria (14.1%).

V. Conclusion

These results show that unilateral cleft lips deformity is quite common in clinical practice.

There was no significant difference in pre-operative and after-operative complications between males and women. This study revealed a high complication rate and hypertrophic scar as the most common post-operative complications.

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