ejpmr, 2018,5(10), 112-114

SJIF Impact Factor 4.897

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 2394-3211

EJPMR

THE MORTALITY RATE IN OPERATED CLEFT LIP AND PALATE PATIENTS IN AL-ZAHRA, A TEACHING HOSPITAL

Dr. Abdulkhudher A. Alwan[1]* and Dr. Sada Jasim Abdulameer[2]

[1]*B.D.S - F.C.A.B.M.S Maxillofacial Surgery Chaireman of Maxillofacial Department. Wassit University.
[2]Department of Basic Science, College of Dentistry/Wassit University.

***Corresponding Author: Dr. Abdulkhudher A. Alwan**

B.D.S - F.C.A.B.M.S Maxillofacial Surgery Chaireman of Maxillofacial Department. Wassit University.

Article Received on 10/08/2018 **Article Revised on 31/08/2018** **Article Accepted on 20/09/2018**

ABSTRACT

This a prospective study is include 200 operated patients born with cleft deformities and they were operated under general anaesthesia in the maxillofacial department in Al Zahra, a teaching hospital in wassit between 2013-2017. Cleft lip and/or palate are common birth defects due to genetics and environmental causes. CLP may be isolated or as part of syndromes. Congenital heart disease (CHD) is one of the most common diseases that association with orofacial clefts. The aim of this study is the evaluation the mortality rate, causes and prevention of death in Cleft lip and Palate patients during and after operation. For 200 operated patients with cleft deformities two patients were died diagnosed due to respiratory and congenital heart diseases. Therefore precise clinical examination, echocardiography should be done pre operatively to exuded congenital heart disease and to determine the fitness for general anesthesia. **Aim of study:** To determine the mortality rate, causes and prevention of death during and after operation.

KEYWORDS: Mortality, cleft.

INTRODUCTION

A cleft is a gap in the lip and/or palate**.** "Clefts occur when the two sides of the lip or palate fail to grow together during the first trimester of pregnancy. Infant may be born with a cleft lip, a cleft palate, or both. Orofacial clefts occur in about 1 of every 600 births in the United States of America, making them one of the most common congenital anomaly in the head and neck region".[1,2] The etiology of Orofacial clefts is complex, including many genetic and external (environmental) factors.[3,4,5]

In many studies a great concentration given to correlation between orofacial clefts at birth and other defects. Congenital heart disease (CHD) is the one of the most common associated anomalies with orofacial clefts, it is reported as the principal cause of death among infants with OFCs.[6,7]

MATERIAL AND METHOD

This prospective study is include 200 operated patients presented with cleft deformities to Al-Zahraa teaching Hospital in wassit, department of oral and maxillofacial surgery between May 2013-May 2017. All patients pre operatively examined by pediatrician and otolaryngologist to exclude other abnormalities, and by anaesthetist to confirm the fitness for general anaesthesia. All the patients have the investigation: C.B.P, B.sugar, S. creatinin, HBV-HCV-Chest X-ray and some of them echocardiography taken by pediatric cardiologist. Two infant died preoperatively due to malnutrition and recurrence chest infection were exclude from this study, as this study conducted for operated cases only (expose to general anesthesia).

RESULTS

Within a period of 4 years, between May 2013 and May 2017, higher incidence of cleft lip with or without palate in male than in female, in contrast to isolated cleft palate higher in female than male table(1). Two patients were died out of 200 patients (1%), one of them female with complete cleft lip and palate and the second is male with complete cleft lip and palate also table (2). The female was died 1hr. postoperatively due to respiratory embarrassment in respiratory care unit, while the male was died after intubation by the anesthetist due to cardiac stand still.

Table (1): Sex distribution of cleft lip and palate.

Cleft type	Sex		Ratio(Male: Female)
	Male	Female	
Cleft lip	40	22	1.8:1
Cleft lip & palate	80	40	2:1
Cleft palate	4	14	1:3.5
Total	124	76	1.7:1

Table (2): The mortality rate.

Cleft type	No.of cases	No. of death	Mortality rate
Cleft lip	62	0	0%
Cleft lip & palate	120	2	1.6%
Cleft palate	18	0	0%
All types of cleft	200	2	1%

DISCUSSION

Orofacial cleft is one of the most common defects in the united states of America. The occurrence rate varies by population. In this study isolated cleft palate higher in female than male, in contrast to cleft lip with or without palate higher in male than in female table(1), this is agree with Mossey et al 2009.[7,8] "Cleft lip and palate classified into syndromic and non-syndromic defects. The syndromic may be up to 62.9%.[9,10] The most common defects associated with orofacial clefts are velocardiofacial syndrome, Pierre robin syndrom, stickler syndrome and others".[11,5] In this study two patients were died, one after few minutes of induction and intubation due to congenital heart disease(large A.S.D) according to forensic report, that not detected by clinical examination by anaesthetist who is well trained and qualified, and the same time the Echo study is not available, and the E.C.G mostly not enough to detect all the congenital heart disease. The congenital heart disease and the adverse effect of anaesthetic drugs(hypotensive agent), also vasovagal reaction that may be occur after stimulation of recurrent laryngeal nerve by intubation, all result in cardiac stand still, according to the explanation of anesthetists team in the death conference in the teaching hospital, after that failure of all measures to regain heart beats. The second case with history of chronic airway obstruction and episodes of stridor's without response to treatment, clinical examination by maxillofacial, pediatrician, cardiothoracic surgeon, and bronchoscope, laryngoscope and esophagoscop were done with no clear cause or defect other than cleft lip and palate. In fact the patients with history of sever upper or lower respiratory tract infection are more sensitive to sedative drugs and increase the risk of obstruction at the time induction or postoperatively, and she was died in the R.C.U after one hour of extubation due to bronchospasm and sever hypoxia and fail of reintubation according of forensic report. In this study both the dead cases were with complete cleft lip and palate table (2), that means there is an relation between the severity of orofacial cleft and mortality rate. Aspiration and food reflux are increase with complete cleft lip and palate, thus increase the severity of chest infection and malnourishment (anemia, underweight), therefore these patients liable for local and systemic infection, also the congenital anomaly specially heart disease associated with severity of clefts, that complete cleft lip and palate highly associated with congenital anomaly than cleft lip or palate only.[7,8]

CONCLUSION

1-All the patients should be examined by Echocardiography to exclude C.H.D.

2-Preoperative antibiotic to treat the upper or lower respiratory tract infection which is common in clefts patients due to food reflux into the nasal passage and postponed the sever cases as the operation is not emergency.

3-If the patient has history of stridor or obstruction, the patient should be discharge intubated after operation to the R.C.U.

4-The congenital anomaly highly associated with the severity of orofacial cleft, therefore multidisciplinary team is the cornerstone to reduce the mortality and morbidity.

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