

Short Communication

DCR Operation in Rural Area of Bangladesh: A Study of 346 Cases

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Abstract:

Objective: To observe the result of surgical outcome of DCR operation without intubation.

A total number of 346 DCR surgeries were performed in septic operation theatre of Pangsha Eye Hospital, south western rural area in Bangladesh from January 2004 to December 2014. 346 cases were included in this study.

On the basis of distribution of age, 43.41% of cases were between 14-40 years of age.

Female cases were 83% and male were 17.63%. Only 10 cases were intubated and 336 were not intubated.

Key words: Dacryocystorhinostomy (DCR), Intubation (silicone), Nasolacrimal duct obstruction, Lacrimal drainage, Lacrimal passage.

Introduction:

Three hundred and forty-six operations of dacryocystorhinostomy were performed in the period of 11 years from January 2004 to December 2014 by the author in Pangsha Eye Hospital, Pangsha, Rajbari, a south-western region in Bangladesh.

Total operations were done in a septic operation theatre of this hospital. Dacryocystitis is an acute or chronic inflammation of the lacrimal sac. The surgical procedure of choice is dacryocystorhinostomy in which a connection is established between the lacrimal sac and nose.

Epiphora a condition in which there is tearing because of impaired drainage of tears through the lacrimal passage. Chronic dacryocystitis is the commonest cause of epiphora and also is responsible for cosmetic disfigurement. Obstruction in the lacrimal drainage system and its inflammation is annoying and sometimes is a vision threatening problem.¹

External dacryocystorhinostomy (DCR) was first described by Toti in 1904, since then it has gone through several modifications.²

Acquired lacrimal drainage obstruction may be secondary to trauma, infection, inflammation, rarely neoplasm or mechanical causes.

Dacryocystitis is a disease of adult group with female preponderance. Prevalence of dacryocystitis is high in those who use bath water like pond water.³

Materials and methods:

The operations were carried out in a septic OT in Pangsha Eye Hospital from January 2004 to December 2014. The operations (346 cases) were done without intubation (only 10 cases were intubated), the age of those patients was from 14 to 70 years. There were 285(83%) females and 61(18%) males. All patients were properly evaluated in the indoor including necessary laboratory investigations for smooth post-operative management and to avoid any short of complication due other systemic diseases.

Type of study:

Retrospective chart analytic study.

Cohort analytic study

Preoperative medication- Inj. Diclofenac 1amp (50mg) and Inj. Diazepam 1amp (10mg) were given 10-15 minutes prior to beginning of the operation for relief of the pain and tension during operation.

Anesthesia:

Infiltration anesthesia using Xylocaine 2% 5ml and Bupivacaine (.5%) 5ml with 0.15 to 0.2ml of adrenaline 1:1000 making its solution to 1:150000/1:200000.

Surgical procedure:

All the steps of the conventional DCR were done without intubation and only 10 cases were intubated.

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Table-1: Yearly operations registered:

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Female	11	20	20	17	34	28	33	37	36	29	20
Male	02	10	09	04	05	13	03	05	03	04	03
Total	13	30	29	21	41	41	36	42	39	33	23

Table I shows the highest operation was performed during 2011 and the total number was 42 out of which 37 were female and 5 were male. During 2008-2009 total 41 DCR operations was done. But the lowest number of operations were 13 in 2004.

Table-II: Age of the patients:

Age in years	No of patients	Percentage
14-20	06	1.79%
21-30	63	18.21%
31-40	81	23.41%
41-50	89	25.72%
51-60	64	18.50%
61-70	43	12.43%
Total	346	100%

In table II the highest age group was from 41-50 years which was 25.72%, followed by the age group of 31-40 years (23.41%). The minimum number of people belonged to age group 14-20 years, in percentage it was 1.79%.

Table-III: Distribution of sex

Sex	No of patients	Percentage
Female	285	82.37%
Male	61	17.63%
Total	346	100%

The Table III shows out of total 346 patients, the majority were female (82.37%) and rest were male (17.63%)

Table-IV: Side of the eye

Side	No of patients	Percentage
R/E	148	42.77%
L/E	198	57.23%
Total	346	100%

Table IV presents that 148 operations were done in the right eye (42.77%) and 198 were done in the left eye (57.23%).

Table-V: With or without intubation

Intubation	No of patients	Percentage
Without	336	97.12%
With intubation	10	2.89%
Total	346	100%

Table V shows intubation was needed in 336 patients and without intubation 10 operations were done.

Result:

Almost all cases were followed up postoperatively for 3 to 6 months. In case of intubations, tube was removed after 2months

Discussion:

This study has shown that 41.62% cases belong to 21-40 years age group. Age between 41-50 years group were 25.27% and age 51 to 70 years 30.93%. In one study by Choudhury et al (1994) 58% cases belong to 20-40 years age.⁴ Gender wise, about 83% were female and 17% were male. In one study, women is consistent with a study of Kabir et al 80% were females and 20% were male.⁵ In another study, 64.11% were female and 35.89% were male⁶, another study found 68.85% were female and 31.45% were male out of retrospective study on 459 cases.⁷ In another study female were 69.6% and 30.4%.⁸ However, most of the female patients in our study came from villages and majority were house wife, using pond water for bathing.

The only successful treatment of chronic dacryocystitis is dacryocystorhinostomy (DCR).

Preferably with single flap rather than double flaps. Untreated dacryocystitis never undergoes spontaneous resolution.⁹

Regarding intubation, we performed 10 cases with intubation and 336 were without intubation. In intubated cases silicon tube remained for 2 months. After 2 months tube was removed.

Syringing was done on 2nd post operative day. In those cases which were intubated 2 of them were failed and re-DCR was done but failed due to soft tissue growth and for that obliterated the osteum and other case failed due to abnormal anatomical structure. In cases without intubation, 5 of them came with partial block after 2 to 4 months and 4 of them were relieved by probing and syringing.

Dacryocystorhinostomy (DCR) is an acceptable method in treatment of epiphora due to acquired naso-lacrimal duct obstruction and success rate of the procedure is also very good.

Conclusion:

The female who undergone DCR operation suffered from common cold for long period. They had also upper respiratory tract infection in most of the cases. Hormone factor may contribute for more affection of female.

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