



**ORIGINAL RESEARCH PAPER**

**Ophthalmology**

**STUDY OF SUCCESS RATE OF EXTERNAL DACRYOCYSTORHINOSTOMY IN PATIENTS OF CHRONIC DACRYOCYSTITIS – A HOSPITAL BASED STUDY**

**KEY WORDS:** Chronic Dacryocystitis, Dacryocystorhinostomy Epiphora, Munk Score.

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**ABSTRACT** **PURPOSE** –To study success rate of external dacryocystorhinostomy in patients of chronic dacryocystitis. **MATERIAL AND METHODS** – Our study was a prospective, observational, hospital based study of 60 patients suffering from chronic dacryocystitis. All patients underwent a detailed comprehensive ocular examination and underwent external dacryocystorhinostomy surgery. Postoperative complications were noted and MUNK score was used to evaluate success of external dacryocystorhinostomy. 48.3% patients presented with epiphora while 15% patients presented with sac swelling. Success rate of external dacryocystorhinostomy was found to be 95% and only 5% patients showed recurrence.

**INTRODUCTION**

Epiphora is a common annoying symptom, embarrassing the patient both socially and functionally and may even endanger the eye. Insidious onset of epiphora is characteristic of chronic inflammation or infection of lacrimal sac. Chronic dacryocystitis has predilection for females due to narrow lumen of bony lacrimal canal<sup>1</sup>. Maximum incidence of chronic dacryocystitis is seen in 3<sup>rd</sup>-4<sup>th</sup> decade of life<sup>2</sup>.

Dacryocystitis is more common in regions with temperate climate<sup>3</sup>. External Dacryocystorhinostomy is the main surgical modality in management of patients with chronic dacryocystitis.

**MATERIAL AND METHODS**

Our study was a prospective, Observational, hospital based study of 60 patients suffering from chronic dacryocystitis, who came to eye opd in R.D Gardi medical college.

The main aim of our study was to determine the success rate of external dacryocystorhinostomy which is the surgical treatment of choice in patients suffering from chronic dacryocystitis. Technical approval of study was taken from the research guidance committee and institutional ethic committee.

**INCLUSION CRITERIA**

Age >20 years, patients with chronic dacryocystitis, patients with positive regurgitation test.

**EXCLUSION CRITERIA**

Age<20 years, patients with acute dacryocystitis, patients with canalicular obstruction , lacrimal sac obstruction due to tumors, cases with ectropion and entropion or lower lid laxity, patients with bleeding disorders, patients with nasal pathologies like nasal polyp, deviated nasal septum or atrophic rhinitis.

All patients underwent a detailed and comprehensive ocular examination and diagnosis of chronic dacryocystitis was made using investigations like Roplas test, syringing, FDT test, Jones test, Dacryocystography. ENT referral was done in all cases to rule out nasal pathology. All patients underwent external dacryocystorhinostomy.

**RESULTS**

In our study of 60 patients, 46(76.7%) were females while only 14(23.3%) were males (p<0.05)(See table no 1)

**Table no.1: Sex distribution of patients in study group (n=60 patients)**

Sex	No. of patients	Percentage
Male	14	23.3%
Females	46	76.7%
Total	60	100.0

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29(48.3%) patients presented with complaints of epiphora only, while 9(15%) patients complained of swelling, 13(21.4%) presented with mucopurulent discharge, 8(13.3%) complained with both swelling with discharge and 1(1.7%) patient presented with fistula. (see table no.2)

**Table no.2: Presenting complaints of patients in study group (n=60 patients)**

Presenting complaints	No. of patients	Percentages
Epiphora only	29	48.3
Swelling	9	15
Discharge	13	21.4
Discharge with swelling	8	13.3
Fistula	1	1.7
Total	60	100

Our study concluded that patients presented with catarrhal stage were 30(50%), Mucocoele 13(21.6%), pyocoele 16(26.7%) and only one patient presented with fistula formation. (See table no.3)

**Table no.3: Stage of chronic dacryocystitis at presentation (n=60)**

Stage of chronic dacryocystitis	No. Of patients	Percentage
Catarrhal/watering	30	50
Mucocoele	13	21.6
Pyocoele	16	26.7
Fistula	1	1.7
Total	60	100

Our study showed that 32(53.3%) patients had right side affected and 25(41.7%) had the left side affected, while 3(5%) patients were suffering from bilateral chronic dacryocystitis. (See table no.4)

**Table no.4: laterality of chronic dacryocystitis in study group (n=60)**

Laterality of chronic dacryocystitis		
Eye	Number	Percentage
Right	32	53.3
Left	25	41.7
Bilateral	3	5
Total	60	100

Our study had 43(71.6%) positive swab culture with pseudo monas being found in 14% patients while staphylococcus was

seen in 9% patients. (see table no 5)

**Table. No.5: conjunctival swab culture report in patients of study group (n=60)**

Culture report	No. Of patients	Percentage
Positive	43	71.6
Negative	17	28.4
	60	100

95% of our patients had successful surgery. This result of our study shows that external dacryocystorhinostomy is a surgical procedure with a very high success rate in management of patients suffering with chronic dacryocystitis. (See table no 6)

**Table no. 6: patency on syringing at 1 month of follow up in patients of study group (n=60)**

Patency on syringing	Number	Percentage
Patent	57	95
Blocked	3	5
Total	60	100

Grade 0 according to MUNK score describe absence of epiphora and success rate of external DCR surgery among the patients in our study group. Z score is 0.985, P value is 0.002, the result is highly significant at p<0.05. the result of our study shows that external procedure has a very high success rate in management of patients suffering from chronic dacryocystitis. (see table no.7)

**Table no. 7: grading of epiphora according to MUNK score at 1<sup>st</sup> month followup in patients of study group (n=60)**

S.No	Grade	Number	Percentage
1	Grade 0	57	95
2	Grade 1	0	0
3	Grade 2	1	1.6
4	Grade 3	0	0
5	Grade 4	2	3.4
	Total	60	100

**DISCUSSION**

Chronic dacryocystitis is a very common disease affecting the lacrimal system and is more common in persons living in rural areas with poor hygienic conditions. We in our study found that 48(80%) patients belonged to age group between 41-70 years and thus the result of our study is comparable with study of Chaudhary et al (2005) who found the highest incidence of chronic dacryocystitis to be in 6<sup>th</sup> decade<sup>4</sup>.

In our study we found that 46 (76.70%) were female suffering from dacryocystitis which is comparable with study of Badhu B et al who also found female predilection 67.6% patients<sup>5</sup>.

We found that 25 (41.7%) patients had dacryocystitis in left eye. This result is comparable with study of siddhiqui et al who also found that left eye was affected in 37% of there patients<sup>6</sup>.

At 1<sup>st</sup> month follow up 57 (95%) patients presented to us with grade 0 according to MUNK score which describe absence of epiphora and success rate of external dacryocyst orrhinostomy among the patients in our study group.

The z score is 0.985 and p value is 0.002. The result is highly significant at p<0.05. this result of our study shows that external dacryocystorhinostomy has a very high success rate in management of patients suffering from chronic dacryocystitis<sup>7</sup>. This result is comparable with study of Rabina G (2013) who found the success rate of 94.4% for external dacryocystorhinostomy in their study.

**CONCLUSION**

Our study suggest that chronic dacryocystitis is a very

common ocular disorder which is highly prevalent in persons living in rural areas with unhygienic conutions and low socioeconomic status. Pseudomonas, staphylococcus and streptococcus are some of the common associated organisms with chronic dacryocystitis. We found a success rate of 95% of external dacryocystorhinostomy surgery in management of patients with chronic dacryocystitis. Our study recommend use of external dacryocystorhinostomy surgery as a very effective procedure for management of patiens with chronic dacryocystitis.

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