ORIGINAL RESEARCH PAPER

Ophthalmology

A STUDY ON CLINICAL PROFILE AND OUTCOME OF CHRONIC DACRYOCYSTITIS IN ADULTS IN A TERTIARY CARE CENTER

KEY WORDS: Dacryocystitis, Dacryocystorhinostomy, Epiphora, Panophthalmitis.

Ramamani Dalai* Assistant Professor Department of Ophthalmology, S.C.B. Medical College, Cuttack, Odisha, India. *Corresponding Author

Rajashree Rout Assistant Professor Department of Ophthalmology, S.C.B. Medical College, Cuttack, Odisha, India.

Samarendra Mohapatra Resident Department of Ophthalmology, S.C.B. Medical College, Cuttack, Odisha, India.

Sumita Mohapatra Professor Department of Ophthalmology, S.C.B. Medical College, Cuttack, Odisha, India.

ABSTRACT

Introduction: Chronic dacryocystitis presents with annoying epiphora and many a times with purulent discharge. Complications like chronic intractable conjunctivitis, eczema of lower lid skin, lacrimal abscess or fistula formation, corneal ulceration, risk of developing endophthalmitis are cumbersome in untreated cases.

Materials and methods: The present study was conducted amongst 139 patients of nasolacrimal duct (NLD) obstruction attending the Out Patients Department (OPD) of Ophthalmology, S C.B Medical College, Cuttack during the period from October 2016 to September 2018. Out of 144 eyes of 139 patients suffering from chronic dacryocystitis; 97 surgeries of Dacryocystorhinostomy (DCR) and 47 surgeries of Dacryocystectomy (DCY) was performed and followed up for 3 months.

Result: The highest incidence of chronic dacryocystitis was observed in the 5th to 6th decades of age. Females outnumbered males. It was unilateral in most of the cases. No significant triggering factor could be attributed to in most of the cases.

Conclusion: The technique of external DCR operation is a very economical and effective operation suitable in most Indian hospitals. Awareness for the early reporting of watering or mucopurulent discharge from the eyes is much more important for better outcome.

INTRODUCTION:

Dacryocystitis represents an acute or chronic inflammation of the lacrimal sac. Chronic dacryocystitis being more common that presents with annoying epiphora and many a times with purulent discharge, nasolacrimal duct obstruction (NLDO) being the initiating event in establishing infection and thus surgery forms the definitive line of treatment. The occlusion may be caused by congenital abnormality, involutional stenosis, chronic sinus disease, inflammatory disease, naso-orbital trauma or dacryolith.[1]

Besides the discomfort of constant watering from the eye, dacryocystitis may cause spread of infection from the lacrimal passage to the external eye and in presence of even a minor corneal erosion as a result of trivial injury, infection spread into the eye ball leading to fulminating ocular infection like endophthalmitis or panophthalmitis and eventual loss of the eye. It also possesses a great risk in performing ocular surgery. If left untreated, it may cause lacrimal abscess or fistula formation.[2]

Management consists of conservative by probing and repeated lacrimal syringing, balloon catheter dilatation in patients with partial NLDO, DCR or DCY in required cases.[1]

AIM AND OBJECTIVES:

This was an attempt to study the clinical profile and outcome of chronic dacryocystitis.

MATERIAL &METHODS:

The present study was conducted amongst 139 selected patients of chronic dacryocystitis attending the eye OPD of Department of Ophthalmology, S.C.B. Medical College, Cuttack during the period from October 2016 to September 2018.

Inclusion criteria:

The chronic dacryocystitis Patients above 20 years of age in whom by doing lacrimal passage irrigation (LPI) no fluid passed through, rather regurgitates through the lower or upper punctum, were enrolled for the study.

Exclusion criteria: Following patients were excluded from the study-

- Patients below 20 years of age and over 70 years of age
- Patients those were lost to follow up for 3 months
- Patients with uncontrolled blood sugar level and cardiov ascular abnormalities
- Patients having gross DNS
- Patients having severe atrophic rhinitis
- Patients those did not give consent for the study

Detail history and clinical analysis was done. Patients were investigated for HB%, DC, TLC, FBS, HIV, and HbsAg. LPI was done in all the cases. Obstruction with regurgitation was found. External DCR or DCY were performed. All the cases were followed up for a period of 3 months from the date of surgery. Complete success was defined as patent lacrimal passage on irrigation (objective) and absence of symptoms (subjective).

OBSERVATIONS

The present study was conducted amongst 139 selected patients of chronic dacryocystitis .The following observations were made from the study.

Table 1-: Baseline characteristics of chronic dacryo cystitis cases enrolled in the study

Age group in years	No. of Males	Percentage	No. of Females	Percentage
21- 30 yrs	0	0	11	7.9
31- 40 yrs	5	3.6	13	9.4
41- 50 yrs	16	11.5	36	25.9
51- 60 yrs	14	10.0	30	21.6
61- 70 yrs	6	4.3	8	5.8
Total	41	29.4	98	70.6

The peak incidence of chronic Dacryocystitis was marked in the fifth to sixth decade of life with female preponderance.

Table-2: Distribution of chronic dacryocystitis in diffe rent study population

Laterality		Habitat			Socioeconomic status		
Unilateral	Bilateral	Urban	Rural	Total	upper	lower	Total
134(L-63,R-71)	5	33	106	139	21	118	139
96.4%	3.6%	24%	76%	100%	15%	85%	100%

It was observed that the incidence of unilateral cases of chronic dacryocystitis were more common. Further it was more common with low socioeconomic status and in rural areas as compared to urban areas.

Table-3: Occupation wise distribution of chronic dacryo cystitis

Females	No. of cases	Percentage	Males	No. of cases	Percentage
House wife	67	68.4	Labourers	14	34.1
Farmer	26	26.5	Farmer	24	58.5
Others	5	5.1	Others	3	7.4

House wives were affected more.

Table -4.Different clinical presentation of chronic dacryocystitis in the study group

Presenting symptoms	No. of patients	Percentage
Epiphora	112	80.5
Mucoid or mucopurulent discharge	48	34.5
Swelling at the medial canthus	17	12.2
Matting of eyelashes	14	10.1
Lacrimal fistula	5	3.6
Mucocele	10	7.2
Non healing corneal ulcer	5	3.6
Lacrimal abscess	4	2.9
Diagnosed on routine investigation for any intraocular surgeries	14	10.1

Epiphora was the leading presenting symptom in chronic Dacryocystitis.

Table-5: Duration of presenting symptomsof chronic dacryocystitis in the study group

Duration	No. of cases	Percentage
6 months	11	8
1 year	19	13.5
2 year	109	78.5

It was observed that more cases were found in the patients who had long duration of presenting symptoms.

Table -6:Operative procedure carried out in treating chronic Dacryocystitis cases

Type of procedure		Number of surgeries
DCR	Double flap	18
	Single flap	79
DCY		47
Total		144

Most of the surgeries done were single flap DCR.

Table -7:Operative complications of chronic dacryoc ystitis cases

Intra-operative complications	**Complications**	**No. of cases**	**Percentage**
	Haemorrhage	26 cases	18.7
	Damage to nasal mucosa	4 cases	4.1
	Damage to angular vein	2 cases	1.4
	Injury to lacrimal sac or small atrophic sac	2 cases	1.4
Immediate post-operative omplications	Haemorrhage	13	9
	Wound infections	5	3.5

The only significant complication encountered during surgeries was hemorrhage.

Table 8: Postoperative assessment following surgery

Post-operative assessment at the time of discharge		Condition of Epiphora &Other symptoms		Condition of Scar/wound		LPI	
		Relieved	Not Relieved	Healthy	Unhealthy	Patent	Blocked
	DCR	91	6	94	3	97 (Including 5 having resistant to flow)	0
	%	94%		97%		100%	
	DCY	47 (except epiphora)	0	44	3	0	47
	%	100%	0	93.5%	6.5%	0	100%
Postoperative assessment at one week following surgery	DCR	91	6	95	2	97 (Include 5 partially patent having resistant to flow)	0
	%	94%		98%			
	DCY	47 (except epiphora)	0	46	1	0	47
	%	100%		98%			100%
Postoperative assessment at 1 months following surgery	DCR	91	6	97	0	91	6
	%	94%		99%		94%	
	DCY	47 (except epiphora)	0	47	0	0	47
		100%		100%			100%
Postoperative assessment at 3 months	DCR	91	6	97	0	91	6
	%	94%	6%	100%	0	94%	6%
	DCY	47 (except epiphora)	0	47	0	0	47
	%	100%	0	100%	0	0	100%

Postoperative assessment of the cases at the time of discharge showed that there was no epiphora or other symptoms in all the cases operated upon for chronic Dacryocystitis; except in 5 patients with non healing corneal ulcer and in 47 patients of DCY in whom epiphora was not relieved. All the patients with non-healing corneal ulcer showed signs of healing and 3 patients were having discharge from wound margin. The wounds were cleaned; dressed and broad spectrum antibiotics were prescribed. These cases responded to treatment. At 3 months following surgery, 6 patients had complaint of intermittent epiphora and the LPI showed complete blockage of the lacrimal passage. The 4 partially patent lacrimal passages were opened on repeated syringing done over 3 months.

Table 9:The success rate of operative procedures

Operations Performed	No. of cases	Success Rate					
		Objective (Patent LPI)		Subjective (Absence of symptoms)		Patient Satisfaction	
With Double flap DCR	18	17	94.5%	17	94.5%	17	94.5%
With Single flap DCR	79	74	93.5%	74	93.5%	73	92.5%
Total	97	91	94%	91	94%	90	93%
DCY	47	-	-	47(except epiphora)	100%	42	89%

The success rate for external DCR was found to be 94% with very high percentage of patient satisfaction. It also showed that the double flap technique had a slight edge over the single flap technique in terms of success rate.

DISCUSSION:

Peak incidence was marked in the fifth to sixth decade of life. Female preponderance and it might be attributed to menopause. This finding agrees with observations made by NS Jain et al (1955)-67%[3] and Saxena et al (1969)-81.5%[4].Pico opined that the high incidence in females above the menopausal age suggest endocrine basis causing change in the mucus membrane of lacrimal sac and duct[5].The reasons for higher incidence of chronic Dacryocystitis among females is not exactly known but it could possibly be due to a narrow lumen of the bony lacrimal canal as suggested by Meller (1929)[6]. Kitchen droplet fumes and cosmetics lining of eyelids and lid margins might contribute in some respect to this. Right side was found to be affected slightly more than the left side, which agrees with observations made by Reddy (1955)[7], Jacob (1959)[8] and Pandey (1967)[9].The unilaterality of affection agrees with observations made by all authors and this may be due to anatomical narrowing of one side of nasolacrimal duct making that side more prone for obstruction compared to the normal or more spacious nasolacrimal duct on the other side. Chronic dacryocystitis was more common with low socioeconomic status presenting with discharge from the eye for a long period of time as was evident from the literature studies(Panda et al) [10]. House wives were affected more, that was similar to Panda et al[10] study. More percentage of cases were found in the patients who had long duration of presenting symptoms. It was similar to the findings of Panda et al (88%) [10]. Most of the patients would not have agreed for surgery in early part of their presentation or the symptoms might have subsided with the use of systemic antibiotics, nasal decongestant drops and antihistaminic.

CONCLUSION:

Chronic dacryocystitis is a pretty common disease met with in Ophthalmic practice. Prior to the practice of DCR operation, DCY was the appropriate treatment of chronic dacryocystitis but with that the condition of epiphora would persist for the whole life of the patient. The opinion changed after DCR operation especially the Dupuy-Dutemps technique came into practice[11]. It was observed from the present study that with classical DCR employing a small skin incision, there was no disfiguring effect in most of the cases. Therefore, it can be opined that the technique of external DCR operation is a very economical and effective operation suitable in most Indian hospitals .However several patients present very late with the disease, even several years after onset of symptoms and by the time they report to the surgeon the sac is already atrophic or fibrosed due to several intermittent acute attacks as a result of which the surgeon has to perform dacryocystectomy operation. Therefore, social awareness for the early reporting of watering from the eyes or mucopurulent discharge from the eyes is much more important for better management of cases of chronic dacryocystitis.

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