

Clinical profile of adult patients with chronic dacryocystitis

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Abstract

Obstruction of the nasolacrimal duct from whatever source results in stasis with the accumulation of tears, desquamated cells, and mucoid secretions superior to the obstruction in a pathologically closed lacrimal drainage system. This creates a fertile environment for secondary bacterial infection and can result in dacryocystitis which is a constant threat to the cornea and orbital soft tissue. The study included 50 patients who attended ophthalmology out-patients and in-patients departments at. The patients were randomly selected and studied from the clinical and bacteriological point of view. Patients were examined with special reference to the lacrimal apparatus. Present study shows majority 18 cases (36%) were suffering from their symptoms mainly epiphora between 6 months-1year, followed by 3-6 months (34%) and 16% had their symptoms between 1-2 years. 6% of the cases had symptoms since 1-3 months, > 2-5yrs was the duration of the disease in 6% cases. This shows the chronic nature of the disease which progresses to various stages unless treatment is instituted.

Keywords: Chronic dacryocystitis, lacrimal apparatus, epiphora

Introduction

Chronic dacryocystitis is an important cause of ocular morbidity in India. The disease presents as epiphora with or without mucopurulent discharge. Chronic dacryocystitis is also found often in cases of corneal ulcer or may be diagnosed on routine syringing carried out prior to cataract surgery. This is a common oculoplastic problem. No cataract surgery can be planned without ruling out chronic dacryocystitis^[1].

It is an annoying condition and sometimes a sight threatening ophthalmic problem which affects the patients of every age. The obstruction may be an idiopathic inflammatory stenosis, the primary acquired nasolacrimal duct obstruction, which mostly affects middle-aged and elderly women. The obstruction may be secondary to trauma, infection, inflammation, neoplasm or mechanical obstruction, the secondary acquired lacrimal drainage obstruction. Distal obstruction converts the lacrimal sac into the stagnant pool, which easily becomes infected leading to chronic dacryocystitis with epiphora and purulent discharge^[2].

Obstruction of the nasolacrimal duct from whatever source results in stasis with the accumulation of tears, desquamated cells and mucoid secretions superior to the obstruction in a pathologically closed lacrimal drainage system. This creates a fertile environment for secondary bacterial infection and can result in dacryocystitis which is a constant threat to the cornea and orbital soft tissue. It is the most common cause of epiphora and may present with or without mucopurulent discharge^[3].

Dacryocystitis of non-specific origin can be acute or chronic^[4]. Acute dacryocystitis presents with severe inflammation and invariably leads to chronic dacryocystitis. Chronic dacryocystitis is more common and presents with epiphora and discharge. In the chronic form, the disease tends to be indolent.

Epiphora causes social embarrassment by constant watering and discharge and is a menace to the integrity of eye. The peculiar location of lacrimal sac at the junction of orbit and nose makes it frequently involved by diseases of both these sites causing chronic conjunctivitis, orbital cellulitis and infection may spread to cavernous sinus.

Methodology

The study included 50 patients who attended ophthalmology out-patients and in-patients departments at. The patients were randomly selected and studied from the clinical and bacteriological point of view. Patients were examined with special reference to the lacrimal apparatus.

First of all, the patient's demographic data was noted that included the age, gender, occupation, rural or urban and socioeconomic status according to modified version of the Kuppuswamy's socio-economic status.

Then detailed history was taken. The presenting complaints and duration of the complaints were noted, to study the different modes of presentation of the disease, its progression and complications.

Inclusion criteria

- ✦ Age >15 years.
- ✦ Patients with epiphora.
- ✦ Patients with purulent or mucopurulent regurgitation.
- ✦ Samples processed under aerobic conditions.

Exclusion criteria

- ✦ Age < 15 years.
- ✦ Patients with acute dacryocystitis.
- ✦ Patients with other ocular infection.
- ✦ Patients on antibiotics since past one week.

All patients included in the study underwent basic evaluation as mentioned in the standard proforma after obtaining written informed consent. Routine ophthalmic examination was conducted by the investigator, including slit lamp examination, paying special attention to the presence of discharge and epiphora. The presence of any anomaly of eye lids and other ocular adnexa were noted. Any coexistent ocular infection or inflammation was specifically looked for and cases excluded if did not meet the inclusion criteria. Routine ENT examination was also conducted, specifically to diagnose nasal pathology.

Results

Table 1: Age Incidence of chronic dacryocystitis

Sl. No.	Age Group	No of Cases	Percentage
1.	11-20 years	2	4%
2.	21-30 years	6	12%
3.	31-40 years	6	12%
4.	41-50 years	14	28%
5.	51-60 years	8	16%
6.	61-70 years	9	18%
7.	71-80 years	4	8%
8.	81-90 years	1	2%

This study shows highest incidence in the age group 41-50yrs (28%), followed by 61-70yrs (18%) and 51-60yrs (16%). Incidence is lower in extremes of age. Thus it is evident that chronic dacryocystitis is a disease of middle age.

Table 2: Chief clinical features

Sl. No.	Clinical Features	No of cases	Percentage
1.	Watering	22	44%
2.	Watering & Discharge	26	52%
3.	Swelling/Mucocele	2	4%

The present study shows watering/epiphora with mucopurulent discharge in 52%, firm nodular swelling in medial canthus or mucocele in 4% were various presentation. Present study shows majority 18 cases(36%) were suffering from their symptoms mainly epiphora between 6 months-1year, followed by 3-6 months (34%) and 16% had their symptoms between 1-2years. 6% of the cases had symptoms since 1-3 months, > 2-5 yrs was the duration of the disease in 6% cases. This shows the chronic nature of the disease which progresses to various stages unless treatment is instituted.

Table 3: Nature of regurgitate on ROPLAS test and lacrimal sac syringing

Sl. No.	RGT	No of cases	Percentage
1.	Clear fluid	11	22%
2.	Mucopurulent Discharge	30	60%
3.	Mucoid Discharge	9	18%

On regurgitation and lacrimal sac syringing, 60% cases showed mucopurulent discharge (MPD), 22% showed clear fluid (CF) regurgitation and 18% showed mucoid discharge (MD).

Discussion

In this study patients above the age of 15yrs were selected. The highest incidence of chronic dacryocystitis was found in the age 41-50 years (28%), followed by 61-70 yrs (18%) and 51-60 years. Similar age incidence was seen in the study carried out by Shah CP ^[5] *et al.*, with highest incidence occurring between 41-50 years (27%), followed by 21-40 and 51-60 years. In a study by Chaudhary IA ^[6] *et al.* (2005), the average age of the disease was found to be 50.5yrs (16-91yrs). In the analysis done by Tariq Farooq Babar ^[7] the most common age at presentation was 60 yrs (31.30%). Sood N.N ^[8] *et al.* 1967 showed peak incidence (72%) was above age group of 4th decade. Prakash R ^[9] *et al.* reported highest number of cases in age group 40-60 years (35%). Thus it is evident that the disease is common among middle aged and elderly people.

Present study found only watering/epiphora as the presenting symptom in 44% and the remaining presented with watering & discharge (52%), swelling at medial canthus either as firm nodule or in 4% which is lower than Tariq farooq ^[10] *et al.* who reported mucocele in 12.31%.

Our study documented more cases with complains of watering as well as discharge than with epiphora alone when compared with other studies. Our study showed most common duration of presenting symptoms between 6months-1 year 36% followed by 3-6 months in 34%. Epiphora for 2-3 yrs and longer duration could be present without clinical infection, representing simple stenosis of lacrimal duct.

A majority of patients (60%) had mucopurulent discharge. Mucoid discharge (18%) and clear fluid (12%) was noted.

Of the 50 patients in the study, 40 patients (80%) had regurgitation on pressure over lacrimal sac. The ROPLAS test was negative in 10 patients (20%). As per an Indian study by Devdatta J. Gohel^[1] the sensitivity and specificity of ROPLAS in detecting chronic dacryocystitis are 87% and 98% respectively. Thus the sensitivity of this test as per our study is nearer (83.33%) to that study.

Conclusion

- ✦ Watering/Epiphora and mucopurulent discharge of duration (> 6months to 1 yr) is the common clinical presentation.
- ✦ ROPLAS test was 83.33% sensitive in diagnosing dacryocystitis.
- ✦ Lacrimal syringing is a simple OPD procedure. This test gives clue to further investigate and treat this disease prior to any intraocular surgery because of potential risk of infection.
- ✦ Rhinological associations with chronic dacryocystitis like DNS (38%), hypertrophy of inferior turbinate, sinusitis, atrophic rhinitis on ARS are seen in patients of chronic dacryocystitis.

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