

Clinico-demographic profile of patients with chronic dacryocystitis in a tertiary care centre of Bihar

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Abstract

Aim: To evaluate the demographic profile and clinical presentations of patients operated for chronic dacryocystitis in our tertiary care institution

Materials and Method: This is a retrospective hospital-based study conducted with medical records of patients operated for chronic dacryocystitis and its complications during 2015-16, a period of two years.

Results: Of the total 122 cases operated, an average of 61 cases per year, most (33%) were in the age group of 41 to 50 years followed by 21 to 30 years. The mean age of presentation was about 42 years. The condition was twice as common in females as in males, with both sides equally affected. Majority (56.6%) of patients were having symptoms for 3 to 4 years consisting of epiphora (100%), discharge (80.3%), secondary conjunctival inflammation (24.6%) and swelling (16%). Regurgitation of pus on pressing the lacrimal sac area (ROPLAS) was the most consistent sign present in 86.1% of cases. Mucocoele, pyocoele, lacrimal abscess and fistula formation were some of the complications.

Discussion: Chronic dacryocystitis is a common cause of ocular morbidity in our region where majority of population has low socio-economic status, poor health awareness and ocular hygiene, and defers treatment with inadequate compliance to the same. The study confirms female preponderance of disease, occurring mostly in the fifth decade of life, with mostly unilateral affection and no side predilection. A lapse of 3-4 years before seeking treatment underlines the importance for imparting proper health education to the people of our state.

Keywords: Chronic dacryocystitis, Epiphora, Lacrimal abscess, Mucocoele, Nasolacrimal duct (NLD), Pyocoele

Introduction

Inflammations of lacrimal sac constitute a frequent cause of ocular morbidity in India. Chronic dacryocystitis is often secondary to obstruction at the lower end of nasolacrimal duct due to nasal polypi, hypertrophied inferior turbinate or extremely deviated nasal septum (DNS). It can also be secondary to facial trauma, surgery, sarcoidosis, granulomatosis with polyangiitis (Wegener's) or neoplasms.^(1,2) In most cases, no clear cause can be identified. Primary acquired nasolacrimal duct obstruction develops gradually and occurs mainly in women aged 40 years or older.⁽³⁾ It accounts for 87% of epiphora which causes social embarrassment due to chronic watering from eyes.⁽⁴⁾ Pain and redness in dacryocystitis is recurrent, with fever, erythematous swelling around the nasal aspect of lower lid and mucopurulent discharge from the inferior punctum.

Chronic dacryocystitis cases are common in Bihar where majority of population has low socio-economic status and health awareness, and avoids treatment for prolonged periods with inadequate compliance to prescribed treatment. Despite this, extensive literature search shows a paucity of similar studies on the subject from this region. Hence the present study was intended to fill this gap in knowledge, with the purpose to evaluate the demographic profile and clinical presentations of patients operated for chronic dacryocystitis in our institution.

Materials and Method

This retrospective hospital-based study included medical records of patients admitted for the management of and operated for chronic dacryocystitis in the institution over a period of 2 years from January 2015 to December 2016 in the in-patient department of the urban tertiary care teaching institute of Bihar province of eastern India. Their demographic profile and clinical presentations (including history and examination) were recorded, including signs as seen by diffuse illumination using torch light and slit lamp with focus on adnexa and medial canthi; regurgitation on pressing over lacrimal sac area (ROPLAS test) and results of syringing were separately noted, as were the results of speculum examination of nasal passages. Patients with nasal pathology were excluded from the study.

Data were entered in and analysed using Microsoft Excel (Microsoft Corporation, USA), and expressed as frequencies, proportions and measures of central tendency to establish the clinicodemographic pattern.

The study confirms to the tenets of the Declaration of Helsinki, and the institutional ethics committee approved it.

Observations

A total of 122 cases of chronic dacryocystitis were operated during the 2-year period. Out of these 64

(52%) were operated in 2015 and 58 (48%) in 2016, corresponding to an average of 61 cases per year. The procedures performed were either dacryocystorhinostomy or dacryocystectomy (Fig. 1).



Fig. 1: Operative treatment of chronic dacryocystitis by external dacryocystectomy

The youngest patient was 15 years old, and the oldest 70 years. Fig. 2 shows that maximum cases (40, 33%) were in the age group of 41 to 50 years followed closely by 21 to 30 years (34, 28%). Mean age at presentation was about 42 years, with a standard deviation of about 14 years. Median age at presentation was 45 years. Out of the total cases, there were 82 females and 40 males, an overall ratio of 2:1.

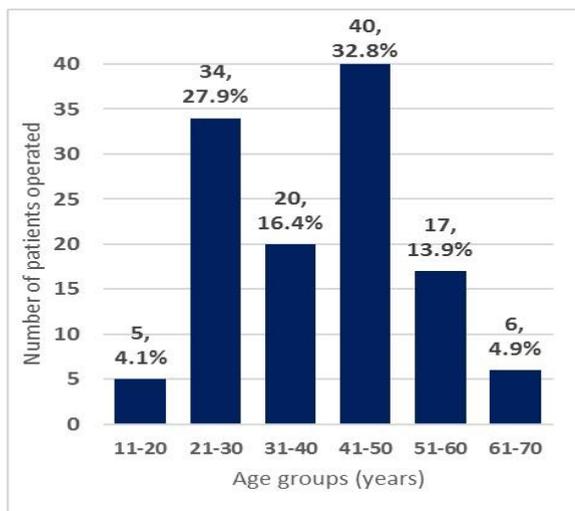


Fig. 2: Age distribution of patients of chronic dacryocystitis (N=122)

It was observed that only the left side was affected in 61 patients while only the right side was affected in an almost equal number of cases (59 patients). Two cases had bilateral affection.

Fig. 3 shows that most (69, 57%) of the patients were having symptoms for 3-4 years. There were five cases which presented within one year of appearance of

symptoms, whereas less than 1% had symptoms for a duration longer than five years.

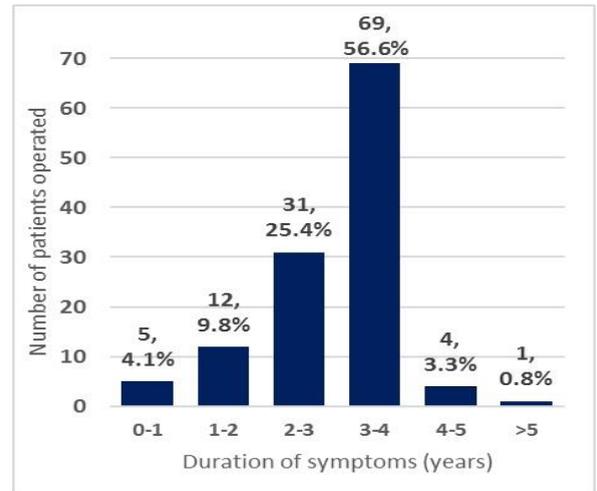


Fig. 3: Duration of symptoms in chronic dacryocystitis (N=122)

Most patients presented with multiple symptoms. Table 1 shows that epiphora was the commonest symptom present in all the cases, whereas discharge was found in 80% of cases; about 25% of cases presented with inflammation of the conjunctiva secondarily, and swelling in lacrimal sac area was reported in 16% of cases. Regurgitation of pus on pressing the lacrimal sac area was the most consistent sign present in 86% of cases. Nearly 16% presented with complications including mucocoele, pyocoele, lacrimal abscess formation (and associated pre-septal cellulitis) and fistula in the sac area at presentation (two patients), with recurrent episodes of pus discharge from the same.

Table 1: Symptoms and signs in chronic dacryocystitis

Symptoms and signs	Number of patients	Percentage
Epiphora	122	100.0
Discharge	105	80.3
Conjunctival congestion	30	24.6
Swelling in lacrimal area	19	15.6
ROPLAS test positive	105	86.1
Mucocoele	11	9.0
Pyocoele	6	4.9
Fistula	2	1.6
Lacrimal abscess/pre-septal cellulitis	2	1.6
Blocked NLD on syringing	122	100.0

Discussion

In this two-year retrospective study during 2015-16, a total of 122 patients were admitted for operative treatment of chronic dacryocystitis, with almost equal number of cases performed each year in our urban tertiary care hospital of Bihar. This consistency emphasizes that this problem is quite common in our region. Badhu B et al⁽⁵⁾ in the subtropical plains of Nepal with monsoon climate, and a similar study from Jharkhand, India⁽⁶⁾ also concluded that chronic dacryocystitis is common in these geographically adjacent locations.

Mean age at presentation was about 42 years, with a standard deviation of about 14 years. Median age at presentation was 45 years. Chronic dacryocystitis appears to have bimodal age-distribution with peaks in the age-group of 41-50 years followed by 21-30 years. Maximum incidence at approximately 40-55 years was also observed by Jacobs;⁽³⁾ Sharma et al⁽⁷⁾ have also found higher incidence in the fifth decade. It is known that older patients are predisposed to this condition as the lacrimal drainage system loses its elasticity and thins, and tears fail to flush debris. In some cases, especially in young women, stones may develop that lead to intermittent attacks of dacryocystitis; this has been termed acute dacryocystic retention syndrome.^(8,9)

There was a female preponderance with their frequency of affection being almost twice as that of males. This is similar to findings of hospital-based studies in rural India⁽⁴⁾ (which found a male-to-female ratio of 1:2.1) and in urban India⁽⁶⁾ (which observed it to be 1:2.3), as well as a study from Saudi Arabia⁽¹⁰⁾. It is also consistent with findings of Shigeta et al⁽¹¹⁾ who observed that anatomic differences of narrow bony nasolacrimal canal and acute angle between the bony canal and the nasal floor predispose females to primary acquired obstruction of the nasolacrimal system. The ratio was found to be 1:3 in the study of Jacobs;⁽³⁾ Sharma⁽⁷⁾ also observed that females were three to four times more affected compared to males, but Patel et al⁽¹²⁾ found an almost equal incidence in males and females. Thus, nonspecific acquired obstruction seems to occur more commonly in older patients and women.⁽⁹⁾

The overwhelming majority of cases had unilateral affection but overall, both sides were equally affected. This was consistent with the findings of Sood NN et al⁽¹³⁾ although some studies^(10,14) found more incidence of dacryocystitis on the left side and others⁽⁶⁾ on the right side.

More than half of the patients were having symptoms for 3-4 years. This was probably due to the fact that dacryocystitis is common in people having poor ocular hygiene and poor health-seeking practices who are unaware of long-term complications of the disease. Patients with poor hygiene are known to be at greater risk.⁽⁹⁾ This was also observed in the study from

Jharkhand⁽⁶⁾ where more than half of the patients were having symptoms for 2-3 years.

Most of the patients presented with more than a single symptom. Epiphora was the commonest symptom present in 100% of patients as also observed in studies from Pune⁽¹²⁾ and Ranchi.⁽⁶⁾ Discharge was found in four-fifths of cases and only one-fourth of all cases presented with red eyes. Regurgitation of pus on pressing the sac area was found to be the commonest sign present in more than four-fifths of all cases which is in concurrence with the findings of studies from Pune⁽¹²⁾ and Ranchi⁽⁶⁾ but not from Pondicherry.⁽¹³⁾ All patients showed blocked nasolacrimal passage on syringing.

Sood et al⁽¹³⁾ had found that 6.5% cases had acute exacerbations with pyocoele formation and 1.6% with lacrimal abscess formation and associated pre-septal cellulitis; another 1.6% cases showed fistula development due to previous acute exacerbations – a pattern of complications which is in concurrence with the present study.

Conclusion

Chronic dacryocystitis cases are common in Bihar as majority of population has poor ocular hygiene practices, health awareness and health seeking behaviour, avoiding treatment for prolonged periods.

The study confirms female preponderance of disease, occurring mostly in the fifth decade with mostly unilateral presentation and no side predilection. Epiphora was the most common symptom, and regurgitation of pus on pressure over lacrimal sac (ROPLAS) was the most common sign at presentation. A lapse of three to four years before seeking treatment underlines the importance for imparting proper health education to the people of Bihar.

Financial interests: None

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