ORIGINAL RESEARCH

A Follow-up Study of Dacryocystitis for Surgical Outcomes in Dacryocystectomy at a Tertiary Care Hospital in Northern Maharashtra, state of India

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Abstract

Introduction: Dacryocystectomy or DCT refers to complete surgical extirpation of lacrimal sac. Chronic dacryocystitis is the inflammation of the lacrimal gland and sac with epiphora as the most common presentation leading to ocular morbidity.

Aim: To evaluate outcomes of surgical management in current post-operative complications in chronic dacryocystitis.

Material and Methods: Studies the various modes of presentation and post-operative 1-month follow-up of DCT patient age, sex, laterality and presenting complaints

Results: Out of 60 patients, females were more commonly affected than males. Dacryocystitis was most common between age group 50 to 60 years. Housewives were more commonly affected followed by farmers and daily wage workers.

Keywords: Chronic Dacryocystitis, Dacryocystorhinostomy, Nationwide, Observational Study.

Journal of Research in Medical & Interpathy Sciences. 1(2);2023

Aim of Study

To evaluate the clinical profile and post-operative complications of DCT in patients with chronic dacryocystitis.

Introduction

Chronic dacryocystitis is a result of long-standing inflammation of the lacrimal sac. It usually affects females of age group 40 to 60 years. It is predominant in females due to the narrow lumen of the bony canal. Two types of surgeries for Dacryocystitis are performed. These include Dacryocystectomy (DCT) and Dacryocystorhinostomy (DCR). DCT is the conventional approach whereas DCR is the preferred surgery over DCT and can be performed by following techniques:

1) Conventional external approach DCR,
2) Endonasal surgical DCR,
3) Endonasal laser DCR,
4) Endocanalicular laser DCR. In our study, DCT was done in patients with chronic dacryocystitis.

Material and Methods

Study Centre: Tertiary hospital in Northern India
Study period: One year (January 2022 to January 2023).
Sample size: 60
Methodology: Patients coming to Ophthalmology OPD with complaints of watering associated with sticky discharge, and swelling over the lacrimal sac area were examined and two diagnostic tests were performed to confirm chronic dacryocystitis. These included ROPLAS (Regurgitation on the application of pressure over lacrimal sac region) is a non-invasive clinical test in the diagnosis of nasolacrimal duct obstruction. A positive test with the presence of clear or mucoid regurgitation was considered as standard for diagnosis. Another test performed was lacrimal sac syringing. In this cannula loaded with sterile saline is inserted into the punctum and canaliculus saline is injected into puncta and regurgitation is looked for. A clear or mucoid regurgitation with a complete block of the nasolacrimal duct was taken as standard for diagnosis. Demographic profile, occupation of the patient, symptoms, clinical examination, and systemic illness of hypertension, diabetes mellitus, and bronchial asthma were noted. Patients with confirmed diagnosis of chronic dacryocystitis were investigated and dacryocystectomy or DCT surgery was done under local anesthesia. Post-operative follow-up was done at one month and complications like watering, lid complications, wound dehiscence, and re-surgery were documented. The statistical analysis was done using *Jamovi* statistical software.

Results

Out of 60 patients, chronic dacryocystitis was observed in age group of 40 to 80 years with mean age of 62.6 years. Females

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Conflict of Interest: Authors declare no conflict of interest.

Funding Support: None

were more affected 38(64.6%), and males were 22(38.2%). 14 patients had diabetes mellitus, 10 patients had Hypertension and 1 patient had Bronchial Asthma.

Out of the total patients operated 50 patients complained of watering post-operatively, 5 patients had complained of discharge, 4 patients developed lid complications like ectropion and 1 patient required re-surgery for wound dehiscence.

Discussion

In our study, a higher incidence of disease was found in females which is 38 (64.6%). This higher incidence in female may be attributed to the narrow lumen of bony lacrimal canal and higher vascular congestive factors. It is comparable to a study carried out by Pawar and Patil6, where the incidence of Chronic dacryocystitis was seen in females in 56% of cases. Other comparable studies are Jacobs HG,[7] and R. Dalgleish *et al*.[8] (54%). Higher incidence of 61.60 67.86 and 84.6% were noted in Payal Katre *et al*.,[9] Surendra PW *et al*.,[10] and Saxena RC *et al*.,[11] respectively.

We also found that the disease prevalence was highest in the age group of 51 to 60 years that was 30.5% followed by 25.7% in the age group of 61 to 70 years, similar to another study.[10] Jacobs HG[7] found maximum incidence in age group of 40 to 55 years. While some studies have quoted a maximum age incidence in the 4th decade in their separate studies.[8,11,12] Duke Elder S[13] stated that the disease preferentially affects adults over middle age being relatively rare in children and adolescents. The highest incidence quoted by him also was in the fourth decade of life.

In our study, 42.2% had left sided obstruction, 39.6% had right side obstruction and 18.2% had bilateral obstruction, with no significant laterality found (resembling similar other studies).[7,14-16]

Also, out of 60 patients operated, 50 patients had complain of watering post-operatively, 5 patients had complain of discharge (0.083), 4 patients developed lid complications like ectropion and 1 patient required re-surgery. 14 patients had diabetes mellitus, 10 patients had hypertension and 1 patient had bronchial asthma. No co-relations have been found between the systemic diseases and post-operative outcomes in our study.

Conclusion

Chronic Dacryocystitis, though a common problem of lacrimal drainage system and most commonly presenting only with epiphora, is a much less recognized disease, especially in rural populations and in lower socio-economic communities, thus patients may present late with one or more complications. We concluded that Chronic Dacryocystitis was more common in females and in age group 51 to 60 years. Dacryocystectomy causes post-operative watering but relieves the patient of mucoid discharge and prevents complications of orbital cellulitis, sinusitis, even meningitis, cavernous sinus thrombosis, and brain abscess.

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