

# Case Report on Right Chronic Dacryocystitis with Lacrimal Sac Abscess

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## Abstract

**Background:** Dacryocystitis of the lacrimal sac, can be acute or chronic. Chronic dacryocystitis is prevalent, but acute dacryocystitis is uncommon, and it's usually caused by a nasolacrimal duct obstruction. Traumatic injury, infections, inflammations, and neoplasms are all possible causes of nasolacrimal duct obstruction (NLDO). Whatever causes NLDO, it leads to the stalling of tears, the accumulation of mucoid secretions, and the desquamation of cells, providing an ideal environment for bacterial infections and the development of dacryocystitis. **Case presentation:** A 23 years old male came to the ENT department with the chief complaint of right eye watery discharge for 1 year, and right lower eyelid swelling with pain over the right side of the face for 1 month. The patient had a history of road traffic accidents one year ago. For that, he underwent open reduction and internal fixation. But after 9 months, he was having a history of right frontozygomatic suture region infected plate for which he underwent surgery of infected Removal with right orbital volume correction. He had a history of 2 units of blood transfusion with no allergic reaction. On arrival, a physical examination of the eye was carried out which shows swelling over the right eyelids along with tenderness. The Contrast Enhanced Computed Tomography of paranasal sinuses was done along with the dacryocystography under local anesthesia after that he has undergone through Dacryocystorhinostomy under general anesthesia and later he was treated with antibiotics, analgesics, and antacids.

**Conclusion:** It is an inflammation of the tear-producing gland. Chronic dacryocystitis has 2 types namely, primary and secondary types. The primary variety, which affects 80% or more of women, is widespread and distinguished by a strong sex preference. The most significant contributing component to its cause appears to be heredity. The prevalence of the second variant is uncommon and roughly equal in both sexes. It is brought on by an illness or injury to the nearby parts. An external dacryocystorhinostomy is the best method of treatment for this condition.

**Keywords:** Dacryocystitis, Dacryocystography, Dacryocystorhinostomy.

## INTRODUCTION

Chronic dacryocystitis is the inflammation of the lacrimal sac, frequently caused by bacteria. Obstruction of the nasolacrimal duct converts the lacrimal sac into a reservoir of infection. It is a constant threat to the cornea and orbital soft tissue. (1) For a variety of reasons, the excretory system of the lacrimal gland is vulnerable to infection and inflammation. Due to the conjunctival and nasal mucosal surfaces, which are both generally bacterially populated, this mucus membrane-lined track is infectious. Tears from the eye are directed into the nasal cavity via the lacrimal excretory system, which serves this purpose. (2)

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## CASE PRESENTATION:

A 23 years old male came to the ENT department with the chief complaint of right eye watery discharge for 1 year, and right lower eyelid swelling with pain over the right side of the face for 1 month. The patient was apparently alright 1 year back when he developed right eye watery discharge, no foul smelling, no blood-stained. Right lower eyelid swelling for 1 month which is insidious in onset gradually progressing in amount, partially relieved with medication. Pain over the right side of face since 1-month, continuous dull aching type, not relieved with medication. Also having blurring of vision sometimes for 2 weeks.

The patient had a history of road traffic accidents one year ago. It was a two-wheeler accident with a car on the other side. He forcefully fell on the road facing toward the road and had major facial bone fractures. Right Lefort III, left Lefort II, Right ZMC, and Right Parasymphysis fracture with mid palatine split for which he underwent open reduction and internal fixation. After 9 months, he was having a history of right frontozygomatic suture region infected plate for which he underwent surgery of infected Removal with right orbital volume correction. He had a history of 2 units of blood transfusion with no allergic reaction.

On arrival, a physical examination of the eye was carried out which shows swelling over the right eyelids along with tenderness swelling of 3×2cm over the right side of the nose extending medially till the root of the nose, laterally 4cm away from the root of the nose, superiorly till the medial canthus right eye, inferiorly till ¾ right of the nose. Margins are well-defined skin over the swelling is erythematous in an inspection and palpation. Nose: Deviated nasal septum to left, the mucosa is normal pinkish. Oral cavity: Mouth opening 2 finger breadth, missing teeth in lower gums.

The CECT of paranasal sinuses shows Metallic mesh forming the floor and medial wall of right orbit with screw, Metallic plate with screw fixation of the right zygomatic arch, Postoperative changes in Sino nasal region, fractured of the hard palate, Metallic screws also noted anterior to the bilateral maxillary sinus, Fat from the zygomaticomaxillary gap in the sinus was found in a case with displaced fracture fragments of the posterolateral wall of the right maxillary sinus. The lateral pterygoid plate on the right side has fractured. Soft tissue edema in the right infraorbital area with fat stranding.

The patient has undergone dacryocystography under local anesthesia which reveals the obstruction of the right lacrimal duct at the middle Turbinate level. After obtaining the physical fitness for the surgery he has undergone through Dacryocystorhinostomy under general anesthesia and later he was treated with antibiotics, analgesics, and antacids.

## DISCUSSION:

Chronic dacryocystitis develops secondary to obstruction of the nasolacrimal duct (NLD) caused by infection or inflammation. The nasolacrimal passage is frequently attributed to intranasal disease when the disease is said to be caused by obstruction of the route in most cases. (3-10) Bacteria such as *S. aureus*, *S. pneumoniae*, *CoNS*, and *P. aeruginosa* are frequently implicated as the cause of chronic dacryocystitis, but they can differ from one place and patient to another. (11)

Before planning any intraocular operation, ophthalmologists should be aware of the presence of nasolacrimal blockage and any potential pathogens that may have been inoculated there due to the risk of endophthalmitis. A lacrimal abscess that has not been treated can progress. (12)

Dacryocystitis is a common disorder with recognizable symptoms and signs that aid in the diagnosis, however, its progression can occasionally be gradual and it frequently recurs. Additionally, it is linked to complications like the development of draining fistulae, recurrent conjunctivitis, and even abscesses, orbital cellulitis, and endophthalmitis in individuals who had intercurrent intraocular surgery. (13)

HL Cook and JM Olver et al suggested that Chronic dacryocystitis is typically treated with the first round of broad-spectrum oral antibiotics, then an external dacryocystorhinostomy (DCR), and finally intubation. Dacryocystectomy (DCT), which involves the removal of the lacrimal sac and any present fistulae, was used to treat chronic dacryocystitis. (14)

## CONCLUSION:

It is an inflammation of the tear-producing gland. Chronic dacryocystitis has 2 types namely, primary and secondary types. The primary variety, which affects 80% or more of women, is widespread and distinguished by a strong sex preference. The most significant contributing component to its cause appears to be heredity. The prevalence of the second variant is uncommon and roughly equal in both sexes. It is brought on by an illness or injury to the nearby parts. An external dacryocystorhinostomy is the best method of treatment for this condition.

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