



Bilateral Acute Dacryocystitis in an adult patient following Punctal Thermal Cautery for Dry Eye Syndrome

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Abstract : Bilateral acute dacryocystitis is an acute inflammation of the both lacrimal sacs, commonly seen with congenital nasolacrimal duct obstruction, in adults sometimes can be seen with bilateral sinonasal polyposis, bilateral inferior turbinate hypertrophy and rarely with atrophic rhinitis producing excessive crusting bilaterally causing potential nasolacrimal duct orifice obstruction, but here we have treated a patient with dry eyes due to primary keratoconjunctivitis sicca by bilateral lacrimal punctal thermal cautery and following which after 25 days the patient came back with bilateral acute dacryocystitis presenting with fever, swelling over both the lacrimal sac area, pain and tenderness over the swelling, we have managed the patient in our inpatient department with intravenous antibiotics, aspiration of the sac, injection of antibiotics into the sac, culture and sensitivity of the aspirate followed by surgical intervention for the dacryocystitis made us to present this journal.

Keyword : Bilateral acute dacryocystitis, keratoconjunctivitis sicca, dry eyes, punctal thermal cautery

Introduction:

Acute dacryocystitis is an acute inflammation of the lacrimal sac. When it is involving both the lacrimal sacs, it is called bilateral. Bilateral acute dacryocystitis is a rare entity. Commonly found in congenital dacryocystitis, that too commonly as chronic type, but rarely present as bilateral acute dacryocystitis. In adult patients, bilateral acute dacryocystitis is very rare. Common etiological factors include bilateral sinonasal polyposis, bilateral inferior turbinate hypertrophy and rarely bilateral atrophic rhinitis with excessive crusting. Nasolacrimal duct intraluminal pathology causing bilateral acute dacryocystitis is a very rare thing, hardly faced in our day today practice. Here we had an experience of 58 yrs old female presented with acute bilateral dacryocystitis following punctal thermal cautery for dry eyes management. The case management in our setup and its outcome was interesting and inspired us to bring in front of you to present this journal.



Fig.1 Bilateral acute dacryocystitis



Fig. 2 Bilateral acute dacryocystitis with clear cornea



Fig. 3

Case report:

A 58 yrs old female presented with pain and swelling over the both lacrimal sac area, fever for 4 days duration. she is a known case of dry eyes due to primary keratoconjunctivitis sicca. On examination, patient was febrile. On examination of the eyes, lids were mildly edematous, red, warm, tender swelling present over the both lacrimal sac area. Regurgitation test was not done because of its acute course. Anterior segment normal on both sides. Pupils reacting to light. Lens immature cataract on both sides. Visual acuity RE 6/9, LE 6/9. 25 days back patient underwent bilateral punctal thermal cautery for dry eye treatment. Before that patient had irritation, watering, photophobia for the past 1 year duration. Patient is a flower merchant in the temple gate. On routine followup patient had recurrent epithelial erosion. Patient was on lubricants for the same for 1 year. Instead of all the treatments patient had persistent symptoms and recurrent epithelial damage. Cornea was stain positive for rose bengal and fluorescein stains. Patient was evaluated for dry eye. It was concluded that tear aqueous deficiency due to primary keratoconjunctivitis sicca. Planned for punctal cautery. Then we did punctal thermal cautery on both sides. Post operative hospital stay was uneventful. Patient was discharged and went to home.

After 2 weeks of the treatment patient symptomatically and clinically improved. Corneal staining became negative. 10 days after the review, the patient presented with present illness. We admitted the patient and put her on intravenous antibiotics, inj. ceftriaxone 1 gm BD, inj. amikacin 500 mg BD. We have done lacrimal sac aspiration and sent for culture and sensitivity test. Injection ceftriaxone given intrasac on both sides.

Culture and sensitivity microbiological report came as staphylococcus aureus grown in culture and sensitive to ampicillin and amikacin. Patient was started on inj. ampicillin and inj. amikacin for 7 days. Swelling and inflammatory signs reduced. We planned for dacryocystectomy after 2 weeks on both sides, because it will give relief from dacryocystitis and also from the dry eyes. Dacryocystectomy done on both sides after 2 weeks and the postoperative period was uneventful. 7th day sutures removed and patient was discharged.

Discussion:

Acute dacryocystitis is commonly caused by streptococcus haemolyticus, staphylococcus aureus and pneumococcus. Microbiology of our case also came as staphylococcus aureus and responded well to the IV antibiotics. In tear aqueous deficiency, tear flow will be reduced through lacrimal sac and nasolacrimal duct, it may produce nasolacrimal duct stenosis or obstruction. Which might be asymptomatic due to dry eyes. In addition to that, total punctal occlusion gave rise to total absence of lysosome entering into the lacrimal sac and pave the way for the organism to grow and produced acute dacryocystitis with presumed preexisting nasolacrimal duct obstruction.

Primary keratoconjunctivitis sicca is the involvement of lacrimal glands alone, it can be confirmed by lacrimal gland biopsy. Since biopsy of lacrimal gland will aggravate the dry eye, it was not performed. In this patient complaints pertaining to the oral cavity were not present, it will not come under the secondary keratoconjunctivitis sicca type. This secondary type can be confirmed by oral mucosal biopsy and it is not required in this patient. Inference:

Nasolacrimal duct irrigation is a must before doing punctal occlusion, whether temporary or permanent.

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