Presumed Acute Adenoviral Dacryoadenitis Associated with Epidemic Keratoconjunctivitis: A Case Report

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ABSTRACT
Acute dacryoadenitis is an uncommon ophthalmic disorder that involves inflammation of the lacrimal gland. It is caused by various bacteria, viruses, fungi, and parasites. The most frequently involved causative microorganisms are staphylococcus bacteria and mumps virus. In this case report a 16-year-old male child with acute dacryoadenitis associated with adenoviral epidemic keratoconjunctivitis is described. As far we are aware of, this is the first case of presumed adenovirus-induced acute dacryoadenitis associated with keratoconjunctivitis.

Keywords: Acute dacryoadenitis, adenoviral keratoconjunctivitis, epidemic keratoconjunctivitis, lacrimal gland, lymphadenopathy

INTRODUCTION
Dacryoadenitis is a rare ophthalmic disorder. It is caused by various bacteria, viruses, fungi, and parasites. The most frequently involved causative microorganisms are staphylococcus bacteria and mumps virus. In this case report a 16-year-old immunocompetent male child with acute dacryoadenitis associated with adenoviral epidemic keratoconjunctivitis is described. As far we are aware of, this is the first case of adenovirus-induced acute dacryoadenitis associated with epidemic keratoconjunctivitis.

CASE REPORT
A 16-year-old boy presented to us complaining severe pain, watering, photophobia, redness, diminution of vision and drooping of upper eyelid in the right eye since 2 days. He was also having upper respiratory tract infection for 5 days. In his family, brother and sister were also suffering from acute red eye and diagnosed adenoviral keratoconjunctivitis. We also diagnosed many patients with adenoviral keratoconjunctivitis in the last 2 months from the same area. Ocular examination of the right eye revealed mechanical ptosis due to upper eyelid edema, erythema, circumcorneal congestion, follicles in upper and lower conjunctival fornices, chemosis and painful and enlarged palpebral lobe of lacrimal gland [Figure 1]. Corneal sensation decreased in all four quadrants in both the eyes. Anterior chamber showed normal findings. Visual acuity was 6/24 in the right eye and 6/6 in the left eye. About 3 mm × 2 mm size epithelial defect was present, which had a geographical configuration at 6'O clock position, 2–3 mm inside the limbus. Multiple subepithelial infiltrates were present in the whole cornea. Fluorescein staining showed superficial punctate staining of upper 3/4th part of the cornea. Bed of the geographical ulcer stains about 3 mm × 2 mm with fluorescein. The left eye also showed multiple white subepithelial infiltrations. Regurgitation on pressure over lacrimal sac area was negative. Pupillary reaction, extraocular muscle movements, intraocular pressure and dilated fundus examination in both eyes were normal. Bilateral tender preauricular lymphadenopathy was noted. Giemsa stain showed predominantly mononuclear cells in the conjunctival...
Adenoviral infection in the human eye can cause nonspecific conjunctivitis, follicular conjunctivitis, pharyngoconjunctival fever, epidemic keratoconjunctivitis, and chronic/relapsing adenoviral conjunctivitis. The diagnosis of adenoviral epidemic keratoconjunctivitis in present case based is on typical clinical signs such as positive family history, simultaneous community involvement, bilateral subepithelial white infiltrations, conjunctival follicles, tender preauricular lymphadenopathy, higher level of serum adenoviral antibodies IgM and presence of inclusion bodies in conjunctival smear. Epidemic keratoconjunctivitis is caused by adenovirus serovars 8, 19, and 37. Serological typing and polymerase chain reaction for adenoviral were not available in
our case, which is a limitation of our case report. Various laboratory tests such as viral culture, fluorescent antibody test, enzyme immune assay, hemagglutination test, complement fixation test and polymerase chain reaction for adenovirus were required for confirmation. Epidemic keratoconjunctivitis is a self-limiting disorder, and no anti-viral drug is effective. Treatment is mainly symptomatic. Topical cyclosporine-A 0.1% may be required in nonresolving subepithelial corneal infiltrations.

Adenoviral infection should be considered agent in the differential diagnosis of acute dacryoadenitis. To avoid treatment delay, acute dacryoadenitis should be kept in mind as a possible manifestation of adenoviral ocular infection during treatment of epidemic adenoviral keratoconjunctivitis.

REFERENCES


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