

Clinical & Refractive Optometry is pleased to present this continuing education (CE) article by Dr. Langis Michaud entitled **A Case of Severe Adenoviral Conjunctivitis**. In order to obtain a 1-hour Council of Optometric Practitioner Education (COPE) approved CE credit, please refer to page 203 for complete instructions.

A Case of Severe Adenoviral Conjunctivitis

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ABSTRACT

In current optometric practice, ocular emergencies are seen on a daily basis by most practitioners in Canada. Fortunately, optometrists have the right to prescribe topical medications, improving the healthcare services provided to patients. This case illustrates why steroids are important as a tool available to optometrists, considering the fact that 90% of red eyes among adults are inflammatory in nature.

SUBJECTIVE

S.L. is a retired 67-year-old carpenter who came to the University Clinic for the first time in April 2008 at the recommendation of his spouse. She felt that her husband was suffering from the same disease she had had six months ago, which was treated effectively in our clinic.

The patient complained about redness surrounding the left eye, which had begun three days prior and had increased since. He was photophobic and presented with heavy mucoid discharge throughout the course of the day. His was uncomfortable, even though he reported no loss of vision or reduced vision. He had applied comfort/tear drops as often as had been needed over the past three days, without noticing any improvement.

His general health was good; he took just one medication to control his systemic hypertension. He did not have diabetes, nor had he had any ocular surgery or other eye diseases in previous years. His last examination was done three years ago and his glasses were changed at this time.

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OBJECTIVE

Entering visual acuities were OD 6/6 (20/20), OS 6/6 (20/20) and OU 6/4.5 (20/15) with glasses on. Both pupils were reactive to light and accommodation without any pain. Ocular motilities were full and smooth in any gaze.

Anterior segment examination revealed swollen eyelids on the left eye with mucoid discharge flowing over the lids edges. There were no bacterial signs or blepharitis. Bulbar conjunctiva showed hyperemia grade 2+ with severe chemosis (Figs. 1A, B). The fluid inside the conjunctiva was whitish. There were follicles on the inner inferior palpebral conjunctiva. The cornea was spared and clear. Anterior chamber was quiet and calm without cells or flare. The right eye was normal without redness, chemosis, or swollen lids.

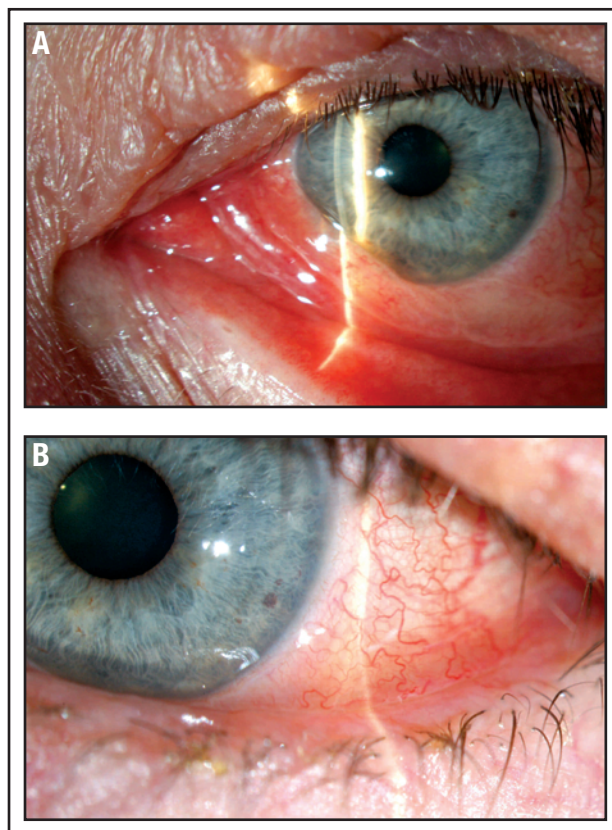


Fig. 1A, B Bulbar conjunctiva showed hyperemia grade 2+ with severe chemosis; initial visit

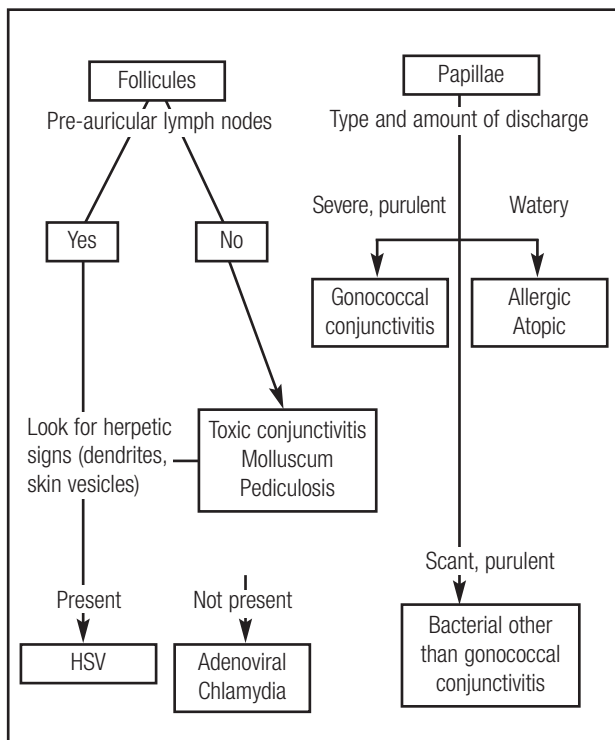


Fig. 2 Differential diagnosis schematic

The posterior segment evaluation was considered within normal limits OU without any sign of inflammation. Intraocular pressure measured by Goldmann tonometer gave 17 mm Hg OU, compensated for by 545 μ m corneal thickness on both sides. Preauricular adenopathy was noted on the left side.

ASSESSMENT

This patient shows severe acute conjunctivitis with chemosis and swollen lids. There is no keratitis associated with this disease. Differential diagnosis should be made on the presence of papillae or follicles as follows (Fig. 2)¹

It is quite clear that since we noted the presence of follicles and not of papillae, and there were no herpetic signs, the only possibilities remain adenoviral or chlamydial origin.

Considering the patient's symptoms, (itching, burning, foreign-body sensation) and the clinical signs (watery discharge, red and edematous eyelids, palpable preauricular node, redness and chemosis), an adenoviral etiology was suspected. Chlamydial inclusion conjunctivitis normally affects younger patients with a history of vaginitis, cervicitis or urethritis. Subepithelial infiltrates are a possibility and the secretions are more mucous and stringy than watery.

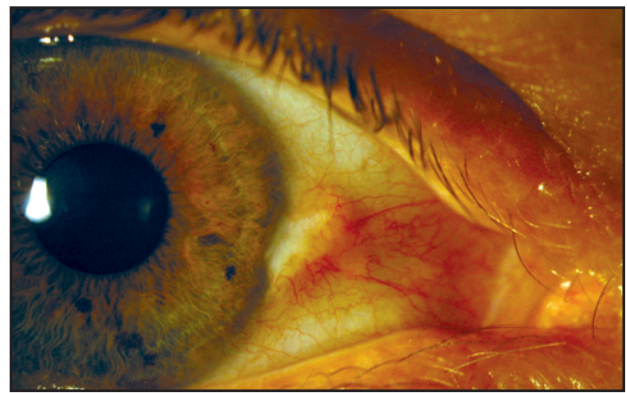


Fig. 3 Faint chemosis remained at final visit.

PLAN

Since adenoviral infection is considered self-limited, the goal of treatment is mainly to support the immune system and to make the patient more comfortable. However, in severe cases like this one, a proactive approach is preferred and steroidal treatment should be considered as a first-line therapy.

This is what we did by prescribing fluorometholone 0.1% (FML, Allergan) q2h00 x 48h00 and q4h00 for 5 days, then slowly tapered based on the evolution of the case. Artificial non-preserved tears were also recommended as needed, at least q2h00 as well. Cold compresses were recommended several times per day. In fact, this is the same treatment the patient's wife was prescribed by an ophthalmologist six months prior to treat the same disease.

The patient was advised that this type of conjunctivitis is very contagious, usually for 10-12 days, from the day of onset. It was emphasized to him that he should avoid touching his eyes, shaking hands with other people, sharing towels, etc. The patient was advised to restrict significant exposure to others as long as his eyes were red and weeping. Finally, I recommended to the patient that he wash his hands on a regular basis.

Follow-up examinations

I saw the patient 48h00 later and his condition had improved slightly, even though he reported a huge improvement in his level of comfort (Fig. 3). He followed the treatment as prescribed, using Refresh Tears (unidoses) regularly between FML drops. IOP was measured at 18 mm Hg. Since there was no significant change in the clinical appearance of the eye, I recommended that the patient continue the same regimen, FML q2h00, for another 48h00 and that he return for a follow-up.

At the time of his second follow-up visit, the patient was more comfortable and it was obvious, just by external

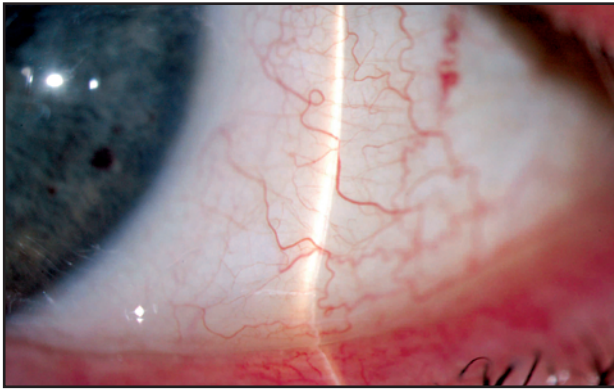


Fig. 5 Cured eye

examination that the treatment had begun to be effective. The redness was fairly reduced and the lids were no longer swollen. Chemosis remained at 80% of what it had been previously, but the clarity of the fluids inside the conjunctiva was improved. It was decided to reduce the FML regimen to q4h00 x 1 week, keeping the tears and compresses as previously recommended.

After a week, chemosis was reduced to 25% of what it had been previously and the patient felt normal. No other signs were recorded and the FML dosage was

reduced to TID x 4 days, BID x 4 days and QD x 2 days. The patient was therefore seen 10 days later and at that time almost all of the inflammation was gone. A slight chemosis remained (Fig. 4). IOP was still 18 mm Hg and no other adverse signs were noted. It was recommended that the patient continue FML QD for 1 week and that he then cease the treatment. He was also advised to come back if any redness or other discomfort returned.

CONCLUSION

This Case Report illustrates a case of severe conjunctivitis that required the use of anti-inflammatory drugs in order to improve the patient's condition and his symptoms. Even though this condition is not considered vision-threatening, it is a severe one that can lead to extreme discomfort. Apart from the pharmacological treatment, it is important to consider the contagious nature of this disease, which is rarely seen in regular practice, but will be increasingly encountered with the extension of optometric therapeutic privileges.

Steroids should be considered an essential component of topical drugs available for optometrists with a view toward providing our patients state-of-the-art care.

REFERENCE

1. Rhee, DJ, Friedberg MA et al. The Wills Eye Manual, 3rd edition, 1999, p. 120.