CLINICAL CONSULTATION

The Clinical Consultation section is offered as an educational exercise under the direction of Etty Bitton, OD, MSc, École d'optométrie, Université de Montréal, Montréal, Québec. It is intended to be a continuing forum wherein we as optometrists share our views and opinions with our colleagues. In this issue, Rick Trevino, OD, provided the case report and the questions that accompany it; Michael Radoiu, OD, and Jules Plante, OD, reviewed the case.

CASE REPORT: Optometric Care of the Patient with Juvenile Rheumatoid Arthritis

A 12-year-old, Caucasian girl presented for a routine eye examination and contact lens fitting. She had recently been diagnosed with pauciarticular juvenile rheumatoid arthritis (JRA) and is antinuclear antibody positive. She was prescribed Naprosyn 500 mg twice a day in order to control left knee and left ankle pain, and her rheumatologist instructed her to have an eye examination in order to rule out uveitis. Her last eye examination had been one year previous to this visit. She had no ocular complaints.

Our examination revealed best corrected visual acuity of 20/20 in each eye with a low myopic correction. The eyes were white and quiet. The anterior chambers of each eye were clear, and there was no iris synechia. Intraocular pressures were 10 and 13 mmHg in the right and left eyes, respectively. Pupils, motilities, and color vision were normal, and the dilated fundus examination was unremarkable. The patient was fit into daily wear, soft contact lenses.

After three months of uneventful contact lens wear the patient developed a conjunctivitis of the right eye. It resolved within two weeks but left her with chronic grade 1+ superficial punctate keratitis of the right eye. This has limited her contact lens wear because her right eye becomes injected, but not irritated, whenever she wears her lenses. The anterior chambers remained clear until six months following the diagnosis of pauciarticular JRA. She now has a few cells (two to four cells) but no flare noted in each anterior chamber. She remains asymptomatic. The eyes are white when not wearing contact lenses. This finding has remained stable for the past four weeks.

Questions

1) How should this patient's anterior chamber reaction be managed?
2) How should this patient be monitored?
3) What is the ocular prognosis for this patient?

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This 12-year-old female patient is experiencing a low-grade uveitis which is all too common in cases of pauciarticular juvenile rheumatoid arthritis (JRA). Though this anterior chamber reaction is scarcely noticeable by either the patient or the practitioner, allowing it to "smolder on" indefinitely could potentially put the eyes at risk. If unchecked, even the most benign looking reaction could become exacerbated and lead to posterior synechiae, band keratopathy, secondary glaucoma, or even cataracts. The visual prognosis for undetected, and therefore untreated, cases has traditionally been poor. If a JRA-associated uveitis is detected early, treated appropriately, and followed up carefully, the patient's prognosis is usually quite good.

The therapeutic armamentarium available to the Doctor of Optometry in these cases includes both mydriatic and corticosteroid eye drops. Mydriatics help stabilize the iris to prevent painful ciliary spasms and to reduce the likelihood of posterior synechiae. Topical steroid therapy helps reduce a debilitating anterior chamber reaction. While the use of mydriatics, except for Atropine, poses little risk to the patient, long-term steroid use can introduce a plethora of potential problems including, but not limited to, superinfections, elevated intraocular pressures, and cataracts.

Since this patient's uveitis is very subdued, the use of mydriatics (i.e., Tropicamide 1%) will probably have little or no therapeutic value. Mydriatic use can also result in the undesirable side effect of cycloplegia which would undoubtedly impact this young person's day-to-day activities. My recommendation would be to have the patient discontinue contact lens wear until further notice, check the corneal integrity to rule out any epithelial breaks, and then initiate a steroid treatment. I would start the patient on Pred Forte 1% taken OU q.i.d. for three days; this should effectively eliminate any anterior cell reaction. If no cells were noted, the drops should be

tapered to t.i.d. for two days, then b.i.d. for two more days, followed by q.d. for an additional day, and then discontinued.

Quarterly follow-up should be made for the next five to seven years to insure that there is no occurrence of sequelae to the uveitis. After seven years of being uveitis-free, the chances of additional episodes are slim and the prognosis for continued good vision is excellent.

REFERENCES

1. Kanski JJ. Juvenile arthritis and uveitis. Surv Ophthalmol 1990; 34(4): 253-267.
2. Fraunfelder FF, Hampton RF. Current ocular therapy. Fourth Edition, WB Saunders Company 1995; Section 11: 227-229.

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Juvenile rheumatoid arthritis, also referred to as Still's disease, is a type of arthritis that usually affects children and teenagers under 16 years of age. It often begins with a skin rash accompanied by fever and a generalized lymphadenopathy. The pauciarticular form is commonly associated with chronic anterior uveitis, especially if the patient is nuclear antibody positive, as in this case.

The uveitis manifests slowly but eventually tends to get more difficult to control, producing cataracts, glaucoma and, in some cases, phthisis bulbi or band keratopathy, a degenerative corneal condition that affects chronically inflamed eyes. The eye remains typically white and the patient is usually asymptomatic. In fact, many patients will initially consult for vision loss, either from a cataract or a band keratopathy.

This young patient has to be followed closely, as there is significant risk of severe vision loss on a long-term basis. It is imperative to watch for signs of aggravation of the anterior uveitis. The intraocular pressure should be measured and cells in the anterior chamber counted at three- to six-month intervals. We can use a 2 mm x 6 mm beam on a dilated pupil, counting the cells moving in the beam for a few seconds. An increase in the number of cells indicates the need for treatment. We can also evaluate the anterior chamber flare; significant flare will make the iris details appear blurred.

We should not consider contact lens wear as a risk factor for initiating anterior chamber inflammation (the source of uveitis being obviously endogenous), but it is usually contraindicated if the patient is prescribed topical eye drops.

These patients need to be followed. Anterior segment inflammation has to be controlled with cycloplegia and topical steroids. Since it penetrates the cornea more easily, the suspension form is often preferred to the solution form. Steroid-induced complications can be associated with the regular use of cortisone-based drugs, and some cases might eventually require periocular injections (subconjunctival or subTenon) or the use of immunosuppressive drugs.

The prognosis for this patient is guarded considering the probable cataract that can be difficult to remove satisfactorily, often hastening the visual deterioration. A vitrectomy combined with cataract extraction seems to give better results. The strong possibility of chronic glaucoma, due to poor eye response to intraocular surgery, makes the prognosis worse. Worse still is the appearance of a band keratopathy.