QUICK REFERENCE GUIDE

Care of the Patient with Anterior Uveitis

American Optometric Association

A. DESCRIPTION AND CLASSIFICATION

Anterior uveitis is an intraocular inflammation of the iris and ciliary body. The term “anterior uveitis” is often used synonymously with “iritis” (inflammation of the iris only) and “iridocyclitis” (inflammation of both the iris and the ciliary body). Anterior uveitis is termed “acute” when the inflammation lasts less than 6 weeks or “chronic” when it lasts longer.

B. RISK FACTORS

- ❑ Trauma
- ❑ Juvenile rheumatoid arthritis
- ❑ HLA-B27 genotype
- ❑ Pets (toxoplasmosis, toxocariasis)
- ❑ Behcet’s disease/syndrome
- ❑ Conditions endemic to certain parts of the country (histoplasmosis, Lyme disease)
- ❑ Trauma or surgical disruption of lens capsule
- ❑ Sexually-transmitted diseases (syphilis, Reiter’s syndrome, HIV)
- ❑ Anterior chamber intraocular lenses

C. COMMON SIGNS, SYMPTOMS AND COMPLICATIONS

Anterior uveitis may be differentiated from more common types of ocular inflammation by its unilateral presentation of signs and symptoms. The clinical signs and symptoms of nongranulomatous anterior uveitis are usually acute, while the granulomatous forms have a more insidious onset. Table 1 provides an overview of the signs, symptoms, and complications associated with anterior uveitis.

D. EARLY DETECTION AND PREVENTION

The acute nature of anterior uveitis in most cases leads the patient to seek care, resulting in early detection. Chronic forms, which may develop gradually and asymptomatically, can be detected during regular eye examinations.

If the disease is detected and treated early, sight-threatening complications may be avoided. When a systemic etiology is suspected, the patient should be referred to a primary care physician or other health care provider for evaluation and treatment.

E. EVALUATION

The evaluation of patients with signs and symptoms suggestive of anterior uveitis or patients diagnosed with anterior uveitis should include, but is not limited to, the following areas:

1. Patient History

- ❑ Age, gender, race
- ❑ Ocular history of previous eye disease or trauma
- ❑ Commonly reported symptoms, their duration and laterality

NOTE: This Quick Reference Guide should be used in conjunction with the Optometric Clinical Practice Guideline on Care of the Patient with Anterior Uveitis (Reviewed 2004). It provides summary information and is not intended to stand alone in assisting the clinician in making patient care decisions.

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- ❑ General medical history of systemic diseases
- ❑ Prior diagnosis of anterior uveitis, therapy used, and outcome

2. Ocular Examination

- ❑ Observation for general signs of systemic disease (e.g., joint deformities, oral lesions, rash, nail pitting)
- ❑ Monocular best corrected visual acuity
- ❑ External examination with illumination
- ❑ Gonioscopy
- ❑ Slit lamp examination (e.g., assessment of anterior chamber, conjunctiva, cornea, iris, lens, vitreous)
- ❑ Fundus examination (e.g., indirect ophthalmoscopy with pupillary dilation and examination with biomicroscope and auxiliary lens)
- ❑ Tonometry

3. Supplemental Testing

- ❑ Laboratory testing (communication and comanagement with patient's primary care physician advised)
- ❑ Imaging studies
- ❑ Fluorescein angiography

4. Assessment and Diagnosis

Establishing the diagnosis of anterior uveitis involves:

- ❑ Collecting and integrating clinical data
- ❑ Identifying the type of anterior uveitis as specifically as possible
- ❑ Ordering additional laboratory tests, x-rays, or consultations to rule out systemic etiologies

F. MANAGEMENT

Table 2 provides an overview of the evaluation and management of patients with anterior uveitis.

1. Basis for Treatment

Treatment of anterior uveitis is directed at five goals:

- ❑ Preserving visual acuity
- ❑ Relieving ocular pain
- ❑ Eliminating ocular inflammation or identifying its source
- ❑ Preventing formation of synechiae
- ❑ Managing intraocular pressure

2. Available Treatment Options

- ❑ Corticosteroids decrease inflammation by reducing the production of exudates, stabilizing cell membranes, inhibiting the release of lysozyme by granulocytes and suppressing the circulation of lymphocytes.
- ❑ Cycloplegics and mydriatics relieve pain by immobilizing the iris, prevent adhesion of the iris to the anterior lens capsule (posterior synechia), stabilize the blood-aqueous barrier and help prevent further protein leakage (flare).
- ❑ Oral steroids are useful in recalcitrant cases of anterior uveitis in which topical steroids have produced little response.
- ❑ Nonsteroidal anti-inflammatory drugs (NSAIDS) are useful in reducing inflammation associated with cystoid macular edema that may accompany anterior uveitis.

In cases of recurrent or bilateral anterior uveitis:

- ❑ Consider supplemental testing p.r.n.
- ❑ Rule out posterior ocular segment involvement
- ❑ Rule out systemic disease; refer to primary care physician for evaluation (when indicated)
- ❑ In cases of posterior or intermediate ocular segment involvement or systemic disease, comanage with physician and/or refer to retina specialist or uveitis clinic.

3. Patient Education

- ❑ Stress serious nature of condition and possible complications
- ❑ Encourage compliance with therapeutic regimen and followup appointments
- ❑ Inform patient of potential side effects of long-term corticosteroid use
- ❑ Review signs and symptoms of systemic conditions
- ❑ Instruct patient on signs of recurrence and the need to reinstitute therapy promptly

4. Prognosis and Followup

Most cases of anterior uveitis respond favorably to early diagnosis and treatment. Anterior uveitis may recur, especially when there is a systemic etiology.

Table 2 provides a summary of the frequency and composition of followup evaluations for patients with anterior uveitis.

- ❑ The initial followup visit should be scheduled between 1-7 days, depending on severity of the disease
- ❑ Once the condition has stabilized, followup should be every 1-6 months; the longer the eye is quiet, the longer the intervals between followup visits
- ❑ At a minimum, two to five followup visits after the initial diagnosis may be required

TABLE 1

Common Signs, Symptoms, and Complications of Anterior Uveitis

Type	Onset	Symptoms	Signs	Complications
Nongranulomatous Anterior Uveitis	Acute Not associated with a pathogenic organism	Pain in the eye Photophobia Occasional blurred vision	Circumlimbal redness, marked flare & cells, pupil usually miotic, posterior synechia Intraocular pressure (low, high, or unaffected) Fine, white keratic precipitates (KPs)	Posterior subcapsular cataract Secondary glaucoma Band keratopathy Cystoid macular edema
Granulomatous Anterior Uveitis	Insidious Generally follows a microbial infection	Pain in one eye Photophobia Occasional blurred vision	Circumlimbal redness, marked flare & cells, pupil usually miotic, posterior synechia Large yellow KPs and iris nodules (Koeppe or Busacca) Vitreous haze or cells (with associated posterior inflammation)	Posterior subcapsular cataract Secondary glaucoma Band keratopathy Cystoid macular edema

TABLE 2*

Frequency and Composition of Evaluation and Management Visits for Anterior Uveitis

		Composition of Followup Evaluations				Management Plan**	
Severity of Condition**	**Frequency of Evaluation****	**Visual Acuity**	**Slit lamp for Cells and Flare**	**Tonometry**	**Ophthalmoscopy**	**Initial**	**Followup**
MILD Visual acuity (VA) 20/20 to 20/30 Superficial circumcorneal flush No keratic precipitates (KPs) Trace to 1+ cells and flare Intraocular pressure (IOP) reduced < 4mm Hg	Every 4-7 days (or p.r.n. if worsening)	Yes	Yes	Yes	If not done on initial visit	Treatment optional depending on symptoms Cyclopentolate, 1% (t.i.d.) or homatropine, 5% (b.i.d.-t.i.d.) Prednisolone acetate, 1% (b.i.d.-q.i.d.)[a] Oral aspirin or ibuprofen, 2 tablets (q.4h)[b] Consider beta blockers if IOP is elevated Educate patient	No response—Increase frequency of medications Improving—Continue or taper medications Clear—Taper and/or discontinue medications
MODERATE VA 20/30 to 20/100 Deep circumcorneal flush Scattered KPs 1-3+ cells and flare Miotic, sluggish pupil Mild posterior synechiae IOP reduced 3-6 mm Hg Anterior vitreous cells	Every 2-4 days (or p.r.n.)	Yes	Yes	Yes	If not done on initial visit	Homatropine, 5% (q.i.d.) or scopolamine, 0.25% (b.i.d.) Prednisolone acetate, 1% (q.i.d.)[a] Oral aspirin or ibuprofen, 2 tablets (q.4h)[b] Consider beta blockers if IOP is elevated Dark glasses Educate patient	No response—Increase frequency of medications Improving—Continue or taper medications Clear—Taper and/or discontinue medications
SEVERE VA < 20/100 Deep circumcorneal flush Dense KPs 3-4+ cells and flare Sluggish or fixed pupil Posterior synechiae (fibrous) Boggy iris Raised IOP Moderate to heavy anterior cells	Every 1-2 days	Yes	Yes	Yes	If not done on initial visit	Atropine, 1% (b.i.d.-t.i.d.) or homatropine, 5% (q.4h) Prednisolone acetate, 1% (q.2-4h)[a] Oral aspirin or ibuprofen, 2 tablets (q.3-4h)[b] Consider beta blockers if IOP is elevated Dark glasses Educate patient	No response—Increase frequency of medications Improving—Continue or taper medications Clear—Taper and/or discontinue medications

[a] Shake steroid suspensions well before using. May use dexamethasone or fluorometholone steroid ointments at bedtime.

[b] Contraindicated in the presence of concurrent hyphema.

*Adapted from Figure 2 and Tables 4 and 5 in the Optometric Clinical Practice Guideline on Care of the Patient with Anterior Uveitis

** Adapted from Catania LJ. Primary care of the anterior segment, 2nd ed. Norwalk, CT: Appleton & Lange, 1995; 371-2

Legend:
b.i.d. Two times per day
q.i.d. Four times per day
t.i.d. Three times per day