

## Acute Anterior Uveitis

A Patient Education Monograph prepared for the American Uveitis Society

January 2003

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**NOTE:** The opinions expressed in this monograph are those of the author(s) and not necessarily those of the membership of the American Uveitis Society, its leadership, or the Editorial Board of [UveitisSociety.org](http://UveitisSociety.org). All medical decisions should be made in consultation with one's personal physician.

### Introduction

Uveitis is not a single disease. Similar to arthritis (joint inflammation), uveitis can be a part of many different disease processes. Different types of uveitis often follow characteristic patterns that are distinguished by factors such as what part of the eye is affected? Is the inflammation in both eyes or just one eye? Did the inflammation start suddenly or gradually? Did the inflammation remit completely or has it assumed a chronic course? Of these many subsets, the most common presentation for uveitis is undoubtedly acute anterior uveitis or AAU.

Anterior means that the front portion of the uvea is primarily affected by the inflammation. The anterior part of the uvea is the iris that surrounds the pupil and the adjacent ciliary body that synthesizes aqueous humor, the fluid that fills the front of the eye. Some ophthalmologists use the term acute to mean that the disease begins suddenly such that a patient notices symptoms within hours to days. The term acute can also mean the opposite of chronic (lasting a long time). Most patients with an acute uveitis have an inflammation that will clear completely within days to weeks to a few months after the onset, but this is not always the case.

### Course of Disease

The symptoms of AAU are generally eye redness, pain, and sensitivity to light (photophobia). Sometimes the vision is reduced, but this varies. Tearing, lid puffiness, and some drooping of the eyelid may also be present. Inflammation or infection in other parts of the eye may produce similar symptoms. For example, an ophthalmologist must distinguish AAU from diseases of other eye structures such as conjunctivitis (pink eye), keratitis (inflammation of the cornea), or scleritis (inflammation of the white part of the eye). The special microscope called the slit lamp is the most important tool that is used in distinguishing these entities. In AAU, white blood cells accumulate in the fluid filled space in the front of the eye. They are readily detectable by the slit

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lamp. AAU requires these cells to be present in the anterior chamber in order for the diagnosis to be made. All patients with AAU should initially undergo a dilated eye examination. This permits the examiner a view toward the back of the eye. The possible cause of AAU changes considerably if the inflammation in the front of the eye is accompanied by marked inflammation in the back of the eye.

AAU may have complications. For example, the iris may stick against the lens of the eye, (which is just behind the iris). These adhesions are called synechiae. They are a worrisome complication if they extend completely around the pupil. AAU may be associated with a rise in intraocular pressure, which may lead to glaucoma. AAU can also cause fluid to accumulate in the portion of the retina responsible for central vision, the macula. This complication is known as cystoid macular edema (CME). These complications may affect the choices for treatment.

**Diagnosis and Testing**

All patients with AAU should provide their doctor with a thorough medical history. The physician may elect to obtain laboratory tests and/or x-rays depending on what the patient has noted in other organs of the body.

**Cause of Condition**

AAU may occur as an isolated medical problem without any association with illness or inflammation elsewhere in the body. It might also arise as part of a localized infection such as that due to the virus that causes cold sores, herpes simplex. It can occur rarely as an adverse reaction to a medication. AAU may also be associated with an illness affecting multiple parts of the body. The most common illnesses associated with AAU are also associated with a tissue type known as HLA-B27. A detailed explanation of HLA-B27 and those diseases associated with HLA-B27 is found elsewhere on this website. Most diseases of other organs that are linked to AAU are apparent from associated symptoms. For example, bowel inflammation or colitis can be associated with AAU. A patient who has this association would usually have abdominal problems such as crampy abdominal pain, weight loss, and/or diarrhea. Some of the less common diseases associated with AAU include sarcoidosis, interstitial nephritis (a rare kidney inflammation), relapsing polychondritis (a rare autoimmune disease), and vasculitis (an inflammation of the blood vessel wall).

**Treatment**

The mainstay of therapy for AAU is eye drops. These usually include a topical corticosteroid drop such as prednisolone acetate and often a dilating drop such as cyclopentolate. The corticosteroid drop treats the underlying inflammation. The dilating drop reduces pain and helps to prevent the complication of the pupil sticking to the adjacent lens. The frequency of the drops depends primarily on the intensity of the inflammation. Some forms of AAU are associated with an infection such as herpes and will also require therapy directed at the known infectious cause. Other patients may have an illness of other organs that will also impact the treatment recommendations. On occasion AAU is severe enough to warrant treatment by the local injection (shot) of corticosteroid near the eye itself or by oral therapy such as prednisone. Any

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treatment—including eye drops—may result in adverse effects; these must be balanced with potential benefits in recommending therapies. Complications of inflammation such as an elevated intraocular pressure may also affect treatment choices.

**Prognosis**

Some forms of AAU have a tendency to recur. Prompt initiation of treatment at the time of recurrence may shorten the duration of the attack or improve the prognosis, but treatment should always be guided by a physician who should confirm the patient's suspected diagnosis at the earliest possible time.

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