IRITIS

[Eye Inflammation]

- Ankylosing Spondylitis
- Enteropathic Arthritis
- Psoriatic Arthritis
- Reactive Arthritis
- Undifferentiated Spondyloarthritis
- Juvenile Spondyloarthritis
What is Uveitis or Iritis?

Uveitis is the medical term for inflammation inside the eye. Think of the eye as a hollow, fluid-filled, 3-layered sphere. The outer layer of the eye includes the cornea and the sclera; the innermost is the retina; and the uvea is the middle layer. When any part of the uvea becomes inflamed, it is called Uveitis.

The uvea is composed of the iris, which controls the light levels inside the eye; the ciliary body, which is where some of the fluid for the eye is produced; and the choroid, which is the part of the eye that brings blood to the retina.

Often, when a portion of the uvea is inflamed, adjacent parts of the eye are inflamed as well. Since the uvea is made up of different parts, there are different forms of uveitis, depending on which area is affected. Consequently, other terms for uveitis include retinitis, retinochoroiditis, vitritis and iritis.

Our bodies rely on our immune system to protect us from infections. White blood cells are the heart and soul of our immune system. These white blood cells must continuously distinguish between what should be present in the body and what represents potential danger. Although white blood cells rarely make an error, when an error is made, inflammation results, such as in the case of uveitis or arthritis.
Episodes of iritis associated with spondyloarthritis generally resolve completely, sometimes in a few days. Rarely, an episode can last longer than three months.

An ophthalmologist should examine you to confirm the diagnosis, particularly if you suffer vision loss, have eye pain, or have redness that is present for more than a few days.

Uveitis is unique among all forms of inflammation in that a doctor can actually see white blood cells within the eye using the appropriate microscope. Although certain infections can also cause white blood cells to be present inside the eye, an ophthalmologist – a physician specialized in treating eye conditions – is usually able to tell the difference based on observations during an eye examination.

**Inflammation and Why It Occurs**

Inflammation can occur anywhere in the body and, although inflammation inside the eye is somewhat rare, it does occur, and affects about 1% of the population. To understand why this inflammation occurs, we need to take a look at our immune system.

**Symptoms**

The symptoms of uveitis will vary depending on the part of the uveal tract which is inflamed. In the typical presentation that occurs with the iritis associated with spondyloarthritis, an affected individual normally knows that something is happening in the eye a few hours or even a day or two before the inflammation begins in full. For example, the eye may feel tender or as if a foreign body is present. With iritis associated with spondyloarthritis, the eye becomes red and sensitive to light. Often tearing is present and sometimes the eyelid droops. Vision may be impaired, but this varies depending on the severity of the attack. Most often only one eye is involved, but the iritis associated with spondyloarthritis tends to be recurrent and can move to the opposite eye.
How is Uveitis Diagnosed?

A diagnosis of uveitis is commonly made by an eye care professional, such as an ophthalmologist or optometrist, after an eye examination. In order to diagnose uveitis, a physician will take into account a person’s medical history and may perform a variety of tests. In order to confirm that inflammation is occurring within the eye, a doctor may use various instruments including: a slit lamp microscope - which is a microscope that allows the doctor to examine the eye under high magnification, and an indirect ophthalmoscope - an instrument the doctor wears like a miner’s light, which is used in conjunction with a small lens held about three inches from the eye that can magnify from three to five times.

While many different tests are appropriate in evaluating patients with uveitis, these tests should be ordered selectively depending upon the medical history and the findings of the examination. Some patients require no tests, while other patients are subjected to a variety of laboratory evaluations.

For example, in addition to routine blood and urine testing, a physician may take a chest x-ray and order special studies of the eye such as a fluorescein Angiogram, which is performed by injecting a special dye, called fluorescein, into a vein in the arm in order to help evaluate the blood flow within the eye. An ultrasound examination of the eye is also helpful in certain circumstances.

Once a diagnosis of uveitis is made, it is important to determine whether the inflammation is confined to the eye or whether it fits into a pattern suggesting that it is a part of a syndrome or a systemic illness, such as ankylosing spondylitis.
Who Gets Uveitis?

Uveitis can affect persons of any age and of either sex, but uveitis is most common in individuals between the ages of 15 and 50. Uveitis can occur by itself, limited only to the eye, or it can be a secondary condition to inflammation elsewhere in the body. An example of secondary uveitis is when it occurs in association with spondyloarthritis. Uveitis also occurs in association with other systemic diseases such as psoriatic arthritis, inflammatory bowel disease, juvenile arthritis, Bechet’s disease, and sarcoidosis.

Genetic factors play an important role in the development of uveitis, but environmental factors are also contributors and the relative importance of each is still being studied.

There are many causes of a red eye besides uveitis, and some forms of uveitis do not even produce redness.

Treatment

Appropriate treatment for uveitis depends upon the underlying cause, the severity, and the uniqueness of each patient. Obviously, the antibiotics that might be useful for an infectious cause of uveitis would not be useful for non-infectious problems.

For iritis that is associated with spondyloarthritis, the usual treatment consists of topical corticosteroid eye drops along with a dilating eye drop. The eye drop initially is given frequently, sometimes hourly or more. The dilating drop helps to relieve muscle spasm in the eye and reduces pain, as well as mitigating complications from the inflammation.

If the inflammation of iritis is very severe or if it is not responding to the topical corticosteroid eye drop, a periocular corticosteroid injection can be used; this is an injection administered to the area around the eye. This type of treatment is very similar to injecting a joint with cortisone and can provide prompt relief. Rarely, a patient with spondyloarthritis may also require the brief use of oral prednisone for a severe bout of eye inflammation.

Sulfasalazine and methotrexate are medications taken orally and are sometimes effective in reducing the frequency and intensity of attacks. However, patients must take these medications continuously, while in the majority of patients iritis attacks are separated by many years. Consequently, most patients do not wish to take a daily medication for a disease that is so episodic.

The injected TNF inhibitors, such as adalimumab or infliximab, also help to prevent attacks. However, their cost and risk usually do not justify their use simply for iritis or uveitis. In the setting of spondyloarthritis, these medications are more often given for the indications of joint disease. But in situations where the uveitis is persisting for longer periods of time or where prolonged steroid eye drops are required, then TNF inhibitor injections are often considered.

Very little is known about diet and exercise in the treatment of uveitis. However, stress is a known trigger for many diseases, and efforts to reduce stress are always beneficial.
Complications

Glaucoma - an elevation of intraocular pressure that damages the optic nerve - rarely complicates the iritis of spondyloarthritis. It is usually treated with additional eye drops.

An additional complication is when the pupil becomes stuck in a closed position. Often it will begin to move after appropriate drops, but if it is stuck in a complete circle, emergency laser treatment is sometimes given to be sure that the fluid within the eye can continue to circulate.

Cataract, or a clouding of the lens in the eye, can also be a complication of inflammation. Moreover, the chronic use of corticosteroids can lead to cataract. Cataract is very successfully treated by surgery in the majority of cases. To avoid cataract formation, an eye care expert should work with you to use the amount of corticosteroid appropriate for your particular case.

Another complication, macular edema, or fluid leakage in the area of central vision, is treated by controlling the underlying inflammation.

Prognosis

Most patients with iritis in association with spondyloarthritis do not have chronic or persistent inflammation, although exceptions occur. The general prognosis is good and vision is normally fine between attacks.
Future Outlook

Several centers in the U.S. are actively performing research to understand and treat uveitis more effectively. International collaboration assisted by the Spondylitis Association of America has helped to identify genetic susceptibility factors in the iritis associated with spondyloarthritis. Additionally, several genes associated with rare forms of uveitis are being characterized.

New therapies are also being studied. The biologic treatments such as the TNF inhibitors are potent for some individuals, although rarely prescribed for the iritis in association with ankylosing spondylitis.

However, there are new biologic medications being developed and tested specifically for uveitis.

Another innovation is the ability to place corticosteroid directly in the eye through a slow release mechanism that provides medication for six months to three years. This exciting development is rather effective, but includes possible risks such as cataract, glaucoma, bleeding, and infection.

As the causes of uveitis are better understood, medical research will continue to bring new treatments and new prevention measures. Over the last decade, we have seen numerous advances in the diagnosis and treatment of uveitis.

Special thanks to James Rosenbaum, MD for authoring this pamphlet on behalf of SAA, and to Robert Inman, MD for updating it in 2018.

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The Spondylitis Association of America was the first, and remains the largest, resource in the U.S. for people affected by spondyloarthritis. For more than 35 years, SAA has dedicated all of its resources to funding medical research, education, advocacy, and supportive programs and services that directly benefit the spondylitis community.

By joining SAA you gain access to tools that will improve your own quality of life while also making a difference for the 2.7 million affected people throughout the nation. Join today and receive:

- “Spondylitis Plus,” our information-packed, advertising-free quarterly news magazine
- SAA’s Patient-to-Patient Recommended Rheumatologist Directory
- Access to exclusive Members-Only content on spondylitis.org
- A complimentary copy of our guidebook, “Your Guide to Living with Ankylosing Spondylitis”
- Discounts on SAA educational and awareness products, such as books, DVDs, and exclusive, limited edition SAA logo items
- The satisfaction of knowing that you are part of an extraordinary community of patients, friends, family, and healthcare professionals dedicated to finding the cure!

There are over 100 types of arthritis. At SAA, we focus on one – yours. So that no one has to face spondylitis alone.