

## RED EYE

### **SUBCONJUNCTIVAL HEMORRHAGE**

A subconjunctival hemorrhage is often the cause of acute ocular redness. The diagnosis is based on simple observation of the characteristic features of such a hemorrhage: the redness, which is unilateral, is localized and sharply circumscribed, the underlying sclera is not visible, the adjacent conjunctiva is free of inflammation, and there is no discharge. There is also no pain, and vision is unaffected. Contributory factors include trauma (which may be so minor that the patient does not recall it), fragile conjunctival vessels, bleeding disorders, anticoagulation therapy, and hypertension. A subconjunctival hemorrhage sometimes results from prolonged coughing, vomiting, or a vigorous Valsalva maneuver.

### **CONJUNCTIVITIS**

Of the disorders that cause a red eye, conjunctivitis is the one that the primary care physician is most likely to encounter. Conjunctivitis is characterized by dilatation of the superficial conjunctival blood vessels, resulting in hyperemia and edema of the conjunctiva, with discharge. A purulent discharge generally suggests a bacterial infection, but otherwise, the nature of the discharge is not clinically useful in determining the cause. Fluid may accumulate beneath the loosely attached bulbar conjunctiva, causing it to balloon away from the globe (a phenomenon known as chemosis). Patients with conjunctivitis do not usually report visual problems .

#### **Viral Conjunctivitis**

#### **Bacterial Conjunctivitis**

#### **Chlamydial Conjunctivitis**

### **Allergic Conjunctivitis**

*Seasonal allergic conjunctivitis*, a type I, IgE-mediated hypersensitivity to pollen, animal dander, or dust, is the most common form of ocular allergy and is often encountered in patients with atopic disease. *Perennial allergic conjunctivitis* is similar, but the symptoms are less severe. *Conjunctivitis medicamentosa*, a contact allergy, is characterized by a red eye with eyelid edema, erythema, and scaling in a patient using a topical ophthalmic medication. The hallmark of allergic conjunctivitis is

**itching**, often accompanied by tearing and nasal congestion. There is bilateral dilatation of the conjunctival blood vessels, with varying degrees of chemosis and a mucoid discharge.

## **BLEPHARITIS AND OTHER EYELID ABNORMALITIES**

Blepharitis, an acute or chronic inflammation of the eyelid often associated with conjunctival inflammation, is caused by a variety of infectious agents, allergic disorders, and dermatologic diseases. When bacteria, particularly staphylococci, colonize the eyelash follicles and the meibomian glands, excess secretion of abnormal lipids occurs. Ocular irritation ensues, with sensation of the presence of a foreign body, accompanied by erythema and edema of the eyelid margins, misdirection and loss of eyelashes, conjunctival hyperemia, and instability of the precocular tear film.

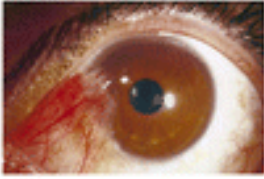
## **EPISCLERITIS**

The episclera lies beneath the conjunctiva and over the sclera. Episcleritis E, which occurs much less often than conjunctivitis, is a self-limited, recurrent, presumably autoimmune inflammation of the episcleral vessels. It is characterized by the rapid onset of redness, a dull ache, and tenderness on palpation. Vision is unaffected. Discharge, if present, is watery.. An oral nonsteroidal antiinflammatory drug (e.g., aspirin) may relieve the symptoms, but reassurance that the condition is self-limited and will clear spontaneously is often all that is required.

## **SCLERITIS**

Scleritis can impair vision and may be associated with a life-threatening vascular or connective-tissue disease (e.g., rheumatoid arthritis). Fortunately, scleritis is much less common than conjunctivitis or episcleritis. The redness may be focal or diffuse, and the underlying sclera is pink. Typically, there is moderate-to-severe, deep ocular pain and tenderness on palpation. The diagnosis of scleritis calls for a prompt referral to an ophthalmologist; an oral nonsteroidal antiinflammatory drug may help relieve symptoms in the interim. Treatment often requires systemic corticosteroids, antimetabolites, or both and should be managed concurrently by the ophthalmologist and the primary care physician.

## **PTERYGIUM**



A pterygium is a benign, degenerative conjunctival lesion often seen in hot, dusty climates, particularly among persons who spend large amounts of time outdoors and are exposed to ultraviolet light (e.g., fishermen and farmers). The lesion may extend into the peripheral cornea, but unless the paracentral cornea is involved, vision is unaffected. Lubrication with artificial tears often provides adequate relief

## **ACUTE ANGLE-CLOSURE GLAUCOMA**

### **ACUTE ANTERIOR UVEITIS**

### **SUPERFICIAL KERATITIS**

A wide variety of factors, including dry eyes, topical medications, viral conjunctivitis, exposure to ultraviolet light, use of contact lenses, blepharitis, and eyelid abnormalities, can cause superficial keratitis. This disorder is characterized by an inflammation of the corneal epithelium and superficial stroma, with conjunctival hyperemia.

## Differential Diagnosis of “red eye”

	Conjunctiva	Pupil	Cornea	Anterior chamber	IOP
<b>Subconjunctival Haemorrhage</b>	Bright red	Normal	Normal	Normal	Normal
<b>Conjunctivitis</b>	Injected vessels, fornices. Discharge	Normal	Normal	Normal	Normal
<b>Iritis</b>	Injected around cornea	Small, fixed, irregular	Normal, KPs	Turgid, deep	Normal
<b>Acute glaucoma</b>	Entire eye red	Fixed, dilated, oval	Hazy	Shallow	High