

that all pain must be made evident through the branches of the fifth nerve. Pain in the eye, as in other portions of the body, is either inflammatory or non-inflammatory, and inflammation of any of the structures of the anterior portion of the eye is accompanied by pain, thereby differing from inflammations of the lining membranes and contents.

In *Conjunctivitis*, although the nature of the disease is evident at a glance, the character of the pain is distinctive—a feeling of smarting and dryness, itching and sensations of sand in the eye; occasionally the nerve branch supplying the lachrymal gland partakes in the irritation, causing a copious flow of tears. The patient describes this pain accurately and localizes it correctly, indeed he not infrequently indicates the exact point upon the palpebral conjunctiva at which a foreign body is situated.

*Episcleritis* is not usually characterized by pain, but it may occur owing to a secondary compression of the ciliary nerves by the inflammatory exudation.

The pain accompanying *Ulceration of the Cornea* is, as a rule, acute, and referred to the ciliary region. Associated with this pain there is frequently Photophobia, in the production of which a curious reflex occurs. When the light falls upon the retina, there follows a painful blinding sensation, accompanied by an uncontrollable impulse to close the eyes. The point to be observed is, that the pain is not caused by the light irritating the inflamed cornea, but by light falling upon the uninjured retina. The optic being a nerve of special sense and almost, if not entirely, devoid of common sensation, it is evident that, for the production of this reflex, the irritation must be transferred to the sensory nerve of the eye—the fifth; probably the same chain is concerned in the reflex sneezing which occurs in some persons when passing suddenly from dim into bright glaring sunlight. It is possible that there is a sufficiently intimate connection between the optic and fifth nerves in the retina, to allow the transference to take place there. Photophobia is a valuable symptom, as it usually indicates that the cornea has become affected.

In *Iritis* there is acute suffering. The pain is felt in the eyeball and radiating over the regions supplied by the supra and infra-orbital branches of the fifth, and sometimes along the side of the

nose. It is very intense in character, worse at night and early in the morning. In this affection there is pain when the eye is exposed to light, but it differs from that of photophobia in being direct and not reflex, the inflamed and painful iris contracting when the light falls upon the retina and so causing the pain directly. Iritis may be accompanied by photophobia also. When iritis is accompanied by tenderness to the touch, we know that the ciliary body has become involved in the inflammation—a condition known as *Irido-cyclitis*; the degree of tenderness being a good gauge of the severity of the process. The only other affections giving rise to tenderness on pressure are glaucoma and neuralgia, and in these the tenderness is neither constantly found, nor is it confined to the points of contact.

*Acute Inflammatory Glaucoma* gives rise to severe pain in the eye, occurring chiefly when the head is congested. There may also be acute pain in the bones forming the orbit. Accompanying the pain there is inflammation and chemosis of the conjunctiva, with subconjunctival injection. Chemosis and tumefaction of the lids also occur in severe cases. The pain in the eyeball is owing to the stretching of the ciliary nerves, due to the increase in the contents of the eye, and to this stretching of the nerves is to be ascribed the dilatation and immobility of the pupil, as well as the anæsthetic condition of the cornea. Coincident with the onset of acute glaucoma, there is usually some febrile disturbance, with increased rapidity of the pulse and vomiting. In this connection it may be well to remind you of the fact, that atropine will induce glaucoma in an eye predisposed to it, and the application of atropine to an eye already suffering from this affection will materially assist the progress of the disease.

In *Suppurative Choroiditis*, which involves the entire uveal tract, the pain is indescribable and the ball exquisitely sensitive to the touch.

The ordinary choroidal and retinal inflammations are unaccompanied by pain, so also with affections of the vitreous humor and optic nerve.

Tenderness in a shrunken eyeball indicates inflammatory action involving the remains of the ciliary nerves, and is an indication for its removal, to avoid sympathetic inflammation in the sound eye.

Intra-ocular tumors, especially sarcomata, occasionally give rise to aching pain.