

of the sclerótica commonly occupy only one side of the eyeball, so does the protrusion in question. The protrusion is generally near the cornea, as if the corpus ciliare was the seat of the disease, and more frequently above, or to the temporal side of the cornea, than below, or to its nasal side. In some cases, there is only one protrusion, which may enlarge to the size and prominence of a filbert; in others, a number of tumours, of various sizes, surround the cornea; while, in a third set, the whole eye is enlarged, and the sclerótica attenuated in its entire circumference. Such tumours, or protrusions of the choroid, have received the names of *circumscripta albugo*, *varicositas oculi*, *hernia choroidea*, *staphyloma corporis ciliaris*, and *staphyloma sclerótica*. They generally present numerous varicose vessels ramifying over them.

"The front of the eye, however, is not the only seat of staphyloma of the sclerótica and choroid. Scarpa tells us that he had never met with any tumour or elevation of the sclerótica on its anterior surface, resembling a staphyloma; but that he had twice happened to meet in the dead body with staphyloma of the posterior hemisphere of the sclerótica.

"**Displacement of the Pupil.**—Although the iris is seldom affected with inflammation in choroiditis, the pupil, in many of the cases which I have witnessed, underwent a remarkable change of place. The iris is always narrowed towards the portion of the choroid which it affected, and in many instances, the pupil is observed to have moved so much out of its natural situation, as to be almost directly behind the edge of the cornea. Upwards, and upwards and outwards, are the directions in which the pupil is most frequently observed to become displaced. It occasionally continues small and moveable, in other cases it is immovable, but not dilated; in very severe cases it is greatly enlarged, the iris having entirely disappeared at that part of the circumference towards which the displacement of the pupil has happened. The pupil does not return to its place, even although the other symptoms of choroiditis are subdued. We sometimes observe the iris, in cases of choroiditis, to be of a slate colour, and the pupil to be more or less filled with lymph. These changes denote the previous existence of iritis.

"**Opacity of the Cornea.**—is not a necessary, although a frequent attendant on choroiditis. It is generally the edge of the cornea nearest to the portion of affected choroid which becomes opaque, so as to resemble part of a broad arcus senilis; or as if the sclerótica were intruding on the cornea, the rest of the cornea remaining perfectly clear. In other cases, there are pretty extensive, but very irregular spots of whiteness, more the effect apparently of interrupted nutrition than of inflammation. In some cases I have observed the cornea smaller than natural, but more frequently it not only becomes almost quite opaque, but partaking in the staphylomatous degeneration of the neighbouring sclerótica, it even undergoes a degree of dilatation, so as to become considerably broader and more prominent than in its natural state, and scarcely distinguishable from the attenuated sclerótica. I have sometimes thought that in such cases, a watery effusion might have separated the ciliary ligament, so as to lodge between the cornea and sclerótica externally, and the iris and choroid internally. From the affection of the cornea alone, in such cases, independently of the interior changes of the eye, the patient's vision may be almost or altogether lost.

"In consequence of choroiditis, the eye may enlarge so much as to protrude from the orbit to a very considerable degree, without much inflammation of the sclerótica and conjunctiva, these tunics being merely thinned by the pressure of the distended choroid. After a time, however, the eye, in this state of exophthalmos, is apt to suffer from external inflammation, in consequence of being, but imperfectly protected by the lids, or it may be in consequence of cold or mechanical injury. When the inflammation, thus excited, runs to a great height, the conjunctiva becomes chemosed, puriform fluid is deposited behind the cornea, or between its lamellæ, the eye bursts, continues to swell and protrude still more, assumes a fungus appearance, bleeds profusely, and being productive of great pain and deformity, evidently requires to be extirpated.

"**Intolerance of Light and Epiphora** generally attend this disease in a considerable degree.

"**Pain.**—This varies much in different individuals. When there is as yet no protrusion, the pain is moderate; when the sclerótica is much pressed and distended, and especially when this

takes place suddenly, and is attended with considerable increase of redness, the pain in the eye becomes severe, and sometimes furious. Hemiplegia is also present, affecting principally the top of the head, the high part of the temple, and the cheek. It is not strictly circumorbital, nor is it strikingly nocturnal.

"**Vision** is variously affected in choroiditis. In some instances, the very first symptom complained of is dimness of sight. The patient generally complains of photopsia, and not unfrequently of iridescent vision. Hemipopia, all objects to one or other side of a perpendicular line, or above or below a horizontal line, appearing dim, all objects appearing confusedly, and as if double, even when viewed with one eye, are symptoms which not unfrequently distress the patient long before the redness or blueness of the eye attracts attention. If the disease goes on, we sometimes find that total blindness ensues, even when the choroid appears but partially affected; while in other cases the whole eyeball is evidently enlarged and discoloured, and yet a considerable degree of vision is retained.

"Recovery is always slow. If the disease has gone to any considerable length, it is scarcely ever completely removed. The vestiges of it are in general permanent, even after it has been completely checked in its progress. In many cases we may reckon ourselves fortunate if we arrest the disease. Yet it sometimes happens that the cure proceeds to a degree beyond our expectation. I attended a gentleman who many years before had lost all useful vision in the left eye from this disease. The right was now attacked. Both pupils were greatly displaced; the visible arteries of the right eye were much dilated, and the sclerótica at different places considerably attenuated; the left eye was enlarged, of a pretty deep blue colour, and a great part of the cornea opaque. By bloodletting, counter-irritation, and other remedies, the disease was arrested in the right eye, and very unexpectedly the left eye recovered to such a degree, that he was again able to read with it an ordinary type."

The "redness" which Dr. Mackenzie describes above as the first and most prominent symptom is one of the most characteristic features of the disease. He says, "one or more of the reticular arteries are enlarged, and running towards the edge of the cornea, are seen to end there in a lash of small vessels," but I think the practitioner cannot rely on this as a constant appearance to guide him in his diagnosis. The redness probably always commences in the direction of these arteries, but it does not always appear confined to their course. The sclerotic vascularity in this disease, in fact, differs from the usual sclerotic vascularity of iritis or general inflammation of the eyeball. Instead of being produced by numerous vessels regularly and uniformly converging towards the margin of the cornea, and there forming a pink zone, it is the effect of more insulated and circumscribed vascular enlargement. It appears at first, to use more common language, as a small pink patch in the white of the eye, near the cornea, about a quarter of an inch in diameter, while the remainder of the sclerótica retains its natural whiteness, or is marked by one or more patches of a similar nature. The red patches soon become elevated, and assume a thickened or fleshy appearance, the conjunctiva often participating little in the inflammatory action. It should not, however, be forgotten, that a vascular patch answering to this description often remains after the disappearance of a pustule or pimple in common pustular ophthalmia, and may be mistaken for the change which I am describing; but as it belongs to the conjunctiva, it may be moved over the sclerótica by drawing that membrane on one side, and thus be distinguished. As the disease advances, these vascular patches become diffused and mixed with each other, until at length the whole white of the eye, or exposed part of the sclerótica, becomes red, although not presenting the usual vascular arrangement observed in common iritis. Distinct vessels are not visible converging to the cornea, but a general redness or stain, more intense in some places than in others, and more of a light purple tint than the florid or scarlet vascularity of more general inflammation.

As the disease advances, the change in structure is more conspicuous. The sclerótica loses its natural semi-opaque fibrous condition, and becomes thin and transparent, allowing the dark colour of the subjacent choroid to become visible in dark spots or patches, which ultimately become elevated into blue or black prominences or projecting tumours; a kind of hernia or protrusion of the latter membrane from want of the support of the sclerótica thus disorganized. In treating of inflammation of the eye in general,