

think, be explained by a consideration of the circumstances under which they individually occur, and a just appreciation of the anatomical conformation of the parts. That the crystalline lens is formed from extremely transparent nucleated cells, is I think evidently deducible from the observations of Todd and Bowman; these by elongation and due coalescence, form a series of fibres which are united into laminae by the sinuosities of their edges, which lock into one another. The continued formation of these transparent nucleated cells, which are the organized connecting medium for all the purposes of growth and nutrition, between the lens and its capsule, may be generally seen by a magnifying glass at the soft circumference of the body. The continual formation and coalescence of these cells, cause the concentric arrangement around a centre nucleus; this may be clearly seen in the boiled lens, that of the fish for example. The elongated cells having become arranged in the form of fibres, still evidently preserve a tubular or cellular character, and contain very minute quantities of fluid, which serves to preserve the general transparency of their fibres. This quantity of fluid, or the diameter of the tubes evidently diminish as we proceed from the circumference to the centre, whereby the centre portion of the lens is more dense than the circumference. It is this circumstance that gives the lens so beautiful an achromatic power, and is the cause why it so immeasurably excels all human attempts at imitation. These nucleated cells receive their nourishment by endosmose from the liquor Morgagni, and they may be greatly influenced by its deficiency, its superabundance, or its morbid content.

The capsule surrounding the lens consists of a basement membrane, having epithelium cells on its free surface, as the other serous membranes; this membrane gives out a fluid, (the liquor Morgagni,) which serves as the nourishing material for the nucleated cells of which the lens is formed. The posterior part of the capsule is in connection with the hyaloid membrane, and is supplied with circulating fluid by the arteria centralis retinae; the anterior portion of the capsule has reflected over it, the membrane of the aqueous humour, and derives its nourishment from vessels that take their course between these two textures, supplying the epithelium of both structures.

Contemplating these anatomical characteristics of the part, I think we may be led to the following views of the nature of the diseases of the lens. Thus in old people we find the amber coloured lenticular cataract, the result of want of nourishment, an atrophied condition dependent upon the diminished quantity of the liquor Morgagni, the nutritive material of the cells, whereby we have a closer approximation of all the fibrillae, and consequently a density of the concentric layers, that reflect light instead of transmitting it to the interior of the eye; this is often co-existent with a diminished condition of all the humours of the eye, hence the want