

used warm, run freely into the eye, then the lids everted and carefully bathed. The frequency of this operation depends upon the severity of the inflammation. The lids may be prevented from adhering together by clipping the lashes and placing a little soft ointment along the edges. The contagious nature of the discharge in all forms of ophthalmia should never be lost sight of. Hot or cold applications are best made by means of cloths wrung out of hot or cold water, and frequently renewed. Poultices are a constant menace to the cornea. As in other acute inflammations, the condition of the bowels and circulation require attention.

As the acute stage passes into the sub-acute, the discharge increases and the acute hyperæmia gives place to a more chronic congestion with a somewhat relaxed condition of the mucous membrane. This, then, is the period in which the use of astringents should be begun, but before doing so the cornea should be subjected to a searching examination, as *the existence of any corneal abrasion or ulceration contra-indicates astringents*. The reason for this is evident when we remember that if the corneal epithelium be injured or removed, mineral astringents possess the power of dissolving the corneal cement substance. The most servicable astringents are, sulphate of zinc j—ij gr.; alum j—jv gr.; nitrate of silver ss—ij gr.; sulphate of copper ss—ij gr. to an ounce of water. Beginning with the weaker solutions, they are rather soothing, while the stronger are stimulating to the chronic forms. It is hardly necessary to remind you that acetate of lead forms an opaque white crust over a corneal ulcer, and may thereby affect the vision, and that nitrate of silver occasionally discolors the conjunctiva.

Passing now to the consideration of a structure peculiar to the eye—the cornea—let us briefly review its structure. The external surface of the cornea is covered with a layer of epithelial cells directly continued from the conjunctiva; below the epithelium is found an elastic lamina, then comes the corneal tissue proper, while the posterior surface is covered with Decemet's membrane. The nerve supply consists of fine filaments in the anterior portions of the cornea, and the excruciating pain of a progressive corneal ulcer is due to the involvement of these filaments. Removal of the cor-

neal epithelium does not usually leave an opacity, and a deep ulcer may leave a surprisingly slight one. but any injury to Decemet's membrane causes a permanent opacity corresponding to the size of the injury. Let me here repeat a rule which has been already laid down, viz., when the corneal surface is affected, astringents are contra-indicated; this refers particularly to the mineral astringents.

The most common affection of the cornea is ulceration, and the symptoms calling for amelioration are, pain, photophobia, heat and lachrymation, while the danger to be guarded against is perforation. The several forms of ulcer vary from slight abrasions of the corneal epithelium to the serpiginous form, which may result in destruction of the eye. If the photophobia be severe, it renders an examination of the cornea almost impossible, but this may be facilitated by instilling a few drops of a cocaine solution, which almost instantaneously relieves the photophobic pain. The treatment of corneal ulcers during the progressive stage aims at keeping the eye at rest and preventing a perforation. The friction of the lids over the ulcerated surface is a constant source of irritation and pain. This is best relieved by a compress and bandage, which is also of material service in supporting the thinned cornea against pressure from within, which might cause it to bulge or perforate. Upon general surgical principles the compress and bandage serves an important end as an anti-phlogistic agent, by mechanically diminishing the calibre of the vessels and thus preventing the secondary phenomena of transudation, etc. Atropine is most efficient in soothing the pain, and it may be used frequently unless there is a tendency to perforate, when eserine should be used by preference, on account of its power of diminishing intra-ocular tension. Bathing the eye in a warm saturated solution of boracic acid previous to the instillation of the drops also aids in relieving the pain. As the ulcer ceases to progress, vessels extend to it from the conjunctiva, the edges change from being abrupt or undermined to a more rounded form, and soon the floor of the ulcer becomes almost level with the surface of the cornea. This is the time for stimulating applications, the best of which are an ointment of the yellow oxide of mercury gr. ij—jv to ʒ, or calomel dusted on the surface of