Mursing of Diseases of the Eye.

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SYMPATHETIC OPHTHALMIA.

The most terrible local accident that can follow an injury to an eye is sympathetic inflammation of its fellow. No wound, however small, is exempt from the risk, nor does the disease ever occur without a preceding wound. Not all wounds are equally dangerous. The danger varies with the different regions of the globe; the cornea and the posterior part of the sclerotic are less susceptible than the sclero-corneal junction and ring of sclera surrounding. Here the chance of evil consequences is so great that it has been called the "dangerous zone." Wounds of the external tissues in this neighbourhood involve almost necessarily either the base of the iris or the ciliary body, and these structures rather than the outer coats are really the dangerous layer.

The cause of sympathetic inflammation 18 yet to seek, but there is no doubt that it is, at the bottom, a septic process. Wounds heal without irritation are not which followed by sympathetic inflammation, nor are the clean-cut incisions of an operation, except in rare instances; on the other hand, the contusion and laceration caused by a flying fragment of stone or metal, especially if it be retained in the eye, form an injury most favourable to its development. The micro-organism, if it be one, which causes the disease is not of very sturdy growth. When other pyogenic cocci gain entrance, and general suppuration of the wound and globe occurs, it is an almost certain safeguard against more serious mischief; presumably because the more vigorous pyogenic bacteria prevent the growth of the feebler.

For this reason, it was the custom formerly to excite suppuration in a hopelessly damaged eye by poultices, so that the whole might shrink and become harmless. Though all circumstantial evidence points to the microbic origin of sympathetic ophthalmia, no absolute certainty as to its nature exists, since the methods so far employed have not been able to demonstrate the presence of microorganisms.

The course of the disease is sometning after the following:—An injured eye has not quieted down; without suppuration there has been troublesome cyclitis or initis, obstinately resisting the usual remedies; most often the iris or ciliary body is entangled in the wound. After some time has elapsed—rarely less than a month, often considerably longer—the fellow eye is seen to be slightly irritable.

It waters on exposure, and is a little red. Occasionally it fails after use, and becomes easily tired. Examination will often show little at first, but soon signs of inflammation of almost any or all of the deeper parts of the globe will make their appearance. Perhaps most commonly the earliest structure involved is the ciliary body, and this gives rise to the exudation of small masses of lymph, which, passing into the anterior chamber, are deposited on the back of the cornea at the lowest part. This condition, the so-called keratitis punctata, has already been shortly described.

Soon the iris, and often the vitreous, join in the inflammatory process. The iris forms dense adhesions to the lens capsule, and itself becomes thickened and immobile by inflammatory deposits. The vitreous is disorganised and so full of opacities that the fundus reflex may be lost. A form of secondary glaucoma comes on; the intraocular tension rises, and the eye becomes extraordinarily Severe neuralgic pain is the constant sequel. hard. As a result of the general disturbance of all the ocular tissues, the lens often becomes opaque. After a long time, extending over many months, or even years, the eye gradually quiets and the inflammation subsides, leaving in most instances a much-damaged organ.

In the less serious cases the disease runs the course of an irido-cyclitis, and some sight remains, but in perhaps 50 per cent. of cases a solt, tender, atrophied globe is left, without hope of vision.

Very rarely the auditory nerves are also attacked, and the unfortunate sufferer is not only blind but also deaf. In this respect the disease has some resemblance to the interstitial keratitis common in hereditary syphilis.

Children are more susceptible than adults; in these there is often no pain, and all the signs of cyclitis are less marked. There is, therefore, considerable danger that no notice may be taken of the onset, and the disease gain firm hold, while the onlookers are yet unaware.

With this risk, no wound is trivial, no injury lightly to be regarded.

For this reason, when an eye is seriously damaged so that little hope of useful sight remains, especially in a young person, the surgeon will advise removal unless the wound immediately quiets and obviously runs an aseptic course. If a more severe injury shows that no good recovery can take place, the eye should be removed at once. Immediate excision is the only absolute safeguard against sympathetic ophthalmia.

Inasmuch as there is always an interval between the injury and the onset of the inflammation in the sound eye, many surgeons will wait a day or two in doubtful cases; but if the delay is too long, the disease may follow, even though enucleation have been performed. In this case, however, it is usually of a mild variety and recovery is common.

Should the disease develop, the course to be



