

Ocular Leprosy.

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THE eyes in leprosy are subject to most of the ordinary eye diseases that we find everywhere with the exception of diseases of the fundus; *i.e.*, we do not find diseases of the optic nerve, retina and choroid among lepers as a part of the leprosy process; they may exist in lepers, but they either were acquired before the leprosy or exist independently of it.

In my experience among the lepers at Carville, the most important eye diseases of leprosy are keratitis, iridocyclitis, and episcleritis.

KERATITIS.

Inflammations of the cornea may be either the superficial or deep (interstitial).

In the superficial form of the disease the cornea may be marked by (*a*) many small dots or specks, or (*b*) a nebula of the outer layer just beneath the corneal epithelium. This form of the disease may increase by the formation of more and more dots and by involving the deeper layers of the cornea until either the disease becomes arrested or the vision becomes seriously impaired.

In the interstitial type the deeper structures of the corneal stroma are involved and a general haziness of the cornea results resembling luetic (syphilitic) interstitial keratitis. The essential difference between the keratitis of lues (syphilis) and leprosy is that in the former we have an intense reaction of the cornea and adjacent tissues for a time and then when the attack has spent its force the tendency of the cornea is to resume its former transparency; but in the interstitial keratitis of leprosy just the opposite occurs; the milky appearance of the cornea is gradually established, and there is no tendency for it to become clearer. Leprous interstitial keratitis is often associated with opacity of the anterior capsule of the lens.

Pathology.—The bacillus of Hansen is carried from the lymph vessels of the conjunctiva to the lymph spaces of the cornea and, from the irritation produced, the epithelioid cells infiltrate the cornea, the fixed corneal cells increase in number.

IRIDOCYCLITIS.

The iris becomes the seat of a very severe inflammation in leprosy, and with repeated attacks posterior synechia are formed which it is quite impossible to break by mydriatics (dilators) in many cases on account of the paralysis of the nerve supply of the muscle tissues of the iris. The pupil

finally becomes occluded and the muscle tissue of the iris becomes atrophied and instead of an elastic tissue the iris becomes brittle like a piece of blotting paper; many cases are difficult to operate upon on this account. When grasped with the iris forceps, instead of stretching as the normal iris does, a small piece of iris tissue comes away in the bite of the forceps. This makes it very difficult to do a neat iridectomy for optical purposes. Another difficulty is in judging when the iritis or iridocyclitis has completely subsided; when the eye appears to be quiet there is often some lurking cyclitis to be lighted up by surgical interference.

EPISCLERITIS.

This is not a serious affection in leprosy of itself. It is only because of the extension of the organisms to the underlying tissues through the lymph channels that it becomes of such great importance. In the great majority of the cases of keratitis and iritis, the bacillus of Hansen has found its way into these tissues from the pericorneal episcleritis. In keeping with other manifestations of leprosy, the leprous episcleritis is not always violently red with evidences of surrounding tissue reactions; on the contrary, the slight swelling may be of a yellowish colour, and surrounded by few dilated blood vessels of the conjunctiva. The elimination of this focus of infection by operation very often saves, or at least, postpones the subsequent iridocyclitis or keratitis and consequent loss of vision.

Many cases of these diseases go on, in spite of treatment, to blindness. In my experience, about seven or eight per cent. of all lepers become blind sooner or later as a result of these manifestations of the disease.

There are other affections of the eye which, although not apt to lead to blindness, are very disfiguring, such as falling of the eyebrows and loss of the cilia (madarosis). Paralytic lagophthalmus* is very common and is often accompanied by ectropion. This can, of course, be remedied by operation, but the effect of the result of operation is not permanent, and must be repeated. Tarsorrhaphy† is recommended in these cases sometimes at the outer canthus and sometimes at the inner, but I believe that my best results have been from a simple removal of a V in the centre of the lid.

Of course, there are other diseases leading to blindness; for instance, pannus, which seems to spread not from the upper margin of the cornea as in trachoma, but equally from all sides, leaving the pupillary area until the last, but this is not very common, fortunately.

*Inability to close the eyes as a result of paralysis.

†An operation for lessening the size of the opening between the lids.