RAPID INTERSTITIAL DEGENERATION OF THE CORNEA FOLLOWING CHOROIDAL HAEMORRHAGE

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THE literature of degenerative conditions of the cornea is scanty—so much so, that I am unable to classify the following case to my satisfaction. Mr. J. H. Doggart's article, "Marginal Degeneration of the Cornea" in the October number of *The British Journal of Ophthalmology*, 1930, has been helpful.

This report is of a case of very rapid interstitial corneal degeneration associated with diabetes and carbuncles.

On July 4 of last year, Dr. Dru Drury asked me to see Mrs. T., aged 51 years, in hospital. He had noticed a sudden affection of her right eye. I found her in bed; dull and listless and sweating freely. She was having insulin and the usual dietetic restrictions. The lids of the right eye were swollen a little: the conjunctiva chemotic: the cornea a trifle oedematous and ciliary congestion marked. Anterior chamber shallow: pupil enlarged and tension high. Vision equal to hand movements. The other eye seemed quite normal. Surrounding the cornea like a complete, magnified arcus senilis, and deeply situated, was a ring of greyish-yellow colour. No pain present or complained of previously. Several large carbuncles were discharging freely, one being on the right side of her neck. Carbuncles had troubled her for four months.

An acute glaucomatous condition was evident, for which she was ordered eserine frequently and hot fomentations.

Next day the corneal ring had extended centrally.

July 6, the degenerative process had extended over the entire cornea, and a moderate amount of Meibomian secretion noticed. Tension less. Thinking that a long restricted diet might be a factor in a dystrophic degeneration, I advised cod liver oil, lettuce and fruit juice.

No marked changes between this date and July 10, when the deep corneal layers looked yellower and seemingly liquid and movable. Tension still above normal though not high.

July 12.—Slight right eye pain. Cornea quite opaque.

July 13.—Eye painful and tender—pain extending to frontal and nasal regions—iritic in character. Eserine now stopped entirely and atropine ordered. Next day, pain quite gone and tension normal. Stopped atropine. Ciliary congestion also much diminished.

July 17.—Eye soft: less congestion. Cornea becoming ectatic centrally but clearer at the limbus. The temperature was irregular

throughout, sometimes 101° and then becoming almost normal for a time. I did not see her again until July 26, when I found a great change for the worse. Dr. Drury expected her death some days previously, when she had a sudden collapse.

July 29.—She died. The right eye was excised while the body was still warm. The cornea was so thin centrally that it ruptured during the very careful removal.

Mr. D. J. Wood, of Capetown, very kindly examined and reported on the specimen. He said the cornea was "concave inwards and central part gone. The corneal layers were much separated by fluid and had hardly anything in the nature of a cell exudate among them. There was a blood detachment of the choroid with wide separation of retina. No satisfactory section of the cornea obtainable."

It is unfortunate that there is no information as to the appearance of the corneal ring in relation to the incidence of the glaucoma. One may reasonably suggest that the sudden choroidal haemorrhage, raising tension and blocking the angle, so affected the adjacent tissues as to cause their destruction—aided by a toxin-laden aqueous.

Central necrosis of the cornea in severe infections, *e.g.*, panophthalmitis, has been recorded, and is of peculiar interest, says Friedenwald¹. In these cases "the pus cells which then wander into the cornea, are unable to penetrate the necrotic zone. They form, therefore, an annular infiltrate of increasing density. . . . finally ulcerating and giving rise to a circular trough (ring abscess of the cornea)."

Collins and Mayou² also describe an annular infiltration which may occur in severe intra-ocular infections and lead to ring abscess.

Fuchs³, among the various corneal dystrophies classed and described, has no case like that of my patient. Parsons' "Pathology of the Eye" being unfortunately out of print, was not available for reference, but in his handbook⁴ a "Keratitis marginalis profunda" is described occurring as a rarity in old people which presents some points of resemblance to the condition I have described.

Points of interest in this case, I consider, are the rapidity of onset and course: painlessness in the presence of very high intra-ocular tension and the immunity of the corneal endo- and epithelium—the latter gave a bright reflex throughout.

REFERENCES

1. Friedenwald, J. S.—The Pathology of the Eye, pp. 31 and 225.
2. Collins and Mayou.—Pathology and Bacteriology. *System of Ophthalmic Practice*, p. 321.
3. Fuchs, E.—Textbook of Ophthalmology. Trans. Duane, 4th ed., p. 292.
4. Parsons.—Diseases of the eye. 3rd. ed., p. 235.