INTERSTITIAL LINEAR KERATITIS*†

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KERATITIS associated with a line of opacity within the cornea is a peculiar condition which has been included as an interstitial keratitis by Duke-Elder and Leigh (1965). It was first reported by Fuchs (1926) as keratitis linearis migrans, and the literature was enlarged and summarized by Wright (1963). The characteristic feature is a line of granular opacity which elongates at each end while migrating upwards and backwards through the corneal stroma. This migration has been of sufficient clinical interest for the word "migrans" to be incorporated in the name, but the following case shows that migration may not necessarily occur.

Case Report

A girl aged 8 years complained of slight irritation and photophobia of 5 weeks' duration in the right eye.

Examination.—The visual acuity in the right eye was 6/6 with +0.75 D cyl., axis 70°. There were two small triangular areas of peripheral corneal thinning, one at 3 and the other at 9 o'clock, which had resulted from atrophy in the superficial part of the stroma and were vascularized by a network of fine vessels. Extending between the apices of these two areas was a sharply-defined opacity like a piece of white thread. At each end it lay immediately subjacent to Bowman's membrane and then passed progressively deeper so that in the mid-region it was on Descemet's membrane. There were a few aqueous cells and a faint flare, but no keratic precipitates. Otherwise the media were clear and the fundus was normal.

A general examination was also normal and there was no evidence of syphilis.

Progress.—The eye remained comfortable on gutt. hydrocortisone but soon became irritable again when the drops were stopped. This state persisted for 4 years, the ocular tension remaining normal all the time. Then a second pair of thinned areas appeared immediately below those already present. This was not accompanied by any sign of intra-ocular inflammation and the symptoms were unchanged. A linear opacity about 1 mm. long appeared 6 months later at the apex of each of the more recently thinned areas. The two lines then lengthened towards each other but never met (Fig. 1). Slit lamp examination showed that the two opacities were parallel and at the same depth in the cornea (Fig. 2).

The condition again remained static for a further year when all three lines of opacity began to fade uniformly throughout their length. A year later they had vanished leaving the cornea quite clear again apart from the four peripheral thinned areas. The eye is now comfortable without treatment.

The left eye has remained normal throughout.

* Received for publication March 7, 1968.

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FIG. 1.—Diagram of the cornea showing peripheral areas of atrophy with threadlike opacities in the stroma.

FIG. 2—A. Slit-lamp appearances near limbus to show two areas of corneal thinning.

B. Threadlike opacity lying on Descemet's membrane in the mid-corneal zone.

C. The two threadlike opacities are more superficial near their extremities.

Discussion

Although the clinical appearances of the present case differ somewhat from those previously described, it seems unnecessary to postulate it as a separate entity. The main point of difference from former reports was in the line of opacity which remained static for over 5 years before fading without trace. However, this resolution of the stromal opacity appears to have been a constant feature in previous cases.

Other variations from keratitis linearis migrans were also apparent in the present case. Small peripheral areas of corneal atrophy within the palpebral fissure preceded the appearance of the linear opacities. These latter were dense and threadlike and not granular. The second pair of opacities extended towards each other from either side rather than elongating from the centre of the cornea as previously described (Wright, 1963). The slow, uniform, and complete disappearance of the linear opacities on slit-lamp examination was the final curious feature.

The term keratitis linearis migrans infers that the line of opacity always migrates, but its static position in the present case suggests that the word "migrans" could well be omitted from the name. As the changes occurred within the stroma, the wider term of interstitial linear keratitis is preferable.

Summary

A case resembling keratitis linearis migrans is presented with features not previously described. The static position of the linear opacity suggests that the wider term of interstitial linear keratitis could be adopted.

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