DISCIFORM KERATITIS AND CORTISONE*

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The name disciform keratitis was coined by Fuchs in 1901. It is more non-committal and less sibilant than the term abscessus siccus which it replaced. It is not a disease *sui generis*, but a description of any non-suppurative lesion of the corneal stroma characterized by disc-shaped swelling and opacity. It may occur after trauma, as well as in association with virus infections such as vaccinia and varicella. It is, however, its frequent association with herpes-febrilis infection which is perhaps of greatest interest.

The mechanics of the corneal swelling in disciform keratitis is not clear. Braley[1] postulates that it represents a hypersensitivity to herpes and that the herpes virus, acting as an antigen, combines with the local and circulating antibodies to produce a hypersensitivity reaction. The evidence for this view does not appear to be conclusive.

In the few cases of disciform keratitis which I have treated recently, I have found cortisone to be effective in clearing the interstitial corneal opacity, yet I am dubious about using corticosteroids freely in cases of this condition in which I suspect a herpetic origin.

In the first place one must take cognizance of the known dangers of cortisone in the other clinical types of herpes infection of the cornea. Thus Thygeson[2] states that before the advent of cortisone perforation and hypopyon were unheard of complications in herpes corneae. He reports that he has seen 2 cortisone-treated cases with hypopyon and knows of 3 with corneal perforation. He puts forward the view that only harm can result from the widespread use of cortisone in herpetic infections. Braley states that cortisone disturbs the local immunity in the cornea to the herpes virus. He quotes H. L. Ormsby in stating that cortisone applied to the cornea at the beginning of a dendritic ulcer will spread the lesion to the entire cornea. On theoretical grounds, therefore, it would seem that caution is necessary in the exhibition of cortisone in the herpetic type of disciform keratitis.

Secondly, while it is accepted that some cases of disciform keratitis respond well to cortisone, it must also be recognized that other cases become worse under adrenal corticosteroid treatment. Thus Hogan *et al.*[3] record that of 8 cases treated with hydrocortisone 2 gave a good response while the other 6 were worse. Another 8 cases treated with cortisone gave an excellent response in 5, but 3 were worse after treatment.

Case Report: A White South African male complained of defective vision in one eye. Examination showed a round swelling of the parenchyma in the optical zone of the cornea. The posterior surface of the cornea bulged toward the anterior chamber. Keratic precipitates were present. Vascularization of the cornea was absent. With topical cortisone the corneal opacity and swelling resolved rapidly, but the patient developed a dendritic ulcer of the cornea. The cortisone was stopped and the ulcer was carbolized and aureomycin ophthalmic ointment prescribed. The ulcer healed within about 48 hours.

CONCLUSION AND SUMMARY

Many cases of disciform keratitis are of herpetic origin. In view of the known dangers of adrenal corticosteroids in other herpetic infections of the cornea and the fact that cases of disciform keratitis may deteriorate on this form of treatment, corticosteroids should be used with great caution in this condition. Subconjunctival injections of the drug, in forming a local tissue-depot of the drug which cannot readily be withdrawn, are potentially dangerous.

A case of keratitis treated with topical cortisone is described.

REFERENCES

1. Braley, A. E. (1952): Amer. J. Ophthal., **35,** 1737.
2. Thygeson, P. (1953): *Ibid.*, **36,** 269.
3. Hogan, M. J., Thygeson, P. and Kimura, S. (1955): Arch. Ophthal., **53,** 165.

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