TOPICAL CORTISONE IN THE TREATMENT OF SYPHILITIC INTERSTITIAL KERATITIS*

PRELIMINARY REPORT OF 20 CASES (26 EYES)

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THE majority of the reports which have been published on the treatment of syphilitic interstitial keratitis with topical cortisone have been concerned only with the more or less immediate effects of the hormone, and very few cases observed for more than about a year have been included. The reports have been conflicting, some authors obtaining excellent results, and others mediocre or poor results. Some authors maintain that cortisone may be contraindicated in interstitial keratitis, and some have even discarded it entirely.

On theoretical grounds, the correct use of cortisone would be expected to produce excellent results in interstitial keratitis, provided that treatment is started early enough. However, although cortisone is freely available for this purpose, there still appears to be some reluctance to use it, and when it is used the dosage is often inadequate. It has therefore been considered desirable to describe here briefly a series of cases which, it is hoped, will help to dispel any doubts about the value of cortisone in this condition and to establish it as an imperative method of treatment.

The three principal criteria for assessing the effectiveness of cortisone in interstitial keratitis are:

- (1) its immediate effect on the inflammatory condition and the associated distressing symptoms;
- (2) the duration of individual attacks and the incidence of relapses;
- (3) the final visual acuity.

In this report only brief reference will be made to the first two; more consideration will be given to what is probably the most important criterion (and the one easiest to assess)—the final visual acuity. A further paper is in preparation, in which the rationale of the use of cortisone in interstitial keratitis will be discussed, the relevant literature reviewed, full clinical data of the series of cases described here recorded, and conclusions drawn from the information available as to the best way of using cortisone in this condition.

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TABLE

VISUAL ACUITY AFTER TREATMENT OF INTERSTITIAL KERATITIS:

Adapted from:	Author	† Klauder and Vandoren	Klauder	
	Date	1941	1947	
No. of Patients	...	Not stated	54	59
No. of Eyes	...	63	96	97
Treatment Schedule	...	Arsenic, bismuth, artificial fever	Arsenic, bismuth, artificial fever	Penicillin, with or without fever and/or chemotherapy
Time of Assessment	...	At least one yr after starting treatment	About 2½-10 yrs after treatment	One yr or less after penicillin treatment
Final Visual Acuity (corrected) Percentage Distribution	6/6 or Better 6/9, 6/12	31·7 } 55·5 23·8 }	14·0 } 61·5 47·5 }	20·5 } 55·5 35·0 }
	6/15-6/30	31·7	27·5	34·0
	Less than 6/30	12·7	11·0	10·5

†Visual acuity not "corrected" in every case.

Clinical Material

Between December, 1950, and January, 1954, twenty patients attending the Department of Venereal Diseases, General Infirmary, Leeds, were treated with topical cortisone for the first attack of syphilitic interstitial keratitis. Half of them had had an attack previously in one eye, and only the second eye to become affected was treated with cortisone; 26 eyes, with a wide range of severity of involvement, were treated. In nearly every patient drops of a cortisone acetate suspension (5 mg./ml.) were used exclusively; the majority were admitted to hospital for at least part of the time they were receiving drops; all of them also received systemic antisyphilitic treatment (penicillin, with or without bismuth).

All of the patients were kept under periodic observation, and a special review, which included biomicroscopy, was made in March and April, 1954. The duration of observation after starting cortisone was as follows:

Months	6-11	12-23	24-35	36-39
No. of Eyes	4	6	12	4

Results

In nearly all the cases the immediate effect of cortisone was excellent; there was rapid relief of symptoms, suppression of inflammation, and restoration of normal vision. In some the improvement was slower, and the rate was influenced partly by the duration of the disease before treatment was started, but principally by the dosage of cortisone. There was no evidence to suggest

COMPARISON OF PRESENT SERIES WITH SERIES PREVIOUSLY REPORTED

Graham and others	Oksala			‡Present Investigation
1948	1952	1953		1954
" 49 cases "	Not stated	24	11	19
	157	35	18	25
Arsenic and bismuth, some with fever	Arsenic and bismuth	Penicillin, with or without fever	Penicillin, fever, and topical cortisone	Penicillin, bismuth, and topical cortisone
Unqualified, but probably several years in most cases	Unqualified, but probably many years in most cases	Average 1½ yrs after treatment	Average 1 yr after treatment	6-39 months after starting cortisone (see text)
53	22.3 } 31.8 } 54.1	60	100	36 } 52 } 88
37	27.3	26	0	*12
10	18.5	14	0	0

‡One patient (one eye) omitted (see footnote in text).

*Three eyes: Visual acuity (Case 18) 6/24 and (Case 19) 6/18 both have corneal scarring; (Case 10) 6/18 cornea functionally normal, but healed chorioretinitis involving macula (see text).

that when adequate dosage was used attacks were prolonged; in fact, the results could be interpreted as indicating that adequate dosage might shorten attacks. The series is too small and the period of observation too short to draw conclusions about the relapse rate, but there was no evidence to suggest that this was greater than might have been expected if cortisone had not been used. Relapses were equally well controlled. So also was any accompanying iridocyclitis.

The visual acuity (corrected for refractive errors) at the time of the last review is summarized in the Table, which also presents data adapted from the literature suitable for comparison by this criterion. These represent the final visual acuity obtained by the best methods of treatment in use before cortisone was available. The Table also includes another cortisone-treated series. These data, though the most suitable that could be found for the purpose, are not strictly comparable (especially in view of the differing observation periods), but even so the Table clearly demonstrates the superiority of topical cortisone. In only three of the 25 eyes in the series reported here was the final visual acuity less than 6/12.* In one of these (V.A. 6/18), the cornea was functionally normal and the impaired vision was almost certainly

*One patient (one eye) has been omitted from the analysis. She has been blind in one eye for many years as a result of corneal scarring and chorioretinitis, but the cornea treated with cortisone appeared (34 months after treatment was started) to be functionally practically normal, and there was no evidence of other ocular disease. For some reason, not yet determined, the patient feigned blindness.

due to an old chorioretinitis involving the macula. In two others (V.A. 6/18 and 6/24), the impaired vision was probably due at least in part to corneal scarring; the management of these two cases had been in some respects unsatisfactory, since corneal opacities were allowed to develop during a period when the patients were not under regular supervision, and when cortisone was either not used, or given in inadequate dosage.

In this series no contraindication to the use of cortisone was revealed.

Summary

In order to emphasize the great value of topical cortisone in the treatment of syphilitic interstitial keratitis, and to help to establish it as an imperative method of treatment in this condition, a series of twenty cases (26 eyes) so treated has been briefly reported. When adequate dosage of the hormone was used and the cases were well managed, excellent immediate and long-term results were always obtained; in the whole series, judged by the ultimate visual acuity (measured at periods ranging from 6 to 39 months after the start of treatment), the results were much superior to those reported to have been obtained by other methods of treatment. No contraindication to the use of cortisone was revealed. A more detailed report of the cases is to be published.

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