conjunctiva, by removing any excess of carbolic acid on the wooden applicator and by carefully swabbing any excess after cauterising. I do not as a routine cauterise the bare area of the cornea, as I found that cauterising it does not affect the end result, and cases that were non-cauterised were as successful as cauterised cases. Still cauterisation of the corneal area does not cause any harm and may be done. Immediately after the cautery, the conjunctiva shrinks a bit and a reactive hyperaemia follows. All this disappears in a few days. The zinc drops are mild astringent drops, while the yellow, precipitate ointment is a mild irritant whose property of helping the body in getting rid of replacement fibrous tissue is known, and I have found the combination of these two drugs with the operative treatment effective adjuvants in the treatment of the pterygium.

From the cosmetic point of view, the result is excellent and after a few weeks, and even before that, you can hardly see any trace of the operation. From the surgical point of view, this treatment, as proved by the successful results, is based on a perfectly sound basis. Further, I would like to mention that in the last six or seven years, about 600 cases were treated in this way, most of which were periodically followed and observed, and up till now I have not had a single recurrence.

Sufficient time has now elapsed in which to test the efficacy of this operative procedure, so that I now have every confidence in offering it to the medical profession.

REFERENCES


ANNOTATION

Sir Isaac Newton and colour vision

The Tercentenary celebrations of the birth of Sir Isaac Newton should not be allowed to pass without an expression of the indebtedness which all students of colour vision owe to the man whom Prof. Andrade regards as the greatest scientist who has ever lived.

Not content with discovering the prismatic dispersion of light he propounded the laws of the mixture of pure colour stimuli. Of these by far the most important theoretically and practically is the fact that any colour can be matched by a suitable mixture of three selected radiations. This is the fundamental fact, and no theory of colour vision can be comprehensive which does not take it fully into
account. It is upon it that Thomas Young founded the Trichromatic Theory, which was accepted and elaborated—perhaps over-elaborated—by Helmholtz. To it we owe the three "sensation" curves (better termed distribution co-efficient curves), first calculated and graphed by Clerk-Maxwell, and subsequently re-estimated by more accurate methods by König. Abney, Wright, and others.

In the earlier researches “there were a number of obscure features and imagined limitations that required clarification. There was, for example, confusion between the specification of a colour in terms of the three fundamental physiological responses of the Young-Helmholtz theory and its measurement in terms of a mixture of three physically defined radiations; the possible arithmetical manipulations of the data were not appreciated, in particular the freedom with which values recorded in terms of one set of radiations could be transformed to a different set, the consequent liberty to choose reference stimuli for a colour specification different from the radiations used experimentally in colour matching and so on. Two papers by Ives provided the first detailed solution of colour mixture problems on the trichromatic system, followed by two papers by Guild, who reduced the problems of colour mixture to two dimensions by separating the amount of light from its quality, and applied the ordinary rules of plane geometry to their solution.”

The above quotation is from W. D. Wright’s “The Measurement of Colour,”* which, after giving the most lucid theoretical and mathematical exposition of the subject, deals exhaustively with the methods and applications of colorimetry.

Ophthalmologists are more concerned with physiological and pathological aspects of colour vision, but it may be safely said that no one is fully competent to attack these until he has grasped the facts of colour mixture. These are facts, and the trichromatic theory is based upon them; but the trichromatic theory by no means explains all the facts. Many of the difficulties are removed by a knowledge of the peculiarities of the receptive apparatus—the rods and cones, adaptation, induction, electrical responses, and so on. None the less we owe an enormous debt to the physicists and their illustrious protagonist, Newton.

**ABSTRACTS**

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**MISCELLANEOUS**

(1) **Lancaster, W. B. (Boston).—What is orthoptics? Jl. Amer. Med. Assoc., February 16, 1946.**

(1) This admirable exposition of orthoptics and of orthoptic treatment deserves study by all those who deal with defective

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