by any known method—an assumption for which there is no ground whatever.

It seems to me that we are obliged to fall back on some form of the old theory, that sympathetic ophthalmia is due, partially if not entirely, to irritation of the ciliary nerves. No doubt there are difficulties in the way, which experimenters have so far failed to remove, but in seeking for an explanation of these failures several possibilities are open to us.

The common occurrence of sympathetic irritation in one eye after injury to the other is generally acknowledged, and it may be that the mechanism by which this irritation is conveyed differs in man from that in dogs, rabbits, and guinea-pigs, and this seems not so unlikely when we remember the anatomical arrangement of the whole ocular apparatus in man, designed to secure binocular vision. Or it may be that the explanation lies in the anatomical and physiological relationships of the nervous mechanism conveying the irritation, of which we as yet know nothing, and I believe that it is by the study of these relationships that our knowledge of the cause of sympathetic ophthalmia is most likely to be extended.

I have to acknowledge my great indebtedness to Dr. Lorrain Smith, not only for his permission to work in the Pathological Laboratory of Queen's College, but also for valuable aid and advice in performing the experiments, and in the course of the research.

REFERENCES.

- ¹ Von Graefe's Archiv, xxx, pt. 3, xxxi, pt. 2. Ueber die Ophthalmia Migratoria (L. Voss, Hamburg), 1889. Beiträge f. Augenhell., March, 1893.
² Archiv. of Ophthal., vol. xv, p. 281. ³ Ibid., vol. xvii, p. 187. ⁴ Quoted in Oph. Rev., 1891, p. 301. ⁵ Von Graefe's Archiv, xlii, pt. 1, 1896. ⁶ Archiv f. Augenhell., xxii, pt. 1. ⁷ Etude sur l'Ophthalmie Sympathique. Rep. of Internat. Med. Congr. at Rome. ⁸ Archiv f. Ophthal., xl, pt. 4. ⁹ Ibid., xxxviii, pt. 1. ¹⁰ Ibid., xxxviii, part 4. ¹¹ Ibid., xl, p. 46. ¹² Quoted by Berry in Edin. Med. Journ., March, 1897, p. 334. ¹³ Ann. d'Ocul., cxii, 14 Quoted by Velhagen, vide infra. ¹⁵ Archiv. of Ophthal., xxv, pt. 3. ¹⁶ Trans. Oph. Soc., 1894, p. 215. ¹⁷ Oph. Rev., 1897, p. 35. ¹⁸ Trans. Internat. Oph. Congr., 1894, p. 205. ¹⁹ La Semaine Médicale, 1897, p. 218. ²⁰ Ibid., p. 220. ²¹ Oph. Rev., 1893, p. 96. ²² Von Graefe's Archiv, xxxviii, pt. 4, 1892. ²³ Textbook of Ophthalmology, London, 1893, p. 293.

OPHTHALMITIS OCCURRING LONG AFTER ENUCLEATION OF THE FELLOW EYE FOR INJURY.*

By GEORGE FERDINANDS, M.D.,
Aberdeen.

ANY morbid condition occurring in an eye after its fellow has been removed for injury is of great interest to the ophthalmic surgeon. The two following cases which have come under my notice are worthy of record, especially as they tend to throw some doubt on the infallibility of preventive enucleation.

CASE I.—J. S., when 5 years old, injured her right eye while attempting to cut a garter with a knife. She was taken to the Aberdeen Royal Infirmary, where, according to the statement of the patient's mother, an operation was performed on the injured eye—probably an iridectomy—eight or nine days after admission. Three weeks later the patient was discharged. Not long after—the exact period cannot be ascertained—the parents noticed that the uninjured eye was “weak,” and the child could not bear light. Evidently the symptoms of sympathetic mischief had set in. The patient was taken back to the infirmary, where the exciting eye was removed, not, however, without some delay occasioned by the reluctance of the parents to consent to the removal of the injured organ. The sympathising eye then rapidly recovered, but, to use the patient's own words, “the eye was never very strong, especially in the winter.” On December 15th, 1891, that is, fourteen years after the accident, the patient consulted me for the first time. She wished to begin wearing an artificial eye but the socket would not admit one. On examination the socket was found occupied by a mass of hypertrophied conjunctiva, and a narrow band of cicatricial tissue limited the movement of the upper lid. The swollen conjunctiva was removed, the cicatricial band divided, and the patient was ultimately able to wear a comfortably-fitting glass eye, which she only used occasionally. On March, 1895, that is, three years and some months after the patient commenced the use of an artificial eye, she was led into my consulting room, and the following was her story:—“For months past her health had not been good, and her eye grew ‘weaker and weaker,’ until the sight got so bad that she could not see to move about.” Thereupon she thought it time to seek advice.

On examination the eye was found sensitive to pressure, the conjunctiva and sclerotic were injected, the cornea studded with keratitis punctata and the iris inflamed. V = fingers at 2 ft. barely. The socket showed no sign of inflammation neither was it sensitive to pressure. The patient was ordered atropine and put under mercury and iodide of

potassium. Under this treatment the eye made rapid progress, the vision being on June 21st $\frac{2}{5}$ and J. 1. Unfortunately this improvement was not permanent, and the eye has had several relapses, each of which only yielded temporarily to mercurial inunction. At present the vitreous shows signs of degeneration, and there are large floating opacities. V = $\frac{1}{8}$. The eye has to be kept continually under atropine, as its cessation causes a return of the active symptoms.

CASE II.—J. W., farm bailiff. In 1875 injured his left eye; in his own words, “the eye was reduced to a pulp.” It was removed four days after the injury. In 1896 he found that the artificial eye he was wearing irritated the socket, and as its use gave him “a pain over the brow” he discontinued wearing it. About this time he began to notice that he could not see to read so clearly as before, and this disability gradually increased until the eye showed “signs of inflammation.” The patient first consulted me on June 26th, 1897. Examination of the eye revealed well-marked irido-cyclitis and a subcorneal deposit. The eye was very sensitive to touch, and the patient complained of severe “neuralgic” pain in the brow and temple. V = fingers at 3 ft. The eye improved under mercury and atropine; the subcorneal deposit cleared up so that in July vision improved to $\frac{2}{8}$. In August, however, the inflammatory process returned in all its activity, in spite of treatment. In February, 1898, the cornea began to ulcerate. Just now the eye is quieter, and the corneal ulceration shows signs of healing. V = fingers at 4 ft. No view of the fundus could be obtained.

REMARKS.

The question of the difficulty of deciding whether such cases as narrated above are cases of true sympathetic ophthalmitis was fully discussed at the Ophthalmological Congress at Heidelberg. In the cases now recorded, the long interval between the removal of the injured eye and the onset of the inflammation is, I believe, without precedent. Of the thirty cases examined into by the Committee of the Ophthalmological Society, the interval between enucleation and the first appearance of sympathetic mischief was under three weeks in twenty-five cases, more than three and up to eight weeks in five cases. Since then Leopold Weiss¹ has recorded a case, which he regarded as one of sympathetic ophthalmitis, occurring nearly two and a-half years after enucleation for injury. So far as my own observation of the two cases goes, the symptoms and the progress are identical with those of sympathetic ophthalmitis. In Case I there is one point worthy of notice—that the inflammation appeared to follow the irritation caused by an artificial eye. The wearing of an artificial eye over a shrunken stump has been known to excite sympathetic mischief,² but in Case II the eye had evidently been wholly removed.

Hitherto in our treatment of injuries of the eye we have confined our attention almost exclusively to the injured organ itself. The recently-published experiments of Bach³—who found that irritation of an eye causes almost simultaneous sympathetic irritation of its fellow—while throwing fresh light on the probable cause of sympathetic inflammation, also indicates the direction in which additional preventive measures might be taken. The visual organs are so closely connected that clinically at least they should be regarded as one organ. In severe injuries of an eye, therefore, it may be well to extend our palliative treatment to its fellow.

REFERENCES.

- ¹ Archives of Ophth., xxii, 1. ² Lawson, Ophth. Hosp. Rep., 1867-69, vi. ³ Von Graefe's Arch., xlii, 1.

A CASE OF ACQUIRED NYSTAGMUS.

By ARCHIBALD S. PERCIVAL, M.B., B.C. CANTAB.,
Ophthalmic Surgeon to the Children's Hospital, Newcastle-upon-Tyne.

THE following case affords confirmatory evidence in support of the view that acquired nystagmus is essentially due to fatigue of the ocular muscles, and not to deficient illumination. The former view, as is well known, has been ably supported by Snell, Dransart, Nieden, and others.

J. A., a railway clerk, came to me complaining of dimness of sight. His visual acuity was normal when tested with test types under good illumination, and no abnormality of his fundus was detected on ophthalmoscopic examination. On inquiry as to the character of his work, he said that he was engaged all day in a well-lighted room, adding up long columns of figures in a large folio account book; he then declared that the figures that he looked at seemed to dance up and down.

On putting him into the position that he ordinarily assumed when at work, with his eyes running up the edges of the page of a large book, a vertical nystagmus at once became manifest. It is noteworthy that this nystagmus failed to appear on simply rotating his eyes upwards. He did not complain spontaneously of hemeralopia, but on inquiry he said he thought he saw less well than other people when the illumination was defective. I took him therefore into the dark room, and comparing his visual acuity with mine (which is presumably normal), I found that with

* Exhibited at a meeting of the Aberdeen Medico-Chirurgical Society