ABSTRACTS

I.—MEDICAL OPHTHALMOLOGY

- (1) **Cordes, F. C. and Dickson, O. C. (San Francisco).—Angiomatosis retinae (von Hippel's disease). Results following irradiation of three eyes.** *Amer. Jl. Ophthalm.*, Vol. XXVI, p. 454, 1943.

(1) **Cordes and Dickson** review the history of angiomatosis retinae (von Hippel—Lindau's disease), its physical signs, the incidence of associated central nervous system lesions, its prognosis and treatment. It is evident that in the late stages of the disease in the eye, all known forms of treatment to date are of no value. The literature is reviewed about cases treated by electrolysis, diathermy, radium and X-rays.

The authors describe two patients, in one X-ray treatment was administered to one eye and in the other to both eyes. In the latter case one eye was severely affected, and irradiation did little or nothing in its progress to blindness from increasing gliosis and detachment. In the other eye of this case and one eye of the first case the authors suggest that on ophthalmoscopic examination, the changes in the intra-ocular neoplasm and its feeding vessels were towards a regression. In the former case a dose of 1,202 r was given, and in the latter 1,800 r were administered to each eye.

The authors comment that up-to-date treatment by electrolysis, diathermy and irradiation is of value only in the early stages of the disease.

H. B. STALLARD.

- (2) **Lloyd, R. I. (Brooklyn, New York).—The hereditary macular degenerations.** *Amer. Jl. Ophthalm.*, Vol. XXVI, p. 499, 1943.

(2) **Lloyd** comments that the characteristics of the hereditary monocular degenerations are familial incidence; bilaterality; onset at epochs such as birth, second dentition, puberty, the end of skeletal growth, beginning of involution and senility; and the time and manner of onset is the same for members of a family. He states that if the transmitter is a female, she is usually affected, but the male transmitter may escape.

The author discusses the ophthalmoscopic picture of hereditary macular degeneration in four groups. His paper is well illustrated with fundus drawings and micro-photographs of morbid histology.

H. B. STALLARD.

II.—MISCELLANEOUS

- (1) **Williamson-Noble, F. A. (London).—Contact lenses.** *The Practitioner*, p. 82, February, 1944.

(1) The prototype of the modern contact lens was made by Thomas Young at the end of the eighteenth century, a man whose genius equalled that of Isaac Newton. **Williamson-Noble** describes how contact lenses are now made and fitted to the wearer. From the optical standpoint they have several advantages over ordinary spectacles, they move about with the eye, they are closer to the eyeball, they afford protection to the eye and are almost impossible to break when *in situ*, they are prevented from fogging by movements of the lids, they are invisible and they cannot be knocked off. They are especially useful in high myopia, conical cornea, corneal scarring and old mustard-gas burns. Certain disadvantages attaching to their use are described.

A. F. MACCALLAN.

- (2) **Nicholls, John V. V. (Ottawa).—Ophthalmology in the R.C.A.F.** *Can. Med. Assoc. J.*, April, 1944.

(2) **Wing-Commander Nicholls** contributes a short paper on his experiences as consultant in ophthalmology, Air Force Headquarters, Ottawa. There was, he says, at the outset of the war little first-hand knowledge in Canada of the medical aspects of aviation. (One of the first problems was that of the medical selection of air crew). The problem was attacked by the formation of medical selection boards at each Initial Training School. These boards comprised several internists, an ophthalmologist, an oto-laryngologist and a neuro-psychiatrist. It was found that medical standards were fairly uniform for all members of air crew with the exception of the ophthalmic standards. "The ophthalmologist began to live a double life. On the one hand he interpreted the standards as accurately and honestly as he could, while on the other his curiosity got the better of him, and he began analysing and studying them. As a result a large number of studies were set up to evaluate the various ophthalmic procedures as tests and to correlate the ocular assessment so obtained with flying performance."

At the outset the Project-O-Chart was adopted as a standard means of measuring visual acuity. The Maddox Rod replaced the Red-green box, and it was found that the former gave more uniform results, especially in the hands of less skilled examiners. Tangent scales were developed, but it was found that the tangent scale used at reading distance, as in the Maddox Wing Test was grossly unreliable because of the great stimulus to the associated accommodation-convergence reflex.

Specifications for the manufacture in Canada of binocular gauges and the Bishop Harman diaphragm were drawn up. With the entry of Japan into the War the supply of Ishihara colour charts was lost. The book of charts of the American Optical Society was used instead. Those who failed were tested on a lantern. The R.C.N. colour lantern was evolved, and a distinct improvement in the situation resulted.

The question of aniseikonia and the rôle of orthoptics have also received attention. The R.C.A.F. ophthalmologists place most importance on visual acuity and colour vision. Night vision is tested by the rotating hexagon. A new spectacle frame designed for service conditions, and the incorporation of surface hardened lenses for air crew, and the development of a new protective goggle have all emerged.

The school of aviation medicine is described, and the re-organisation of the medical branch of the R.C.A.F.

The number of Medical Selection Boards has been reduced to two, and at each there is an ophthalmic "unit or cell" in close collaboration with other members of the board. The ophthalmic "cell" consists of an experienced ophthalmologist, two or three medical officers under instruction, and three or four female ophthalmic assistants. "At Medical Selection Boards there is an unexcelled opportunity to gain experience in physiological optics, ocular muscle balance, and refractions. . . . These Boards, therefore form an excellent starting point in a training programme."

R.R.J.

- (3) **Falls, Harold F. (Ann Arbor, Michigan).—A word of caution in use of pentothal sodium in ophthalmic surgery.** *Arch. of Ophthalmol.*, Vol. XXXI, (old series, Vol. LXXXVIII), No. 2, p. 134, February, 1944.

(3) Pentothal sodium is becoming increasingly popular in ophthalmic surgery, and Falls, in this article, gives some warnings about complications attending its use. Coughing or sneezing occurred in about 10 per cent. of his cases, but this percentage was reduced by previous cocaineisation of the eye. Apnoea occurred in 5 per cent. of cases, and in one of these, a patient with heart disease and generalised arterio-sclerosis, death occurred. When respiratory failure sets in, the author recommends artificial respiration by thoracic compression and the administration of a gas mixture containing not more than 40 per cent. of oxygen and 4-5 per cent. of carbon dioxide. If cardiac failure is imminent, 2-4 minims of adrenalin 1/1000 should be given intravenously. It should also be remembered that for intra-ocular operations the post-operative sequelae of pentothal sodium may be disastrous, since they include nausea, restlessness and vomiting.

F. A. W-N.