The number that can take part in any one of these excursions is limited and the places for those wishing to participate in them will be allocated in the order in which they are applied for.

It will greatly facilitate the arrangements for the Convention in July if provincial members who intend to be present will let the Secretary for Finance and Registration (Mr. Leslie Paton, 29, Harley, Street, W.1.) know as soon as possible.

If a sufficient number is registered it will be possible to arrange with the railway companies to allow a considerable reduction on railway fares. To secure this reduction, members will probably be required to produce their Convention tickets signed by the Secretary. Convention tickets will be sent immediately on receipt of the subscription. The subscription for Associates (*e.g.*, wives or daughters of members) is 10s.: the extra subscription for members of the Ophthalmological Society of the United Kingdom is £1. Ophthalmic surgeons who are not members of the Ophthalmological Society pay a subscription of £2.

ABSTRACTS

I.—OCULAR SYPHILIS

(1) **Lundvick, C. V. (Chicago).—Annular gummatous conjunctivitis.)** *Amer. Jl. of Ophthal.*, March, 1924.

(1) This interesting case of **Lundvick's** may be summarized as follows:

Onset with severe and constant occipital headaches, followed next day by swelling and pain in the left eyelids. Some lacrymation, no discharge and patient felt feverish.

The oedema of the bulbar conjunctiva increased, and numerous uniform nodules were found 1-3 mm. in diameter, brick red in colour, completely surrounding the cornea, and extending to the fornices. The vitreous was hazy, the right eye appeared normal. The white cells numbered 14,000 per cubic millimetre; a differential count was not done. The Wassermann reaction for the blood and cerebro-spinal fluid was negative. A fortnight after admission the patient was treated with mercury and potassium iodide, and the condition cleared up in thirteen days.

F. A. WILLIAMSON-NOBLE.

(2) **Hume, Graydon.—Optic atrophy due to late syphilis.** *Lancet*, November, 1924.

(2) "The serious and relentless nature of optic atrophy associated with the late stages of syphilitic infection justifies our attacking the disease by a route which has added risks." Such is the concluding paragraph of **Hume's** short article dealing with intracisternal injection of mercuric chloride for the arrest of optic atrophy in tabetics. The technique adopted is that of Gifford of Omaha, and it would be well to read it either in the original or in the words of Hume. This author has had three cases, in two of which there was some response to treatment. In one the course of the atrophy was arrested "for some time"; in the other its rate was slowed down. The author has been informed by Gifford that he (Gifford) had had a series of cases in which the atrophic process came to a stop following *several* injections, and that some cases had actually improved.

ERNEST THOMSON.

(3) **Zimmermann, E. L. (Baltimore).—Syphilitic iridocyclitis with a consideration of factors influencing its occurrence.** *Arch. of Ophthal.*, November, 1924.

(3) **Zimmermann's** paper is based on the investigation of 190 cases of syphilitic irido-cyclitis, with the object of evaluating the influence of arsphenamin and mercury in producing or inhibiting lesions of the anterior uveal tract. 56.8 per cent. of the cases of iritis occurred within the first year of infection. In only three cases was the iritis associated with the presence of active tertiary lesions. Three factors are considered as influencing the production of irido-cyclitis. These are: (1) Individual predisposition, as exemplified by the American negro, in whom other observers have noted a greater severity of uveal reactions and a higher incidence of iritis, in comparison with the white population. (2) Predisposition of the infecting organism towards involvement of the uveal tract. Thus in a series of rabbits experimentally inoculated with syphilis, three strains of spirochaetes produced a high incidence of uveitis while fourteen other strains produced none at all. This tendency is not a fixed biological characteristic. With continued passage the incidence and severity of eye lesions may increase or diminish. (3) The effect of treatment. In experimental rabbit syphilis, certain groups of tissues tend to be involved in a given order, with iritis towards the end of the cycle. By excision of the initial lesion or treatment with arsphenamin, the course of the disease is modified, by conferring protection on certain tissues, which protection fails to reach the eyes, so that lesions of the cornea and iris may occur as the only manifestations of a general

infection. Circumstances which were unfavourable for the occurrence of other generalized lesions tended to increase the relative incidence of lesions of the eyes and *vice versa*. In human beings, however, this does not obtain. Recurrence, if it manifests itself early in patients treated with arsphenamin, occurs in the form of a positive Wassermann reaction, a neuro-recurrence, or as a lesion of the skin or mucous membranes; iritis in fact has become much less frequent since the introduction of the arsenic preparations. With regard to recurrences of syphilitic iritis, Fuchs states that they are common while Iggersheimer considers that they are rare after the process has been quiescent for a period of one year.

In the 190 cases of iritis studied by the author there were 21 recurrences of which 12 occurred after a quiescent period of over a year. In one of these there was a series of seven relapses each occurring from one to three months after the conclusion of a course of injections, the condition clearing up when the injections were resumed. Another case showed five recurrences of a chancre (positive dark field examinations), in spite of the fact that some recurrences were preceded by as much as three grains of arsphenamin administered over a period of five weeks. One case of marked Jarisch-Herxheimer reaction was seen. The patient had been successfully treated with mercury 22 years previously for bilateral syphilitic optic neuritis, but when seen, had a positive Wassermann. Violent iritis with hypopyon developed the day after her second injection of neoarsphenamin and subsided rapidly after the third dose which was double the second one. There were 15 cases of the relapsing iritis type. Each was originally treated for early secondary syphilis with arsphenamin, iritis developing from four to fourteen weeks after the last injection. In analogy with the neuro-recurrent cases, the blood Wassermann was negative in seven, doubtful in three and positive in only two. Several cases of this type are cited from the literature. They occur in patients who have been insufficiently treated. The infection is suppressed before defence mechanisms have developed, but a few spirochaetes escape and later produce a marked exudative reaction. There are thus two types of ocular reactions occurring after anti-syphilitic treatment: (1) The Jarisch-Herxheimer type occurring within a week. (2) The relapsing iritis appearing within one to three months after conclusion of treatment.

The association of iritis with neuro-syphilis, is debatable; Iggersheimer, Trousseau, Wile and Marshall consider that there is a strong association but Wernicke regards iritis as an assurance against the eventual development of tabes or general paralysis, whilst Mautascheck and Pilcz who have followed up cases of syphilis in the Austrian Army for several decades can see no

association between uveitis and "parasyphilis." A high incidence of neuro-syphilis might be due to three factors: (1) A cephalic distribution of spirochaetes—there are no facts to support this theory. (2) The occurrence of iritis and neuro-syphilis at the same stage in the cycle of tissue reactions. (3) Extension of a uveal focus to the central nervous system via the retinal lymphatics and the optic nerve. If carefully examined, syphilitic iritics frequently show some neuro-retinitis, or in the absence of ophthalmoscopic change, there may be a central scotoma for colours. In the present series of cases, routine spinal puncture showed that the incidence of asymptomatic neuro-syphilis was no higher in patients with irido-cyclitis than in syphilitics in general.

With regard to the Wassermann reaction, it was positive in every case of iritis occurring as a manifestation of secondary syphilis. In the relapsing iritis cases it was frequently negative also in the cases associated with tertiary lesions. On the other hand, from figures quoted, it would appear possible for a non-syphilitic iritis to occur in conjunction with a positive Wassermann reaction in about 6 per cent. of cases.

F. A. WILLIAMSON-NOBLE.

II.—OPTICS AND REFRACTION

(1) **Blatt, N.—Fundus anomalies in cases of anisometropia. A contribution to the question of so-called "Amblyopia ex anopsia."** (**Die Augenhintergrundanomalien bei Anisometropie.**) *Arch. f. Ophthal.*, Vol. CXII, 1923.

(1) **Blatt** supports the view that amblyopia from non-use of the eye does not exist, that the weak sight of anisometropic subjects is caused rather by objective changes. Among 429 cases of advanced anisometropia, amblyopia was frequently absent; when present there were to be observed either ophthalmoscopic alterations or at least anomalies with regard to the visual field or colour vision. In the present publication the fundus changes alone are dealt with. The following cases were noted:

(1) More or less important changes in the fovea centralis. These corresponded clinically to hereditary disease of the macula (Behr's heredo-degeneration of the fovea), which, as the literature on the subject shows, is accompanied in almost 50 per cent. of cases by anomalies of refraction. The cause is congenital and dates back to embryonic development. There were further noted anomalies of

the fovea with respect to size, form, and position, as well as the character of the pigmentation both of the fovea and its neighbourhood (irregular central pigmentation or unusual poverty of circumfoveal pigmentation). To this group belong also aplasia or absence of the fovea as observed in albinos.

(2) Disturbances of development affecting the papilla (with or without foveal changes). In this class the author places conus formation and choroidal atrophy, in both of which the extension hypothesis is to be discarded in favour of a congenital cause. The optic nerve can further present anomalies with regard to form and colour; and to this class belong such affections as coloboma, pseudoneuritis and decolouration of the papilla, mostly in the form of congenital hereditary optic nerve atrophy. In connection with this class the author describes a case of congenital optic nerve atrophy which was probably related to co-existing myxoedema.

(3) Anomalies of the blood-vessels of the retina, which of course do not account for a pronounced amblyopia, but can be productive of other very important changes, which in numerous instances were combined. To this group belong the complete and incomplete inverse type of papilla. Optico-ciliary and cilio-retinal vessels are further mentioned, and also tortuosities of the vessels. With the above-mentioned anomalies there were often combined abnormal conditions of pigmentation; but these were also found in amblyopic eyes as the sole existing alteration. Blatt attaches to these, in such cases, a causative value, and is of opinion that the conditions of pigmentation exert a real influence on visual acuity. In schoolchildren normal and supra-normal acuity of vision was more frequently associated with dark fundus than with a fundus poor in pigment. The good vision of negroes must be connected with the richness of their pigmentation, and the weak sight of albinos with their poorness in pigment. The anomalies of pigmentation can be, in general, divided into 3 groups: irregular distribution, abnormal poorness and abnormal wealth of pigment. The last mostly takes the form of massed deposits of pigment (melanosis). It is remarkable that the numerous published cases of unilateral hyperpigmentation (melanosis) are so frequently associated with ametropia. A rare developmental anomaly is so-called "Aplasia of the fundus" which is characterized by small pale papilla, smallness of the blood-vessels (including those of the choroid), and rarefied pigmentation. Another is coloboma of the choroid. Of course there exist also early acquired alterations which, in cases of anisometropia can lead to an erroneous diagnosis of "amblyopia ex anopsia"; for example, congenital syphilitic retino-choroiditis, the sequelae of retinal haemorrhages in the fovea during birth, and so on. For the ophthalmoscopic examinations red-free and reflected daylight should be used in addition to the usual methods.

The practical deduction resulting from the author's studies is that patients with "one-sided amblyopia ex anopsia" should not be needlessly subjected to troublesome visual exercises.

V. ST. JOHN.

(2) **Blatt, N.—Alterations of the visual field in cases of anisometropia (with reference to the so-called "Amblyopia ex anopsia.") (Gesichtsfeldveränderungen bei Anisometropia.)** *Arch. f. Ophthal.*, Vol. CXII, 1923.

(2) In a series of 429 anisometropes **Blatt** observed frequent fundus anomalies in the ametropic and weak-sighted eye, so that the assumption of an "amblyopia ex anopsia" could in most cases scarcely have been supported. In other cases an exact test of the visual field provided ample grounds for the weakness of vision. The author is of opinion that, if conscientious ophthalmoscopic and perimetric examination were performed, the hypothetical diagnosis of "amblyopia ex anopsia" could scarcely ever be advanced with any appearance of justice.

V. ST. JOHN.

(3) **Posey, William Campbell (Philadelphia).—Some extraneous factors bearing upon refraction.** *Amer. Jl. of Ophthal.*, April, 1924.

(3) Though the factors mentioned are well-known individually, they are for the most part unmentioned in text books, and **Posey** considers that it may be useful to enumerate them. Thus, thickening of the retrotarsal fold in chronic, follicular, or vernal conjunctivitis, and in trachoma, also deposits of lime salts in the conjunctiva may make considerable change in the refraction. A pterygium may, by traction on the cornea, cause astigmatism, with the rule, of 3D or more. Growths within the lids may cause even greater changes. Thus a chalazion growing from the upper margin of the tarsus in one case caused the disappearance of 1.25D of myopia. Pressure exerted by orbital growths or more commonly by the encroaching wall of a distended sinus causes hypermetropia if the pressure is from behind, and myopia if it is lateral. Weakness of ciliary muscle may be brought about by many causes, among them are the toxic effect of nicotine, when the vitality of heavy smokers is affected by gastric or excretory disturbances, the toxins from chronic sinusitis, from dental and tonsillar causes, the reflex effect of nasal obstruction alone, the early effects of cerebro-spinal syphilis, and the presence of vascular hypertension.

F. A. WILLIAMSON-NOBLE.