ABSTRACTS

I.—CORNEA


(1) Waldman discusses the various pathological conceptions about the nature of white rings in the cornea. He describes 5 cases. There were 50 to 60 dots in the ring formation. In 4 cases the rings were in the lower half of the cornea and one in the upper half. No other corneal changes were present. A shallow epithelial depression overlying the ring was noted in one case. These cases were kept under observation over several years and at no time was there any biomicroscopic evidence of changes in the corneal nerves or substantia propia.

H. B. STALLARD.


(2) Schwartz stresses the importance of treating foci of infection in cases of herpetic and dendritic corneal ulcers in addition to local treatment. He describes 11 cases, in 10 of these the removal of septic foci apparently expedited recovery, in one case the patient declined surgical attention to a septic focus and the corneal disorder continued.

H. B. STALLARD.

II.—REFRACTION


(1) Chance, Ogden and Stoddard examined the concept that myopia is reduced by wearing glasses combining under-correction with base-in prisms. They investigated 13 students, aged 18 to 24 years with myopia of less than 2 dioptres. These were refracted with and without a cycloplegic and each was given a spherical under-correction of the myopia and from $4^a$ to $6^a$ of total base-in prism. Glasses were worn constantly for 3 months and orthoptic training given. 11 students had true myopia and no change in the
refractive state was obtained. In 2 classed as pseudo-myopia the myopic state was eventually reduced to the cycloplegic refractive state.

H. B. STALLARD.


(2) Hofmann and Carey describe a high degree of compound myopic astigmatism in monozygotic female twins, 3 years of age. The parents were emmetropic and there seems to have been no evidence of myopia in other relatives. The birth of the twins was uneventful. The refractive errors were as follows:

Twin A.
- R.E. -10 sph.
- -1 cyl. ax. 80°.
- L.E. -11 sph.
- -1.25 cyl. ax. 90°.

Twin B.
- R.E. -10 sph.
- -1.25 cyl. ax. 90°.
- L.E. -10.5 sph.
- -1.25 cyl. ax. 90°.

Correcting lenses were ordered, one drop of adrenalin 1/1000 instilled thrice daily and follow-up examinations made.

H. B. STALLARD.


(3) Marquez describes his optical technique of correcting biastigmatism by the combination of two cylinders. The first corrects the corneal astigmatism according to ophthalmometric measures on the Javal-Schiotz or other keratometer. The second cylinder is "searched for," after the corneal astigmatism and the spherical correction have been made, by using an astigmatic fan. The correction is made until all the lines on the fan are equal in intensity. The resultant single cylinder is obtainable by means of formulas, graphs and tables described in the text of this paper.

The author claims that this bicylindric process has a sensitiveness much greater than that of Jackson's crossed-cylinder test.

H. B. STALLARD.


(4) Abraham estimated the basal metabolic rate in 202 patients. In 40 control cases this was -0.75 per cent. and the adduction and
abduction powers at 13 inches were 20 and 21 prism dioptres respectively.

In 134 cases with persistent ocular complaints after correction of the refractive error, the tests showed subnormal convergence reserve, less than 15 prism dioptres of adduction. The basal metabolic rate averaged $-15.2$ per cent. It varied from $+21$ to $-25$ per cent., being below $-10$ per cent. in 112 cases, that is $83.58$ per cent. of cases. These results suggest that there is definite relationship between basal metabolic rate and convergence.

H. B. STALLARD.

### III.—LENS


(1) Salit, Swan and Paul extracted 461 rat lenses by the intra-capsular method. Of these 119 were normal, 186 immature cataract and 156 mature.

The water content of the normal lens is 59.60 per cent., of the cataractous lens 73.78 to 80.625 per cent. Potassium phosphate and chlorine decrease but sodium and calcium sulphate and carbonate increase in cataract.

The degenerative processes of the lens tissue are more intimately connected with changes in the anions than with kations. On the whole there is a greater increase in the negative than in the positive ions as the lens become more cataractous. In general the changes are similar to those which occur in human senile cataract.

H. B. STALLARD.


(2) Wolfe and Wolfe discuss 6 cases of cataracta caerulea, 3 of which they had reported in a previous paper. All were in the same family. Four were more than 35 years of age and had a well advanced posterior subcapsular opacification. They comment that the blue colour of the dots is probably due to dispersion of light.

H. B. STALLARD.

(1) Sweet's study on the value of chemotherapy in acute gonococcal conjunctivitis is made on 102 patients treated between July 1, 1938 and March 31, 1942. A comparison was made of the results after treatment with sulphanilamide, sulphanilamide and sulphapyridine combined, sulphapyridine, sulphathiazole, and sulphadiazene. The dose was the same for all drugs and consisted in an immediate dose of 0.3 to 0.6 grains per pound of body weight followed by a four-hourly dose of 0.1 grain per pound of body weight. The discharge stopped in an average of 4 or 5 days.

A good response to treatment was shown in 81.2 per cent. of patients on sulphanilamide, and in 96 per cent. on sulphapyridine. Included in the latter group were 4 patients who had failed to respond to sulphanilamide and 3 of these had recovered on sulphapyridine. Eight patients were treated with sulphathiazole and 16 with sulphadiazene, all with good result.

Severe toxic reactions were few. There was one case of severe conjunctival reaction after sulphathiazole. It is evident that sulphanilamide is less effective than the others.

H. B. Stallard.


(2) Martin describes two cases of Parinaud's oculo-glandular syndrome, both in boys aged 5 and 8 years respectively, from the same district. The onset of the disease followed the handling of a wild-rabbit's skin in each case.

Sulphathiazole 7.7 grains four times a day was administered in each case. The ocular disorder and glandular enlargement cleared up within 15 days in one case and 10 in the other. The disease may last from a few weeks to many months.

H. B. Stallard.


(3) Feldman has used ultra-violet light in the diagnosis of certain ocular disorders particularly those affecting the cornea, sclera, lens and vitreous. Fluorescence of the lens is obtained; the
ripeness of a cataract may be better determined by ultra-violet light than by other methods of examination; and during a cataract operation it is easy to distinguish soft cortical lens matter from fluid vitreous. By ultra-violet light the structure of a pterygium and fibrous proliferation over the sclera are easily observed. It possesses no advantages over other methods of illumination in the diagnosis of corneal foreign bodies and ulcers.

H. B. Stallard.


(4) Ravin comments on the conception that in acute optic neuritis there is arterial spasm with dilatation and increased permeability of the capillaries leading to localized oedema and tissue anoxaemia.

He treated 5 cases with vaso-dilators supplemented with thiamin chloride 5 mg. three times a day as an adjunct, and atropine drops. Four patients received by mouth erythrol tetranitrate 0·5 gm. thrice daily for 3 weeks. This was decreased gradually as the vision improved. One patient had nitroscleran 100 mg. intravenously every other day for 6 doses.

A fair measure of visual recovery occurred in all cases. The author comments that it is difficult to assess whether this would have happened despite the use of vaso-dilators or whether it was appreciably helped by these drugs.

H. B. Stallard.

V.—OPERATIONS


(1) Smith and Siniscal describe their modification of Ewing's operation for cicatricial entropion. A traction suture is inserted through the centre of the lid margin and is attached to the clamp retaining the lid in an everted position. An incision is made through the conjunctiva and tarsal plate 2mm. above and following the curve of the lid margin. The orbicularis muscle is stripped from the anterior surface of the tarsal plate by blunt dissection for about 4mm.

Alternate black and white mattress sutures, generally 2 of each are passed through the conjunctiva and tarsus 1mm. above the conjunctivo-tarsal incision. One end of each mattress suture is
then carried downwards through the lower tarsal strip to emerge on the lid margin just behind the line of cilia. The other end of each mattress suture is passed through the orbicularis muscle and skin 4mm. above the line of cilia. The sutures are then drawn taut, a strip of rubber tubing 4mm. in diameter is placed along the whole length of the lid margin between the upper and lower line of sutures. These are then tied over the rubber tube. A sterile vaseline dressing is applied.

The sutures are removed on the fifth day after operation unless undue swelling or a stitch abscess necessitates earlier removal. Over 500 patients have been operated on by this technique and there have been only 0.5 to 1 per cent. recurrences.

H. B. STALLARD.


(2) Payne discusses several operative procedures for the correction of lateral rectus palsy. One of his cases had a left convergence of 45 degrees. He cut strips of the lateral half of the superior and inferior recti from their insertions posteriorly for 20mm. The paralysed lateral rectus was divided 8mm. from its insertion. The distal part of the muscle was then split into two equal halves in the long axis of the muscle fibres down to the insertion. The upper half was then joined by mattress sutures to the superior rectus strip and likewise the lower to the inferior rectus strip. The belly of the lateral rectus was then brought forward and sutured to the insertion. Three weeks later the patient was able to rotate his eye laterally for approximately 25 degrees. There was also present left hypertropia of 5 prism degrees and esotropia of 7 degrees. About one month after the first operation a 2mm. recession of the medial rectus was performed.

Four months later the cosmetic result was good, abduction was 43 degrees, esotropia 4 degrees and left hypertropia 6 degrees. With correction by lateral and vertical prisms the patient obtained stereoscopic vision, was able to diverge 7 degrees and converge 26 degrees. Diplopia persisted in the upper lateral field.

H. B. STALLARD.


(3) Berens’ technique for restoring the lower conjunctival fornix in cases where this is shallow owing to filling with fibrous tissue is as follows. A vertical incision 2cm. long is made in the conjunctiva
Operations

565

of the socket floor at the outer canthus. The conjunctiva is undermined towards the nasal side and down to the infra-orbital margin. It is raised and all subconjunctival fibrous tissue blocking the lower fornix is excised. Three mattress sutures of silk are now passed through the conjunctiva in the floor of the socket, then through the tissues overlying the inferior orbital margin to emerge through the skin and be tied over pieces of rubber. A mould or a prosthesis is inserted. The stitches are removed on the fifth day after operation. Five cases are reported in which this operation was successful.

H. B. STALLARD.


(4) Payne has surveyed the value of various glaucoma operations by examining pathological sections of 100 eyeballs. He comments that in practically all the specimens the operative incision was so far anterior to the normal angle of the iris that basal iridectomies could not have been made. Many of the wounds contained remnants of the iris and ciliary processes. Almost all the surgical wounds were sealed by fibrous tissue in which evidence of inflammatory action remained.

The specimens show the fatal pathological changes characteristic of glaucoma. The paper is illustrated by microphotographs of eyes after paracentesis, posterior sclerotomy, iridectomy, iridencleisis and corneo-scleral trephining. Eyes were lost after iridencleisis owing to herniation of the lens into the scleral wound.

The author concludes that there is no satisfactory operation for glaucoma but there is some hope in the choice of operative procedure. Most excisions followed paracentesis, posterior sclerotomy and iridectomy. The number of specimens submitted after iris inclusion operations, corneo-sclerectomy and trephining amounted to less than 15 per cent. of the total. From the pathologist's point of view it would seem that some form of corneo-sclerectomy is the operation of choice.

H. B. STALLARD.


(5) Randolph's instrument consists of a No. 20 intravenous needle bent to conform with a cyclodialysis spatula. The end of the needle is flattened and smoothed. It is attached to a 2 c.c. hypodermic syringe which is filled with air (presumably sterile). The author maintains that the injection of air into the anterior chamber after cyclodialysis lessens the incidence of anterior chamber haemorrhage.

H. B. STALLARD.
VI.—MEDICAL OPHTHALMOLOGY


(1) Woods' paper on focal infection is long, well-reasoned and contains much sound argument. He weighs the evidence, clinical, bacteriological and experimental for and against focal infection as a cause of uveitis in particular. He shows clearly the defects in this conception.

The paper contains tables analysing the cause of uveitis. One of these is the result of Irons and Brown's work on 200 cases and the other 562 cases examined by Guyton and Woods. It is interesting to note that in the former focal infection was blamed in 72 per cent. of the cases and in the latter, 244 cases of uveitis with definite diagnosis of the aetiological factor responsible, foci of infection were incriminated in 12·7 per cent. and tuberculosis in 54·1 per cent. This change of opinion on the relative importance of tuberculosis and foci of infection as causes of uveal disease has occurred in the last two decades with the decline of the implicit belief in the doctrine of focal infection.

The author comments that the conception of focal infection as a cause of eye disease is mainly based on suggestive and circumstantial evidence. He states that it is reasonable to believe that primary foci of infection may be related to secondary ocular inflammation through a mechanism of sensitization and intoxication from the primary focus. He ends the paper by stating that from a practical point of view it is advisable to search for foci of infection and if these are sufficiently severe or capable of impairing the patient's general health they should be removed. This is also the case if there is anything in the patient's history, reaction to vaccine therapy and other clinical behaviour suggesting an allergic sensitivity to the products of the focus of infection. However, the author condemns the routine removal of minor and symptomless foci of infection as a cure-all for endogenous ocular disease.

H. B. STALLARD.


(2) McGovern describes the case of a girl, aged 13 years, with bilateral angiomatosis retinae. The first symptom and sign was a retinal haemorrhage along the course of the upper temporal vessels in the left eye. The family history contained evidence of Von Hippel-Lindau's disease.

The author's patient was treated by deep X-ray therapy which was without effect on the right eye and caused pronounced loss of
vision and increased retinal exudate in the left eye. He comments, and rightly so, that the literature contains evidence that local treatment by surface diathermy and catholysis, and radon seeds sutured to the sclera give more favourable results.

H. B. Stallard.


(3) Mayfield describes a case of pulsating exophthalmos due to arterio-venous fistula in the cavernous sinus. Repeated attempts at digital compression of the common carotid several times a day failed to produce thrombosis and after 10 days were abandoned. The common carotid artery was ligatured. Three days after this pulsating exophthalmos re-appeared. Another operation showed the internal and external carotid arteries as large as normal and with a good pulse. Ligature of the external carotid artery was performed and the pulsating exophthalmos has not recurred in 4 years post-operative observation but a slight bruit persists.

H. B. Stallard.


(4) Bahn reviews a series of 400 consecutive private patients, 215 men and 185 women, for the incidence of psychoneurosis associated with ocular disorders. He estimates this at 75 per cent. compared with 50 per cent. which he believes exists in general practice. He suggests that psychoneurosis is due to imbalance of the autonomic nervous system. He describes a regime concerning work, sleep, exercise, recreation, diet, alcohol and tobacco on which he gives his patients advice.

H. B. Stallard.

VII.—MISCELLANEOUS


(1) Terry's paper is written on a study of 50 foetuses and several animals, cats, rats, pigs and opossums. It is richly illustrated by drawings from microscopic sections.

In the foetal-eye vitreous fibrils are perhaps related to the blood vessels in the embryonic vitreous. The so-called persistent tunica
vasculosa lentis consists in a growth of embryonic connective tissue in the interstices of the persistent tunica-vasculosa-lentis network.

The direction of the blood flow in the hyaloid artery from the optic nerve forwards has been verified in foetal life. The anterior portion of the tunica vasculosa lentis or the pupillary membrane has an independent arterial supply. The tunica vasculosa lentis drainage in later foetal life opens into the deeper portions of the iris. Persistence of these connections will result in congenital synechia.

A relationship between rapid growth of the lens and wide extension of the hyaloid arterial system is probable, as the disappearance of the hyaloid system occurs concurrently with the development of another method of nutrition for the lens, namely the formation of aqueous humour. Aqueous development before the filtration angle is functioning could explain buphthalmos.

H. B. STALLARD.


(2) Barlow describes the case of a woman, aged 47 years, who was under observation with a primary sarcoma of the choroid for 13 years. She refused excision during this time but eventually submitted to it on account of secondary glaucoma. The neoplasm was found to be composed of spindle cells and round cells, to be very vascular and pigmented. It had infiltrated the optic nerve around the central retinal vessels just behind the lamina cribrosa.

For 7 years after excision of the eye the patient was kept under medical observation and at no time did she show any clinical evidence of metastases. She died from a cerebral haemorrhage and post-mortem examination revealed no evidence of malignant metastases.

H. B. STALLARD.

CORRESPONDENCE

DARK GLASSES

To the Editors of The British Journal of Ophthalmology

Dear Sirs,—Dark glasses with side pieces of the type worn after intra-ocular operations, are becoming increasingly difficult to obtain, so it seemed necessary to devise a substitute for them. My first thought was X-ray film, but this did not prove satisfactory owing to difficulties in tinting. Coloured gelatine sheets of the type used for stage lighting proved more satisfactory, but were too