

ABSTRACTS

I.—RETINA

- (1) **Weekers, L. (Liège).**—Laboratory notes concerning the operative treatment of retinal detachment. (*Enseignements de laboratoire concernant le traitement opératoire du décollement rétinien*). *Arch. d'Ophthal.*, Vol. LII, p. 636, 1935.

(1) **Weekers**, in a long paper, describes the results and significance of some laboratory investigations which he has made in connection with the surgical treatment of retinal detachment. Histological study of sections through sites of galvano- and thermo-cautery punctures of the globe and punctures made with a fine Graefe knife, show that the episcleral tissues play a considerable part in establishing union with the retina through the medium of a plug of organizing granulation tissue which extends from the episclera to a short distance into the vitreous beyond the level of the inner surface of the retina. The choroid and sclera appear to play no part in the establishment of this link of granulation tissue. Indeed there is often to be seen a clear space filled with lymph between the plug of granulation tissue and the adjacent choroid and sclera at the site of the puncture. The author's experiments on rabbits proved the fact that the retina was adherent to the globe at the site of the punctures made by a Graefe knife or the thermo- and galvano-cautery but might be detached elsewhere.

He regards this adhesion between the retina and the episcleral tissues as an essential factor to surgical success in the treatment of retinal detachment.

With this object in view, he now practises surface thermo-coagulation using a galvano-cautery with a very fine terminal heated sufficiently to penetrate the sclera down to but not through the choroid. A number of points are thus made over the site of the retinal hole. The globe is then punctured with a fine ground down Graefe knife in several places through these cauterised areas and the inter-retinal fluid evacuated.

The author believes that widespread irritation of the choroid leads to hyperaemia of that structure, excessive exudation and to augmentation of the inter-retinal fluid.

H. B. STALLARD.

- (2) **Smaltino (Naples).**—A case of glioma of the retina cured by X-rays. (*Considerazioni sopra un caso di glioma della retina guarita con la radioterapia*). *Boll. d'Ocul.*, May, 1936.

(2) The patient was a boy aged 6 years; both eyes were attacked. The child showed a positive Wassermann reaction and the

diagnosis of the eye condition was doubtful; it improved for a time under anti-syphilitic treatment; but eventually relapsed.

Small white nodules appeared on the iris of the right eye and the diagnosis of glioma was clear. Excision of this eye which had been proposed before but rejected by the parents was now performed. Microscopical examination confirmed the diagnosis; the left eye showed a large detachment of the retina greyish in colour with many superficial folds. After the excision, both sides of the head were treated by X-rays; the left retina returned to place, leaving a large grey patch. Near this were many smaller patches which seemed to be scar tissue in the place of the former glioma nodules. This eye has remained good up to the present time; the boy has been under observation throughout.

HAROLD GRIMSDALE.

- (3) **Mecca (Sassari).—Retinitis pigmentosa.** *Ann. di Ottal.*, March and April, 1936.

(3) In this long and interesting paper, **Mecca** summarises the various views held on the causation of retinitis pigmentosa and gives an account of five cases which have been under his care. He has come to the conclusion that the chief and immediate cause of the disease is to be found in continued spasm of the arteries, and that this is due to disturbance of some one or more of the endocrine glands. He lays stress on the necessity of complete general examination of each patient in order that the basal lesion may be discovered; in the series of cases which he records, the author claims that he has been able to relieve the conditions to a considerable extent and to bring about at least a temporary suspension of loss by the use of vaso-dilatators.

He has used injections of acetylcholine and has observed in some cases marked improvement both of the visual acuity and the field; it is natural that the benefit was greatest in those cases which were least advanced.

Further, he has made experiments by injecting vaso-constrictors continually into animals and has been able to produce appearances in part similar to those of retinitis pigmentosa.

HAROLD GRIMSDALE.

- (4) **Lo Cascio and Friedmann (Padua).—The action of light on the amount of aminocoids in the retina.** (*Azione della luce sul contenuto di aminoacidi della retina.*) *Ann. di Ottal.*, May, 1936.

(4) This paper contains the results of experiments in which the eyes of rabbits which had been confined in darkness, were compared with those of others which had been exposed to light.

It was found that the amount of aminoacids in the latter group was slightly less than in the former retinae. It is known that aminoacids tend to split up under the action of light; Rosch and Te Kamp have shown that under the action of light ammonia separates from the retina in larger quantity than forms in dark adaptation.

HAROLD GRIMSDALE.

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## II.—MISCELLANEOUS

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- (1) **Campbell, Edward H. (Philadelphia).—Relationship of sinusitis to optic and retrobulbar neuritis with special reference to etiology and treatment.** *Arch. of Ophthalm.*, Vol XVI, p. 236, 1936.

(1) Campbell's article provides a useful resumé of current views as to the aetiology and treatment of retrobulbar neuritis. Using this term in its widest sense, he states that the condition may be due to the following causes, arranged in the order of their importance:

1. Disseminated sclerosis.
2. Toxic conditions.
3. Tumours or cysts of the basal portion of the frontal lobe.
4. Acute infectious diseases.
5. Focal infection.
6. Syphilis.
7. Metabolic disturbances (*e.g.* diabetes; anaemia.)
8. Lactation.
9. Tuberculosis.
10. Leber's disease.

The association of retrobulbar neuritis with sinus disease has various pros and cons. Among the "pros" may be mentioned: (1) that operation on the posterior sinuses greatly benefits the condition; (2) the researches of Onodi and others have shown the close association which can exist between the optic nerve and the sinuses, and in particular the manner in which the optic canal can be encroached upon and narrowed by the sinus cells. Among the "cons" are the following observations: (1) Although sinus infections are far commoner in children than in adults the reverse is the case with regard to retrobulbar neuritis; (2) It has been repeatedly observed that no gross pathological change has been found in the sinuses opened, even though cure of the neuritis followed the operation; (3) Lillie, in a report on 225 cases of retrobulbar and optic neuritis at the Mayo Clinic, included only one case in which the condition was actually due to sinusitis. These observations have some bearing on treatment. Since the causes are so manifold, a careful and searching examination must be made by those capable of dealing with them. While this is being carried out the author recommends the promotion of sweating by physical means, drugs

or the injection of foreign protein, and nasal treatment by ephedrine sprays, irrigation with hot saline or application of mild silver protein tampons. If a purulent condition is found in the sinuses it should be dealt with and any obvious focal sepsis in the teeth or tonsils should be eradicated. If complete blindness occurs, or there are signs of optic nerve atrophy, the author would feel inclined to advocate opening even apparently normal posterior sinuses in the hope of bringing about some improvement.

F. A. W-N.

(2) **Bracci-Torsi (Pisa).**—A case of cyst of the iris. (*Contributo clinico ed istologico alle cisti dell'iride*). *Ann. di Ottal.*, January, 1935.

(2) **Bracci-Torsi** gives the history of a case of cyst of the iris which was watched for many years. In 1917, the patient was struck in the right eye by a piece of ice which made a perforating wound, with prolapse of the iris and partial traumatic cataract. The vision was with +9.0 D. sph., 1/50. Seen again in 1927, there was noted a brown mass in the part of the pupillary border adherent to the cornea and apparently arising from the posterior surface.

This gradually increased in size, and changed colour, becoming paler. In 1932 the patient complained of severe pain and it was found that the cyst completely filled the anterior chamber, giving rise to secondary glaucoma. A first operation, by which a part of the cyst was removed, gave only temporary relief; Lagrange's sclerectomy was completely successful.

Microscopical examination of the cyst wall showed that it was made up of two parts; the central seemed to be slightly altered iris tissue, the peripheral consisted of one of two layers of endothelial cells. The author thinks that the iris was dragged into folds by its adhesion to the cornea, and that these folds became converted into a closed sac into which fluid was secreted by the iris, distending it until it filled the anterior chamber.

He points the moral that an early intervention is desirable to prevent the onset of glaucoma.

HAROLD GRIMSDALE.

(3) **Yanes, T. R. (Habana, Cuba).**—Ocular accidents in one-eyed workmen (a question of legal medicine). (*Los accidentes oculares en obreros monoftalmos. Una cuestion de Medicina Legal*). *Rev. Cubana de Oto.-Neuro.-Oftal.*, Vol. V, No. 2, March-April, 1936.

(3) **Yanes** has been studying ocular injuries in workmen, who have previously lost one eye and have received an accident to the remaining useful eye. These workmen, even if they may not

be left with any disability, always give greater trouble during treatment, because if the affected eye is occluded they are practically blind, and it is necessary at times to admit them into hospital, when it would not have been necessary if the sight of the other eye had been preserved.

But the problem is greater, when some disability, partial or total, results from the injury. The responsibility of the employer and the insurance company is discussed in those cases, which lose the sight of their only eye.

The Cuban laws lay down that the loss of an eye leaves a permanent disability, which varies from 25 per cent. to 50 per cent., according to the degree of skilled work. But no differentiation is made between two-eyed and one-eyed workmen. The author thinks that if the only eye is lost the company ought not to pay total compensation of 100 per cent. which would correspond to total disability through the workmen being left definitely blind. Nor does he think that they ought to pay compensation corresponding to the disability produced by the loss of one eye.

He expresses the opinion that if the workman was working with his only eye, his capacity was not 100 per cent., but that it was less, and if the loss of one eye reduces it by 30 per cent. in ordinary daily labourers (bricklayers, farm labourers, etc.), the capacity of the workman at the moment of the accident must be 70 per cent. It is this amount he loses by the accident and it is this which in all cases the employer ought to pay and not total compensation, because the workman is completely useless after the accident. If this were so, one-eyed people would not find work easily, for then the insurance companies would not grant policies for monocular workers. The ideal would be that the employer should pay for the damaged eye, and the state the remainder, as occurs in the State of New York, where there is a public fund for this purpose. The laws of different countries on this point, which the author has studied, are incomplete and insufficient, which explains the diversity of different legal judgments given in these problems.

E. E. CASS.

(4) **Contino (Messina).—Workmen's compensation for loss of vision. (Perdita funzionale e danno lavorativo negli infortuni oculari).** *Ann. di Ottal.*, February, 1936.

(4) Since the law recognises the necessity of compensating workmen for injuries which interfere with their capacity of earning, it becomes necessary to calculate the loss of ability for any loss of vision. Generally speaking, full visual acuity (6/6) is not required in any trade, and therefore small losses may be borne

without lessening capacity. On the other hand vision below 1/10 of normal (6/60) is not generally sufficient to carry on any trade usually requiring sight.

Between these two conditions lies the region in which compensation is difficult to assess. It has been generally agreed that the total loss of one eye is equivalent to the loss of 35 per cent. earning power; total loss of both to 100 per cent.

**Contino** points out that those schemes which have proposed an arithmetical progression in increase of disability corresponding with an arithmetical increase of loss, are faulty since in the lower ranges of vision a small loss is more important than when acuity is normal. He therefore proposes a geometrical increasing progression.

His scheme, which is simple, is to multiply 35 in the case of one eye (or 100 if both are damaged equally) by the square of the fraction of normal vision which is retained. Thus if a man has lost acuity in one eye only and has 6/12 (0.5 of normal), his estimated deficiency would be  $35 \times (\frac{1}{2})^2 = 8.75$  per cent. Since in Italy no compensation is given when the loss is less than 11 per cent., no compensation would be allowable in this case. If then the second eye had been damaged so as to reduce its vision to 6/24 (0.25 of normal), the loss would be represented by  $65 \times (\frac{1}{4})^2 = 4$  per cent. and the total damage 12.75 per cent. would demand compensation.

The scheme is simple and easy to remember, and probably gives as fair treatment as is possible for any hard and fast arithmetical scheme.

HAROLD GRIMSDALE.

(5) **Yanes, T. R. (Habana).—The use of gloves in ocular surgery. (El uso de guantes en cirugía ocular).** *Rev. Cubana de Oto.-Neuro.-Oftal.*, Vol. IV, No. 5-6, September-December, 1936.

(5) **Yanes** thinks that it is a bad custom, practised by many surgeons, not to use gloves in ocular operations, especially in operations for cataract and glaucoma. (Elliot, Lagrange, etc.)

All the alleged reasons for not using gloves whilst operating (tactile sensitivity, that the fields of operation is not touched, etc.) originate largely from the care, which is taken during operation, in not allowing the ends of the instruments which must enter the eye, such as the iris repositor, capsular forceps, etc., to be exposed to the touch. Therefore, and as in the matter of sterilization nothing ought to be neglected. The author performs all his operations with sterilized rubber gloves, in the same way that is

practised in some ophthalmic clinics, for example in the Ophthalmological Institute of Central Medicine in New York. He is convinced of their usefulness, although he admits, as is natural that he cannot entirely eliminate the problem of operative infection, but he knows that his statistics have been more satisfactory.

E. E. CASS.

(6) **Marchesini and Ghio (Genoa).**—Investigation of the orbit by means of injections of substances opaque to X-rays. (*Indagine radiografica della piramide orbitaria mediante l'introduzione di sostanze X-opache*). *Ann. di Ottal.*, September, 1935.

(6) **Marchesini and Ghio** have tried to discover some substance, opaque to X-rays, which may be injected into the orbit without exciting irritation. They have experimented with various preparations, in some of which the opacity is due to the contained iodine; these they found unsatisfactory.

A thorium preparation, "thorotrast," they found to be well borne by the tissues and to give a satisfactory shadow. Most of their experiments were carried out on rabbits, but in one instance they tried the method in man, and found that the outline of the globe was well indicated by the shadow; the opaque substance remained for a long time with little change; two years after the injection the shadow was still visible though less intense. In another patient the attempt at injection was immediately followed by much pain and the proceeding was stopped. The authors think that this method will be of value in localising tumours deep in the orbit, and indicating their extent.

HAROLD GRIMSDALE.

(7) **Villani (Rome).**—Influence of diathermy on intra-ocular tension. (*Azione della diatermia sulla tensione oculare*). *Boll. d'Ocul.*, February, 1935,

(7) Little attention has been paid to the action of diathermy on intra-ocular tension, and the reports thereon have been by no means unanimous. **Villani** has applied diathermy to a number of eyes both in health and disease and has noted changes in the tension. He finds that there is always an early reduction of tension, sometimes considerable, but temporary only, so that after a short time it returns to the original height, but does not rise above this. The fall lasts only some 20 minutes but may be prolonged by a second application of diathermy. In glaucoma, repeated sittings of 15 to 20 minutes, with current of 300 to 600 milliamperes have brought about a lasting reduction of tension.

The author thinks that the action depends on the dilatation of the efferent vessels under the influence of heat, but adds that there may be some stimulation of the sympathetic nerve fibres reducing the secretion of the ciliary body and the size of the pupil, at least in some cases.

HAROLD GRIMSDALE.

(8) **De Sanctis (Parma).**—Treatment of prolapse of iris by diathermo-coagulation. (*La diatermocoagulazione nei prolassi dell'iride*). *Boll. d'Ocul.*, April, 1936.

(8) **De Sanctis** has made experiments on prolapses produced in rabbits, destroying the iris tissue by means of diathermy. He finds that by this treatment he obtains a flat and resistant scar, but that the anterior synechia persists. He concludes that in the case of a recent prolapse, excision is the best treatment, but when the prolapse is older, it will not be possible to prevent anterior synechia by an excision and thinks that in diathermy we have a safe means of destroying the prolapse and making a scar which is unlikely to be followed by sympathetic trouble.

HAROLD GRIMSDALE.

(9) **Torgersruud, T.**—Some cases of naevus of the conjunctiva. (*Quelques cas de naevus de la conjunctivite*). *Acta Ophthalmol.*, Vol. XIII, p. 77, 1935.

(9) In discussing nine cases of conjunctival naevus under his observation, **Torgersruud** gives a useful review of the literature on the subject. He stresses the relative frequency of the new formations, their frequently non-pigmentary nature and the fact that they are to be regarded as of congenital origin, even if they make their appearance later in life. They are to be considered in the differential diagnosis of any swelling of the conjunctiva. In children and young adults their progress should be watched; in the elderly they should be excised as malignancy is to be feared. The dangers of radium treatment are emphasised by the recital of a case history relating to a boy aged 7 years, in whom the suspicion of melano-sarcoma had led to radium therapy. The lens became opaque and ultimately it was found histologically that the mass was a naevus, which could easily have been removed surgically without damage to the eye.

ARNOLD SORSBY.

(10) **Kiewe, P. (Geneva).**—Chalazion-like recurrent tumour of the lid. (*Ueber eine rezidivierende, unter dem Bilde eines Chalazions auftretende Geschwulst der Lider*). *Acta Ophthalmol.*, Vol. XIII, p. 139, 1935.

(10) **Kiewe** reports a case of chalazion in a man aged 57 years; within the space of six months the mass was removed three times,

on the last occasion with its capsule intact. Histologically no definite diagnosis could be made, and for want of a better designation, the mass was considered as similar to the inflammatory pseudo-tumours described by pathologists. Volterra's modification of the Cajal silver impregnation method showed extensive argentophile quality of the protoplasm, though the tumour could not be regarded as belonging to the reticulo-endothelial group.

ARNOLD SORSBY.

(11) **Kyrieleis, Werner (Hamburg).—Researches on papilloedema. (Untersuchungen ueber Stauungspapille).** *Arch. f. Ophthal.*, Vol. CXXXV, p. 100.

(11) **Kyrieleis** here records a study of the effects of compression of the optic nerve at different levels by ligature or clamp. Ligature of the nerve within the skull produced no changes in the papilla.

Compression within the orbit behind the entrance of the central vessels caused slight swelling of the optic nerve distal to the site of ligature, slight blurring of the edge of the optic disc without swelling, changes which are attributed to obstruction of the lymph stream in the nerve.

On constriction of the nerve involving the central vessels (the vein being more compressed than the artery) the swelling of the nerve stem anterior to the ligature was more marked, the blurring of the disc greater, and haemorrhages appeared at its margin; in one case a definite choked disc developed, the swelling fading gradually into the surrounding retina. The oedema so produced was almost certainly due to venous stasis, which also caused the haemorrhages.

All changes observed clinically and anatomically in the peripheral part of the optic nerve after compression within the orbit were the result of stasis (Stauung) in the lymph stream and the vein.

These findings, however, could not offer a reliable guide in explanation of the papilloedema in increased intracranial pressure, as in this series of experiments that factor was absent.

The author emphasises the essential difference between the swelling of the optic disc from a peripheral cause (without a rise in intracranial pressure) and that due to increased intracranial pressure. The former may arise from venous stasis, or abnormal permeability of the vessel walls from vasomotor or osmotic disturbances, or obstruction of the tissue fluid, all mainly passive factors situated in the eye itself; the latter, on the other hand, is the result of an active force outside the eyeball.

THOS. SNOWBALL.



## ABSTRACTS

*Br J Ophthalmol* 1936 20:  
638-646  
doi: 10.1136/bjo.20.11.638

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