

had a narrow escape as several adjacent buildings were burnt out. Fire has always been a recognized hazard in civil life but the cause of these particular fires was most unusual and quite outside the ken of even the oldest fire insurance offices such as the "Hand in Hand." On May 10 the hospital was again badly damaged by blast and repairs had to be restarted. On the night of the great London fire of December 29, 1940, no fewer than 128 firemen attended as casualties. The Senior Resident Officer contributes a short account of the main differences between blitz casualties and those seen in civilian practice. Mr. Tarrant pays a well deserved tribute to the kitchen and domestic staff as well as to the nurses and resident medical officers. The paper is illustrated with five pictures.

ABSTRACTS

I.—LENS

- (1) Kirby, D. B. (New York).—Procedures in intracapsular cataract extraction. *Amer. Jl. Ophthal.*, Vol. XXV, p. 269, 1942.

(1) Kirby classifies zonules into (1) those which rupture easily (2) those which tear with average pressure, traction and rotation and (3) resistant, elastic and unyielding capsules.

He describes a technique which he has tried out over 4 years in 25 cases. His method of dealing with the capsule is to raise the corneal section by means of the corneal part of the corneo-scleral stitch, thus bringing the iris and lens capsule under direct view. Capsule forceps, held in the left hand, are passed under the iris just in front of the equator at the 10 o'clock meridian. The capsule is now grasped tangentially. The heel of the forceps displaces the iris upwards. Then counter pressure is made with the point of a blunt hook applied over the zonule at 4 o'clock, just inside the corneo-scleral junction. Pressure at this point combined with slight traction on the capsule at 10 o'clock renders the zonule tense and facilitates its rupture. The capsule forceps are then moved clockwise, rotating the lens to 2 o'clock and counter-pressure is made with the blunt point at 8 o'clock. In this way the zonule is gradually ruptured. The author states that this procedure is sufficient to rupture the average capsule within 5 minutes.

For resistant capsules he recommends that the lens capsule be grasped as described above and lifted slightly. The zonule appears as a glistening sheet and is stripped from the capsule by means of

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stroking with a blunt hook immediately in front of the equator under the direct view of the surgeon. For these procedures he claims the advantage of great ease in picking up the capsule and a quicker delivery of the lens than by other methods.

H. B. STALLARD.

- (2) **Gradle, H. S. and Sugar, H. S. (Chicago and Vancouver, Washington).—Wound rupture after cataract extraction.** *Amer. Jl. Ophthal.*, Vol. XXV, p. 426, 1942.

(2) **Gradle and Sugar** attribute the causes of wound rupture after cataract extraction to compression on the globe by the contraction of the orbicularis oculi and the extra-ocular muscles. The intra-ocular pressure is thus raised and effects an opening of the wound with, in some cases, the added complications of hyphaema and iris prolapse. Proptosis assists in a passive manner the compressor effect of the orbicularis oculi. For this reason exophthalmometer readings may be of some clinical significance in the incidence of wound rupture.

The authors have devised a compressometer, the framework of which rests on the lateral margins of each orbit. A plate is inserted between the lower lid and the sclera. Compression is made by a calibrated spring operated by the examiner's finger. The authors consider that compressibility of the eyeball within the orbit is not to be regarded as a factor in wound rupture. In their series proptosis made little difference to the end results.

Prophylactic tenotomy of the orbicularis oculi was tried in 40 private and 52 hospital cases. In the former the results are stated to have been "excellent," but in the latter the percentage of incidents after operation was approximately the same as in non-tenotomized cases. Haemorrhage from the external angular artery was troublesome in performing tenotomy of the orbicularis oculi.

H. B. STALLARD.

- (3) **Jackson, E. (Denver, Colorado).—Results of cataract extraction.** *Amer. Jl. Ophthal.*, Vol. XXV, p. 403, 1942.

(3) **Jackson** maintains that the statistics of the results of cataract extraction carefully followed up in a relatively few cases over a period of years are worth more than those of a large number of cases seen only for a few months. His paper records some facts about 61 cases followed up for 2 to 32 years, the average period being $4\frac{1}{2}$ years.

H. B. STALLARD.

II.—GLAUCOMA

- (1) **Alvaro, M. E. and Silva, N. A. (Sao Paulo, Brazil).—A simplified technique of gonioscopy.** *Amer. Jl. Ophthalm.*, Vol. XXV, p. 406, 1942.

(1) **Alvaro and Silva** describe their method of gonioscopy by the employment of a corneal microscope mounted on a universal joint which is set in a Zeiss universal base. This apparatus is placed on a table with four swivelled wheels so that it may be moved readily in the examination of the filtration angle from different positions. The eye is illuminated by Bausch and Lomb's ortholite lamp. Koeppe's contact lens is placed over the eye. The light is so placed that its rays are perpendicular to the apex of the contact glass.

H. B. STALLARD.

- (2) **Clarke, S. T. (Boston).—Goniotomy.** *Amer. Jl. Ophthalm.*, Vol. XXV, p. 423, 1942.

(2) **Clarke** comments that this operation has a limited place in the surgical treatment of glaucoma. The ideal case is one of chronic simple glaucoma in which there is a well-pigmented line in the region of the pectinate ligament, and a flat approach to the iris angle. Anterior synechiae are an absolute contra-indication.

In the operative technique the part played by the assistant is important. He must make the proper degree of pressure on the contact glass with the bident while the operator is inserting the knife and incising the pectinate ligament. The pressure must be sufficient to keep bubbles of air from passing beneath the contact glass but not so much that the iris-lens diaphragm is brought forward.

Miotics are used after operation and a double eye dressing applied for four days. In one of Clarke's cases a low grade iritis occurred which was controlled by 2 per cent. adrenalin drops. He records briefly the main facts and results of 8 cases treated by this operation.

H. B. STALLARD.

III.—MISCELLANEOUS

- (1) **Weekers, R. (Liege).—Ocular symptoms of hunger oedema. (Symptômes oculaires de l'oedème de carence).** *Ophthalmologica*, Vol. CIII, p. 81, February, 1942.

(1) **Weekers** had the opportunity of studying 15 cases of hunger oedema seen at the University Clinic at Liege. He found the ocular

tension to be normal or more frequently lowered in spite of a decrease of proteins in the blood plasma or of a reduction in the albumin-globulin relation. He holds that these observations are contrary to the theory that the vitreous body is a simple dialysate, determined by osmosis. Epidemic glaucoma, which is accompanied by oedema, cannot be solely attributed to a change in the concentration of the proteins in the plasma for, in this affection, as also in hypertension, which is often present as a complication with Quincke's oedema, the vascular factor appears to play a decisive rôle.

ARNOLD SORSBY.

- (2) **Goldmann, H. and Grunthal, E. (Berne).**—Tumour of the optic nerve and its leptomeninges in Von Recklinghausen's disease. (Ueber einen Tumour des Sehnerven und seiner Leptomeningen bei Recklinghausenscher Krankheit). *Ophthalmologica*, Vol. CII, p. 79, August, 1941.

(2) **Goldmann and Grunthal** report this case in a child aged 5½ years as substantiating Davis's classification of optic nerve tumours as part of the picture of Von Recklinghausen's neurofibromatosis (F. A. Davis, Primary Tumours of the Optic Nerve—a phenomenon of Recklinghausen's Disease—*Arch. Ophthalm.*, Vol. 23, p. 735, 1940). The child's body showed the typical light brown spots of Recklinghausen's disease (café au lait spots). The father and a brother possessed similar spots. No member of the family had peripheral neuro-fibroma.

The tumour was a fibromatous growth of the soft meninges with tendencies to the formation of cell-like meningeoma; in addition, there is a gliomatous fibre growth in the atrophic optic nerves and into the meningeal tumour. The growth may be briefly described as fibro-gliomatous, corresponding to Davis's third stage of tumour development in Recklinghausen's Disease. In particular, it shows a proliferation of medullary nerve fibres and neuro-fibrils into the perineural tissue. These fibres lie partly direct in the collagenous interstitial tissue. The ends, piston-like and globular, are similar to the "cytoid bodies" of Verhoeff.

The tumour may be considered as part of the picture of a central neuro-fibromatosis, and in all such cases the café au lait spots on the skin are to be looked for in the patient and in members of his family.

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- (3) **Jean-Sedan (Marseilles).**—Retinal haemorrhage in smokers of potato leaves. (Hémorragies rétiniennes chez les fumeurs de feuilles de pommes de terre). *Ophthalmologica*, Vol. CII, p. 361, December, 1941.

(3) **Jean-Sedan** reports that in consequence of a great shortage of tobacco in Marseilles at the time of his report (June, July,

August, 1941), substitute plants were being used, particularly leaves of the potato plant. He observed five identical cases of retinal haemorrhage, coming on within 8 to 15 days after the use of potato leaves for smoking. The retinal haemorrhages were flame-shaped in appearance; in three cases there was an associated subconjunctival haemorrhage and in none was there any affection of the cardio-vascular system or kidneys. General manifestations were of the type seen in the school boy after his first cigarette. Toxic factors are the alkaloids solanin and solanidin. In three cases the retinal arterial pressure was taken and found to be distinctly raised, a point of interest in view of the finding of Bidault that in tobacco amblyopia there is a retinal hypotension.

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- (4) **Bakker, A. (Groningen).**—The carbonic anhydrase in the ocular tissue of mammals. (Der Kohlensäureanhydrasegehalt verschiedener Augengewebe einiger Säugetiere). *Ophthalmologica*, Vol. CII, p. 351, December, 1941.

Bakker, A. (Groningen).—Does carbonic anhydrase induce hydration of carbonic dioxide or dehydration of carbonic acid. (Bewirkt die Kohlensäureanhydrase in den Augengeweben eine Hydratation von Kohlendioxyd oder eine Dehydratation von Kohlensäure?). *Ophthalmologica*, Vol. CIII, p. 88, February, 1942.

(4) In the first paper, **Bakker** finds that the concentration of carbonic anhydrase in the crystalline lens and the retina of different individuals of the same species is very constant. In the eye tissues of different species of animals the concentration of the enzyme varies within rather extensive limits. No parallelism between enzyme-concentration and vascularisation of the retina could be demonstrated. It is supposed that tissues with a strong aerobic glycolytic activity and with a poorly developed vascularisation need a high concentration of carbonic anhydrase, which has to catalyze the rapid dissociation of carbonic acid into H_2O and CO_2 .

In the second paper the author reviews the literature on this theoretical point and reports some observations from which he concludes that hydration of CO_2 and dehydration of H_2CO_3 are equally catalyzed by carbonic anhydrase. Substances such as cystein, histidin, histamin and glutathione activate this enzyme action. Dehydration and hydration are both equally accelerated by these activators in the presence of the enzyme. In the crystalline lens and in the retina dehydration seems more active than hydration. He could find no evidence for Leiner's assumption that the action of the enzyme is unilateral.

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- (5) **Schmid, A. E. and Saubermann, G. B. C. (Basle).**—Sulphanilamide therapy in ophthalmology by means of irgamid. (Die Sulfanilamidtherapie in der Augenheilkunde mit Irgamid). *Ophthalmologica*, Vol. CII, p. 65, February, 1942.

(5) **Schmid and Saubermann** report their experiences in four hundred cases with Irgamid, a Swiss sulphanilamide preparation. They found it effective in *ulcus serpens*, catarrhal ulcer, ophthalmia neonatorum, intra-ocular affections, abscess of lid and dacryocystitis. They stress in particular its value in phlyctenular ophthalmia.

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- (6) **Benedict, William L. (Rochester, Minn.)**—Multiple sclerosis as an etiologic factor in retrobulbar neuritis. *Arch. of Ophthalm.*, Vol. XXVIII (Old Series, Vol. LXXXV) No. 6, p. 988, December, 1942.

(6) Multiple (or disseminated) sclerosis is well known to ophthalmologists as a common cause of retro-bulbar neuritis, and **Benedict's** paper is a useful reminder of this. Other possible causes have also to be considered, however, and of these, the most important are exogenous toxæmias, especially lead, alcohol, thallium and tobacco; constitutional diseases particularly diabetes and arteriosclerosis; peripheral vascular disease; brain tumour; arachnoiditis and some other diseases of the central nervous system. The association of sinus disease with retro-bulbar neuritis seems to be a remote one, because during the last ten years at the Mayo Clinic, not a single case of severe sinus disease has developed retrobulbar neuritis, nor has any case of the latter had recent acute sinusitis. Eye signs—diplopia and scotoma—appeared as initial symptoms in 15 per cent. of the 500 cases under review, and in an additional 40 per cent. disturbance of vision occurred sometime during the course of the disease. Other characteristic early signs are transitory muscular and sensory changes affecting particularly the extremities, and obscure attacks of vertigo, especially when occurring over widely scattered periods. The onset of blindness is usually rapid; it begins often as a central or caeco-central scotoma, which expands so as to involve the whole field within three to four days. After twenty-four to forty-eight hours of blindness, perception of light is regained and vision gradually improves, beginning at the periphery of the fields. Recovery may be complete, but in many instances it is only partial. A second or third attack, affecting either or both eyes, may occur before other evidences of the disease appear, though it is more usual for the patient to suffer from a tingling and numbness of the extremities, attacks of dizziness, vomiting and urinary incontinence before a second episode of retrobulbar neuritis. With regard to the position of the scotoma, this was central in 50 per cent. of cases, centrocaecal in 25 per cent., and of other types,

including hemianopia, in 25 per cent. Pallor of the discs was discernible in nearly all patients who had recovered from an attack. It is worth remembering that quite marked pallor may not be inconsistent with recovery of useful vision. If the lesion of the optic nerve is in front of the point of entry of the vessels, some degree of swelling of the disc will occur; such a condition was found in eight out of ninety patients. Pain, dizziness or nausea preceded the blindness in about half the cases. Out of 400 successive cases exhibiting signs of retrobulbar neuritis, multiple sclerosis was suspected as the cause of blindness in 90.

F. A. W-N.

OBITUARY

EDWARD JACKSON

EDWARD JACKSON died recently at his home in Denver, Colorado, at the age of 86 years. Only a fortnight previously he had presided at a business meeting of the American Academy of Ophthalmology and Laryngology.

He derived from a Quaker family living in Lincolnshire in the early part of the 17th century. His forbears were sent to Ireland as colonists somewhere about this time, and two generations later his direct ancestor emigrated to Pennsylvania.

Jackson took a degree in civil engineering before taking a medical degree at the University of Pennsylvania in 1878. In 1888 he became Professor of Ophthalmology at the Philadelphia Polyclinic. Later he moved to the West for family health reasons but later returned to Philadelphia. In 1899 he moved to Colorado for the second time and made his home at Denver. He was twice married. At one time or another he climbed all the mountain peaks of Colorado.

For many years he was Editor of the *American Journal of Ophthalmology*. He founded the Ophthalmic Year Book in 1904 containing abstracts of ophthalmic literature, a most valuable assistance to many of us, when British and American Ophthalmic Journals did not give it. Complimentary copies were sent regularly to the present writer in Egypt, though he never knew that the cost of publication was largely borne by Jackson himself.

Sir George Stokes, Lucasian Professor of Mathematics, about the middle of the last century described the principle of crossed cylinders. The device as a test for astigmatism was simplified by Jackson, and Jackson's crossed cylinders are known the world over.