excellent contrast to the year 1907, when the percentage was as high as 28.

Emphasis is laid on the importance of pre-natal care in combating eye tragedies resulting from inherited syphilis.

An excellent poster illustration shows the danger to small children who play with scissors. Industrial eye accidents are said to be in all probability the most serious cause of blindness in the United States to-day. Sight-saving classes are on the increase, but many more are needed.

During the past year, an attempt has been made to determine what effect reading actually has on the eyes, and whether there is such a thing as a saturation point beyond which the eyes suffer, no matter how ideal the factors of lighting and good sight are. This study was undertaken in co-operation with the Department of Education of Columbia University, and important results are anticipated.

We have always held that a poster campaign is the best way of teaching the masses the important facts of eye hygiene and protection. To show that the idea of pictorial representation of eye accidents is not so recent as might be thought, we reproduce a humorous drawing of about 100 years ago showing an eye in danger.

ABSTRACTS

I.—GENERAL MEDICINE


(1) Gasteiger reports the case of a man aged 47 years, the subject of hyperthyroidism, in whom partial removal of the thyroid left unaffected some swelling of the lower lids. Within four months after the operation the condition had become much worse: the swelling of the lower lids hung like bags down to the nose. The skin was thick, and had no oedematous pitting. Definite exophthalmos developed with marked limitation of movement: there was also chemosis, and danger of keratitis owing to inability to close the lids. Associated conditions suggested that the trouble was myxoedematous in origin and so thyroid preparations were ultimately administered with striking results. Gasteiger holds that the exophthalmos was due to myxoedematous swelling of orbital
tissues, thus explaining the marked limitation of ocular movement. (The author could not find any such cases in the literature. He must have overlooked the article by L. M. Zimmermann: Exophthalmos following operation for the relief of hyperthyroidism. *Amer. Jl. of Med. Sciences*, Vol. CLXXVIII, p. 92, 1929, abstracted in this Journal, Vol. XIII, p. 580, 1929.)

**ARNOLD SORSBY.**


(2) Craig and Lillie report eight cases of chronic local arachnoiditis in the region of the chiasma. Differential diagnosis of this condition may be very difficult and Cushing has enumerated seven possible causes of the chiasmal syndrome. These are (1) Meningioma with a parasellar, rather than a suprasellar, point of origin. In this there is usually no pituitary dysfunction or X-ray evidence of enlargement of the sella. (2) Pituitary adenoma which shows the usual X-ray and clinical signs of enlargement of the pituitary. (3) Craniopharyngeal pouch cysts, occurring generally in early life, and showing X-ray evidence of calcification in the cyst wall. (4) Glioma of the chiasma or third ventricle which is relatively rare and often produces anterior pouching of the sella as seen by X-rays. (5) Chronic local arachnoiditis which may simulate pituitary tumour. (6) Syphilitic meningitis which shows characteristic serological and cytological changes in the cerebro-spinal fluid. (7) Aneurysms which may present an audible bruit or show pathognomonic changes to X-rays.

The features of the chiasmal syndrome comprise (1) Lowered visual acuity. (2) Optic atrophy. (3) Bitemporal hemianopia for colours or form or both; the defect may be only scotomatous. (4) Temporal hemianopia with amaurosis of the opposite side. (5) The amaurosis may have been preceded by the following successive changes: central scotoma, caecocentral scotoma, enlargement of the scotoma leaving islets of vision, amaurosis. (6) Homonymous hemianopic scotoma for form or colours or both. (7) Asymmetry in the field defects. In the cases reported, the chiasmal region was exposed by raising a fronto-parietal osteoplastic flap, a flap of dura and then elevating the frontal lobe. Adhesions and exudate were found round the optic nerves and chiasma and sometimes loculated fluid. The adhesions were freed by a blunt hook and the fluid removed. Four cases recovered and either remained stationary or improved, the remaining four died at varying periods after operation.

The authors also describe the symptomatology of lesions involving the basal portion of the frontal lobe or the olfactory groove. No
fewer than eight different syndromes may occur. These are:—(1) Unilateral central scotoma with normal fundi. (2) Unilateral central scotoma with pallor of the disc but normal conditions in the other eye. (3) Bilateral central scotoma with pallor of both discs. (4) Bilateral papilloedema. (5) Unilateral amaurosis and optic atrophy with contralateral papilloedema. (6) Amaurosis and optic atrophy in one eye with papilloedema and central scotoma in the other eye. (7) Central scotoma and various alterations of the peripheral fields due to optic atrophy consecutive to papilloedema. (8) Bilateral amaurosis with any of the foregoing changes in the discs.

Tumours usually cause a slowly progressive evolution of signs, whereas inflammatory conditions usually have a rapid onset, are progressive for a short time and then regress noticeably.

F. A. W-N.

II.—ORBIT


Well authenticated cases of orbital cholesteatoma are so uncommon that the report of a case closely observed and examined, as in the present instance, is worthy of publication.

According to Michail’s researches only four undoubted examples are on record—by Rohmer, Gosselin (reported by Demarquay), Schirmer and Birch-Hirschfeld. Gosselin’s case is not accepted as genuine by some observers. In two of these cases, Schirmer’s and Birch-Hirschfeld’s, there was a history of traumatism. This was lacking in the other two, as also in Michail’s. The author considers that in his case the tumour was congenital in origin.

Michail’s patient was a boy, aged 9 years, when brought to the hospital. The parents gave a history that during the first year of the boy’s life they had noticed the appearance of a painless swelling under the upper orbital margin at the temporal side.

The growth had increased in size steadily, protruding below the temporal half of the orbital rim. The eyeball was displaced downwards and towards the nasal border. The frontal bone had been eroded, leading to the formation of a notch in its margin as large as the tip of the index finger. The eye retained vision of 5/20, and showed no fundus change. Full details of a complete examination, by clinical and laboratory methods, are given and illustrated by photos and radiographs. The tumour was removed by operative measures, and the results of a thorough histological examination are forthcoming. The wall of the cyst exhibited its analogy to skin;
a thin epidermis and a layer of dermis, lacking papillae and hair follicles. Its contents seemed to have resulted from proliferation of the epidermal layer. The dermal layer contained blood vessels and numerous blood extravasations.

J. B. Lawford.

III.—MISCELLANEOUS


(1) Experimental injury to the eye generally excites a transient rise in tension followed by hypotony. These changes also occur in the undamaged eye. Larsson reviews the literature on the subject of lowered tension in the undamaged eye, and reports clinical observations of 150 cases seen by him. In the great majority no lowered tension in the uninjured eye could be established; transient increase in the earlier stages was not observed at all. In many of the cases in which the tension of the uninjured eye was low, the lower limits of the normal were not overstepped. But the appendix showing details of 31 cases in which the tension did decline, reveals cases in which it was as low as 13 mm. Schiötz. This phenomenon is hardly a consensual reaction, for in some of these cases the tension in the damaged eye was raised. In one case in which the tension was decidedly low, sympathetic ophthalmitis developed; the removal of the exciting eye caused a subsidence of the inflammation and a return to the normal of the lowered tension. As similar low tensions were observed in cases of non-perforating injuries to the eye, the value of this sign as an early sign of sympathetic inflammation is doubtful. Low tension in the uninjured eye has persisted in some cases all the time they were under observation, and in some cases it remained even after the removal of the injured eye.

Arnold Sorsby.


(2) On November 30, 1930, Bailliart delivered a remarkable lecture before the Belgian Ophthalmological Society under the title of “L'Oeil des Hypertendus.” Whilst paying most attention to
the measuring of the blood pressure in the central vessels of the eye, he throws new light on the vascular conditions in the glaucomatous eye and emphasises the special danger when the intravascular tension reaches or surpasses one-half of the diastolic brachial pressure.

It is surprising how well the functions of the retina are preserved with marked or even advanced degrees of arterial degeneration. It is, therefore, always important to obtain a correct history from the patients by inquiring for any abnormal subjective sensations such as black or brilliant spots before the eyes, seeing slight fog, etc. Bailliart thinks that a macular star, even by itself, is nearly always a sign of azotaemic nephritis. It is always accompanied by local hypertension of the retinal vessels. He is inclined to ascribe the dominating factor in the aetiology of renal nephritis to circulatory disturbance and believes that the oedema of the papilla, the haemorrhages and the retinal exudates are caused by it. But in nephritis, as opposed to ordinary hyperpiesis, a toxin of unknown origin is an additional factor in causing retinitis. In the case of the hyperpietic the disease has not yet attacked the kidney, or is it not the result of an affected kidney. In renal retinitis, the kidney lesion pre-exists or is contemporary with the retinitis, and—superimposed on the vascular lesions—a toxin passes into the retina. The local retinal arterial pressure loses its correlation to the general pressure; in the ordinary hyperpietic it remains 0·45 or 0·5 of the brachial diastolic, but reaches 0·7 in a nephritic. Therefore the progress in a hyperpietic will be more grave if the retinal pressure exceeds the usual proportion of the brachial diastolic, even when the usual signs of renal retinitis are not yet present. This retinal hypertension is concomitant with an elevation of intracranial pressure. Therefore the raised retinal arterial pressure, when it is present, is an important diagnostic and prognostic sign in the fine differentiation between hyperpietic and nephritic retinitis. Another cause of this relative arterial hypertension is a local vascular lesion of the central artery (increased rigidity, etc.).

Bailliart cannot decide yet whether the obliteration of the arteries causes the hypertension or vice versa. As far as the eye is concerned the choroidal vessels also play an important part. The signs of arteriosclerosis of the retinal vessels are caused chiefly but not exclusively by hypertension. To those signs must also be added the exudative macular retinitis recently discussed by Coppez and Danis. He shares their opinion that this is a lesion closely connected with retinitis circinata.

The writings of Bailliart are always read with pleasure and interest. His introduction of tonoscopy is probably the most important step forward since Gunn's time, and in this sphere
Bailliart reigns supreme both in theory and practice. He always shows considerable knowledge of general vascular disease, yet it is here that one dares to disagree with him. To give but two examples: Bailliart believes that macular star is nearly always associated with azotaemic nephritis and that the kidney escapes in general hyperpietic disease. He is justly proud of his method of determining the local pressure in the retinal vessels, but sit venia verbo—he undervalues the importance of anatomical changes. Probably the truth lies midway—in the correlation of those anatomical changes with local vascular pressure. The fact that vascular hypertension may exist without ophthalmoscopic evidence of degeneration, is in itself insufficient, because it may be a transitory symptom (viz., climax).

Perusal of Bailliart's paper itself is strongly recommended.

N. PINES.


(3) Because of its varied symptomatology trichinosis is very frequently missed in diagnosis. In 505 autopsies by Williams the undiagnosed disease was found in more than 5 per cent. of the cases.

Of the ocular signs and symptoms of trichinosis the most characteristic is chemosis of the bulbar conjunctiva. Occurring bilaterally as a rule, in the first few days of the disease there is chemosis of the bulbar conjunctiva of a pale lemon jelly appearance with only slight inflammatory reaction. The chemosis is limited to the conjunctiva overlying the external and internal recti muscles. This is due to the early invasion of the recti by the parasite. It is probable that this condition is present in 50 per cent. of the early cases. It is generally accompanied by oedema of the lids extending over the temporal and frontal regions. Pain on movement of the eye is significant. Exophthalmos, conjunctival ecchymosis, mydriasis and retinal haemorrhages are not uncommon.

The number of parasites found in the ocular muscles is much greater comparatively than that found in the skeletal muscles. Occurring early in the disease there is invariably an eosinophilia ranging from 10 to 80 per cent.

Confirmation of the diagnosis is easily obtained if permission can be obtained for excision and pathological examination of a fragment of a rectus muscle. Otherwise the parasite must be sought for in the blood stream.

A. F. MACCALLAN.