The National Society for the Prevention of Blindness has sent us an illuminating table showing the number of firework accidents in connexion with the fourth of July celebrations, 1935.

The figures disclosed are staggering; a total of 6,940 injuries which were serious enough to be mentioned in the daily press. Among these were 24 deaths, 539 eye injuries and 57 cases of loss of sight. The greatest damage was among children.

Demand, of course, determines supply. We suppose that so long as fireworks are used in celebrations there will be a certain proportion of injuries. But the total disclosed in America last year is much too large and would seem to indicate the necessity of prohibiting the sale of fireworks to children altogether. Very few accidents, we believe, occur in connexion with public rejoicings in these islands, because the promoters of such festivities see that the fireworks are under the control of a responsible person. One cannot always guard against a rocket stick descending on one's head, but one should guard against small children putting their eyes out with squibs.

ABSTRACTS

I.—MEDICAL OPHTHALMOLOGY


(1) Roy describes an unusual case in a man of middle age, whom he has observed for the past 10 years.

When first seen, in 1925, the man was 37 years of age. Until 15 years previously his eyelids had been normal. His work was in the manufacture of maple syrup in a forest cabin, and he was operated on about this time for chalazia. His upper lids began to feel stiff and soon became thicker than usual. At the age of 23 years he noticed that the lower lids were similarly affected. The hypertrophy of the lids has steadily progressed and has led to a bilateral ptosis.
When first seen the lids, on eversion, showed no evidence of trachoma. The conjunctiva was congested and "deep fissures nearly vertical in direction were found throughout the tarsus, giving it an irregular appearance, and separating ridges or hard nodules which had the consistence of cartilage." The conjunctiva was adherent everywhere to this hypertrophied tissue. The outer canthi were not in contact with the globes.

The lower lids were equally increased in volume, but remained in contact with the eyes. The patient complained of itching, catarrh and epiphora. The family history showed goitres in maternal grandmother, mother and three maternal aunts.

Biopsy of the hypertrophied tissue showed that the case was one of "progressive degeneration of the Meibomian glands the remains of which determined the production of foreign body granulomas, and a keloid hyperphoria of the tarsal conjunctival tissue."

The general health was good, and the Wassermann reaction negative.

Skeletal radiography showed widespread bony changes in the limbs and skull. The bones of the head showed increase in the external diameters of the skull, thickening of the vault, and enlargement of the frontal sinuses. The sella turcica was normal.

In summing up, the author states that the case presents a hyperplastic and degenerative disturbance of certain connective tissues—bones, periosteum of the long bones, skin and subcutaneous tissues of the face and extremities of the limbs, and above all, of the tarsus of the eyelids.

The paper is a long one and is illustrated by illustrations of the patient, radiograms of the forearm and skull, and microscopical sections.

R. R. J.

(2) Schupfer (Florence).—The pathogenesis of retinitis pigmentosa. (Sulla retinite pigmentosa con particolare riguardo alla sua patogenesi). Boll. d'Ocul., February, 1936.

(2) In this long and interesting paper Schupfer discusses the various theories which have been suggested for the explanation of retinitis pigmentosa, and proceeds to give some account of investigations which he has made on a number of patients. He points out that recently opinion has been in favour of regarding the diencephalon and the pituitary body as probably concerned in the production of this disease. He therefore has tried to examine in his subjects the state of the functions over which these preside.

The diencephalon is that part of the brain which is derived from the second cerebral vesicle; in the adult it is barely separable from the other parts; it contains the hypothalamus and the epithalamus,
i.e., most of the structures round the third ventricle. These structures play an important part in maintaining the normal metabolism. They harmonise the workings of the various endocrine glands and control their secretions.

The author finds in all his cases some alteration of the basal metabolism, generally in the direction of increase. The function of the kidneys was altered in the majority of the patients; three showed a power of concentration definitely abnormal; four showed polyuria under the dilution test. The blood also deviated from the normal; five showed an increase in the number of the red corpuscles.

All these disorders may be attributed to disordered action of the diencephalon, but there are other changes, deafness and loss of sense of smell which cannot depend on this part of the brain. It follows that the "diencephalic theory" cannot be accepted; Schupfer points out that many of the lesions observed occur in structures derived from the mesoderm and suggests that there may be congenital changes here, which may bring about the changes in the diencephalon and thus cause retinitis pigmentosa.

HAROLD GRIMSDALE.


Petragnani (Siena).—Recurrent vitreous haemorrhage. (Contributo all'etiopatogenesi delle emorragie recidivanti del vitreo). Boll. d'Ocul., March, 1936.

(3) These two papers contain the clinical records of a number of cases of recurrent haemorrhage in the vitreous. The conclusions of the authors of the first paper are that the conditions are probably due to some alteration of the vessel walls in the direction of increased fragility; they find that recurrent haemorrhage in the vitreous is frequently associated with recurrent haemorrhage elsewhere, e.g., epistaxis. The authors find that there is no evidence of tuberculosis or syphilis being in any way the cause of this disease. They find that in practically all their subjects the smaller veins were unusually fragile, as shown by bruising following light blows with a hammer over a bony surface or pinching the skin (pizzicottamento); in the latter case the bruising might not show for a day or two. They call the underlying diathesis "intermittent venous angiopatrosi." Petragnani, on the other hand, is inclined to allow considerable importance to tuberculosis in this disease; he finds that two out of the three individuals of whom he treats were definitely tubercular and concludes that disease of the vessels has relatively a small part in the production.

HAROLD GRIMSDALE.

(4) Rönné holds that whilst Förster's classical description of syphilitic choroiditis is still valid as a whole, appearances noted to-day differ in some detail from those in earlier days. Atrophy of the disc which Förster regarded as a constant late sign is not so frequent now and is more likely to occur in congenital than in acquired syphilis. Recurrences, too, are less frequent, and these also are more frequent in congenital syphilis. These changes he holds to be due to the earlier diagnosis and treatment of the underlying affection. The incidence of syphilitic choroiditis he found to be 2.5 per thousand in private practice and 4 per thousand in hospital practice.

ARNOLD SORSBY.


(5) Riddell refers in his paper to an exhaustive investigation into tobacco amblyopia by Usher in the Annals of Eugenics, Vol. II, 1927, and gives his conclusions in full. The author's own case was in a man of 37 years of age who was uniocular, the other eye having been lost in the War. When first seen vision was 6/9 and J.1. He was smoking 3 ozs. of Empire tobacco a week as well as roughly 20 cigarettes a day. His daily alcoholic intake never exceeded three glasses of whisky or beer. He was advised to stop smoking and the use of spirits but was allowed to continue his beer.

The central scotoma is illustrated at various dates between October, 1933, and February, 1936.

The author's conclusions are as follow:

"The central fields have been recorded by means of small white test objects at one and two metre distances. This was found to be a satisfactory method of watching the progress. The diagrams are drawn in rectangular co-ordinates upon squared paper. This has the advantage of saving space and is, in fact, a more accurate method than the commonly adopted one of translating a tangent screen into polar co-ordinate.

Iso-chromatic plates, such as Ishihara's, may be of great value in the diagnosis and course of this condition. Conversely, in patients with standard visual acuity, mistakes made in an iso-chromatic test may be attributed incorrectly to defective colour vision from other causes. On no occasion could this patient read Plates 10 or 11.

Tobacco amblyopia in its early stage may take two years or longer to regain normal central fields and standard colour vision. The visual acuity tested by Snellen's chart alone, may give an erroneous impression of recovery."

R. R. J.
Crisp discusses the difficulties encountered in determining the pathology and aetiology of headaches. He stresses the importance of taking a broad view of a case presenting this symptom and of the necessity for the ophthalmologist to be particularly conversant with other provinces of medicine especially in oto-rhinology and neurology.

A period of post-graduate study of neurology is recommended for the ophthalmologist. Encephalitis, meningitis of slow and gradual onset, syphilitic disease of cerebral vessels are among some of the less common neurological disorders which have headaches as a principal symptom.

In assessing other aetiological factors due weight has to be given to cardio-vascular disease, renal and gastro-intestinal disorders, endocrine allergic conditions and to the patient's psychological make up and the background of his daily life. The author states that it is well known that apart from major emotions such as fear and anger, minor emotional disturbances such as irritation, suppression, anxiety, frustration and lack of opportunity in which to do quietly some steady work are factors in inducing headaches.

In some cases where a refractive error is the cause of headache this symptom may persist in spite of wearing correcting glasses, owing to failure to observe certain points in ophthalmic hygiene such as lighting, the correct posture of the head and the position of the book.

The author makes some conjectural suggestions in regard to the complex pathology of migraine and quotes Rowe who believes that some types of migraine are attributable to angioneurotic oedema of the cerebral cortex.

This paper gives an interesting survey of an important and significant symptom.

H. B. Stallard.

Russell Brian reports a case of exophthalmos following the administration of thyroid extract and discusses the sequence of events in the light of recent experimental work on the aetiology of exophthalmos.

As a rule the administration of thyroid extract or thyroxine experimentally to animals or therapeutically to man does not cause exophthalmos. Exophthalmos has occurred after partial thyroidectomy for thyrotoxicosis where thyroid extract has been given to
treat the post-operative hypothyroidism. However, this state of affairs is rare, and only some 20 cases have so far been reported in the literature.

Thyroxine or thyroid extract alone does not produce exophthalmos, but it has been thought that these substances operate synergically with a sympatho-mimetic substance, either ephedrine or ephedrone. Thyroxine appears to facilitate the action of such substance in producing exophthalmos.

The thyrotropic hormone of the pituitary is capable of producing exophthalmos in intact experimental animals, and in those who have undergone thyroidectomy, and it seems to work more readily in the presence of hypothyroidism. There is some experimental evidence to show that it acts through a nervous mechanism for excision of the superior cervical sympathetic ganglion prevents the occurrence of exophthalmos.

The author reports the case of a Jewish woman, aged 58 years, who developed exophthalmos during the administration of thyroid extract for the treatment of obesity and myxoedema.

It is probable that the exophthalmos is not the direct result of the action of the thyroid extract, but is due to another substance which in certain individuals is produced in response to the thyroid extract, and which experimental evidence suggests may be the thyrotropic hormone of the pituitary.

H. B. Stallard.


(8) Benedict and Montgomery describe eight cases of pseudoxanthoma elasticum in five of which the fundus oculari was examined. In two of these five cases angioid streaks were noted and in the remaining three the choroid was diseased, one showing evidence of degeneration and the other two post-inflammatory changes.

Gröndblad, in 1929, was the first to note the association between pseudoxanthoma elasticum and angioid streaks and in 1933 and 1934 Nomland and Klein found these two lesions associated in 19 out of 21 cases where angioid streaks were noted.

Pseudoxanthoma elasticum may begin in infancy, puberty or late in adult life. It consists in the appearance of chamois-yellow coloured nodules or papules which later become linear and may coalesce to form plaques. The adjacent skin is in lax folds. The sites of election are the folds of the neck, the axillae, inguinal region, flexures at the elbow and knees, peri-umbilical, peri-anal, the glans penis and presternal regions. Histological changes occur in the elastic tissues in the middle and deep layers of the cutis. The authors give a detailed account of these changes and discuss their nature.
In some cases it appears that the blood cholesterol, lipids, fatty acids and total lipoids show no departure from the normal whereas in others they are slightly raised.

The pathology of angioid streaks is discussed but the aetiology remains unknown. Among the conceptions that are mentioned are those of Jadassohn’s who suggested that elastotoxins were the cause of the lesions; Missbildung, malformation of elastic tissue; Gröndblad, degenerative changes in the elastic layer of Bruch’s membrane; and Clay, thrombosis of the posterior ciliary vessels.

H. B. STALLARD.


(9) Appelmans reports a case of encephalo-trigeminal angiomatosis affecting the areas of skin supplied by the first and second divisions of the sensory part of the left fifth cranial nerve, the left eye and the pia mater over the left side of the brain.

The patient was mentally defective, the youngest son of his family and his mother was 40 years of age when he was born.

The left eye had been removed for glaucoma. The edges of the angioma were sharply defined over the area of cutaneous distribution of the first and second divisions of the fifth cranial nerve and the neoplasm was of the simple venous variety. There were no thrills or murmurs. The affected left side of the face was less massive and less developed than the right. Radiographs of the skull showed that the vault on the left side was thicker than on the right and on its inner surface there were disseminated some irregular angiomaticous dilatations spreading from the frontal to the occipital region.

The author comments that angiomata affecting one or more divisions of the trigeminal nerve and the cerebrum and its meninges are always of the simple venous variety, are congenital, and in many cases do not increase in size during life. In the case reported, the neoplasm had remained the same size since birth. He points out that the neoplasm affects the left side more commonly than the right.

Encephalo-trigeminal angioma with glaucoma is very rare. This paper contains a table summarising the literature of angiomata affecting the skin supplied by branches of the trigeminal nerve and the disorders associated with this lesion, among which are buphthalmos, glaucoma, nodules in the retina, hyperaemia of the papilla, Jacksonian epilepsy and intra-cranial involvement.

The author discusses the pathology and differentiates this type of angioma from the proliferative variety seen in von Hippel-Lindau’s disease (angioblastoma) and arterial angioma.

H. B. STALLARD.

(1) Nordlöw compares the refractions under atropine in 1,210 eyes of squinters with the curve established by Brown and Kronfeld for non squinters, and concludes that squinters show more hypermetropia. [Comparison between two racially widely separated groups is of doubtful value in refractions.—Reviewer.] Ninety-five squinters were examined after intervals of 6—7 years and the writer found that those that became rectified spontaneously showed a reduction in hypermetropia of 3'8 D.—much more than in those whose squint persisted. It is also pointed out that in squint the centre of horizontal movement is displaced inwards; the degree of movement is itself unaffected. Spontaneous rectification of the squint brought this centre back to normal, the most that persisted of this abnormality being some heterophoria. In view of a high percentage of spontaneous rectification, the author deprecates excessive operation, especially in early childhood.

Arnold Sorsby.


(2) Vannas followed up the work of Nicholson and Ask who hold that air pilots with exophoria underestimate distances whilst those with esophoria overestimate them. Inducing heterophoria by means of prisms and employing the three-rod test, Vannas found that—

(1) In exophoria, underestimations are more frequent and the errors more gross—than overestimations.

(2) In orthophoria, the same results are obtained as in exophoria, though underestimations were rather fewer and overestimates rather more. Moreover the errors were not so gross.

(3) In esophoria, underestimates and overestimates were about equal in incidence and extent.

Arnold Sorsby.

(3) Heinonen continuing his studies in myopia reports that in elementary schools children coming from educated families show a greater incidence of myopia than those from the average population. This he holds to prove the significance of the hereditary factor in myopia, though the observation still leaves unanswered the question as to the rôle of close work in producing myopia.

ARNOLD SORSBY.


(4) As a result of calculations based on Gullstrand's schematic eye, Smaltino concludes that the variations of thickness of the cornea have no sensible effect on the total refractive power and that variations in the anteroposterior length of the lens are practically negligible.

HAROLD GRIMSDALE.

III.—MISCELLANEOUS


(1) The report of Bagghi which runs through five numbers of the Calcutta Med. Jl., is the thesis for the Jubilee Memorial Prize. It elaborates a previous paper which was noticed in an annotation last year, p. 167.

The author's summary may be abstracted here. He would arrange his cases in three groups. I. Inevitable blindness. II. Blindness, much of which might have been prevented with proper care and early treatment. III. Blindness that could have been successfully prevented by early medical aid.

In his series of cases, 307 fell into the first group, 950 into the second, and 797 into the third. He reckons that about 38 per cent. of blindness in India is absolutely preventable. He emphasises the following points in a campaign against blindness in India.

a. "Removal of illiteracy and thereby making the victim realise his loss.

b. Instructing the laity to secure proper medical aid at the right moment.

c. Stoppage of quack practice, if necessary, by legislation.
BOOK NOTICES

- Provision of sufficient medical men in the villages.
- Increasing the number of hospitals or dispensaries, properly equipped, to treat diseases of the eye.
- Improving the social and economic condition of the children of the soil."

These various subsections are examined in more detail, and we note that the author recommends the legislature to suppress couching and to make trachoma a notifiable disease. He concludes as follows:

"In our country blindness is plentiful because ignorance, illiteracy, poverty and apathy stand as stumbling blocks in our path. . . . The fact remains that the work of prevention has never been undertaken earnestly. . . ."

R. R. J.

BOOK NOTICES


The Société Française d'Ophtalmologie and Edward Hartmann the author of this admirable atlas of radiographs are to be congratulated on the production of so fine and valuable a piece of work.

The book is composed mainly of illustrations with explanatory legends and a certain amount of text. The author has taken considerable pains to collect together radiographs of ophthalmological interest from all over the world and it is evident that he has selected wisely from the large collection which he accumulated for the purpose of this work. The range of his task is so wide and varied that it is probable that no one ophthalmologist, however extensive his experience, would personally encounter in his clinical career examples of all the disorders shown in this atlas. The author expresses his appreciation of the co-operation of his colleagues in this collective task.

The radiographs have been selected mainly for the characteristic features of the particular disease they illustrate and to afford the ophthalmic surgeon a work of reference so that he may compare radiographs taken in the course of his practice with those illustrated in this book.

The scope of the work is wide, chapters being devoted to radiographic evidence of general medical diseases, intra-cranial tumours and other problems of neurological interest, oto-rhinological and dental disorders and affections of the bones of the skull and face.

There are some excellent radiographs in connection with recent work on arterio-radiography showing the site of intra-cranial