Glaucoma

If due allowance be made for the fact that a number of the globes had undergone late changes which were calculated to hide the evidence of a previous glaucoma, we find that 19 out of the 30 left had suffered from high tension. In 3 of these the angle of the chamber was freely open, and in 16 it was closed. Of the 3, one showed a free communication between the aqueous and vitreous chamber; in the second a bulky Morgagnian lens closed a large part of the angle of the chamber; and in the third there was good reason to think that the glaucoma had existed before the operation was undertaken. Taking the remaining 16 cases, together with certain others in which the presence of glaucoma could no longer be established, the following conditions found present afford reasonable explanations of the causes of the raised intra-ocular pressure. In one there was a corneal fistula following a corneal staphyloma; in one there was a capsulo-corneal synechia; in one a retino-corneal synechia; in 5, the ciliary body was involved in the scar; in 6, the dislocated lens pressed extensively on the iris base; in 3, the lenses were tilted at right angles to their normal position; in 5, the pupil was blocked, and in 3 of these iris bombe was present; in 2, the interior layer of the hyaloid was much thickened by inflammatory exudate; in one, there was a dense after-cataract; and in one, glaucoma had evidently been present before the operation.

ABSTRACTS

I.—THE RETINITIS OF ARTERIO-SCLEROSIS


Foster Moore has contributed an article of interest, the outcome of painstaking and accurate observation. The subject is considered under three heads:

1. The evidence of arterio-sclerosis revealed by the ophthalmoscope.

2. An endeavour to show that a condition of retinitis may be engrafted on this—a condition with distinctive characteristics differing markedly from those of renal retinitis and therefore deserving of separate recognition, and

3. A consideration from a study of cases of the extent to which
disease of retinal vessels is indicative of similar disease of cerebral vessels.

1. Moore considers the characteristics of retinal arterio-sclerosis as described by Marcus Gunn:
   (1). Irregularity of lumen of arteries.—This he regards as not distinctive. It may not be present even with a high degree of arterio-sclerosis. If it is present it is an indication of severe disease and of a high blood pressure.
   (2). Tortuosity of the arteries.—This is seldom extreme in degree and is not a very valuable sign, as considerable tortuosity may occur under physiological conditions.
   (3). Central light reflex.—This is an exceptionally narrow and bright central light streak which may show a series of brighter points at intervals. This Moore considers one of the most important universal signs, yet subject to misinterpretation, as it is only an exaggeration of normal conditions.
   (4). Loss of translucency of arterial walls, and
   (5). Obstruction of blood flow in veins where they are crossed by arteries.

These two signs he considers very valuable, as they are never seen apart from arterio-sclerosis. They are always present in it, and their variations are so visible that they form a trustworthy means of judging the extent and degree of sclerosis.

The evidence of obstruction is of two kinds: (a) the actual effect on the vein by "banking;" (b) the displacement of the line of the vein. Thus a vein may be approaching an artery at an acute angle, but it suddenly goes off and crosses under the artery at a right angle and after it has crossed resumes its former line. This displacement Foster Moore considers the most striking and important single sign of severe retinal arterio-sclerosis.

(6). Oedema of retina, mentioned by Gunn, he does not regard as a necessary sign of arterio-sclerosis.

Other changes may occur in the arteries. A general reduction in size, although it is a condition difficult to prove, Moore thinks does occur in arterio-sclerosis. In some cases the lumen of an artery may become completely obliterated and the former vessel is then represented merely by a fibrous white thread. Retinal haemorrhages are, of course, incidental to arterio-sclerosis, and the different types are described. Some degree of optic atrophy may also occur in arterio-sclerosis, and results from one of two conditions: (a) thrombosis of a retinal artery or its branches; (b) gradual narrowing of arterial branches, and consequent insufficient blood supply. The former is sudden in onset, the latter gradual. Lental opacities he does not consider as necessarily associated with arterio-sclerosis. As regards sex-incidence of arterio-sclerosis, his impressions agree with those of Nettleship and Gunn, viz. that females are more
prone than males to suffer from arterio-sclerosis, and his observations indicate that women are more tolerant of a high blood pressure than men.

2. The second part of the paper is devoted to an endeavour to show from a study of a number of cases that a retinitis may be engrafted on a condition of arterio-sclerosis, and that this retinitis deserves recognition as a separate clinical entity. Arterio-sclerosis, as was shown by Gull and Sutton, is a disease of small vessels. The renal and retinal vessels are affected in this disease as well as other small vessels in the body, but Foster Moore believes that the retinitis which develops in arterio-sclerosis is solely due to disease of the retinal vessels. No doubt, as disease in the renal vessels progresses, renal insufficiency may be produced, and soft-edged areas of exudate may appear similar to those found in chronic parenchymatous nephritis. But the distinctive characters of the change in arterio-sclerotic retinitis are shown in: (1) the character and arrangement of the exudate; (2) the changes in the dots which are slow to develop and slow to undergo change, although they may completely disappear: (3) the "pipe-stem" sheathing of the arteries; (4) the unilaterality of the condition; and (5) the histological character of the exudate which is found entirely in the internuclear layer, and is seen to consist of masses which are perfectly homogeneous and hyaline in appearance—thus indistinguishable from the exudate in renal retinitis—although none of the large phagocytic cells so common in many sections of renal retinitis were found in these cases.

Further evidence for the view that arterio-sclerotic retinitis is a separate entity from renal retinitis, is to be found in the ophthalmoscopic appearances: (1) the evidence of well-marked arterio-sclerosis; (2) retinal hæmorrhages tend to be smaller and more scattered than in renal retinitis; (3) the retinal exudate already mentioned; (4) the rarity of woolly patches (if these are present they indicate the beginning of renal insufficiency); (5) retinal oedema does not occur and therefore detachment is rarely if ever produced; (6) the "star" figure may be present in either variety; and (7) changes in 45 per cent. of cases are unilateral, while in renal retinitis changes are nearly always present in both eyes.

Further, the gradual evolution of arterio-sclerotic retinitis from arterio-sclerosis can often be studied in an individual, and a comparison of groups of cases of arterio-sclerosis and of arterio-sclerotic retinitis, show the existence of similar but more advanced vascular changes in the latter. Also, the duration of life is longer in cases of arterio-sclerotic retinitis than in cases of renal retinitis, and cerebral hæmorrhages are a much commoner cause of death in these cases than is uremia.

3. The third part of the paper deals with the relation of
sclerosis of the retinal arteries to cerebral arterio-sclerosis. Two
groups of patients have been studied. One group consisted of
44 patients admitted to St. Bartholomew's Hospital suffering from
hemiplegia of sudden onset, i.e., vascular brain disease. Of these,
70 per cent. showed evidence of retinal vascular disease, and in 43
per cent. this was severe in degree.

Another group of 66 patients attended at Moorfields on account of
impaired vision, the result of retinal arterio-sclerosis. Information
is available as to 46 of these, and in 21, i.e., 46 per cent., there had
been a vascular lesion; 18 are known to be still alive.

It will be recognized that this paper is an important one. It
is illustrated with tables and excellent plates, and all the points
which seem to be clearly established are the existence of a
condition of arterio-sclerotic retinitis, developing out of arterio-
sclerosis of retinal vessels. The absolute distinction between this
and renal retinitis is not quite definite perhaps, and there seems to
be, in the mind of the observer, the suspicion that some cases can be
claimed to belong to either category. It appears, however, to be
quite clear that patients suffering from arterio-sclerosis, and patients
the subjects of arterio-sclerotic retinitis, are peculiarly prone to
vascular lesions of the nervous system.

JAMES TAYLOR.

II.—ALPHABET KERATITIS

(1) Haab, O. (Zurich).—New observations upon the cornea and
the retina (Neue Beobachtungen an Hornhaut und Netzhaut
des Auges.) Correspondenz-Blatt für Schweizer Ärzte, 1916,
Nr. 33.

(2) Haab, O. (Zurich)—Alphabet keratitis (Die Buchstaben-

(1) Haab, in a clinical lecture delivered before the Society of
Medical Men in Zurich (February 26th, 1916), told his hearers that
any clinical facts he had discovered were to be ascribed to the
methods of examination he had learned from his former teacher,
Horner, who was one of the first to lay stress upon the value of oblique
illumination and of the direct method of ophthalmoscopy.

Examination of the eye by oblique illumination with the loupe
was introduced in comparatively recent times, and yet this small
instrument is one of the most valuable we possess. Hartnack's
loupe is generally used, but further help can be gained by employing
a binocular instrument, of which there are several.
Using this method, Haab had discovered reticular keratitis, and band-shaped opacities in the cornea in cases of infantile glaucoma. He also was able to describe the cerebral light reflex. He now draws attention to a new disease—"alphabet keratitis" (Buchstabenkeratitis).

Although he still uses the old lens of Hartnack, the source of light has been improved by the introduction of the Nernst lamp. This light is very powerful and white. With the Nernst lamp, one not only sees better, but more, than with gas or ordinary electric light. Gullstrand has improved the Nernst in his "slit light." With this instrument it is possible to see the nerve-fibres in the cornea, and the currents in the aqueous, which have recently been described by Berg, of Stockholm. More recently the half-watt Osram lamp has been constructed. It gives a powerful light which is so like sunlight that it will show that interesting reflection known as the Japanese magic mirror. The magic mirror is made of bronze, and on the reverse side there are relief figures of animals, flowers, or letters. The mirror is beaten slightly convex, and the reflecting side polished. In a strong light at a certain angle of reflection the figures can be seen on the apparently perfectly plane side. This reflex can be obtained with the half-watt lamp. The experiment shows why with this source of illumination we can see things in the cornea which are otherwise invisible.

"Alphabet Keratitis" is a rare affection. In the last eighteen years Haab has seen it only seven times. With good oblique illumination, the surface of the cornea is seen to be raised in places into lines which cross and recross, giving the appearance of letters of the alphabet. The lines are straight and of different lengths. The broader lines have in places a double margin, and here and there, in both the single and double lines, there are round infiltrates. In places it looks as though a row of punctate dots were joined by right lines.

There is at first moderate irritation of the eye. The condition may occasionally disappear in three weeks. In other cases there are repeated relapses which give the affection its serious aspect. Sometimes the eye becomes soft and permanent deep-seated opacities destroy useful vision.

A severe case was treated by Haab with tuberculin. Béraneck’s tuberculin had no action, but one eye made a complete recovery after injections of Koch’s old tuberculin. Haab remarks that it is impossible from one instance to suggest that the affection has a tuberculous basis.

This disease seems to be analogous to a condition described by W. T. Holmes Spicer and R. A. Greeves in a paper read before the Royal Society of Medicine (February 2nd, 1916) as "superficial linear keratitis."
Haab also has some remarks relating to the colour of the fundus. It is generally supposed that the red reflex is caused by the blood in the choroidal capillaries. This is a very common error. As long ago as 1877, von Bezold and Engelhardt pointed out that if the red reflex were really due to blood it's light ought to give the absorption bands of haemoglobin in the spectroscope, but it does not. Again in lipæmia, leucæmia, and pernicious anæmia, there is no marked pallor of the fundus. Cases of lipæmia in diabetes, where the blood is almost white, do not exhibit that pallor of the fundus which would be present were the red reflex due to the blood. Marx has shown that the blood has little to do with the reflex, which is caused by the pigment epithelium behind the retina.

Haab's final subject deals with the macula. This is a region of vulnerability, a locus resistentiae minoris. When the eye has been contused, it is quite common to find that, in addition to Berlin's opacity, which is present at the seat of the blow, the macula also shows some œdema, a change which may cause permanent loss of function, and in some cases lead to the formation of a hole. These holes are found after blows and in senility.

Haab advises observers to pay attention to the oval reflex which is visible round the macula. He has for many years made a special study of this foveal reflex, and finds that it is a very delicate index of the integrity of the macula. When the macula is becoming diseased, we can observe that the reflex grows less evident and eventually disappears. In retinal atrophy the reflex becomes first more extensive and then disappears. The increase in size shows that the fovea is getting shallower. If the disease of the macula disappears the foveal reflex may reappear.

It is especially necessary to pay attention to the foveal reflex in myopia. Macular disease is here heralded by disappearance of the reflex, and calls for immediate and energetic treatment.

The linear reflex seen in exudative disease, such as papilloœdema, is always pathological, and may go on to the formation of a "macular fan."

Haab urged his hearers to become competent in the use of the direct method of ophthalmoscopy. Such advice is hardly necessary in Britain.

T. Harrison Butler.

(2) Haab draws attention to a peculiar irritative and inflammatory disease of the cornea, usually affecting one eye. This he terms "alphabet keratitis" (Buchstabenkeratitis). It appears to be analogous to, if not identical with, the condition described by L. Caspar (Klin. Monatsbl. f. Augenheilk., 1903, p. 289) and by W. T. H. Spicer and R. A. Greeves (Ophthalmoscope, March, 1916). That it is a rare disease is shown by the fact that during the last eighteen years, Haab has met with only seven cases (ranging in age from 14 to 34 years), all of which are fully
described in the present communication. The malady is characterised by a number of straight, superficial ridges, of grey colour, in the cornea, commonly arranged vertically, which often meet at angles and cross and re-cross, and in that way may come to resemble letters of the alphabet, examples of which may be seen in the accompanying figures. The lines may be double-contoured, and appear to include nodes here and there in their course. The affection may be associated with lowered intra-ocular pressure. It may last for a long time, and become very threatening as regards sight. Observation of the corneal changes is facilitated by the
Employment of the half-watt Osram lamp and the Zeiss binocular magnifying glass. Injury played no great part in Haab's cases.

- Haab carefully distinguishes *Buchstabenkeratitis* from other linear conditions of the cornea, such as striped keratitis, birth injuries, herpes febrilis, and lattice-like keratitis. He gives a hint that tuberculin should be tried, especially in the more severe cases.

S. S.

III.—DETACHMENT OF THE RETINA


(1) Foster Moore discusses the retinal detachments met with in renal retinitis.

He considers that this complication is far less rare than has generally been supposed. The reasons for the failure to diagnose it more frequently are, that it occurs late in the patient's life, that the globular detachments are generally situated peripherally and are often transparent, and that the flat detachments are far from being easy to recognize. He mentions the cases which have already appeared in literature, and adds 13 of his own, found in a systematic examination of a large number of cases of chronic nephritis. There are two types of retinal detachment,—the flat, produced by solid subretinal exudate, and the globular, chiefly by fluid. Flat detachments can sometimes be demonstrated histologically, even although they have escaped ophthalmoscopic diagnosis during life. Globular detachments tend to be associated with pregnancy, to occur on both sides, and to involve the lower part of the retina. They are usually transparent, and appear to be tense. If the patient survives, they usually disappear.

Moore's experience is against the view that retinal detachments may develop during the course of a nephritis, in the absence of retinitis. In his opinion, the liability to detachment increases with the severity of the retinal changes, and is independent of the type of nephritis producing them. He describes the detachments as brought about by an active exudation of material, partly solid, but chiefly fluid, into the subretinal space, and he considers that the retina is to be regarded as the source of the whole of this exudate. There are three types of solid exudate: (1) fibrinous, (2) hyaline, and (3) granular. He claims that the two former at least are
indubitably of retinal origin; he gives his reasons for believing the same to be true of the fluid outpoured beneath the retina. He rejects the view that a condition of general oedema is a factor in the genesis of retinal detachment, which he looks on as a purely local manifestation, dependent upon the retina.

Recovery with reattachment would appear to occur quite frequently, especially in pregnancy cases. If so, it is usually complete in two months. More or less extensive changes remain in the retina. This question is dealt with in some detail. The effects upon central visual acuity depend upon the retinitis rather than upon the retinal detachment, unless the latter involves the macula. In the cases examined intra-ocular pressure was unaffected.

The paper is freely illustrated.

R. H. ELLIOT.

(2) Readers may be reminded that at the 1915 Congress of the Ophthalmological Society of the United Kingdom a discussion was held on “Detachment of the Retina,” and that the Society then appointed a Committee, consisting of Messrs. E. Treacher Collins, R. A. Greeves, M. S. Mayou, Leslie Paton, A. Maitland Ramsay, and J. B. Story, to report upon the cure of the condition.

The Committee presented its Report at the 1916 Congress, and an attempt is made below to present, as briefly as may be, its main facts:

A circular letter, asking for notes of unpublished cases, or references to published cases, was issued by the Committee in May, 1915. A case was regarded as “cured” when the retina had remained in its normal position for six months, apart from any question of restoration of function. Records were obtained of twenty-one unpublished cases, and in order to widen the basis of the Report, the Committee utilized the records found in the more readily accessible suitable English (45), French (10), American (4), and German (26) literature. The following quotation may be made from the Committee’s Report: “We think it only just to our own country to state that we have found, on the whole, the English cases most adequately and judicially reported, and that, as regards success from the patient’s standpoint, i.e., visual acuity, English ophthalmic surgeons lead by a very long way.”

Eighty-five cured cases are in all reviewed, and the fact emerges that in no less than forty-four of them recovery followed some form of operation. Of the remaining forty-one cases, in seventeen cure was stated to have been the result of treatment. In twenty-four of the forty-one cases cure took place spontaneously. It is difficult to give too wide a publicity to the facts brought out by the Committee.

Myopia, present in fifty-one cases, was the predominant aetiological factor. In eleven cases simple traumatism (apart from myopia) was the cause of the detachment. Six of the
cases occurred in patients with albuminuria, and in four of these this was associated with pregnancy. In one case the detachment took place during a pregnancy where the urine was normal. In two cases the detachment followed extraction of cataract from otherwise normal eyes; and in the remaining fourteen cases the aetiological factor was unknown or indefinite.

In the greater proportion of cases some hazy or cobwebby opacities were described as present in the vitreous, but the existence of definite vitreous bands was mentioned once or twice only. Usually no tears were noted in the retina, but that the presence of a rupture in the retina does not negative the possibility of cure is shown by three cases collected by the Committee. The duration of detachment from onset to time of cure was found to vary from one day up to three and a half years, and the best results in so far as concerned restoration of visual function took place within the first four or five months, although a marked exception to this statement is noted by the Committee. Most of the cases were between twenty and forty years of age.

In 81.82 per cent. the operation responsible for cure was some form of scleral puncture, as by Graefe knife or galvano-cautery. In the relatively few cases (nine) where the subretinal fluid was aspirated and afterwards either it or normal saline injected into the vitreous, it is noted by the Committee that the visual results were not so good as by the other methods. In many of the cases dealt with in the Report the reposition of the retina was accompanied not only by marked improvement in the central vision but also by pronounced restoration of the visual fields. The reverse, however, was true of a few cases. Of the forty-four operation cases, twenty-six were in myopes; six in traumatic detachment: in two the detachment followed cataract extraction; and in the remaining ten the aetiology was unknown.

With regard to the twenty-four cases of spontaneous cure, in one case reposition took place after detachment had been present for 3½ years, and in another two years. In one case the condition underwent recovery during a golfing holiday; in another cure was after a blow from a tree; and in a third, after an attack of acute mania. The cases of spontaneous cure included thirteen myopes, five instances of traumatism, three of pregnancy with albuminuria, and three of unknown causation.

As to the seventeen cases of cure following treatment, more or less prolonged rest in bed was a measure employed in all, and to this the Committee assigns a most important rôle. In the majority of these cases the detachment had lasted only a short time, measurable by days or weeks. It is noted, indeed, that in three cases only had the detachment persisted as long as six months. Twelve of the cases were in myopes; four of them were instances of albuminuria (two
with pregnancy); and one was of unknown causation. Nine of the seventeen cases regained vision of 6/18 or better, and in three the vision reached 6/6. All seventeen cases, with five exceptions, were between twenty and forty years of age.

The conclusions reached by the Committee are given below in full:

(a) Treatment by Operation

(1) Operative treatment has proved successful in cases of retinal detachment associated with myopia, traumatism, cataract extraction, and in those which, for lack of a better name, may be called idiopathic.

(2) Cure has followed operation after the detachment has lasted two years.

(3) Cure has occurred in patients as young as 15 and as old as 78, but the majority of operative cures was in patients between 20 and 40.

(4) Operation has proved successful despite the presence of vitreous degeneration, shown by vitreous opacities or haze.

(5) Successful reposition has followed operation in one or two cases where the detachment had been described as complete, but in none of the successful operation cases is there any note of the presence of retinal ruptures or holes.

(6) The operation which has proved most beneficial is some form of scleral puncture either with Graefe knife or cautery. Comparative examination of the cases shows that the addition of intra-vitreous injections has not increased the benefits derived so far as visual acuity is concerned.

(7) Full restoration of function, both central and peripheral, may be secured as the result of operation. In the majority of cases useful vision, 6/18 or better, has been gained. On the other hand, complete reposition of the retina may take place with very slight, or even no, restoration of vision.

(b) Spontaneous Cures

(1) Spontaneous cures have occurred in cases of myopia, traumatism, albuminuria of pregnancy, and in idiopathic cases.

(2) It has resulted after the detachment has lasted three and a half years.

(3) It has occurred in a case at. 9 years, and one at. 63 years. Half the cases of spontaneous cures in this series were over 40.

(4) The statements 4, 5, and 7, made about operation cases apply also to spontaneous cures, with this exception—that cases of spontaneous cure are recorded where tears in the retina have been noted.
(c) Non-operative Treatment

(1) The Committee find some difficulty in arriving at definite conclusions as to the part played by non-operative treatment in the cure of detachment. The two means which seem to have proved most efficacious are rest in bed and the use of pressure bandages.

(2) Cases of detachment in association with albuminuria have recovered in which the only treatment employed was rest in bed.

S. S.

IV.—EXOPHTHALMOS.

(1) Denhaene (Brussels).—A case of voluntary exophthalmos (Un cas d'exophtalmie à volonté.) Soc. belge d'Ophthal., 28 avril, 1912.


(4) Maher, W. Odillo (Sydney).—Notes on unusual cases of pulsating exophthalmos Ophthal. Rev., April, 1914.

(5) Maher, W. O. (Sydney).—Notes on two unusual cases of pulsating exophthalmos Ophthalmology, April, 1914.

(6) Ramsay, A. Maitland (Glasgow).—The clinical significance of exophthalmos Medical Press and Circular, June 17th, 1914.


(8) Kuhnt, H. (Bonn).—Mucocele of the frontal sinus and of the ethmoidal cells, with sudden high-grade exophthalmos (Mukokele der Stirnhöhle und des Siebbeinlabyrinths mit plötzlichem hochgradigen Exophthalmus.) Zeitschr. für Augenheilk., January-February, 1915.


(1) Denhaene narrates the case of a man, 22 years of age, who, as the result of an injury to the lower and outer part of the orbit, developed marked exophthalmos which he could produce by compression of air in the nose. The exophthalmos measured 20 mm. to 30 mm. The author thinks that the condition can be explained by a varicose intraorbital tumour or a venous angioma.

Marcel Danis.

(2) Barrière describes the case of a young man, 19 years of age, with right-sided exophthalmos, said to date from infancy. He complained that the exophthalmos was increasing in degree, and that every time he chewed the protrusion increased and diplopia occurred. Movement of the eye outwards was slightly limited; the exophthalmos, which amounted to 5 mm., could be reduced by pressure; and no tumour could be felt. When he pressed the jaws firmly together, the eye protruded 2.5 mm. further and turned slightly inwards, diplopia came on (homonymous, in the right half of the field), there was a protrusion of the outer half of the lower lid, and a smooth elastic tumour could be felt in the lower and outer part of the orbit. Relaxation of the muscles of mastication caused the disappearance of these phenomena. By puncturing the tumour fluid was removed from it, and the increased exophthalmos, etc., could not be produced until the tumour had refilled.

The clinical diagnosis was dermoid cyst of the orbit extending through the inferior orbital fissure into the temporal fossa, and this was confirmed when the tumour was removed by Krönlein’s method.

A. J. Ballantyne.

(3) Mathewson records a case of pulsating exophthalmos following fracture of the base of the skull. A month after the accident, there was much proptosis, and marked restriction of movements of the globe, but no pulsation. Although the optic disc and fundus were normal, vision was reduced to counting fingers at 8 feet in the upper half of the field, while it was entirely lost in the lower half. Six weeks later, dilatation of the palpebral veins and pulsation of the eyeball appeared, while the optic nerve showed slight pallor and the retinal veins some dilatation. During the succeeding eight months, an audible bruit developed, proptosis
became more marked, and vision was further reduced. The common carotid was tied with good results, there being but little proptosis and no pulsation or bruit a month after the operation.

J. Jameson Evans.

(5) The first of the two patients reported by Maher received a blow on the head, the site of injury not being stated. Symptoms of pulsating exophthalmos set in on the right side in three weeks. Four months later the right eye was removed, and after a few weeks, pulsating exophthalmos developed on the left side. The symptoms of this were completely controlled by pressure on the right common carotid, and cure was obtained by ligature of the right internal carotid.

In the second case the base of the skull was fractured by a fall from a height. Left exophthalmos appeared six weeks later. After a few weeks this began to subside, but as this went on pulsating exophthalmos gradually developed on the right side. This could be controlled by pressure on the left common carotid, and the symptoms were much relieved by ligature of the left internal carotid.

The unusual feature of these two cases was the control of the pulsating exophthalmos by pressure on the opposite common carotid.

A. J. Ballantyne.

(6) In an interesting clinical lecture, Maitland Ramsay presents in compact form the principal facts regarding exophthalmos as a clinical symptom.

Under the heading of exophthalmos, accompanied by signs of inflammation, abscess of the orbit is described, and special detailed reference is made to the possibility of cavernous sinus thrombosis as a complication, to its signs and symptoms, and to its prognostic significance. The author then discusses the chief possibilities where the exophthalmos is not accompanied by signs of inflammation. In this connection he draws attention to the fact that while bilateral exophthalmos of this type is, as a rule, symptomatic of general disease, there are many exceptions to the rule. In Graves's disease the exophthalmos may be unilateral, a fact familiar to most of us. In this disease the disfigurement may be lessened by tarsorrhaphy, an operation which has the additional advantage of protecting the exposed cornea and preventing ulceration.

Ernest Thomson.

(7) The main facts of the case of Sym and Miles, are as follows.—A man, aged 46 years, sustained a fracture of the middle fossa of the base of the skull in a carriage accident. On regaining consciousness, he was troubled with a buzzing noise in both ears. Somewhat later, right ptosis and inability to move the right eye either to the right or left. Within ten days of the accident, the right eye became protruded and reddened, and its sight began to fail. The congestion of the conjunctiva became extreme, and some
oozing of blood took place. After an unsuccessful attempt to control the bleeding by ligation of the bleeding points, another surgeon enucleated the eye. Eight weeks after the injury, the left eye showed signs of involvement. Seventy-eight days after the original injury, the right common carotid artery was tied with excellent result (V. 6/6). The patient was discharged on the twenty-first day after operation, and when heard of several months later, had resumed his work as a farmer.

S. S.

(8) **Kuhnt** describes a case of mucocele of unusual character which occurred in his practice some years ago, before Röntgen photography had advanced sufficiently to enable pictures of the skull to be taken. In consequence, the condition was mistaken for a new growth, and was attacked from the temporal side by Krönlein's method. The discovery of the true nature of the swelling was followed up by a radical frontal sinus operation. A mucocele almost always follows a trauma, and develops slowly, generally in the frontal sinus or in the ethmoid cells. In Kuhnt's case there had been a blow upon the temple, and the mucocele appeared suddenly and reached its full size within a couple of days. The accident had occurred two years before the patient developed exophthalmos.

T. H. **Butler**.

(9) **Bedell** publishes a case of pulsating exophthalmos, and deals with the literature of the subject. To the 214 already previously discussed, he adds 32 others, thus bringing the total under review up to 246.

He discusses the treatment of the condition. Ligation of the common carotid artery is the operation most often resorted to; but as it has frequently been attended with fatal results, he thinks ligation of the superior ophthalmic vein should receive greater attention in future. This is, in his opinion, an operation which should always be done after ligation of one common carotid has failed; in many cases it may be advised as the primary procedure. He does not recommend the injection of gelatin, compression of the carotid, nor treatment by drugs, rest, etc.  

R. H. **Elliot**.

(10) **Snowball** carefully reports a case of spontaneous pulsating exophthalmos in the right eye of a lad, 13 years of age. The condition was treated by ligature of the right common carotid artery and external jugular and common facial veins. Ligatures were also applied to engorged veins over the inner and outer end of the upper edge of the orbit. The patient died suddenly on the morning of the ninth day after operation, at a time when all appeared to be going well. The post-mortem examination was most instructive.—A considerable clot of blood was found to lie over the left parietal region and in the left middle fossa of the base of the skull. A clot of blood was found to protrude from a cavity in the apex of the left temporo-sphenoidal lobe, and the brain substance around showed
signs of softening. The right internal carotid showed an aneurismal dilatation, the upper part of which communicated by a small aperture with the cavernous sinus. The last-named was distended and distorted, and contained a dark-red blood clot, streaked with white fibrin.

(11) Fisher's case, which occurred in a woman aged 59 years, may very well have been an instance of spontaneous communication between the internal carotid artery and the cavernous sinus.

The patient suddenly felt giddy, and fell down some six steps. She remained unconscious for four or five hours, and vomited on recovering her senses, and was sick occasionally during the next two or three days. There was no clear evidence of fractured base, no bleeding from the nose or mouth, and no blood found in the vomit. On the third day after the fall, the woman's right eye became prominent. Seen by Fisher, seven weeks later, there was marked pulsation of the right eyeball, and a thrill was felt. A loud bruit was audible over the eyeball and the right fronto-temporal region. There was paralysis of all extrinsic muscles of the eye except the superior oblique. The pupil did not react to light. V. (corrected) = 6/24 partly. The patient was kept at rest in bed, and ten grain doses of potassium iodide were administered. After fifty-six days, the sight of the affected eye (corrected) = 6/9. There was some evidence that the-dilating fibres of the right iris were paretic, and this was supposed by Fisher to be due to implication of the sympathetic nerve filaments in the cavernous sinus.

S. S.

(12) Among these five surgical cases from the Edinburgh Royal Infirmary, Burns describes one of dermoid cyst in the orbit of a girl, twelve years of age, following an injury to the head, six years before. One eye was displaced forwards and outwards, and the movements of the eyeball were somewhat limited. There was a marked fullness over the corresponding part of the temple. Diplopia. Vision almost normal. Slight fulness of the retinal veins, suggestive of difficulty in return of blood. The X-ray examination showed a tumour involving an area of the orbit, temporal fossa, and cranial fossa on the right side of the skull. The edge of the tumour was dense, and the centre clear. After potassium iodide had been tried without success, the tumour was removed, and recovery was uneventful.

S. S.

(13) A man, aged 53 years, had suffered from protrusion of the eyes, without known cause, for some two months before he was seen by Cross. On examination, there was redness of the conjunctiva of both eyes with symmetrical swelling of the eyelids and orbital tissues, causing proptosis of the eyeballs. The optic discs were normal, and there was no evidence of pressure upon the retinal blood-vessels. Movements of the eyeballs were not impaired in any direction. Despite various forms of treatment, the
condition did not improve. Examination of the nasal sinuses was negative. Leucocythaemia and chloroma were excluded by examination of the blood. There was no enlargement of lymphatic glands, liver, or spleen. A small ulcer developed in each cornea, probably as the result of exposure. No clue was obtained as to the actual pathological cause of the proptosis, which must accordingly be left an open question. We may venture to express a hope that more will be heard of this interesting case.

(14) The curious case reported by Greig was observed in a marasmic child, aged eleven months, and weighing only seven pounds. She screamed incessantly, and it was noticed that when crying, all the voluntary muscles (including the orbicularis palpebrarum on both sides) were thrown into a state of convulsive movement, while, in addition, the eyeballs were protruded to such an extent that extrusion appeared to be imminent. If the fit of crying were more violent than usual, or with the slightest touch on the outer canthus, the left eyeball was protruded with a jerk from between the lids. The globe could not be voluntarily retracted, but was quite easy to replace with a little pressure. It is to be particularly noted that the cranial vault was of normal size and contour, that there was no appearance of hydrocephalus, and that the orbits (as far as could be made out) were of normal size and depth. During sleep the eyeballs showed no projection. The globes were not unduly large.

S. S.
Herpes Consecutive to Anti-typhoid Inoculation

V.—Herpes Consecutive to Anti-typhoid Inoculation

(1) Morax, V. (Paris).—Herpes of the mucous membranes and of the cornea following anti-typhoid vaccination (Herpes des muqueuses et de la cornée consécutif à la vaccination anti-typhique.) Ann. d'Ocul., mai, 1916.


(3) Gloagen (Cherbourg).—Three cases of palpebro-ocular herpes following anti-typhoid vaccination (Trois observations d'herpes palpébro-oculaire consécutif à la vaccination anti-typhique.) Ann. d'Ocul., janvier, 1917.

(1) Morax records the case of a soldier, aged 43 years, who developed herpes of the cornea after anti-typhoid inoculation. The first injection, on February 15th, 1916, caused neither malaise nor elevation of temperature. The second injection, on February 22nd, caused slight fever and disturbance at night, and was followed in two days by a slight eruption of herpes on the lower lip. The third injection, on February 29th at 9.30 a.m., was followed in half an hour by malaise, severe enough to make the patient go to bed. Towards midday he had rigors, and his temperature rose to 40° C. Next day he was much better, and his temperature 38° C. On March 2nd he had an attack of herpes on the lips and the right nostril, and behind the right ear. On March 4th his right eye became irritable, and his eyelids a little swollen. When seen by the author on March 7th, he had typical herpetic keratitis in the right eye. Under treatment, this cleared up, and on April 1st the area which stained with fluorescein was reduced to the size of a pin-head. The man had never previously suffered from herpes, and the repetition of the series, inoculation fever, incubation stage of two or three days, and herpes, seems to prove that the inoculation was the cause of the eruption.

The author also refers to the following three cases of ocular lesions following anti-typhoid inoculation, which he regards as coincidences.—(1) Paramacular retinal haemorrhage; (2) paralysis of both recti externi, associated with generalised paralysis; and (3) failure of sight due to optic neuritis caused by intracranial neoplasm.

These four cases only were observed among 1,700 inoculated soldiers whom he examined. He publishes them because he considers that all lesions which may occur after anti-typhoid inoculation, and which can be regarded as due to it, should be recorded, with a view to discovering by clinical analysis, and, above
all, by collation of the reports of different observers, which are really caused by the vaccination and which are merely coincidences.

R. J. COULTER.

(2) Morax also records another case of herpes, consecutive to anti-typhoid inoculation. Four such injections were made, and the first three were followed by no untoward complications. The fourth, however, was quickly succeeded by violent reaction, during which the temperature rose to 40.5° C. Two days after the injection, there was an eruption of facial herpes, and the man noticed that the sight of his better eye had become cloudy. When seen by the author, some three weeks after the injection, there were signs of the recent eruption upon the face and the eyelids. The patient's right eye was somewhat reddened and sensitive to light, and facettes, in a circinate arrangement, were present in the lower half of the cornea. V. = 2/10.

S. S.

(3) Gloagen reports three cases where anti-typhoid vaccination was followed by general symptoms, as fever, headache, and dorso-lumbar pain, along with cutaneous and ocular herpes. The corneal herpes was observed after the first injection in one case; after two injections in a second; and after the fourth injection in the third case. In each instance remaining corneal opacities reduced V. to 0.1, 0.2, and 0.6 respectively.

S. S.

VI.—ROYAL COMMISSION ON VENEREAL DISEASES

(1) First Report of the Commissioners (Cd. 7474), 1914. Price ½d.

(2) Appendix to First Report of the Commissioners (Cd. 7475), 1914. Price 3s. 8d.

(3) Final Report of the Commissioners (Cd. 8189), 1916. Price 1s. 1½d.

(4) Appendix to Final Report of the Commissioners (Cd. 8190), 1916. Price 3s. 9d.

The minutes of evidence (2 and 4) given before the Royal Commission on Venereal Diseases (appointed in 1913), included evidence by several ophthalmic surgeons, amongst whom may be mentioned Mr. F. R. Cross, Mr. W. H. H. Jessop, Mr. N. Bishop Harman, and Mr. E. Treacher Collins. Interesting points were made by all the witnesses named.

Mr. F. R. Cross considered that interstitial keratitis was "practically always due to congenital syphilis." . . . Asked whether any attempt was made at Bristol to explain to the parents of those affected with the disease the necessity of personal treatment, Mr. Cross replied in the negative. He entered a plea for the State
provision of facilities for the diagnosis and treatment of syphilis. He thought that in children gonorrhoea was the chief cause of blindness, while in adults, on the other hand, syphilis was more to blame. He spoke highly of the curative effect of salvarsan in specific diseases of the eye. He saw no objection to the use of silver nitrate to the eyes of newly-born infants, although he did not regard it as a necessary routine method for the prevention of ophthalmia. Unlike Mr. N. Bishop Harman, he knew of no instance of ophthalmia neonatorum transmitted from an affected baby to other children of the same family.

Mr. W. H. H. Jessop's evidence as regards syphilitic affections of the eye was of an interesting and exact nature.

Of 31 cases of iritis, 45·16 per cent. yielded a positive Wassermann reaction, and no particular difference was noted as between men and women. In 24 cases of choroiditis, the percentage of positive reactions was 29·16. (Mr. Harman, however, believed that the figure in question would be higher still if children were included in the returns.) In 62 cases of interstitial keratitis, the Wassermann was positive in 51·61 per cent. Most of the remaining cases were due, in Mr. Jessop's opinion, to tubercle. Of 20 cases of primary optic atrophy, 35 per cent. gave a positive reaction. As regards the treatment of gonorrhoeal iritis, the witness had had no success from the employment of gonococcal vaccine. Mr. Jessop advocated the institution in every general hospital of a special department for the diagnosis and treatment of venereal diseases, a conclusion concurred in by Messrs. Collins and Harman. He had the greatest belief in the value of education in reducing the prevalence of venereal disorders, and threw out the suggestion that under the improved conditions thereby brought about, every syphilitic patient might be induced to keep a small book containing a record of his case and its treatment. The witness's experience of salvarsan in the treatment of optic atrophy had not been of an encouraging nature: he treated such cases with mercury. Iritis, however, speedily yielded to the remedy, a view in which Messrs. Collins and Harman concurred.

Mr. E. Treacher Collins gave it as his opinion that a child who showed notched teeth and other symptoms of syphilis, together with a positive Wassermann reaction, if treated with salvarsan, would be unlikely to develop interstitial keratitis at a later period of life. Mr. Jessop also thought that the disease might be prevented by very early treatment of the child or by pre-natal treatment of the mother. While agreeing generally, Mr. Harman remarked that treatment should be commenced early—that is, without waiting for any of the clinical signs.

As to the Blind, Mr. Collins suggested that the Royal Commission
might obtain statistics from all Institutions for the Blind. Questioned as to in-patient provision in the metropolis for babies with ophthalmia, he stated that three beds were available at the London Hospital and two at Moorfields. He spoke of the Liverpool experience, and stated that in Glasgow the work was being undertaken by the municipality. In regard to London, he advised that the whole matter be handed over to the Metropolitan Asylums Board, the necessary powers being given for that purpose.

Dealing with so-called "rheumatic iritis," Mr. Collins stated that he regarded most cases as being in the nature of iritis, associated with gonorrheal arthritis. He expressed himself as sceptical as to whether iritis could be produced without the intervention of arthritis.

The vexed question of the transmission of syphilis to the third generation was touched upon by the last witness. His remarks were based upon the examination of the offspring of twelve women, themselves affected with interstitial keratitis. Of sixty children in the third generation, 23 (or 38.2 per cent.) were still-born or died in early childhood. On the other hand, Mr. Harman had found it exceedingly difficult to arrive at definite conclusions, inasmuch as the possibility of re-infection in the second generation could not be eliminated. This fallacy, indeed, rendered it impossible to place much reliance upon the figures brought forward.

As regards the value of notification in ophthalmia neonatorum, opinions differed. Thus, Mr. Cross thought that it had already accomplished something, and was optimistic enough to express his belief that ophthalmia neonatorum would be stamped out now that the disease had been made notifiable. Mr. Collins did not believe that the number of official notifications in London really represented the extent of the malady, probably because the fee did not make it worth while. Mr. Jessop, while approving notification, did not think it had helped much to reduce the number of cases.

Mr. Harman was of opinion that notification served two useful purposes: first, it made medical men and midwives more careful; and, second, it rendered speedy treatment of the cases much more likely to be secured.

Sir Arthur Newsholme, K.C.B., Medical Officer to the Local Government Board, stated that the notification of ophthalmia neonatorum had applied to the entire population since April, 1914, when an order was issued by the Local Government Board making the disease notifiable throughout the whole of England and Wales. Prior to that date, the order was permissive, and applied to 35.6 per cent. of the total population. He did not believe that the statistics of ophthalmia from different districts were trustworthy for purposes of comparison, since there was more notification in some districts than in others. Notification was more common in births attended
by midwives than in births attended by medical men. The difference he traced not to an increased number of cases in the former as compared with the latter, but to the fact that no fee for notification was paid to medical men. He laid it down as a principle that "the advisability of notification in any disease is conditioned on its associated circumstances." In other words, the value of notification is only a question of balancing advantages. It had been more effective in some diseases, as typhus and typhoid, than in others, as measles and whooping cough.

Miss Alice Gregory, Honorary Secretary of the Home for Mothers and Babies at Woolwich, speaking of notification by midwives, stated that since it had been in force, there were many fewer cases of ophthalmia neonatorum. She believed that the amount of blindness due to that disease was less now than it was, and she attributed that fortunate circumstance to the greater attention now being paid to the malady.

Dr. A. K. Chalmers, Medical Officer of Health for Glasgow, gave some interesting evidence as to ophthalmia neonatorum, which was made notifiable in Glasgow in the year 1911. It was found before long that there was a certain family predisposition to the disease, which naturally suggested to the authorities the advisability of treating the mothers for the underlying complaint. As time went on, it was also discovered that the worst results occurred in cases where the disease was complicated with congenital syphilis. Thus, 98 per cent. of the non-gonococcal and 87 per cent. of the gonococcal cases were cured of the ophthalmia, while of 63 cases where syphilis complicated the ophthalmia, only 42 per cent. were cured. *

Miss Frances Ivens, the incumbent of several hospital appointments in Liverpool, gave evidence, among other things, of the method of dealing with cases of ophthalmia neonatorum at St. Paul’s Eye Hospital, where both mother and child were received as inpatients.

Mention has already been made of Mr. N. Bishop Harman's figures dealing with blind children, and an attempt may be made to give the reader some idea of them.

* From a memorandum issued by Dr. Chalmers (March 26th, 1917), we learn that hospital accommodation was provided for certain cases of ophthalmia neonatorum in one of the Reception Houses in February, 1912. The practice grew up of admitting the mothers with the babies, in order that the former might also undergo treatment. The latest figures as to ophthalmia neonatorum are that in 1913 of a total of 467 cases where the ophthalmia was non-gonococcal, 0.4 per cent. became totally blind; of 173 cases of gonococcal ophthalmia, 0.6 per cent. became blind; and of 63 cases where ophthalmia neonatorum concurred with congenital syphilis, 9.5 per cent. were blinded. In 1914, of 328 cases, treated presumably in the Reception House set aside for the purpose, no baby was rendered totally blind by the disease, and in 1915, of 389 cases one baby alone was totally blinded.—EDITOR.
Of the 1,100 blind and partially blind children examined by Mr. Harman, the condition was due to injury or destruction of the cornea in 351 (or 31.9 per cent.), and of that number, 266 were caused by ophthalmia neonatorum, 47 by purulent ophthalmia at a later age, and 38 by phlyctenular disease. Mr. Harman claimed (and we think rightly) that there was strong presumptive evidence that the 266 cases of ophthalmia neonatorum were of venereal origin. In the retrospective diagnosis of that affection he attached very considerable importance to the existence of nystagmus. In this connection the value of scarring of the palpebral conjunctiva might perhaps also have been mentioned.

Of the 1,100 blind and partially blind children brought into the enquiry, in 222 the disability was caused by lesions of the posterior part of the eye, and of these the greater number were due to choroiditis. Of the 222 cases, 126 (or 56.7 per cent.) were syphilitic clinically, and had it been feasible to estimate the serum reaction, the proportion might have been found to be somewhat higher. Many of the cases were associated with gross mental defect. As to interstitial syphilitic keratitis as the cause of blindness in the London Blind Schools, Mr. Harman found 190 (or 0.85 per cent.). A list of the confirmatory signs of syphilis in these cases is given, and it may be noted that in no fewer than 129 “Hutchinson's” teeth were found, although that total, it should be added, included a few “Moon's” teeth. Amongst other confirmatory signs, a “characteristic physiognomy,” “iritis,” and “bad family history” bulked largely. Deafness, on the other hand, was present in 43 cases only.

In the examination of the sight returns of 412,527 children, the percentage of damage from ophthalmia neonatorum was 0.0106. In regard to the prevention of that disease, several years ago (1907) Mr. Harman had obtained returns from eight private medical men in an average London suburb. Of 12,680 live births, 110 (or 0.87 per cent.) were affected with ophthalmia, and damage to sight occurred in 6 (or 0.047).

As to venereal disease affecting the eyes of children attending hospital, Mr. Harman cited those he had obtained from two institutions, namely, the West London Hospital and the Belgrave Hospital for Children. The number of children examined at the two institutions was 1,188 and 1,670 respectively. Among the former, three children affected with congenital syphilis were found, and two affected with ophthalmia neonatorum, while among the latter, the corresponding figures were one and six.

Finally, Mr. Harman considered that the following conclusions might be drawn from the figures he adduced:

1. Venereal disease affecting the parents is responsible for more than one-half of all cases of blindness occurring amongst children.

2. The total of the blindness due to venereal disease does not
appears great in relation to the total population. The effects of the disease are largely masked by the heavy incidence of miscarriages, still-births, and infant deaths among the affected population.

3. The effective treatment of affected parents would result in an appreciable reduction in the cases of blindness amongst children and the disabilities arising therefrom.

S. S.

BOOK NOTICES


This Society was founded in 1902, and is composed for the most part of Egyptians, although several well-known Europeans such as MacCallan, Meyerhof, Osborne, Jacovides, Peretz, Waddy, and Sachs figure as members and contributors.

The 1914 Bulletin is written mainly in French and contains a paper by Meyerhof on a case of successful extraction of a piece of steel, of 150 mg. weight, with the aid of a small magnet. The immediate vision obtained was 5/10, but, unfortunately, detachment of the retina followed and vision was reduced to finger-counting at 3 metres.

The second paper was also by Meyerhof, discussing the question of a natural or acquired immunity to trachoma. He gives illustrative cases and decides the question in the negative.

MacCallan then furnished the statistics of the Egyptian travelling hospitals, which show that 40,670 new patients were treated and 30,648 operations performed.

The next paper was by Zaki Seddik, on removal of the tarsus in the treatment of trichiasis. He tried this, as he found that the cutaneous scar left by other operations was objected to by a certain number of patients, and claims to have obtained very successful results. He stated that the operation was only suitable when the tarsal conjunctiva is in a cicatricial condition, and that it sometimes renders the border of the lid rather thick. Gamal Eddin followed with a paper on the same operation. He stated that the most important complication is lagophthalmos. This is best treated by massage and bandaging the lids at night. Entropion may occur if the incision in the cartilage near the edge of the lid is irregular, leaving a thin piece at the centre and large pieces at the angles, and when the sutures are put high above the roots of the lashes. In the subsequent discussion MacCallan pointed out that the operation should not be performed unless the fornix is already