In paying those partially sighted the Board is guided by the report of the ophthalmic surgeon. At the present time in the institute the "blind" and the partially sighted are approximately equal in number.

There appear to be no special classes in Australia for the partially sighted. This is a matter which should be rectified and we hope that the newly founded Ophthalmological Society of Australia will bring the matter to the notice of the government with all the force it can command.

Sir James Barrett states that considerable pressure has at times been brought to bear to secure the admission to the institute of those above the standard, some of whom had excellent sight. His most interesting short note ends with an illuminating table of 28 cases which have applied for admission from 1932 to 1937 and were rejected. Several of these had vision of 6/12 and some 6/6 or even better. One case had 6/6 and normal field in his only eye, the other having been excised. The idea that the Royal Victorian Institute for the Blind is a milch cow adds a disconcerting problem to those who have to administer such charities. It is fortunate for the Institute that such attempts as are outlined here do not succeed and the authorities must be grateful to those upright ophthalmic referees who refuse to certify a person as blind when he or she is not.

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ABSTRACTS

I.—THERAPEUTICS AND OPERATIONS


(1) Gifford in this paper, considers the various types of physical therapy which may be applied to the eye. Phototherapy in its general form has a definite value in a person of poor general resistance affected with any form of ocular inflammation, calcium and vitamin D being given at the same time. Local application of ultra-violet light on the other hand is inferior in its effects to "röentgen therapy," and is therefore little used. The application of cold may at times be valuable, particularly in diminishing chemosis and congestion after operations for squint and after simple evisceration of the globe. To apply it, finely chopped ice is placed in a rubber glove, the fingers of which have been tied off. This is covered by a single layer of thin gauze, and allowed to rest against the closed lids during the alternate waking hours for the first three
or four days after operation. Infra-red lamps are useful for applying heat in place of hot bathing, as is diathermy. With regard to the latter, if the temperature inside the eye is raised much above 105° F. there is danger of haemorrhage, a careful technique is therefore required. Chronic irido-cyclitis especially the tuberculous form, and vascular disease of the fundus are found to respond well to local application of diathermy. It is also recommended in severe infections of the lid and orbit and in acute dacryocystitis. General diathermy finds its principal indication in the production of artificial pyrexia though the method is not without danger, and is contra-indicated in elderly or infirm patients particularly if cardio-vascular disease is present. It is of greatest value in gonococcal ophthalmia in the adult, in interstitial keratitis and in syphilis of the central nervous system. X-rays have been used with great success in severe blepharitis. Three doses of 80-90 röentgens are given at intervals of two weeks, a mercury filled glass or a lead shell being placed beneath the lids to protect the eyeball.

F. A. W-N.


(2) Holmin and Ploman discuss the non-toxicity of heparin, an agent used intravenously for the prevention of thrombosis. They claim that this case of central retinal vein thrombosis is the first in which an already developed thrombosis in man has been treated by heparin.

The description of the ophthalmoscopic findings is as much suggestive of papilloedema and optic neuritis, except for haemorrhages near the periphery at the beginning, which the authors consider characteristic of venous thrombosis. They comment that the obstruction could not have been complete as the symptoms would then have been more serious.

By 3 to 4 daily intravenous injections of heparin 1·66 mg. per kg. body weight for about 10 days the authors suggest that further growth of the thrombus, which was partly occluding the central retinal vein, was prevented, that the fibrin present retracted, the vein dilated and admitted a flow of blood past the thrombus and so circulatory obstruction was reduced. The visual acuity improved from 0·2 to 0·9 in 4 weeks and in 12 weeks from the onset of the trouble it was 1·0 and all retinal haemorrhages had disappeared. The authors attribute the disappearance of the haemorrhages to the fact that they became more liquid under heparin treatment and were thus reabsorbed more easily and rapidly.

They ascribe the favourable course of the case to heparin treatment.

H. B. Stallard.

(3) **Michie** and **Webster** report two cases of gonococcal ophthalmia which responded rapidly to M and B 693 tablets, 0.25 g. taken orally twice daily in addition to local treatment of the infected conjunctival sacs.

In case 1 after three days treatment the gonococci and pus cells were absent from smears and swabs taken from the conjunctival sacs and on the sixth day treatment was stopped and there was no further recurrence.

In case 2 treatment with 0.25 g. orally began on the evening of July 16 and by 5 a.m. next morning the discharge had almost ceased and by the evening of July 18 all discharge, chemosis and oedema had disappeared, the cornea was clear and on July 19 a smear showed very scanty pus cells but no gonococci and a swab failed to show the presence of any of these micro-organisms.

The authors comment that in 10 previous cases of gonococcal ophthalmia not treated with M and B 693 tablets the average number of days from admission to the first permanent negative smear and culture was 49 and that three of these 10 cases showed some permanent corneal opacity on discharge.

It seems that the reduction of the duration of the ocular phase of this disease may prevent corneal complications in some cases. This treatment appears to be a therapeutic advance worthy of an extended trial.

H. B. **STALLARD**.


(4) In a series of twenty cases of lid cancroid observed over several years **Meyer** obtained a cure in 18 (90 per cent.) by the use of Thorium-X-needles. The requisite dose is 0.5 millicuries to 1 c.c.m. of indurated tissues. Thorium-X loses its activity rapidly—it sinks to half in three days and is entirely lost at the end of the week.

The article is well illustrated and contains details of treatment.

D. R. **CAMPBELL**.


(5) **Wegner** describes the operative treatment of a case of injury to the trochlear attachment of the superior oblique muscle.
A new pulley is made with a non-absorbable suture (Synthofil). There was a rapid disappearance of diplopia and a good functional result.

D. R. CAMPBELL.


(6) Thurel points out that as a result of having obtained relief in various cases of different forms of face-ache by alcoholisation of the trigeminal nerve one has been led on to treat sympathetic neuralgias of the face by carbolisation of the spheno-palatine ganglion itself, as it is the most important and at the same time it is the most easily approachable. Alcoholisation of the ganglion is the most efficacious method, but as this is not without some danger it is better to content oneself by applying carbolic acid tampons by the intra-nasal method. He points out the numerous ocular troubles that are thought to be of nasal origin, and the difficulty that there is in distinguishing between the anatomical, and the physiological causation. Amongst the conditions he has found to benefit by this treatment are:—Secondary reflex sympathetic neuralgias, periorbital neuritis, whether secondary to injury or to other ocular affections such as episcleritis, iritis or glaucoma, and symptoms like photophobia.

FRANCIS R. HILL.


(7) The treatment of rupture of the sclera differs according as the rupture is direct, caused by a perforating wound, or indirect caused by contusion; these latter are comparatively rare accidents; they have certain characters in common; the wound is usually situated in the upper or upper and inner quadrant of the globe and concentric with the cornea; the wound is of considerable size and some of the contents of the globe are often forced out of the eye; owing to its elastic nature the overlying conjunctiva is often unbroken; in this case the wound is not infected at the time of injury and may run an aseptic course. The condition of the contents of the globe is the factor of greatest importance in the diagnosis. The lens is almost always extruded and this is a comparatively minor event; if the internal membranes have suffered little damage, the wound may heal and vision may be restored in large part; prolapse of the iris and of the ciliary body and choroid are much more serious; loss of vitreous or copious haemorrhage
may lead to shrinking of the eye and detachment of the retina. Sympathetic ophthalmitis is rare after rupture of the globe, especially if the conjunctiva is intact. Diagnosis of rupture of the globe is usually easy, though subconjunctival haemorrhage may mask it at first. The author advises caution in treatment and prognosis. Even when the conjunctiva is torn, it is not necessary to enucleate at once; the risk of sympathetic does not arise until a month after the injury. The wound in these cases must be cleaned (strong antiseptics are inadvisable) the prolapsed tissue cut off and the edges of the wound sewn up; care must be taken not to increase the prolapse in doing this. Finally a conjunctival flap must be brought over the wound by sliding and secured. Aliquo-Mazzei holds that in extensive gaping ruptures operation should be undertaken, even when the conjunctiva is intact. A large conjunctival flap should be made and placed so that the line of suture does not coincide with that of the suture of the globe, and the accident dealt with as in “compound” ruptures. He reports a case in which enucleation had been suggested by a surgeon and refused by the patient, who eventually regained a large part of visual acuity.

HAROLD GRIMSDALE.


(8) Cerise and Offret suggest that the ultimate outcome of orbital operations involving inclusions or the formation of stumps is not as well understood as it ought to be. For one thing it is only the fortunate results that are exhibited. They quote a case where after the enucleation of the eye on account of buphthalmos the resultant disfigurement necessitated an orbital graft and the material used for the inclusion was calf’s tendon.

The immediate result was quite satisfactory but after 18 months the patient returned as she could no longer retain the prothesis. The orbital cavity was found to be filled by a cone-shaped sac, apparently in the nature of a cyst. This was evacuated and the lining membrane extirpated, but of the included plug of calf’s tendon there remained not a trace. The nature of the best material to employ in such cases is then reviewed and considered along with the accompanying local conditions and the age of the patient. The impression gained is that in young patients, at least, inorganic material is to be preferred.

F. R. HILL.


(9) Koller is of opinion that blood letting is beneficial for a number of ocular conditions in which its value is not fully realised.
In persistent episcleritis, the disease may be disposed of in a large proportion of cases by the following procedure:—Direct the patient to turn the eye inwards if the congestion is temporal or outwards if it is nasal. Hold the lids apart with the fingers, and with a pair of sharp pointed iris scissors, held tangentially to the surface of the eyeball, make a V shaped wound in the conjunctiva and episclera about 7 mm. long. Cocaine should not be used because of its vaso-constricting effect which will diminish the resulting haemorrhage. No bandage is necessary. In iritis and iridocyclitis, especially when dark congestion is present, several such incisions 7-8 mm. from the limbus on the lower half the eyeball will have a favourable influence. Incisions with a sharp scalpel across the conjunctiva of the upper tarsus, and fornix are useful in chronic trachoma with exacerbations and in obstinate forms of subacute conjunctivitis. In recurrent abrasions of the cornea, the author claims that scarification of the conjunctiva followed by brushing the lids lightly with 0.25 per cent. silver nitrate can produce brilliant results.

F. A. W.-N.


(10) Spaeth pleads for diversified surgery in the correction of ptosis. There are three muscles of importance to be considered, levator palpebrae superioris, occipito-frontalis with corrugator supercili and rectus superior. Certain circumstances, when present, indicate definitely the necessity of using one of these, if not exclusively at least to a major degree.

The levator arises by a short tendon which is blended with the underlying origin of the superior rectus. This illustrates the reason for poor levator action in congenital ptosis when combined with poor superior rectus action. The common nerve supply to them is equally relevant. The fibres spread out in a fan-like manner and are inserted in the skin of the upper lid at and below the upper palpbral sulcus (passing through the fibres of the orbicularis), into the superior border of the tarsus, to the superior fornix of the conjunctiva and to the upper border of the margin of the orbital opening.

The frontal part of the occipito-frontalis arises from the epicranial aponeurosis and is inserted into the skin at the level of the eyebrow.

The form of ptosis which is most amenable to surgical treatment is congenital ptosis with an isolated paralysis of the levator; while in myasthenia gravis there is an absolute contra-indication to operation, for the degree of ptosis is always changing.

The principles of operation depend on the shortening of the eyelid itself, advancement of the levator, replacement of the levator by the occipito-frontalis, and, last the utilization of the superior rectus.
In very moderate degrees of ptosis, and in special cases, tarsectomy may be a satisfactory procedure.

Unilateral ptosis must be handled quite differently from bilateral ptosis; also the ptosis of infants must be treated quite differently from that of adults. The ptosis of infants should be corrected as soon as the infant begins to walk, or he will learn to throw his head back and develop a spinal curvature, owing to hyperextension of the head, neck and spine. Crutch glasses may be used here as a stop-gap, until the fourth or fifth year of the child's life.

Success in the employment of Motais's operation depends on the integrity of the superior rectus, but in many cases this muscle has a defective action. In any case it is absurd to suppose that the tarsus-superior rectus adhesion functions as a muscle, if this operation is carried out according to Motais's direction; (this does not apply to the modification described by Young, Brit. Jl. of Ophthal., June, 1924, p. 272).

The utilization of the occipito-frontalis may be a good procedure, but in unilateral cases may result in a peculiar facial grimace.

If there is any action at all in the levator it is probable that advancement of this muscle, combined with tarsectomy, affords relief in the greatest number of cases.

The statement that "all who have had much experience in this branch of ophthalmic surgery will agree with the results of ptosis operations, taken all in all, are far from brilliant" is unfortunately true.

The author gives a resumé of the various procedures which he considers applicable to different ages and different conditions.

A. F. MACCALLAN.


(11) Goniotomy, as its name implies, consists in opening up the angle of the anterior chamber of the eye so as to allow the aqueous to drain directly into Schlemm's canal. The type of case suited to this operation is that which Barkan has called type 1 of chronic glaucoma in which the depth of the anterior chamber is normal and its angle open. Cases with a shallow anterior chamber should be treated by other methods.

The operation is performed under local anaesthesia by instillation of 1 per cent. pontocaine hydrochloride. A special type of contact lens is used which enables the surgeon when looking from the temporal side of the eye, to obtain a clear view of the angle of the anterior chamber on its opposite (nasal) side. After the lens has been inserted, the space between its posterior surface and the cornea is filled with normal saline, introduced by a syringe
and lacrymal canula. The lens is held on the eye with a "bident" by an assistant, and the surgeon passes the goniotomy knife (which rather resembles a Ziegler needle) from just behind the temporal limbus across the anterior chamber so that its point engages the fibres of the pectinate ligament on the nasal side of the eye. By depressing or raising the handle of the knife it is possible to divide the inner wall of Schlemm's canal over at least a quarter of its circumference. The knife is then removed without loss of aqueous and the operation is completed. Technique is important for a successful result, and details of this are given by the author. Up to date he has operated upon 25 eyes, with good results provided that the incision opened at least a quarter of the circumference of Schlemm's canal. Details of these cases are to be published later.

F. A. W-N.


(12) In a previously published work Nakamura had recommended the use of a tuberculous vaccine in sympathetic ophthalmitis before the enucleation of the injured eye, especially where it still retained more or less useful vision.

Subsequent experience of this treatment has convinced him that it is preferable to all others as a prophylactic as well as a therapeutic measure.

Nakamura and Uchida here record in tabular form a series of 95 cases of perforating wound of the eye, which had been submitted to prophylactic treatment with tuberculous vaccine and calcium iodide because of the intense inflammation two weeks after the injury, the more or less serious injury of the ciliary body, the perforating wound with subsequent iridocyclitis, the sympathetic irritation of the other eye and the tuberculin allergy that they showed; in none of these did sympathetic ophthalmitis supervene.

Another table is given with details of 139 cases of perforating injury, in which this prophylactic treatment was not employed; the symptoms after the injury in these were comparatively mild, yet eight developed sympathetic ophthalmitis.

The method of treatment employed was the same as previously used for tuberculin affections of the eye, and consisted of a weekly subcutaneous injection of 1 c.c. of tuberculous vaccine No. 1 (vide Archiv. of Ophthal., Vol. X, 1933, pp. 161 and 423, T.S.) and every second day an intramuscular injection of 3 c.c. of 3 per cent. calcium iodide.

Thos. Snowball.