ABSTRACTS

I.—PERFORATING OCULAR INJURIES.


Thomsen has analysed all the cases of perforating ocular injuries treated at the Copenhagen Hospital for a period of ten years. These numbered 139, of which 37 were under 14 years of age. Of the children 80 per cent. were males and only 20 per cent. females. The proportions among the adults was similar. While the high proportion amongst 'the adults is naturally due to the nature of their occupations, it is not quite so obvious why there should be the same difference among the children. Thomsen attributes it partly to the nature of the games played, but also in greater degree to the small number of cases from which the statistics are drawn. Four-fifths of the adult cases were between fifteen and forty years of age. The right eye was injured in 74 cases and the left in 65 cases. The cause of the injury was very varied, but in only two cases did the injury result from broken spectacles. In 16 per cent. the eye was so severely injured as to necessitate immediate removal. In the treatment of some injuries use was made of conjunctival flaps.

Thomsen divides the cases into four groups:—1. Cases with foreign bodies; 36 cases. 2. Perforating corneal lesions; 51 cases. 3. Perforating corneo-scleral lesions; 40 cases. 4. Scleral lesions; 12 cases. In the first group 42 per cent. regained good vision, in 9 cases after extraction of the foreign body, in 9 cases after extraction of the foreign body and the opaque lens, and in 3 with retention of the foreign body. Forty-two per cent. had to have the eye enucleated, in the majority of which the foreign body could not be removed.

In group 2 cataract formed in 28 cases; 29·5 per cent. recovered useful vision, in one case after the removal of the cataract, while 27·5 per cent. required enucleation. In group 3 cataract occurred as a complication in only one case, and this case was lost through panophthalmitis. Of the remainder 32·5 per cent. recovered good vision and 50 per cent. were enucleated. In group 4, a much less common lesion, the lens was never injured. Twenty-five per cent. recovered good vision and 50 per cent. were lost.

The prognosis as regards enucleation in children and adults was
much the same. Thomsen's observations show the great importance of early treatment, as those eyes which were seen within six hours were lost in only 17 per cent. of cases, whereas those that came under observation more than a week after the injury were lost in 67 per cent. of cases, and the percentage of enucleations showed a steady increase between those two periods.

He next discusses the 32 cases of enucleation, in which he does not include the primary enucleations. Sixteen eyes were enucleated on account of panophthalmitis; 7 for iridocyclitis with or without raised tension; 2 for retained foreign body; 4 for beginning sympathetic ophthalmia (4 weeks, 2 months, 2-5 months and 9 months after the injury); 2 for phthisis bulbi; 1 for a large spontaneous protrusion 12 days after the injury (a 12 mm. corneoscleral perforation). Thomsen found that intraocular haemorrhage was always of grave significance, but that the size of the wound did not seem so important. Although 4 cases were enucleated for fear of sympathetic, in only one case did this disease actually occur. This case was a boy of five years old seen two days after the injury, which involved the centre of the cornea reaching 2 mm. into the sclera. The prolapsed iris was cut off and the eye healed normally. Fourteen days later there was optic neuritis. Four weeks later the other eye was found to have deep ciliary injection with keratitis punctata with optic neuritis, and the vision which had previously been normal was then only 6/36. Inunction and atropin were used, but the former had to be interrupted on account of a rash. Thomsen had the opportunity of seeing this patient ten years later and found that the papilla in the injured eye was blurred but otherwise normal, vision 5/36; the iris in the other eye was tied down by numerous synechiae, but nothing abnormal in the fundus, the vision is given at less than 5/6. Thomsen concludes by contrasting his figures with those given by other observers.

E. E. H.

II.—THERAPEUTIC ANAPHYLAXIS


The above is a short paper dealing with the profuse spontaneous haemorrhages occurring exclusively in young adults, characterized by frequent repetition, by inundation of the vitreous, and finally by retinitis proliferans. The pathology of the disease is obscure and
treatment unsatisfactory. Aubineau has had altogether 15 cases, of whom 12 were males, the ages ranging from 14 to 25 years.

Medical examination revealed nothing abnormal, no arterial tension, no kidney lesion and no syphilis. Sometimes there was a family history of tubercle; two cases showed signs of glandular insufficiency (thyroid and pituitary), two others had frequent nose bleeding. In eight cases a blood count was made, the red cells being deficient in one; in two an excess of polynuclear eosinophiles was noted and in four a deficiency of coagulability.

Five patients were treated with anti-diphtheritic serum in order to provoke anaphylaxis; a subcutaneous injection was first given (10 c.c.) followed 10 to 15 days later by successive sub-conjunctival injections of 1 c.c. In three cases nothing happened, in one local and general reaction followed but no amelioration of vision, and in the last a very gratifying result was obtained. Detailed notes of this case are given from which it appears that vision improved in the right eye from 1/100 to 3/10 and from practically nil to 1/10 in the left. Four months later there had been no relapse.

Aubineau observes that the improvement following each injection was too striking to be accidental and tends to support Dufour's view that anaphylaxis has an antihaemorrhagic action.

Charles Killick.

III.—VISUAL DISTURBANCES FROM INTRA-CRANIAL PRESSURE

Igersheimer, Professor (Göttingen).—Disturbances of conduction along the visual path through pressure from the sub-arachnoid space and ventricular system. (Leitungstörungen der Sehbahn durch Druck vom Subarachnoidealraum und Ventrikelsystem.) Bericht der Ophthal. Gesellschaft, Heidelberg, 1918.

A study of these disturbances has led Igersheimer to conclude that pressure of the fluid within these spaces upon the visual fibres, peripheral as well as central, is more frequent than has hitherto been supposed. Choked disc has been the symptom of increased intracranial pressure that has mainly occupied the attention of the ophthalmologist, but by use of improved methods in testing the field of vision he has been able to detect the presence of scotomata, through which one obtains an insight into pathological conditions, more particularly with regard to those produced by pressure from these spaces, such as it may be impossible to acquire from autopsies.

The author gives the histories of several cases to illustrate the effect of pressure from the sub-arachnoid space on the optic nerves,
and shows by the changes in the scotomata in the field charts the improvement or disappearance of the disturbance of function and other symptoms in the cases. This pressure, as these cases would indicate, may act either alone or in conjunction with other pathological processes (e.g., inflammation). How and where this pressure begins he will not say, but is of opinion that, since it is impossible to say at once in any affection of the optic nerve (apart from typical papilloedema) how far pressure from the sub-arachnoid space may be a contributory cause of the disturbance in function, lumbar puncture is always to be recommended both for diagnosis and treatment.

Cases with increased intracranial pressure are also cited; two of these (in which bitemporal hemianopic scotomata were found) show how the chiasma may be involved, and the resulting defects in conduction may occur, exactly as in the case of the optic nerves, with or without changes in the discs or vision or rise in the lumbar pressure; in one case, simulating disease of the hypophysis, with bitemporal hemianopic scotomata, conduction was affected through a combination of changes within the visual path itself and pressure from without.

In one case (? meningitis serosa), the homonymous hemianopia and other symptoms were successfully treated by repeated lumbar puncture.

The good effects of lumbar puncture in all these cases indicate with great probability, though not with absolute certainty, that abnormal pressure had been exerted on the visual path at some point. It is an important fact that such pressure may apparently arise even in spite of normal lumbar pressure, and that papilloedema may or may not be present. It requires, however, further study to determine why in many cases choked disc alone occurs, in others only a disturbance in conduction, while in others again both are combined.

THOS. SNOWBALL.

IV.—THE MIGRATION OF PIGMENT AND CERTAIN FORMS OF GLAUCOMA

Schieck, Professor (Halle a. S.)—The theory of the causation of certain forms of glaucoma by pigment migration and its influence on the choice of operation. (Die Anschauung von der Entstehung gewisser Glaukomformen durch Pigmentverschiebung und ihr Einfluss auf die Wahl der Operationsmethode.) Bericht der Ophthal. Gesellschaft, Heidelberg, 1918.

In a very large number of cases of glaucoma, as also in eyes in the pre-glaucomatous stage, examination with Gullstrand's lamp
Trephining in Congenital Hydropthalmos

reveals a peculiar migration of pigment in the iris. It is derived from the pigment epithelium on the posterior surface which, whether as a result of trophic changes or other causes, breaks down: the pigment particles thus set free wander in the form of fine dust into the iris stroma and finally become visible as a fine deposit on the anterior limiting layer of the iris. This dust is seen in the aqueous and on the posterior surface of the cornea, so that the natural inference in these cases is that the spaces in the iris angle are also blocked by this pigment.

Moreover, the anterior surface of the iris presents a peculiar dense appearance as if covered by a very fine membrane; this suggests a histological change which, Schieck submits, very likely extends to the iris angle, although it cannot be directly observed, and contributes to the blocking of the entrance to Schlemm's canal.

Clinical observation receives support from the pigmented changes found on microscopical examination of glaucomatous eyes, and especially from a case published by Thomsen in which the only pathological condition present was a dense deposit of pigment in the spaces of Fontana and around the canal of Schlemm.

This theory, then, would indicate the line of treatment, and explain the manner in which operative procedure—iridectomy, anterior sclerotomy, or cycloclysis—really acts.

As a type of other methods the author selects for discussion Elliot's operation as being the most useful for reducing the tension. His objection to it is the danger of late infection, and he prefers to do what would here be called the Fergus operation—trephining in the sclerotic with an anterior cycloclysis—a procedure which, in removing the block at the angle, is in accord with the theory he here propounds, and is stated to be attended with uniformly successful results.

Thos. Snowball.

V.—On Trephining in Congenital Hydropthalmos


Between 1912 and 1917 Fleischer performed Elliot's trephine operation on seventeen eyes (two cases in young women and eleven in children under eighteen months) with results much more satisfactory than had previously been obtained from iridectomy.

In every case the operation passed off well; the trephining was especially easy owing to the stretching of the corneo-scleral margin.

Healing was uniformly good—the trephine opening, in the case of the children, being closed by smooth cicatrical tissue like the sclera. In only one of the adult patients did a cystoid cicatrix ensue.
As regards a reduction in tension, the results were good in all but two cases; in many the improvement was immediate, but in a few it was not apparent until after some months. One should therefore, he thinks, not too readily regard an operation as unsuccessful, and should undertake a second only when there is some urgent indication for it.

The vision ultimately attained depended on the duration of the disease; in seven cases that were operated on before the end of the first year the vision was approximately normal.

The results were better than those obtained by Haab with sclerotomy, with the advantage of not having to be repeated so often. Any danger for the future is obviated by the fact that the cicatrix is not fistulous.

Fleischer recommends this operation as superior to any other form of treatment. The one condition for success, as regards vision, is early operation—if possible, before the end of the first year.

He employed a 1·5 (or 1·75) mm. trephine, and made the trephine opening as far towards the cornea as possible.

THOS. SNOWBALL.

VI.—REMEDIES


(1) Zimmermann gives a short survey of the therapeutics of milk injections, with a critical review of the results of various workers, and a report of two cases of his own.

He describes the technique and the general reaction of parenteral injections, but points out that the mode of action is not yet sufficiently known. High temperature appears to have a helpful influence upon the course of localized affections, in support of which view the author instances the improvement of trachoma in an epidemic of scarlet fever among 40 children. Whether due to the high temperature acting deleteriously upon the micro-organisms, or to leucocytosis, or to hyperaemia and transudation at the site of local inflammation is a matter of theory at present.

Zimmermann quotes favourable results from milk injections on the part of Berneaud, of Kiel, Maschler, Jickeli, etc., and doubtful or negative results on the part of many others.

His own cases (phlyctenular kerato-conjunctivitis with pronounced strumous diathesis) showed very gratifying results from single injections. He sterilized the milk for 10 minutes previous to injection into the gluteal region.

J. HAMILTON McILROY.

(2) Withers, in a short paper illustrated by telling photographs, gives the result of radium application in eight cases of carcinoma in the region of the eyelids.

The diagnosis of carcinoma in these cases was made by the consultant staff of the Barnard Free Skin and Cancer Hospital. Radium was usually applied in silver tubes enclosing glass capsules containing approximately 25 or 50 mgm. of the radium salt. The surrounding tissues were protected with lead 0.5 to 2 mm. thick; and a layer of gum rubber 0.5 to 1 mm. thick was interposed between the surface of the lesion and the radium applicators. For greater protection of the eyeball from prolonged exposure, a lead shield 0.5 to 1 mm. thick, fitting into the fornices like an artificial eye, was employed. This was dipped in melted paraffin to give it a non-conductive covering, and a few drops of liquid vaseline instilled under the lids made the introduction of the shield an easy matter without local anaesthesia. The cases described illustrate the occurrence of carcinomas of the lids, with or without accompanying nodules in the face. In some cases there had been previous treatment by cautery or "cancer-paste," which had resulted in scar tissue, and these were less satisfactory as regards cosmetic and functional results than those which had been untreated.

In all cases, however, cure of the carcinoma was complete and permanent up to date of writing.

The dosage was regulated according to the severity of the case, running from 25 mgm. to 100 mgm. for periods of from 3 hours to 33 hours for each application. In the majority of cases applications were repeated at intervals of a few months, the greatest number of applications being five, which extended over a period of about one year.

In one case of double cataract, the cataract of the side affected by carcinoma disappeared after irradiation, and that of the other eye remained unchanged.

Withers considers the radium method of treatment for carcinoma of the lids should be selected over any surgical procedure.

J. Hamilton McIlroy.


(3) Lancaster's experiments convince him that argyrol is a powerful antiseptic as tested on staphylococcus aureus in serum or in salt solution. It is effective as weak as 1 per cent. or even less and it also has bactericidal power, especially in strengths of 20 per cent. or over, but it is not a rapid bactericide.

S. S.