for operation. If the dose is too heavy the patient becomes semi-conscious, restless and unable to co-operate. Its effect is variable but when it works well it is admirable.

The Ophthalmological Society of Australia

Early in the month of April of this year the newly founded Ophthalmological Society of Australia was formally decided on in Sydney. Until now, while there have been ophthalmic sections of the British Medical Association in Queensland and Victoria and an eye and ear section in South Australia, together with an Ophthalmological Society of New South Wales, there has been no federal body to embrace the whole Commonwealth, and Western Australia and Tasmania have had no ophthalmic provision at all.

The new Society starts with a membership of 110 and its first President is Sir James Barrett. We feel confident that Australia could not have chosen better for the first of what we hope will be a long line of distinguished Presidents. Sir James Barrett was a student of Lord Lister, a fellow research worker with William Lang and he has been a member of the Ophthalmological Society of the United Kingdom for close on half a century.

Committees on various aspects of ophthalmology such as (a) literature and publications, (b) research and scientific, (c) orthoptic training, (d) industrial injuries and compensation, have been set up. Among the conveners are Mr. Bruce Hamilton and Dr. Ringland Anderson.

It is hoped to have the first general meeting in Melbourne in March, 1939. Transactions will be published and the Society hopes later to be in a position to undertake the publication of an ophthalmic journal.

It is with great pleasure that we learn of this new undertaking; nothing is more likely to stimulate research work in Australia and we wish it many years of successful enterprise.

ABSTRACTS

I.—RETINA


(1) After paying a justifiable tribute to the pioneer work of Gonin, who was "learned, sincere and good," Arruga deplores the fact that the treatment of retinal detachment is not as good as
it should be. The principal reason is that owing to the diversity of clinical types, the operator must adapt his measures according to the conditions in each case. Accurate opthalmoscopic examination and localization of the hole are the keynote of success, and although a large and extensive operation is frequently indispensable, the desideratum is to sacrifice the smallest possible area of retina. The examination should be carried out under full mydriasis (aided by the subconjunctival injection of adrenalin) by both the direct and indirect method and the results entered on one of the recognised forms of chart. Ophtalmoscopic examination during the operation is almost indispensable, and can be used to assist localization in several ways:

(1) Diathermic puncture is performed with a needle through the suspected area and the position of the resulting white mark with reference to the retinal hole is noted with the ophtalmoscope. If the retina is too bulging to have been touched by the needle, some of the sub-retinal fluid is allowed to escape with the aid of pressure on the eyeball and the procedure repeated, when the white area will usually be visible. If this is unsuccessful a small needle or knife may be introduced, which will then be visible.

(2) Transillumination, the operator views the tear with his ophtalmoscope, and the assistant marks on the sclera the portion which is illuminated from within the eye. Alternatively the light is applied to the sclera and is moved about until the operator sees it illuminating the tear. In applying surface diathermy a current of 30-60 milliamperes is recommended; for perforation, the strength should be 80-150. In the latter case, the perforations should be separated by at least 0·75 mm. or inconvenient scarring will result. In surface coagulation, the applications may be made closer together. Vortex veins should of course be avoided. It is important in perforating diathermy that the punctures should remain open for some time. When there is much fluid the needles should be 0·5 mm. in diameter or failing this, the perforating action should be prolonged and the borders of the hole enlarged, galvano- cautery may also be used.

One of the secrets of success is that the retina should lie in contact with the choroid at the conclusion of the operation. With regard to post-operative treatment, the author considers that in general, 6-8 days in bed are sufficient, the dressing being changed every three days and the binocular bandage kept on for 12 to 20 days, after which stenopaic glasses are worn. So far as pathogenesis is concerned Arruga considers that adhesions between the framework of the vitreous and the retina are the principal cause of the tears.
(2) Fuchs, A. (Vienna).—On the importance and aetiology of holes in detachment of the retina. (Sur l'importance et l'étiologie des trous dans le décollement de la rétine). Arch. d'Ophthalm., Tome 2, No. 1, p. 18, 1938.

(2) Fuchs points out that the condition to which he refers is one of interest not merely to ophthalmologists but to all medical men in the widest sense, and adds that whereas formerly, the majority of those suffering from detachment of the retina became permanently blind, now, largely due to the genius of Gonin, the greater number can be cured.

Separation of the retina is not in itself a disease, but arises from various causes, either traumatic or idiopathic, the latter term being principally associated with myopia and senility. The trauma may be of a relatively trifling nature and a long time may elapse between the date of the causative injury and the recognition of the actual detachment.

Combinations of various factors may make it very difficult to determine exactly the group into which certain cases fall.

As regards anatomical changes two come into particular prominence, (1) the hole in the retina, and (2) retraction of the vitreous body. The former is much the more important from both the clinical and therapeutic point of view. It was Gonin who emphasized the importance of exact localization of the tear or hole in the retina, and obtained such wonderful results by closing it by means of the thermo-cautery. The satisfactory closing of the holes enables re-attachment of the retina to be permanent. The second condition preliminary to retinal detachment is the presumed presence of a liquid in the vitreous body.

The vitreous is a colloid which can vary its composition, and is capable of producing a large amount of fluid.

The vitreous body being itself detached may pull the retina away from its bed, and by the production of excessive fluid, which may escape through the hole in the retina, may cause its further upheaval.

The vitreous body is only fixed, normally, near the ora serrata and its detachment usually commences in the upper part, with the result that the very weight of the body augments the detachment. Such detachments of the vitreous are frequent in myopes, particularly senile myopes.

It is only in a small proportion of cases of retinal detachment that no holes are to be found and the author emphasizes the need for distinguishing between holes, and tears.

The former are round, oval, or polygonal, and may be present in numbers, or perhaps only one may be observed. Sometimes the "lid" of a hole may be seen floating in the vitreous in front of it.

Tears on the other hand, may appear as slits, or in horse-shoe shape, and many show ragged edges, which are usually rather
unduly pale. The long narrow tears may escape detection through being concealed by the folds of the detached retina.

Another group of tears is to be found at the furthest forward point of observation: these latter give a good prognosis when dealt with by means of diathermy or katholysis.

These tears too, are of interest from a pathogenetic point of view as they are frequently the result of trifling injuries, and yet they may be of unlimited extent—sometimes, as in the case of injuries at birth, being so extensive as to lead to an erroneous diagnosis of glioma. The situation of the tears is of importance and figures show that after a contusion the detachments are usually in the upper and outer part. When the retinal detachment commences at the ora serrata they are usually in the lower temporal quadrant.

The round holes have no particular predilection as regards situation and may be found anywhere, perhaps most frequently in the upper and outer quadrant.

As to the causes of retinal tears and ruptures, they are many but two theories predominate, (1) Traction caused by the vitreous body, and (2) Primary cystoid degeneration of the retina. Fuchs supports the former and does not think that the advocates of the second have made out their case except in regard to a very limited number of a special class.

Congenital fragility of the retina may also play a part, but the author thinks this constitutes no more than merely a weakness which tends towards the formation of a detachment if other aetiological causes present themselves. He considers that weakness of the retina should cause no more surprise than should the cases of undue susceptibility of the cornea in certain subjects, to take on disproportionately serious features, a state of affairs probably due to some fragility of the membrana limitans of Bowman.

Tension of the retina should not be under-estimated as an aetiological factor in cases of extreme myopia as, though perhaps in itself insufficient to cause a hole, it may in combination with other conditions play an important rôle in their origin through traction on the vitreous, malnutrition, etc.

Cysts of the retina too, may cause tears—frequently bilateral and in the lower temporal sector. Fuchs recommends that operative measures in these cases should not be too hastily undertaken, as they tend to recover spontaneously.

Holes near the macula are frequently unobserved until the macular region is itself invaded by the detachment, and if the holes in the periphery are satisfactorily closed the retina is able to re-attach itself completely.

Besides the causes he discusses, Fuchs emphasizes that there are many others of great diversity in both their origin and in their
effects. He maintains that there can be no hard and fast laws laid down in this aspect and guidance is only to be obtained by means of careful observation combined with unbiassed judgment.

F. R. HILL.


(3) After a short dissertation on the various forms that injury to the retina may take, Venco discusses the special lesion of macular holes. He recounts a case of a motorist who was struck violently while driving by a stone thrown up by a wheel. The direction of the blow seemed to have been directly from before backward. There was immediate loss of vision. When the hyphaema which followed allowed examination of the fundus, a typical hole was seen. Round the hole the retina was slightly raised and oedematous.

The author draws attention to the fact that holes of the retina at the macula may be caused by agencies other than injury; Ogilvie, in his paper read to the Ophthalmological Society in July, 1900, was inclined to lay too much stress on injury as the cause; perhaps the present reviewer was in part responsible for this, as the case which he quoted to Ogilvie (no. x in the paper) was more probably an instance of atrophy of the macula, but was included as traumatic at that time.

HAROLD GRIMSDALE.


(4) There is at present no agreement as to the cause of rupture of the retina, though all are agreed upon the necessity of closing tears if cure of detachment is to be obtained. Nastri has had the opportunity of following the course of the onset of detachment in three patients, and the interesting observations then made are here recorded.

In two cases, the first things noted were slight oedema of a region of the retina with small haemorrhages; in this region a tear was seen later and a detachment. In the third case, there was already a tear but the surrounding retina was oedematous, and there had been muscae, which perhaps suggest previous haemorrhages.

In the author’s opinion, the course of things is this: by slow changes, the retina has acquired adhesion to the vitreous. The pull on these adhesions caused by rotatory movements of the eye, acting on some part of the retina already degenerated, causes rupture of small vessels with consequent haemorrhages, and the retina tears in the affected region; the degeneration of the retina must precede any other change.

HAROLD GRIMSDALE.