ON THE TREATMENT OF DETACHMENT OF THE RETINA.

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I HAVE the honour to present to the Académie a method of treatment in cases of detachment of the retina, an affection which has hitherto been regarded by all oculists as incurable. Various means, of both medical and surgical treatment, have been tried, but have been all abandoned as unfitted to cope with that disease. As I have frequently succeeded in curing patients of detachment of the retina, I am desirous of submitting my mode of treatment for the consideration of the Académie.

Detachment of the retina is produced by an effusion of serum between that membrane and the choroid. The retina thus becomes wrinkled and separated, is brought in front of the focus of the dioptric system, and can easily be seen by the erect ophthalmoscopic image. In the first stage, it shows only a slight undulation. When further advanced, a pale grey elevation becomes visible, which, when the eye is in motion, screens a part of the fundus, and the vessels are seen crossing the surface of the detached portion. This grey opaque body gradually increases in size, and the subretinal fluid accumulates, until no part of the fundus can be seen. Total loss of vision then ensues, and the detachment is said to be complete.

The subjective symptoms are, first, dimness of vision, the patient seeing, as it were, a cloud before him; secondly, the interruption of the visual field, that is, the patient sees when looking in one direction, but, when looking in another direction, a cloud seems to intervene between him and the object. In looking at the light of a lamp, the colour appears of a blue tinge. When the effusion approaches the macula, objects appear crooked, and when the macula itself becomes involved, the optic axis deviates in another direction. When the effusion has once commenced, it continues to develop itself until the whole visual field is abolished, and the patient cannot distinguish the light of a candle moved before him in any direction. It is worthy of note that, in some cases of extensive effusion, even that part of the retina which is *in situ*, and still visible by the ophthalmoscope, loses its sensibility to light, because it seems to have, to some extent, imbibed the fluid from the other part.

The description just given is that of the acute form of the affection, which, whether it follow a more or less rapid course in its development, may be traced to a chill caused by a sudden exposure to cold while heated. As a typical case, may be mentioned that recorded by Desmarres, of a lady of distinction, who, in coming from a ball at the Hôtel de Ville on a frosty night, was unable to find her cloak. Too impatient to wait for it, she walked with bare head and shoulders to the carriage, and was instantly taken with detachment of the retina of the right eye. (*Maladies des Yeux*, vol. iii.) This acute form may also supervene upon either a single attack, or a succession of attacks, of violent epistaxis. The vascular relation between the *arteria centralis retinae*, and the orbital and frontal arteries on the one hand, and the Schneiderian membrane on the other, in the case of chill to an overheated face and neck, sufficiently accounts for the phenomena in question; but continued epistaxis may also be the consequence, rather than the cause, of the retinal congestion and detachment. Further, instead of a simple stretching of the retina, a part of it may be torn away, and float as a flap in the vitreous humour.

The detachment more frequently follows a chronic course, and may take two or three years for its development; and in such cases the fluid, instead of being transparent pure serum, is mixed with pigment granules, and sometimes, though rarely, with white flocculi. This chronic state is caused by acute irido-choroiditis, irido-cyclitis, or, indeed, by any of the various forms of chronic intra-ocular inflammation. It is very fortunate if the inflammation be confined to the membranes, and leaves the vitreous body uninvolved, for otherwise the lens ultimately participates, and the result is softening and atrophy of the globe. Sometimes, spontaneous intra-ocular hæmorrhage and total disorganisation of the eyeball may take place.

While revising this paper, I have again seen the case (Sylvester H.) shown to the Glasgow Medico-Chirurgical Society on April 4th, and which Dr. MacGregor Robertson has reported in the *BRITISH MEDICAL JOURNAL* of May 4th, 1884. The patient's right eye had been totally blind for upwards of three years from detachment of the retina, and became complicated with adherent pupil and cataract. He came again to the institution at the end of September; the right (blind) eye

Associated with the chronic form of detachment of the retina we most frequently have a high degree of myopia, which state of refraction, in fact, goes hand in hand with the intra-ocular pathological conditions just mentioned.

Detachment of the retina may, however, also be traumatic in its origin. I have at present under observation the case of Admiral —, who, when out shooting in November 1879, was struck in the right eye by a pellet from the gun of one of the party. I extracted the pellet, which was lodged under the conjunctiva, and had made an indentation in the sclerotic. The eye remained perfectly well February 1880, when, after being out on the ice curling during the day, he had the same evening an attack of epistaxis, so violent that a basin was completely filled with blood, from the right nostril. Irido-choroiditis, with detachment of the retina, followed some days later. The inflammatory attack left a posterior synechia behind, and the detachment gradually increased. I may also mention that the detachment may either be continuous, or in isolated spots or portions. When the detachment is large, it is generally situated in the lower portion. Even when it begins at the upper portion, it for the most part gravitates downwards; and the part of the retina originally affected, if the layer of rods and cones have not been long macerated, applies itself again upon the choroid, and reassumes its function. My clinical observations have fully convinced me of that fact.

Treatment.—In my opinion, this effusion ought to be treated in the same way as other effusions in serous cavities, as, for example, in the pleura or in the peritoneum. I withdraw the effused fluid by a subconjunctival sclerotomy, practised in the meridional direction. The following are the different steps in my operation, when there is a large continuous detachment of the retina, and vision is nearly or entirely abolished. I examine the patient by the erect ophthalmoscopic image, in order to ascertain the site of the detachment, and also to which side the effused fluid inclines. It is essential to repeat this examination, putting the patient's head in different positions. Thus, with the patient sitting upright, and then, also, with the head placed in a horizontal position, he is made to look upwards and downwards, to the right and to the left. The side to which the fluid inclines in the different positions of the eyeball having been thus ascertained, the patient is put under chloroform, and the ophthalmostat is introduced. I then make a vertical incision into the conjunctiva, half an inch long, in the region of the detachment. The assistant separates the lips of the wound in a horizontal direction, by means of two strabismus-hooks. I then open Tenon's capsule, lay bare the sclerotic, and rotate the eyeball in such a direction as to expose the corresponding part of the sclerotic, towards which the fluid inclines. Into that part, I introduce a broad needle, having an external flat surface, and an internal convex surface, and thus give the incision a curved form.² The needle is gently withdrawn without the slightest inclination, and the liquid flows on the withdrawal of the instrument. The instrument is introduced obliquely, in such a manner that the edges of the scleral wound should overlap each other, and not remain gaping when the instrument is withdrawn. If I judge that more fluid remains behind, I introduce a fine silver spatula, and press gently on the lips of the scleral wound. But if the detachment be not very extensive, or the eyeball too prominent, or, rather, soft, I operate with a flat sclerotome, so as to produce a linear, instead of a curved, incision.

The lips of the conjunctival wound are now brought together by means of one or two fine silk-ligatures (although, in exceptional cases, these ligatures may be dispensed with), and both eyes are shut by three strips of court-plaster, lint, and a bandage. The patient is ordered to lie upon his back for two or three days, as after the extraction of cataract. On the third or fourth day, I renew the simple dressing, without opening the eyes; but, on the fifth day, the eyes are opened, and the results of the operation ascertained. By this time, there is generally not the slightest trace of an operation left, so that this method is, at all events, inoffensive, even if we do not always obtain the desired result. Generally, however, we obtain satisfactory results. Of seven operations which have been recorded from my *clinique* since 1878, three have resulted in perfect success. The state of total blindness in each has been cured, so that the patients could return to their ordinary occupations. In each of four other cases,

was then suffering from extensive hæmatopia. The surgeons in attendance thought that either he had been fighting, or that the eye had been injured by a fall while in a state of intoxication, for he is no Good Templar. But, as he maintained that he had not been fighting, nor met with any accident, and as there was no external sign of an injury, we concluded that it was a case of spontaneous hæmorrhage. I removed the blood, which was followed by a large quantity of yellow serum, such as had previously been removed from the left eye. I found, at the same time, that the condition of the left eye, which had been operated on in March, was in every respect satisfactory.

² Taylor's broad needle is well suited for the purpose.

there was a decided improvement; the patients could see to walk about, although sight was not completely restored.

Eight days ago, in the ophthalmic hospital of Paris, I operated upon a patient under the following circumstances. For the report of the case, I am indebted to Dr. Henri Campart.

Madame B., aged 57, came to the Clinique Nationale Ophthalmo-logique des Quinze Vingts, July 12th, 1884. She stated that, in the previous April, she frequently noticed shadows floating before her right eye. Every object that she looked at attentively appeared to her surrounded by coloured rings, especially if the objects were in a bright light. She had never been myopic, and, three months previously, the sight of the right eye was quite as good as that of the left. A few days afterwards, in getting up one morning, she found that the sight of the right eye had become considerably impaired, and that in a very rapid manner. Objects appeared to her crooked, and she could not distinguish their lower half. She felt a sense of weariness in using the eyes, but there was no spontaneous pain. Dr. Galezowski, when consulted some days later, as to this anomaly of vision, found a detachment of the retina of the right eye. He ordered cold compresses to the eye, and blister and leeches to the right temple, and a collyrium of sulphate of eserine (5 centigrammes to 10 grammes of distilled water).

Having received no benefit from this treatment, the patient presented herself at the Quinze Vingts, on the date above mentioned. She is a stout, plethoric woman, and stated that she had long suffered from asthma, attacks of which occurred several times a week. Her occupation was that of a laundress, and she had evidently been much overworked. Dr. Fieuzal diagnosed the case as detachment of the retina of the right eye, with glaucomatous excavation of the optic nerve; with the right eye, she could count the fingers at 58 inches distance; with the left eye, vision was $\frac{3}{4}$ of Wecker's types.

Treatment.—A solution of sulphate of atropine (1 in 200) was dropped into the right eye, and sulphate of eserine into the left. Iodide of potassium was also prescribed to be taken before each meal. At the beginning of October it was proposed to her that she should undergo an operation; she assented, and the operation was fixed for October 7th, 1884.

With the authority of Dr. Fieuzal, chief surgeon of the hospital, who assisted at the operation, an anæsthetic was given, and Dr. Wolfe performed paracentesis of the sclerotic. The lids were kept widely open, and fixed by means of a blepharostat; and, a small opening having been made in the conjunctiva, the sclerotic was punctured on its outer side, between and posterior to the insertion of the external and inferior recti muscles. A brownish limpid fluid escaped from the wound. When it had ceased flowing, the instrument was removed, and, without any sutures having been introduced into the conjunctival wound, the eye was closed, and an agglutinative dressing applied. The patient was ordered absolute rest. She took, every morning, a glass of aperient water.

On October 10th the dressing was removed, and as soon as she opened her eyes, the patient was astonished at the result of the operation. She could count the fingers, see the whole length of them, and distinguish between two different coins of the same colour.

On October 12th the dressing was again removed, and it was found that progress continued to be made. The patient could read at a distance of 2 metres $\frac{3}{4}$ of Wecker's type, with the eye that had been operated on, and she could tell the time on a watch.

Dr. Bacchi, chef de clinique, has taken the visual field, before, and after the operation, which is shown in the map.

I have only to add, Mr. President, that the constitutional complications were conditions unfavourable to my operation. I undertook to operate under such circumstances, simply to demonstrate that we can so rotate the eyeball as to bring under the action of the instrument, that portion of its posterior hemisphere towards which the effusion inclines, and so empty it completely without interfering with the other tissues. But the result which we have obtained holds out the hope that, in emptying out the liquid by sclerotomy, we have also succeeded in curing the patient of her glaucoma.

It is not without reluctance that I mention the operation known as scleral puncture, which, first proposed by Professor von Gräfe, has been practised for the cure of this affection. Many surgeons have practised it, but have been compelled to abandon it. It consists simply in putting a cataract-knife through the conjunctiva and sclerotic, into what is considered to be the site of the detachment. The result is, that a tumour, which is supposed to contain the effused serum, is formed under the conjunctiva. The fluid is allowed, for a fortnight or so, to absorb, and then, as a rule, very little or no result is obtained. I mention this simply to point out that, in the first place, to thrust a

The dotted line marks the boundary of the visual field before, and the continued line shows the gain after, the operation.

knife into the eyeball in the hope of effecting something, is not eye-surgery. This is not the way in which we attempt to remove fluid from other cavities. Further, when the patient is put on his back, and under chloroform, the power of rotation of the eyeball becomes very limited, and the probability is, that the fluid falls backwards; and, in many cases, there is removed, not the effused serum, but a portion of the vitreous. So long, therefore, as surgeons regard my operation simply as a subconjunctival sclerotomy, their chances of success will be comparatively small. My system must be studied in its totality. Two things in it are to be specially attended to, namely, the ophthalmoscopic examination of the eye in various positions, and the liberating of the eyeball from its envelope, so as to render visible, and bring into proper position, that part behind the equator towards which the fluid inclines, and also to demonstrate to our senses that the effusion, and nothing but the effusion, has been removed. If the operation be so understood and practised, it is certain to be satisfactory in its results.

A RATHER HARD CASE.—Mr. William Hosgood, who was Medical Officer of Health for the Amersham Rural Sanitary District for the year ending 29th September last, was then re-appointed by the authority for another year; but the Local Government Board above, notwithstanding they had confirmed the appointment for the previous year, declined to do so again, because (as we believe) he resided outside the district. Another gentleman has now been appointed, and at the last meeting of the Sanitary Authority, a letter from Mr. Hosgood was read, asking for a testimonial, and for the payment of salary for the period during which he discharged the duties, from the 29th September to the 11th of November. The clerk was directed to prepare and forward a testimonial, and to inform him that they were afraid they had no power to pay the salary. It is very gratifying to be the recipient of a testimonial, but quite the reverse to be refused payment for services actually rendered. Mr. Hosgood, having performed the duties of the office satisfactorily, for six weeks, must surely be entitled to be paid by some one, or at least to have a testimonial.