ACCOUNT
OF THE
RHEUMATIC INFLAMMATION OF THE EYE,
WITH
OBSERVATIONS
ON THE
TREATMENT OF THE DISEASE.

BY
JAMES WARDROP, ESQ. F.R.S. ED.

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THE word Ophthalmia is a generic term, under which are comprehended several distinct species of Inflammation of the Eye. Some of these species have been well defined and accurately described by nosologists, but there are others vaguely understood, and no account of them has been given except some ill connected histories of symptoms under the general description of Ophthalmia. I have pointed out in another place*

* Essays on the Morbid Anatomy of the Eye. Vol. I.
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that the inflammation of each particular texture of the eye is accompanied with a distinct class of symptoms, each assemblage caractérising one species of Ophthalmia.

But there are other kinds of inflammation which derive their character, not from the peculiarity of the texture inflamed, but from being produced from some specific virus. Hence the Gonorrheal, the Syphilitic, the Scrofulous, the Gouty, and the Rheumatic Inflammations of the eye ; all of which are accompanied with symptoms different from those of simple inflammation of any of the textures which compose that organ.

I propose on this occasion only to give an account of the Rheumatic Ophthalmia, to point out those peculiarities which distinguish it from other inflammations of the eye, and to explain the mode of treating the disease. The materials indeed of which the present paper is composed, were embodied in one which on a former occasion I had the honor of laying before the Society*, but which it was afterwards considered would better form the subject of a distinct essay.

* On the effects of evacuating the Aqueous Humor, &c. Vol. IV.

Local Symptoms of the Disease.

The Rheumatic Ophthalmia derives its character both by the peculiarity of the local and constitutional symptoms.

The external appearances of Rheumatic Inflammation of the eye, are sufficiently striking to enable an accurate observer to distinguish it from other inflammatory affections of that organ.

The red colour which the albuginea acquires in this inflammation is not the bright crimson which accompanies the inflamed cornea, nor is the redness confined to one part as in the Pustular Ophthalmia. Neither have the vessels that peculiar mode of ramification, nor are the trunks so superficial, nor is there the puriform discharge which accompanies the inflamed conjunctiva. The albuginea acquires a brick red tinge, or an admixture of yellow with crimson red ; and this peculiarity of colour is probably produced by the serous part of the blood being tinged with bile, an effect likely to take place from the marked derangement of the biliary organs which usually accompanies this disease. The shade of yellow however varies a good deal, being in some cases very remarkable, and in others much less perceptible.

The bloodvessels are generally equally nume-

rous over the whole white of the eye, passing forwards in nearly straight lines from the posterior part of the eyeball and advancing close to the cornea ; but neither passing over it nor leaving the pale circle around it, which is so striking when either the choroid coat or iris is inflamed. If the vessels be closely examined, the general redness will be found produced more from numerous small ramifications than a few large trunks*.

There is frequently a little swelling of the conjunctiva, and sometimes it forms a slightly elevated ring round the circumference.

In mild cases, in the early stage of the complaint little apparent change takes place in the anterior chamber, but as the disease advances the cornea becomes dull and turbid, and sometimes there is even a considerable degree of obscurity which does not appear in the form of a distinct speck but of a general cloudiness, more opaque in the center and diminishing towards the circumference of the cornea.

If closely examined there is generally one or more parts where the corneal conjunctiva appears to be abraded ; and these abrasions are usually near its circumference, though they may also be

* These appearances in the colour and mode of distribution of the bloodvessels are represented in the drawing, Plate I.

occasionally observed on all parts of the corneal surface.

At the commencement of the disease there is often a disagreeable feeling of dryness of the eye, but sooner or later a very copious secretion of tears takes place.

If the eyelids be examined when the eye is affected with Rheumatic Ophthalmia, they are found only slightly swelled, and the number of blood-vessels on their internal surface but little increased.

The seat as well as the kind of pain affords striking characters of this peculiar affection. Generally the chief seat of pain at the commencement of the disease is in the head, though it sometimes also affects the eyeball itself. The pain is usually most severe in the temple of the affected side, but it is often seated in the brow, the cheek-bone, the teeth, or the lower jaw. Sometimes the pain is precisely confined to one half of the head, and sometimes there is a severe pain in the cavity of the nose or in the ear. These pains are more of a dull agonizing kind than acute; and though in this disease the pain be unceasing, yet it varies much in degree, coming on at times in very severe paroxysms, and recurring with great violence when the head is bent downwards. Sometimes the pain is excited by merely touching the scalp,

and the patient is unable to rest his head on the affected side or even lean it on a pillow.

The pain in most cases is remittent, the paroxysm coming on at four, six, or eight o'clock in the evening, continuing during the night, being most severe about midnight, and suffering an abatement towards morning.

In the eyeball the patient generally complains more of a sense of fulness and distention than of pain ; and though there is a great degree of external redness in this disease, the eye does not seem to suffer from exposure to light, for the eyelids are kept open without appearing to create uneasiness ; whereas in most other inflammatory affections of this organ even a very moderate quantity of light cannot be endured.

This peculiarity in the seat of pain in the Rheumatic Ophthalmia, may perhaps be satisfactorily explained from the texture of the eye which is affected, and the sympathy which that texture has with similar adjacent structures. This particular species of Ophthalmia appears to me to be chiefly seated in the sclerotic coat, which, like the dura mater and membranes lining the nose, frontal and maxillary sinuses, is of the fibrous class, and it is membranes of this kind which are commonly the seat of rheumatism in other parts of the body.

The sympathy between all these parts and the eye is reciprocal, for when the dura mater is inflamed, irritability and redness of the eye are its concomitant symptoms.

Besides the local symptoms, there is always more or less symptomatic fever accompanying Rheumatic Ophthalmia, which increases along with the pain towards evening, assuming the form of a severe febrile paroxysm. The pulse becomes frequent, and sometimes hard. The tongue is remarkably white and furred, accompanied with a bitter taste in the mouth, more or less nausea, and the skin is hot and dry. The functions of the *primæ viæ* are much deranged, the appetite being impaired, and the evacuations always changed in quality.

But the progress and severity of this disease vary much, the attack being sometimes very slight and soon going away, without permanently injuring the eye, whilst at other times it is extremely severe, in many instances continuing a long time and ultimately destroying the organ. This difference in severity may no doubt depend on a variety of causes, though it will in every case be influenced by the habits and modified by the constitution of the individual.

When the Rheumatic Inflammation is severe, the pain in the head, in some instances soon after the beginning of the disease, becomes agonizing, the

redness of the eyeball increases, and the whole white of the eye is crowded with bloodvessels, the conjunctiva being at the same time swelled. At length ulceration commences in the cornea through which the aqueous humor is discharged, and the eyeball collapses, all pain at this time ceasing ; or as I have in two instances observed, a quantity of a thick puriform fluid has formed in the posterior chamber, and burst through the sclerotic coat.

Rheumatic Ophthalmia may in many instances be traced to a sudden change of temperature. In one case this inflammation came on from the patient's having kept wet clothes on his head when over-heated. In another patient the disease came on after travelling during the night in a carriage with one side of his head close to an open window.

It is most frequent at particular seasons of the year, as in the spring months, and it not unfrequently follows the operations for cataract, particularly in patients who have previously had rheumatism in other parts of the body. Rheumatism may frequently be observed to attack a joint or part that has been injured.

Both sexes appear equally subject to the disease, and I have observed it most frequently in adults and those rather advanced in life.

Rheumatic Ophthalmia usually affects only one eye, but sometimes it attacks both, the inflammation being seldom so severe in the second eye as in that first affected.

From what has already been said of the Rheumatic Ophthalmia, it will be easy to point out those features of the disease by which it differs from other inflammatory affections of the eye. The puriform discharge sufficiently distinguishes it from the inflamed conjunctiva. The central opacity of the cornea, the intolerance of light, the colour and unequal distribution of the enlarged vessels on the white of the eye, the pain in the eyeball, these symptoms contrasted with the remitting pain in the sinuses around the orbit, the slight uneasiness from light, the bright red colour of the vessels, and the whole albuginea being covered by them, sufficiently characterize the Rheumatic Ophthalmia from simple inflammation of the cornea. It is however very apt to be confounded both with the *Syphilitic* and *Gouty* affections of the eye. And this is not surprising when we consider how difficult it is to discriminate in many instances between venereal, gouty, and rheumatic affections of joints.

The Rheumatic resembles the *Syphilitic* more than any other ophthalmia, and I have frequently seen instances of the one treated for the other. But they are to be distinguished from one another by the appearances of the inflammations, the pro-

gress of the diseases, and above all by the constitutional symptoms which accompany them. In the Rheumatic inflammation it has already been noticed that the proper vessels of the sclerotic coat are enlarged, which is the cause of the redness being generally diffused over the whole albuginea, whereas in the syphilitic inflammation it is the anterior ciliary arteries passing along the sclerotica on their way to the iris, which are chiefly affected ; and thus the pale ring which is always observed between the cornea and enlarged vessels in that disease.

Rheumatic and Syphilitic ophthalmia resemble each other in the accompanying pains around the orbit, and in their evening exacerbation. But those who have the syphilitic inflammation in the eye have always the constitutional symptoms of syphilis, and in tracing their origin they are found accompanied with a distinct history of that disease.

In the same manner also as rheumatism and gout are often combined in other organs, so are they found affecting the eye. In some instances the rheumatic affection begins first and then gout succeeds. But there are cases where the inflammation is purely arthritic.

When Gout affects the eye it has the same similarity to rheumatism and syphilis which these diseases have to one another when other parts of the

body are affected with them. However the pure arthritic ophthalmia may easily be distinguished from the rheumatic; for like the syphilitic the gouty inflammation chiefly affects the capsule of the aqueous humor, producing thickening of that membrane, effusion of lymph in the anterior chamber, and adhesions of the edge of the iris with the capsule of the lens; and whilst these changes are going on, the cornea remains perfectly transparent.

Treatment.

In the Rheumatic Inflammation of the eye I have found the evacuation of the aqueous humor attended with much advantage. In those cases particularly where proper remedies had not been employed at an early period of the disease, where there was much pain in the brow or any other part of the head, where the cornea had become dim and clouded, and where vision was impaired, in all such cases the good effects of the operation were instantaneous; the pain of the head was removed and very seldom returned, and the transparency of the cornea was restored. When therefore the disease has made much progress, and when the symptoms have not been relieved by other remedies, the evacuation of the aqueous humor is a practice from which the most beneficial effects may be anticipated.

In those cases where the aqueous humor has

been discharged, I found no applications were afterwards necessary but fomentations to the parts around the eye; and when the eye itself remained irritable some time after, it speedily recovered by the use of the vinous tincture of opium.

The affection of the biliary organs must claim during every period of the disease particular attention. In the early stages of this species of Ophthalmia, great relief is sometimes obtained from the exhibition of an emetic, and in some cases I have observed a complete alleviation of the pain of the head, with a remarkable diminution of the redness of the eye, even in a few hours after the operation of that remedy. The emetic I have usually employed is an ounce of the ipecacuanha wine, with one drachm of antimonial wine. After the emetic the bowels should be completely evacuated, and a couple of grains of calomel combined with a few of rhubarb may be two or three times given; also saline or other purgatives, if necessary, with a view to act on the biliary organs as well as empty the alimentary canal.

When the inflammation has succeeded a sudden chill, the functions of the skin should be restored by the judicious employment of sudorific medicines. A couple of grains of antimonial powder given singly or combined with opium every four or six hours is an excellent remedy, and their effects are particularly useful when a dose is taken a little before the

evening paroxysm, as it frequently has the effect of allaying the pain and producing sleep.

Little advantage is derived from local bleeding. In a few cases where there is a tendency to plethora, a very full and hard pulse, and where relief has not been speedily obtained from the use of the other remedies, it may be necessary to take away some blood either from the arm, or by leeches, from the branches of the frontal veins and arteries. In general however patients affected with Rheumatic Ophthalmia, as with rheumatism in other parts of the body, cannot bear bleeding to a great extent. This remedy should therefore be employed with moderation. Indeed the little relief afforded by bleeding in this disease may be regarded as one of its diagnostic characters.

In the early stage of the complaint the pain of the eye and brow is sometimes much alleviated by using a fomentation of a decoction of poppy-heads. Blisters, too, repeatedly applied behind the ear, or to the nape of the neck, contribute along with other remedies to the cure of this disease ; but they should not be applied near the eye.

The vinous tincture of opium is the only local application which I have ever observed to be decidedly beneficial ; but its use should always be deferred till the latter period of the inflammation, when all febrile symptoms are subdued. A small

quantity of this application may be put within the eyelids once or twice a day with a common camel's hair pencil, and its use persisted in whilst it affords relief.

After the *primæ viæ* have been well evacuated, the tongue may still remain very white and the pulse quicker than natural. In this state the greatest benefit is derived from the internal use of the *cinchona* singly or combined with the mineral acids.

The remarkable effects I had observed of cinchona in the cure of rheumatism of the joints first led me to employ it as a remedy in Rheumatic Ophthalmia, and it seems to possess as specific an effect in this disease as in ague. From the disordered state of the stomach it should only be given in small doses ; generally from five to eight grains taken in a little warm water every two hours, or as often as the stomach can receive it, is sufficient. It sometimes purges the bowels considerably, and when this effect is produced I have not found it diminish its specific virtues. The good effects of this remedy are commonly soon seen, and its use may be persisted in according to the abatement of the symptoms.

The mineral acids are extremely useful in all rheumatic affections of the acute kind. To the powerful action which these remedies have on the biliary secretions, their good effects are perhaps to

be attributed. They may be used from the very commencement of the treatment, or immediately after the action of the first purgative, and they may be freely used whilst taking cinchona. I have in general given a preference to the sulphuric acid, ten drops of which in its diluted state mixed with a teaspoonful of syrup of roses and a glass of cold water is extremely grateful, and may be taken from three to six times daily. In some cases I have also used with advantage turpentine, either singly or combined with the cinchona, or rhubarb. Mercury given in this disease so as to produce ptyalism, aggravates more than it mitigates the symptoms.