A CASE
OF
IDIOPATHIC HYALITIS
(ACUTE INFLAMMATION OF THE VITREOUS HUMOUR
OF BOTH EYES).

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HENRY W—, a powerfully built coal-porter, æt. 33 years, was attacked with dimness of vision on January 22nd, 1873, after a few days of frontal pain, his sight having been previously good.

Personal and family history.—He is married and has six children; has never had syphilis, nor any severe illness, with the exception of small-pox, in an attack of which he was much pitted five years ago. His general health is good. He drinks beer freely, alleging that his severe physical labour renders copious draughts of beer a necessity, but he does not consider himself intemperate. He is in the habit of smoking *about half an ounce of cut-cavendish tobacco a day*. His work is laborious and long-continued, his hours of work being from 5 a.m. till dark, during which time he is constantly lifting and carrying heavy sacks of coals.

Symptoms.—He first noticed “a weakness” of his left eye while reading the paper by candle-light, and left off reading in consequence; but went to work the next morning, though his sight was still somewhat dim. While at work his eyes became inflamed and painful, and his sight so seriously impaired that he was compelled to go home, and suffered severe pain in the forehead for several days before sending for a medical man. Calomel and opium pills were prescribed, but no improvement in his condition took place, partly, as his wife suggested, on account of his disturbed nights, the younger children of the family being very noisy.

State on admission into the South London Ophthalmic Hospital.—On January 31st (nine days after the commencement of the attack), he was led into the hospital, being so nearly blind that he could not safely be left to come even across the room by himself. He had the vacant stare so often observed in amaurotic patients, and on testing his sight he could only read No. 16 of Jaeger’s test types with his right eye, and No. 20 only with his left,—the type in each case being held at a distance of about six inches.

Atropine was dropped into both eyes. The right pupil became widely and evenly dilated, but the left was only half dilated, with its margin slightly irregular, as if from swelling of the iris. The tension was normal in each eye. The ophthalmoscope revealed extreme turbidity of the vitreous and crystalline lens in the right eye: no details of the fundus being distinguishable except a faint outline of the optic disc, seen as if through a dense mist. The vitreous of the left eye was also turbid and no details whatever of the fundus could be seen. Slight sclerotic congestion was observable in each eye, but not the vascular zone characteristic of iritis.

Diagnosis.—The suddenness of the attack at first raised a suspicion of glaucoma, but there was a complete absence of glaucomatous tension; diabetes was suspected, but no sugar could be detected in the urine, which had a pale colour and a low specific gravity. There remained then two possible causes of the hyalitis, viz. tobacco-poisoning and syphilis.

I am not aware that tobacco-toxæmia has ever given rise to symptoms and physical changes such as those observed in this case ; but it is possible that the cumulative influence of large doses of strong tobacco may have had some share in setting up the local mischief in this instance. Evidences of syphilis were next sought for. The patient steadily denied ever having had any venereal disease whatever, and on examining his genital organs no trace of any venereal sore could be found on them. The only circumstance at all pointing to syphilis was the existence of a scabbed sore, somewhat like that of Rupia, a little below the calf of the right leg ; this sore was surrounded by a few smaller pustules, such as are often seen around boils, or any other sore that has been poulticed for some time.

I am therefore still in doubt as to the etiology of the ophthalmic symptoms ; though the subsequent history certainly favours the view that syphilis was the principal cause, if not the only one.

Treatment.—Tobacco and alcohol were strictly and absolutely interdicted. Mercurial ointment was rubbed into the skin of the armpits and sides of the chest ; and $\frac{1}{16}$ grain of corrosive sublimate in cinnamon-water was given three times daily. Atropine was at the same time applied to the conjunctiva of each eye night and morning.

On the day following the commencement of this treatment, Mr. McHardy, my clinical assistant at the Hospital, made an ophthalmoscopic examination and found that the turbidity of the vitreous had already diminished. The sight had also improved slightly.

In less than a week the sight had almost completely returned, and the gums having become decidedly spongy the mercury was gradually discontinued.

On February 11th (twelve days after the commencement of the treatment in hospital) vision was tested. With either eye the patient could read No. 1 of Jaeger's test types easily. The vitreous and lenses were clear enough to give a distinct view of the details of the fundus in either eye, and the retinae and choroids appeared healthy. The pupil of the left eye

had become widely dilated and perfectly round, no traces of any adhesions being visible; at the same time the ulcer on the leg had healed and the general health had improved. This improvement continued up to March 4th, when he came to the Hospital as an out-patient. He had already resumed his work, and only complained of being weaker than before the attack.

He was then taking tonics and small doses of iodide of potassium. The tenderness of the gums was going off.

On March 18th his sight was as good as ever, and his general health so much improved that he was ordered to discontinue all medicines.

Remarks.—The rarity of simple inflammation of the vitreous, as evidenced by turbidity, and uncomplicated by choroiditis or iritis, gives this case its chief clinical interest. Not unfrequently in cases of syphilitic iritis there is a slight general turbidity of the transparent media, but in this case the merest trace only of iritis, and no traces whatever of choroiditis, could be detected before the commencement of or after the treatment.

In venturing to call this a case of inflammation of the vitreous I am aware that I am giving a name which, according to some eminent pathologists, has no corresponding disease. Dr. Hermann Pagenstecher (of Wiesbaden) has made some experiments upon rabbits, which seem to him to prove that the vitreous humour is incapable of inflammation in the ordinary acceptation of the term. He injected a drop of croton-oil into the middle of the vitreous, in such a position that he could watch the effects by means of the ophthalmoscope. He found that three days after the introduction of the croton-oil there was no trace of opacity in the immediate neighbourhood of the oil, but the track of the syringe was marked by a line of pus, reaching nearly but not quite up to the position of the foreign body, *i. e.* the drop of croton-oil. At the point of contact of the croton-oil with the vitreous, there was nothing at all like lymphoid corpuscles,—a proof, he maintains, that the vitreous cannot produce pus by its own proper elements, even under the influence of highly irritant

substances. On the other hand, Donders has succeeded in demonstrating a circumscribed suppuration around a foreign body in the vitreous, without any implication of the choroid, so that he concludes that the cellular elements of the vitreous are capable of inflammatory action.

This experiment, however, only proves the possibility of inflammation in the vitreous of traumatic origin; the question whether spontaneously induced inflammation of the vitreous is limited to its proper elements remains unanswered. That there is such a disease as idiopathic hyalitis can only be inferred from cases like that above related. Here we have marked turbidity of the vitreous passing away like a cloud, leaving behind it no traces whatever of any mischief in the choroid, and the sight is completely restored.

Practically, it would make no difference *in the treatment* whether the surrounding tissues were actively inflamed or not, though the prognosis would be very materially influenced; for with acute inflammation of the choroid or retina, or of both, some subsequent impairment of sight must be looked for as inevitable.

It is seldom that an equally good opportunity offers for testing the therapeutical influence of mercury. It raises also an interesting question as to the mode of action of mercury on the non-vascular tissues. If the vitreous were affected in the same way as the gums, *i. e.* by a rapidly increased proliferation of the cells composing it, we should expect that the turbidity would be rather increased than diminished. Hence we must conclude that, (1) mercury affects the vascular and non-vascular tissues in an entirely different way; or (2) that the non-vascular tissues are only directly influenced by mercury through the medium of the nearest blood-vessels. I am inclined to the latter view, and beg to suggest that under the influence of this medicine the choroidal vessels and absorbents have a greatly increased absorbing power, and that the effused products in their neighbourhood are thus rapidly removed.

That effused products often disappear under the influence

of mercury is a matter of daily experience, but it is not often that the result is obtained so rapidly and so completely as in the present instance.