

to June, 1873, there were 217 cases of this malady among the patients of the Belfast General Hospital, being 2.2 per cent. of the total surgical out-patient cases; 115 occurred in girls between the ages of ten and fifteen, and 63 between the ages of fifteen and twenty. One hundred and eighty-four were mill-workers. Dr. M. had had no opportunity of trying Dr. V.'s treatment, but at his (Dr. M.'s) suggestion, it had been used by Dr. Scott in fifteen cases in the Belfast Hospital, with most satisfactory results. According to Dr. Scott, from fourteen days to a month were sufficient for a complete cure. All pain ceased from one to three days after the first application; and the swollen irritable margin of the ulcer gradually disappeared, leaving a healthy granulating sore. —*Brit. Med. Journ.*, Aug. 30, 1873.

OPHTHALMOLOGY.

46. *Pigmentary Disease of the Eye.*—Dr. HIRSCHLER calls attention (*Archiv für Ophth.*, vol. xviii.) to a peculiar kind of pigment deposit which he has met with in the cornea.

Pigmentary deposits in the proper substance of the cornea occur, as a rule, in connection with scars, a portion of the iris being entangled in the cornea; but he refers only to pigment formed on the spot, not to pigment which has wandered into the cornea from elsewhere. The existence of black pigment has been repeatedly demonstrated microscopically in the cornea, as a result of the degeneration of hæmatin in cases of superficial or parenchymatous keratitis; but the occurrence of pigment in such quantity as to be visible to the naked eye, after the subsidence of inflammation, has hitherto almost escaped attention.

Dr. Hirschler's attention was first attracted by dark spots, which he noticed to appear in the cornea during the retrogression of diffuse parenchymatous keratitis, and which he regarded as mere transparent portions—circumscribed gaps in the parenchymatous cloudiness. Later observations induced him to look on them as accumulations of pigment in the deeper layers, masked by the more superficial haze. As he has now observed this in two cases, that is, in three eyes, he thinks that probably the occurrence is more common than the silence of authors on the subject would lead one to expect.

These pigment deposits are met with during the period of absorption in cases of diffuse parenchymatous keratitis, and appear, in conjunction with commencing clearing up of the general haze, at those parts which are indicated by the presence of more numerous and larger newly formed vessels, and therefore more abundantly on parts near the centre of the cornea. Irregularly margined spots or disks, with four or more angles, are formed of the size of small pins' heads, or 2 millimetres (.08 inch) in diameter; or sometimes the spots may be quite circular. The colour is of a deep black, but when looked at from the front the deposits appear less deeply coloured, owing to the haze through which they are seen. If the latter be absent, then the black spots can scarcely escape observation in moderately clear daylight. By focal illumination under all circumstances they can be more closely examined. They are then seen to be situated about midway between the anterior and posterior surfaces of the cornea. When the infiltration of the cornea has become reabsorbed, these pigment-deposits become so apparent, that they may look like bits of coal-dust on the cornea. Under a magnifying power of 20 diameters, the deposits appear made up of a collection of several smaller spots. The centre of the spot is sometimes of a deep black, surrounded by a rusty-brown or deep-red circle; sometimes it is less deeply coloured than the periphery, and is then of a rusty-brown colour, making the whole spot resemble an irregular ring. In one spot, at a somewhat higher level, a deep-red border could be distinguished, but whether this was due to an effusion of blood or to a loop of vessels could not be determined.

Dr. Hirschler considers that there can be no doubt that this deposit of pigment originates from altered hæmatin, and consequently from antecedent effusion of blood into the parenchyma of the cornea. Additional evidence in favour of this was afforded by the presence of newly formed vessels.

Illustrations are given of the appearances of the deposits, and references are made to authorities on the deposit of blood-pigment.

Dr. Hirschler thinks that the long duration of the parenchymatous inflammation is of importance in reference to the production of these deposits. He describes two cases in great detail; but, before doing so, he remarks that, though differing in the mode of their appearance and in their course, the two agreed with the typical examples of the affection in question, inasmuch as, in both, the disease began at the periphery and extended over the whole cornea, and deprived this for a long time of its transparency; that in both a rich vascularity appeared; and that, finally, the duration was very protracted. In both cases there was slight iritis, not producing marked adhesions, but causing an advance of uveal pigment beyond the pupillary margin. In one case a rather considerable corneal staphyloma resulted, in both eyes, from the keratitis. In both cases Pagenstecher's salve was used for more than a year; and he calls attention to the fact that the pigmentation was first noticed after this remedy had been used for some time.

The first patient was a man, aged 24. He had diffuse parenchymatous keratitis, serous iritis, and pigmentary deposits in both eyes.

The second patient was a married woman, aged 29, who had parenchymatous keratitis, episcleritis, iritis in each eye, and pigmentary deposits in the left eye.

In conclusion, the author also calls attention to the complication of the keratitis with recurrent episcleritis, which was met with in the second case. He thinks it deserves more attention than is generally given to it. Dr. Schiess-Gemusens has written to the same effect (*Kl. Monatsbl.* 1871).

Dr. C. RITTER says (*Monatsblatt für Augenheilkunde*, Oct. 1872) that authors are almost wholly silent on the share which the pigment-layer takes in the inflammatory process. In most forms of iritis, the pigment-layer certainly appears to participate in a very slight degree, or not at all; but in certain cases the pigment-cells appear to take the principal part.

He narrates the case of a woman, aged 52, whose right eye had been defective after a blow three years previously. She could count fingers at the distance of a few feet.

The cornea was diffusely opaque in a moderate degree. Behind the cloudy layers, two completely black points could be seen in the layers immediately adjoining Descemet's membrane. One of them was somewhat further from the membrane than the other. Both were at the lower part of the cornea. The size of the two was not alike; the larger had a diameter of about a millimetre (.04 inch). The intensity of the colour was extreme. The deep black paled but slightly at the margin; slight alterations in the tint were manifest also in the centre of the deposits. The vascularity around the cornea was slight; in the cornea itself there were no vessels to be seen. The aqueous humour was not altered, and the colour of the iris was normal. The margin of the pupil was everywhere, however, united to the lens by dense adhesions which were covered with very black pigment. After atropia, the adhesions were more marked; the pupil dilated outwards, and the blue iris-substance was drawn away from the adhesions all round. The adhesions were continuous with the pigment of the iris, and were covered with black pigment, if not made up entirely of pigment-cells. Manifestly the proper structure of the iris was but little affected. The disease originated, at least in great part, in the pigment-layer. The left eye was quite healthy.

Treatment could not be expected to be of much use, as the disease was of long standing, and the patient only attended for a short time.

The author cannot entertain the slightest doubt that the case should be regarded as one of iritis originating in the pigment-layer with secondary corneal mischief. The latter was wholly insignificant, the superficial layers were quite free, and there was not the slightest inequality of the epithelium. The deeper

layers were, it is true, diffusedly cloudy, but nowhere with any degree of intensity.

The two pigment-deposits, just in front of Descemet's membrane, could, without any difficulty, have become detached from the pigment-layer of the iris and have penetrated through Descemet's membrane. The complete resemblance in colour to that of the iris-pigment would confirm the supposition that this was what had occurred. The morbid change in the cornea is explained, partly as a secondary disturbance of nutrition in consequence of the iritis, partly as a deposition from the iris.

How it happens that this form of iritis has not hitherto been specially described, is incomprehensible. The author has not himself before observed it, at any rate so distinctly, but he may have overlooked cases, and his material for observation is not so abundant as is the case in some large cities. He cannot help suspecting that such cases have escaped notice.

He thinks it worth while to give a special name to the disease, and designates it "Iritis pigmentosa;" with more justice, in his opinion, than can be assigned to the name "Retinitis pigmentosa." He cannot, from one case, lay down any rules for treatment or for prognosis.

He protests against Hirschler's view that the pigmentary deposits in the tissue of the cornea in his cases were due to degeneration of hæmatin. Ritter says that the remains of hæmatin would never be of a "deep black," like "coal-dust," but of a reddish-brown colour. He thinks this is sufficient to upset Hirschler's view. He thinks the cases agree with his own, except in reference to the severe corneal affection present in Hirschler's cases. Ritter quotes statements from the narratives of the cases, showing that the iris was affected in each, much as in his own case.

He thinks that the transference of pigment from the iris in the cornea is not at variance with former experience, and that modern researches on wandering cells have removed any appearance of strangeness from his theory.—*London Med. Record*, Aug. 13, 1873.

47. *Inflammation of the Cornea in Affections of the Trigemini.*—Prof. EBERTH, of Zurich, proposes a new explanation of the occurrence of keratitis after section, injury, or disease of the fifth cranial nerve. This pathologist, whose observations and opinions are worthy of the greatest respect, has for some time maintained that the severity of the process in traumatic keratitis depends upon the conveyance of bacteria into the cornea by the foreign body, and not upon the trauma directly. He now describes (*Centralblatt*, July 19, 1873, No. 32) the occurrence of a similar keratitis without any external wound whatever—by the settlement of the organisms in the cornea after section of the trigemini. The exophthalmos, loss of sensibility, diminished nictitation, and the desiccation of the exposed corneal surface lead on to inflammation, with the production of bacteric masses indistinguishable by the microscope from the condition in diphtheritic keratitis. The most superficial puncture of the affected spot causes a rapid extension of the disease. The second element, therefore, which has not been previously recognized in the etiology of keratitis after injury of the fifth nerve—but which, according to Eberth, is essential—is the presence of bacteria in the atmosphere. Both the condition of the globe after the section or disease of the nerve, and the condition of the atmosphere, will of course vary in different cases. The occurrence of the keratitis will therefore be influenced by the degree and extent of the desiccation, the amount of protrusion, and the size of the ocular aperture. And, on the other hand, the quantity of bacteria in the air and the presence of epithelial abrasions will determine the severity, rapidity, and extent of the inflammatory destruction.—*Med. Times and Gaz.*, Aug. 23, 1873.

48. *Intermittent Neuralgic Vesicular Keratitis depending upon Traumatic Causes.*—Dr. EDWARD HAUSEN has published in the *Hospitals-Tidende* a paper on this affection, which he says has not been hitherto noticed. It takes its origin in a direct traumatic action on the terminal nerve-fibres, probably those of the corneal epithelium which, doubtless, exercise an important control over