

swimming; but it is of some consequence to know what is actually morbid and what is healthy, and I must rest my apology for the length of these observations on this circumstance. Joseph and Charles Weazel have laboured with much assiduity to show, that there is an intimate connexion between the conarium and the hypophysis or pituitary gland, and between both of these bodies and certain conditions of the entire system. But the examples which they adduce, are a great deal too few, and their observations are a great deal too vague to allow these conclusions to be yet ranked among the class of ascertained pathological facts.

[The conclusion in next No.]

II.

Report of Cases treated at the Ophthalmic Hospital, Chatham.
By ANDREW SMITH, M. D. Communicated to Professor Thomson.

(Continued from Vol. xvii. p. 509.)

HYDROPTHALMIA.—Only one example of dropsy of the eye came under observation during the period to which this report refers. The individual who was the subject of it had laboured, for four months previous to his arrival, under severe purulent ophthalmia, which complaint still existed at the time of his admission into the hospital, though in a less aggravated form. He stated, that the increased size of the eyeball first became evident about three months after the commencement of the inflammation, and that it had kept progressively, though slowly, enlarging ever since.

The following were the appearances exhibited on his coming under treatment. The globe of the eye was much and generally enlarged, with its anterior part protruded very considerably from between the lids, and affected, as well as the concealed portion, with a good deal of increased vascularity. The cornea was unusually prominent, and rather of a conical shape, with a dense white opacity of about the size of a split pea near its centre or apex, and the rest of it very turbid and muddy; so much so as to render it very difficult to ascertain the colour of the iris. A semicircular black line could be observed towards the lower and inner edge of the central albugo, formed by the margin of the pupil, which was found to increase or di-

mirish in breath pretty readily, according as the eye was exposed to a greater or less degree of light. The power of vision, as far as related to the discernment of objects, was entirely gone; yet he still was able, with ease, to distinguish light from darkness. Lining of both upper and lower lid granulated, with slight puriform discharge.

The treatment in this case was at first directed to the destruction of the granulations, which, being effected according to the method already described, the system was brought gently under the influence of mercury, and kept so for a fortnight, without the least advantage; indeed the size of the eye had, if any thing, increased within that time. The cornea was now punctured at its lower edge with a large round needle, and the aqueous humour freely evacuated. The ball, after the lapse of a few days, appeared considerably reduced in size, but soon again attained its former dimensions. The operation was then repeated, and with the like temporary advantages; but, almost immediately after this second puncture, the whole white part of the eye assumed a bluish tinge, and became quite irregular, with other marks of approaching, or rather advancing, disorganization; such as gradual loss of power of discerning light, change of colour and diminution of the surface of the iris, fixed pupil, and severe lancinating pains in the ball of the eye. As such symptoms, either individually or conjointly, afforded very little hopes of the eye being recoverable, it was deemed the most advisable proceeding to remove a portion of the cornea, and allow a free exit to the humours, as in staphyloma; for the mode of doing which, and after treatment, see that disease. The ease afforded by the operation was instantaneous and lasting; the patient soon experienced a degree of comfort to which he had been an utter stranger ever since the attack of inflammation; and, in the course of ten days, was dismissed from hospital as well as ever he was, with the exception of the loss of an eye.

Iritis.—Twelve patients were treated with inflammation of the iris; in ten of them, the disease existed in one eye only; and, in the remaining two, it affected both. The complaint in ten was recent, and characterized by the usual attendants of acute inflammation; whilst in the others it was of considerable standing, and exhibited the symptoms of chronic action.

The general symptoms were, an increased vascularity of the iris, and external tunics of the eyeball, pain, intolerance of light, lachrymation, immobility, contraction, or irregularity of the pupil, dimness of vision, and sense of over-distention of the eyeball.

Increased vascularity of the Iris and external Whites of the Eyeball.—In all the cases an increased vascularity was observed, either in the substance of the conjunctiva, or on the surface of the sclerotica. This vascularity became more and more evident as it approached the cornea, and at last formed a bright red ring, about a line behind the circumference of that tunic. In addition to this redness, the source of which was evident, the eye, for some lines behind the cornea, had a slight scarlet tinge, an appearance which I am inclined to look upon as peculiar to this inflammation; and, being an invariable attendant, forms one of the best diagnostic symptoms. In most, indeed I may say in all, the colour of the iris was changed to a reddish hue; and in several, small vessels were observed ramified over its surface. The external redness, after keeping the lids shut for some time, was generally observed to become very trifling; but immediately upon their being separated, it returned with a degree of intensity, modified by the quantity and strength of the luminous rays admitted. In three or four of the patients, a double set of vessels were observed running towards the iris at different depths, and differing, not only in size, but also in colour; the external set being the smallest, was also the most vivid, agreeing exactly with a similar observation I had occasion to make, when treating of the distribution of the blood-vessels, in that form of ophthalmia, complicated with a granulated state of the lining of the lids.

The pain not only varied in its site, but also in its nature, duration, and intensity, in different individuals. In some it was confined entirely to the eyeball, in others in a great measure to the eyebrows, crown of the head, or occiput; and in a third class, it affected the eye, and one or all of those parts at the same time. Some described it as being of a darting or pricking kind, and said that it occasioned a sensation towards the bottom of the eye, like the prick of a pin; others, that it was of a dull and aching character; and others again, that it was of a pulsatory nature, and described by them as resembling the sensation often present in whitlow. In one or two of the number it was constant, and suffered little, if any, remission, till the general symptoms began to yield to the remedies employed; but in the majority it intermitted, and was found to be particularly urgent, from about eight o'clock in the evening till six the following morning. The darting pain was seldom, indeed, I may say never continued, having generally recurred at irregular intervals, which varied from half a minute to a minute, and was then either one single dart, or two or three in succession. The pulsatory pain was more constant, and lasted longer; the aching variety

was also rather constant, and was that which, in two of the cases, continued without interruption till the disease began to abate. In most, indeed I may say in all, the degree of severity of the pain was very considerable, and proved one of the most annoying and troublesome symptoms of the disease, as it often prevented the patients from enjoying any thing like a refreshing sleep for many nights together.

Intolerance of Light was one of the most constant symptoms of this inflammatory complaint, and, in several of the cases, ushered in the disease. In a number it was evident, before any marks of increased vascular action were perceptible, and in the majority it continued after most of the other symptoms were relieved, if not entirely removed; indeed, the diminution of this symptom was found to be one of the most certain signs of the disease being on the decline. When the patients were brought into a bright light, it was with the utmost difficulty the lids could be separated, and when that was effected, they described the sensation experienced as resembling something hot and sharp penetrating the eye, and striking against its posterior part; an uneasy sensation also extended to the forehead, and even occasionally to the crown of the head.

Lachrymation was considerable in all the cases, particularly upon the individuals being exposed to a strong glare of light, and only diminished as the other symptoms subsided. The tears were by most described as being hot and acrid, irritating and burning the parts over which they passed.

Immobility, Contraction, or Irregularity of the Pupil.—The pupil was in general observed to be completely immovable, as soon as the disease had fairly developed itself, and for the most part continued in that state for a day or two, previous to its becoming contracted, and assuming an irregular form, which in all the cases it was afterwards observed to do. In some patients it assumed somewhat of an oblong form; in others, it became semilunar or semicircular; and in a third division, it was jagged and distorted as not to admit readily of description. The irregularity and diminished size appeared to have been occasioned partly by actual contraction of the circular fibres of the iris, and partly by points of effused lymph, which had been thrown out by the diseased vessels, and had adhered to the pupillary margin of the iris. The instant the usual effects of the medicine employed were observed, the last appearance began to fade; and as the cure went on, the effused substance, in all the cases except one, suffered a complete absorption. The effused lymph either adhered to the margin of the pupil in the form of small filamentary threads, of round and irregu-

lar nodules, or fell down, in the form of minute fleck, into the anterior chamber. The latter variety was always more readily removed than either of the former, which probably arose from the lymph not having become organized in the one case, while, from its site and connexions, it might have suffered from that process in the other. It was sometimes observed of a pale cartilaginous colour; at other times it was more or less red; and, in one instance, it exhibited nearly the appearance of healthy muscle.

As the cure went on, occasionally small black points or threads were noticed, extending between the posterior part of the pupillary margin of the iris, and the anterior part of the lens. These were probably small portions of the ciliary process, covered by the pigmentum nigrum, which had formed adhesions to the *tunica hyaloidea* during the acute stage of the disease, and had been torn by the dilatation of the pupil effected by the repeated application of belladonna. These fibrous bodies were always sooner or later separated from one of their connexions by the action of the iris. The edge of the pupil, in two instances, retained a serrated appearance, after its regular functions had been restored, and all other marks of disease removed; but was attended by no inconvenience.

Vision, in all cases, was impaired, and very much confused during the existence of the disease, which seemed to be occasioned by a cloudiness of the cornea, and a more than usual convexity of that tunic. *Sense of over distension of the eyeball* was a symptom very generally complained of; and, always when it was most urgent, vision was observed to be most confused. The patients used to describe the feeling they experienced, by saying, that the ball of the eye appeared to them as if too large for the cavity it was contained in, and that it was ready to start out of their heads. At different times, when they complained much of that symptom, I inspected the eyes minutely, and was perfectly satisfied that the anterior part of the eyeball was more prominent than natural.

Causes.—The iritis, by ten of the men, was attributed to the action of cold, and by two to rheumatism; but from what I could learn, I am inclined to look upon the two last cases as having derived their origin from the same cause as the others. As, however, the syphilitic and mercurial actions have lately got the credit of being very frequent exciting causes of iritis, I shall, for your satisfaction, give the result of the inquiries made relative to such points as the patients admitted. First, then, five out of the twelve had had syphilis; three had had gonorrhoea; and the remainder had never had either of these diseases.

One of the first division had sores on the penis about two weeks before; one about four weeks; one about four years; one about eight years; and the other had had the disease ten times within the last six years. Two of the second division had each a running from the urethra about three years before the attack of inflammation of the eye, and the third about four years. Three of those who had sores had been cured by mercury, and one of them had also used that mineral for cataract. Two of those who had had gonorrhœa, had employed mercury for it, or rather its consequences, viz. bubo; and the other seven had never, to their knowledge, taken any of that medicine.

Here, then, we have iritis occurring in those who had laboured under syphilis or gonorrhœa, and also in others who had never had either of those diseases; again, in those who had taken mercury, and in those who had never used it, except, perhaps, as a purgative, in the form of calomel—results which, as far as they go, in my opinion have but little tendency to support the supposed noxious effects of either syphilis or mercury on the eyes.

From those results, and from many others of a similar description which I have met with during the last five years, I am inclined to view the syphilitic and mercurial actions as predisposing, instead of exciting causes of iritic inflammation, partly by their deranging the healthy functions of the system, and partly from their requiring confinement; whereby the body is rendered more susceptible to the action of cold, which appears to me to be the general exciting cause of idiopathic iritis.

This opinion, I think, is warranted, from having remarked, *first*, that the greater proportion of individuals who have come under my notice with this form of inflammation, during the existence of either of the actions above alluded to, were aware of having exposed themselves, either voluntarily or accidentally, to cold, immediately before the attack. Thus, one of the twelve patients, whose cases have just been mentioned, was seized with the disease soon after walking out of his ward to the necessary, in a cold winter night, while under slight salivation; and a second contracted the complaint in the course of the night, when sleeping opposite an open window, into which a current of air flowed, when under treatment for secondary syphilis without mercury. *Secondly*, that in the greater number of patients, other symptoms, the consequence of exposure to cold, did exist, such as what the patients designated stuffing of the head, increased discharge of mucus from the nose, rawness and soreness of the fauces, &c. *Thirdly*, that several ex-

amples of inflammation of the iris have occurred during the time men have been confined in hospital for other diseases, from similar irregularities as those just mentioned, two instances of which lately came under my notice; one occurred in a man who was under treatment for a bad fever, and the other in one labouring under a pulmonary complaint. *Lastly*, that other inflammatory complaints, as well as that of the eye, are frequently brought on from the same improper exposure, during either the treatment of syphilis, or the action of mercury, such as, inflammation of the glands, fauces, bronchia, lung, intestines, &c., but which have not yet been generally considered as arising from the action of venereal virus or of mercury.

But to have done with this subject, I should beg to suggest the following points for investigation.

1st, Does inflammation of the iris occur more frequently in persons who have, or do labour under syphilis, than in any other class of individuals?

2d, Does it observe any peculiar appearances in subjects labouring under a venereal taint; and does it require any other treatment than that found effectual under the opposite circumstances?

3d, Does it occur equally frequently amongst persons who are properly guarded against cold, as in those whose circumstances or situation in life renders them liable to experience frequent atmospheric vicissitudes?

4th, Are patients generally affected with catarrhal symptoms at the time, or previous to being attacked with the inflammation; or are they aware of having caught a cold? And,

Lastly, Did they labour under any evident disease at the time they became ill with iritis; or had they been lately confined by sickness or any other cause?

Treatment.—When the symptoms of the disease were not concealed in the first instance, the cure was readily effected; but in two cases where the patients did not report themselves till after some continuance of the complaint, the one, after much trouble and time, got well; but the other was left with an opacity of the lens of one eye, and an impaired state of vision of the other. On admission into hospital, the first treatment was entirely regulated by the severity of the symptoms. When the pain was violent, or even moderate, and of long standing, blood was generally abstracted from the arm till syncope, or a state nearly approaching to it, was produced; but when the pain was pretty moderate, and the other symptoms did not run high, local blood-letting was considered sufficient. This was accomplished by leeches applied to the vicinity of the lids, in a num-

ber regulated by the severity of the disease. The bleeding was encouraged by warm fomentations; and a dose of some purgative medicine was administered, generally in combination with a small quantity of the tartar of antimony, which together produced not only an evacuation from the bowels, but also kept up a degree of loathing and sickness, which was found very materially to diminish vascular action. In this disease, no benefit was found to result from giving the latter medicine in doses, so as to induce vomiting; indeed, I think I have observed bad consequences to follow that action, when accidentally produced. As soon as the bowels were freely evacuated, the next object was to affect the mouth by mercury. This was done by giving calomel in conjunction with opium, during both the day and night, in doses of two grains of the former, and a quarter grain of the latter, every hour, or perhaps every two hours, till the gums felt tender, or an increased flow of saliva was manifested.

About this period of the cure, the patients generally stated, that they experienced a very considerable abatement of the pain, and sense of fulness with which they had been hitherto annoyed. The vision immediately became more clear, and the irregularity of the pupil and effused lymph began to diminish, the redness of the extreme parts to subside, and the iris to assume its usual and natural colour. A continuation of the mercury for ten days or a fortnight, so as gently to keep the mouth affected, removed the disease in all except one. In that case, the effusion of lymph which took place into the pupil, completely obliterated it, and caused a total blindness. The pupil of the other eye was, during the activity of the disease, contracted to nearly the size of a pin's head, immovable and irregular; but by mercury, and the assistance of the extract of belladonna, it regained, after some considerable time, its former size. This man positively asserted, that he never experienced any pain, and by trusting to his word, the treatment pursued was less active than the general appearances would have led us to adopt. I have no doubt but this man dissembled, and asserted what was not the case, as he was very much averse to, and afraid of, blood-letting; even the small quantity that was abstracted, appeared to cause considerable dread and consternation.

One out of the twelve was treated without mercury, and with perfect success. It yielded readily to local blood-letting, purging, blisters, and the use of belladonna, assisted by proper diet and regimen.

That the disease may be thus cured without mercury, I admit; yet I cannot help observing that, as far as my experience goes, the general run of cases can neither be cured so safely

not so speedily by any other method; and that the chance of losing or impairing the visual functions is much greater by the one treatment than by the other. This, I know, does not agree with your views; but when I consider the high value you set on candour and open confession, I can readily expect your approval of my stating an opinion which, I think, is warranted from my experience, although at variance with yours.

There is, however, one form of iritis which is to be cured with as much ease and safety without mercury as with it; I mean that of a chronic description, like that treated, as already mentioned, by local blood-letting, &c. In it, the pain is either not present, or is very moderate; the external redness pretty considerable; but the colour of the iris is not much changed; the pupil is, if any thing, for several days at least, dilated, and possesses but little motion; it then contracts very slowly and regularly; lymph is seldom if ever thrown out till the disease has existed for two or three weeks; the ring of vessels round the cornea is quite distinct; the intolerance of light is inconsiderable; and the lachrymation present but in a very trifling degree. When such are the symptoms which mark the disease, and which no doubt indicate a genuine iritis, I should never think of employing mercury, unless local blood-letting, blistering, purging, and the use of belladonna, failed to relieve the complaint, which I have never seen occur.

With respect to the use of the belladonna, I may state, that it was always applied after the first bleeding had been performed, and was besmeared in considerable quantities over the eyelids and eyebrow, whilst a solution of the same substance was dropt between the lids every three hours. When commenced thus early, it sometimes prevents entirely the irregular contractions of the pupil, and appeared also even to have a specific effect on the general inflammation, as that seemed evidently to lessen after it had been applied for some time. I frequently felt a doubt whether this change might not be the consequence of the previous bleeding; and therefore employed it, after an equal number of leeches had been applied in simple ophthalmia; but certainly, as far as I could judge, with just the reverse effect I had been accustomed to observe it produce in iritis, increasing the vascularity, lachrymation, intolerance of light, &c. In inflammation of the iris, it generally occasioned an increased flow of tears for some considerable time after it was applied, the eye appearing more moist than before. In the course of a few hours, sometimes much sooner, and at other times not till after a longer period, it began to dilate the pupil either generally or partially, according to existing symptoms. It was often found

necessary, when adhesions had taken place between the iris and lens, to continue this remedy for some time, after all the others had been laid aside, in order to ensure the future regularity and natural functions of the pupil. In consequence of its losing its powers in the course of a day or two, the old was generally washed off every morning with a little warm water, and some fresh extract applied.

Staphyloma.—The number of patients affected with staphyloma admitted into hospital, amounted to eleven. Ten of them had the operation for evacuating the humours performed; and in the other, absorption of those parts took place spontaneously. In four, the disorganization of the cornea had attained a very considerable extent, and was so prominent as to protrude very considerably from between the lids, producing not only much uneasiness and pain, but also a disfiguration of the countenance. In addition to those inconveniences, the eyes were always suffering slight attacks of inflammation; and there was constantly a more or less disagreeable puriform discharge issuing from between the tarsi, occasioned no doubt by the friction on the irregular surface during the motions of the lids.

Under such circumstances, it was deemed advisable to remove the protuberance, and allow the humours to escape, in order to obtain a collapse of the eyeball, as the patients were all blind, and nothing holding out the least reason to expect any amendment. Another reason for operating was, that in consequence of the irritation occasioned by the deformed parts, there was constantly kept up a slight weakness and watering of the sound eyes, which, I am happy to say, disappeared in every instance, after the contents of the diseased ones were discharged. A total collapse of the diseased organ, in one instance, as above remarked, took place, without any operation, some time after the lunar caustic had been pretty freely applied to the most prominent part of the cornea.

When the operation was to be performed, the patient was seated as in the operation for cataract; and the surgeon, standing before him, depressed the lower lid with the little finger of his left hand, while an assistant, standing behind the man, gently raised the upper lid; and then the former, with a common tenaculum or dissecting hook, held between the fore-finger and thumb of the hand which was most convenient, laid hold of the protruding cornea, and with a common scalpel cut it off, generally from above downwards. This being effected, a sudden gush of humours always took place, after which the lids were allowed to be kept shut for some time, and then gentle pressure was made on the outside of the upper lid, to force out

what remained after the first discharge. This having been done, the lids were again closed, and the eye was covered with a wet rag or a poultice, according to circumstances.

In the course of a few days, a considerable puriform discharge began to issue from the opening, and also flakes of coagulable lymph, at which time the soreness that had existed since the operation began to diminish. There was regularly observed, even sooner than this period, a considerable redness of the remaining part of the globe; and on opening the palpebræ, a copious effusion of a limpid watery-looking fluid invariably took place. The secretion of aqueous humour went on for some time after this, as was evinced by the repeated enlargements of the eyeballs, and their sudden diminution after a flow of a transparent clear fluid, and a sensation as if the eye had burst. About the fourth day after the operation, a white ring began to surround the edges of the wound, which kept gradually increasing till the whole had filled up. A small opening, which would admit about a pin's head, often continued stationary towards the centre for some considerable time, and was only effectually obliterated by repeated applications of caustic.

In a few of the cases, instead of an opening a small fungus formed, which resembled in form a small pea, and had a clear jelly-like appearance, which required the repeated application of the *nitras argenti* before it could be destroyed, and cicatrization obtained. In five patients, the whole of the cornea close to its junction with the sclerotica was removed; and in the others, only about two-thirds of it. The evacuation was more immediate and complete in the first cases, but the healing of the wound was much longer; indeed, such was the difference of the latter, that I think in no case ought more to be taken away, than will readily allow the lens and humours to escape by the assistance of a gentle pressure. As soon as the healing process commenced, and the soreness and inflammation abated, nothing was applied to the eye; but the patient was merely directed to keep a shade over it, to prevent extraneous bodies from coming in contact with it. Six of the number, when the operation was completed, and the humours evacuated, saw very distinctly, but not sufficiently to allow them to distinguish any objects. They however thought, from what took place, that their vision would be restored; a hope which they were prevented from long cherishing, by the unwelcome information received from their medical attendants.

(To be continued.)