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"Notes on some syphilitic eye affections."

by Alexander Meighan, M.B.

Affecting the eye or its appendages we may have primary, secondary, or tertiary indications of Syphilis. The secondary and tertiary conditions may be acquired or inherited. The primary is quite accidental, and rarely met with. A case turned up, however, at the hospital with well marked characters of the inoculation and its sequelæ, the appearance and symptoms of which were;—a hard gristly swelling on the upper and outer aspect of the left upper eyelid; left submaxillary gland swollen and indurated; throat suspicious looking from a few reddish patches in neighbourhood of tonsils. History. Had been dressing a chancre of a companion some weeks ago.

In a fortnight after presenting himself at the hospital, the above conditions became more pronounced; mucus patches now on throat

and inside gums. Chancre on eyelid larger, harder, and firmer; when separated with finger and thumb feels distinctly cartilaginous and gristly; left submaxillary gland larger and more indurated.
Neither the eyeball nor its conjunctiva could be said to participate or sympathise in the changes taking place in the lid, as there were no signs of irritation whatever, excepting the palpebral conjunctiva immediately below the chancre, and corresponding to its base which was congested and thickened. The upper eyelid drooped nearly to occlusion of eyeball, especially at its outer aspect, due partly to the weight of the growth and pressure, and partly to the mechanical impediment offered.
Under local (soothing) and constitutional treatment for some weeks, the chancre and submaxillary gland enlargement gradually disappeared, and the eyelid resumed its natural contour. The process

of removal was decidedly slow, as it would be at least three months since his appearance at the hospital before the eyelid could be said to be at all free from the growth, the patient in the meantime describing himself as well.

When the chancre and submaxillary gland were subsiding, his hair came out pretty freely, especially at the sides of his head, and I thought it to be more so on the chancre side. The mercurial treatment was continued for some time afterwards, patient to report himself.

The most common of the secondary affections, and the first to show itself is iritis, which usually follows the eruptive stage, but may occasionally precede or occur along with it. As a rule it is confined to one eye - I have seen a few exceptions - and out of a number of cases I noticed the left eye to be affected oftener by three to one. This, I think was purely accidental, as the left eye has no more tendency than the right to become symptomatic; but certainly

if one eye has been irritated or exposed in any way when an iritic attack is impending the disease will determine itself in that eye.

Weakness of sight and watering of the eye are early complained of, followed by pain which is orbital and circumorbital in character; worse at night and in the early morning. It is said that pain in this form of iritis is not a prominent feature, yet I have found patients describing it most intense in character. Where the attack has been of some days duration, the pain is always severe with periodical exacerbations, depending on the severity of the attack. Photophobia is not a marked symptom, often conspicuous from its absence; but ciliary congestion is always well marked, fine hair like vessels running in radii towards the corneal circumference, around which they form a network.

Contraction of the iris early ensues followed by discoloration, rusty looking, especially round margin of pupil, where nodules of effusion occupy a part

of pupillary area, sometimes but less frequently, forming a more or less complete ring round its margin—"arcus iridis."
The discoloration of the iris varies a good deal, sometimes it is greenish or reddish brown or other mixed shades of colour, depending on the original colour of the iris, on the extent and severity of the inflammation, and on the consequent alteration in the transparency and reflexion of the aqueous. Characteristic rust-coloured nodules will be seen along pupillary margin of iris often isolating themselves together in patches, with vascularity according to acuteness and severity of attack. Irregularity and immobility from inflammatory adhesions will depend a great deal on the length of time the disease has been going on without anything active being done. The immobility from tags of adhesion usually occurs at certain points only in the pupillary region, (partial synechia) hence the great irregularity when dilated with

atropine.
In other and more advanced cases the pupil may be entirely fixed, giving rise to the condition termed "iridoncosis," where the pupillary margin is bound down to the anterior aspect of the capsule of the lens, and thus divides the anterior and posterior chambers, with the contracted pupillary margin drawn inwards, and the rest of the iris bulging forward, giving it a bolster-shaped appearance. The contracted pupillary area in such cases is often occluded with a lymphy deposition, rendering the patient in the meantime nearly blind of the eye affected. Cases of iritic adhesion to the cornea constituting anterior synechia are seldom met with, and seem to indicate a corneo-iritis with abundant inflammatory effusion.
In all cases it will be well to examine carefully the throat and skin, as the diagnosing of the condition is everything in regards to the treatment.
Irido-choroiditis shows itself at a

much later date than iritis; the choroid becoming implicated after repeated attacks of the iris. The iris in the majority of cases here has not taken on the acuteness of that just described, as many of the patients never sought for advice until the defective vision from the choroiditis ensued. Both eyes suffer, one worse betimes than the other. It may be two, or even ten to fifteen years since the primary condition before the manifestations of chorido-iritis compel the patient to seek advice. Gradual failure of sight complained of; surrounding objects appear dark and confused, or perhaps broken up, from the contracted and defective state of the field of vision. Can only read large type, or count fingers. Pupil sluggish, irregular, or fixed according to the extent of adhesions; and there is no doubt that this fixation of the pupil is a constant source of irritation, from the dragging consequent on the efforts at dilatation. Tension of eyeballs diminished.

Ophthalmoscopic Examination. — Dark bodies

floating in muddy vitreous, with atrophied patches of choroid throughout fundus, giving the latter a marbly appearance. Disc congested, with its outline often irregular looking. In one case there was a large atrophied patch in neighbourhood of the macula, rendering the patient almost blind of that eye.

Choroiditis pure and simple, without previous iritis or retinitis, is by no means frequent, yet the choroid may be affected primarily, occurring with the eruptive stage, or at a later date, when it is apt to be followed by changes in the retina constituting choroido-retinitis.

Dimness and haziness of sight, with dark bodies (muscæ) before the vision are complained of. Sclerotic injected, with, in some cases a pinkish or bluish pink reflexion. Rectal vessels tortuous. Thinning of the sclerotic, giving it a dull bluish look, will be noticed in all cases where the implication of the choroid has been of some duration. The ophthalmoscopic appearances are character-

istic of the disease. Atrophied patches of choroid are seen throughout the fundus, which have no tendency to run together, and are pretty uniformly distributed. They are disseminated; while the fundus beyond (excepting the large and tortuous vessels) is quite healthy looking. Some of the patches are of a whiter shade, owing to the greater amount of atrophy allowing the white sclerotic to shine through; vitreous muddy from inflammatory effusions with dark bodies floating about, or clear, conditions which will depend on the acuteness and duration of the attack, and probably to a great extent on treatment.

Syphilitic. — For a brief account of which I will quote the case of J. C., aet. 22. (3rd Sept., 1883). — Sees No. 16 with right and No. 4 with left. History of acquired syphilis two years ago. Has an eruption on skin at present, principally on arms and chest, and of a polymorphus character:— Psoriasis, erythema, papules, and pustules, in some parts fading, in other parts forming.

Ophthalmoscopic Examination. - Refraction emmetropic. Dark bodies in vitreous of both, irregular in shape and contour, and entangled in a fine reticula, the meshes of which vary a good deal in size. The dark bodies differ in size and density, some of them are quite opaque and black, especially the larger. The vessels of fundus could be observed indistinctly, but the disc was unable to be defined, on account of muddy condition of media, and the fine reticula above mentioned, which hung like a screen in front of the fundus.

(10th Septr 1883). - Much improved in health, feels stronger, and can now see better with right eye. Tension of left - 1.

(26th Sept. 1883). - Greatly improved; dark bodies smaller and less numerous; media still muddy; fundus can be made out more distinct. Disk congested; veins are enlarged, arteries tortuous.

(24 Oct. 1883). - Sight still defective, more in left; media muddy, and disc with no distinct outline, but merges into

surrounding fundus, the vessels of which are swollen and congested, while the nodular infiltrations and degenerative changes commencing in the choroid give it a mottled appearance. Patient to report himself at intervals, and continue taking a dessert spoonful, after food, of the following mixture:—

℞. Hydrargyri Biniodi, grs. IV.
Potassii Iodi, ʒij.
Potassae Chloratis, ʒij.
Infusi Gentianae ad. ℥viii.
Misce.

Retinitis.— Pure and uncomplicated cases of syphilitic retinitis are certainly not frequent, as the choroid, with few exceptions, becomes very soon implicated forming choroido-retinitis. The retina is oftener affected within the first few years of the disease than at a later or tertiary period. Its reputed tertiary occurrence I cannot substantiate.

(26th Aug., 1883).— J. W., aet. 32, with history of acquired syphilis three years ago, complained

of defective vision. Seems to see through a mist, so much so that of late he had to give up his usual employment of coachman.

Barely able to make out No. 16 c right, and No. 10 c left; saying, letters are indistinct and hazy-looking. He complained of sight leaving him, at times, altogether.

To all outward appearances, the eyes were healthy looking in every respect, excepting a sluggish and slightly dilated pupil.

Ophthalmoscopic Examination. – Refraction emmetropic; media muddy, disc blurred and swollen, with no distinct outline, but merges into surrounding fundus, which is dull looking with vessels swollen and tortuous. There are a few white streaks radiating from centre of disc.

(9th Sept., 1883). – Sight much improved, complains of seeing black specks occasionally. Disc's outline still undefinable, but clearer if anything; fundus, which is congested, has a slightly mottled appearance.

(23rd Sept., 1883). – Sight still improving,

media clearer; disc, which is brighter looking, but soft and swollen, is separable from surrounding fundus, which is still congested with a few small spots of a greyish colour visible here and there throughout; would indicate the extension of the disease to the choroid. The treatment was — A dessert-spoonful thrice daily, after food, of — Mixturae Hydrargyri Biniodi; or

℞ Potassii Iodi. ℥iii.
Potassii Bromidi ℥iii.
Infusi Gentianae ad ℥viii.
Misce.

(October 1883.) Case No. 2. Complains of pain in eyeballs, and vision greatly interfered with, so much so that patient was unable to make out clearly largest type. Everything, she said, seemed to rush together, with a constant haziness, and various objects floating before her sight. History of case unsatisfactory. The following points only were noted, viz. that she fell down in the street and became unconscious. On regaining her senses next

day, she felt her eyeballs sore, with a mist before her eyes, while everything, she said, seemed to dance before her. The unconsciousness no doubt was alcoholic.
Ophthalmoscopic Examination.—Disc swollen and hazy, outline undefinable with some large blood vessels radiating from its centre. Media muddy, rendering fundus somewhat dull and obscure. Ordered a dessert-spoonful thrice daily of—

℞ Pot. Bromid. ℥iv.
Inf. Gent. ad. ℥viii.

A fortnight afterwards her condition improved, sees better, can read No 10 e either; vessels of disc engorged and swollen, outline of which is barely definable. Disc soft and somewhat wooly-looking. Fundus hazy and congested. Patient did not return.

Periostitis.—I have seen some cases of syphilitic periostitis affecting the nasal bones near to the inner canthus, and consisting of an enlargement or growth of bony hardness, with no signs of irritation;

painless, and the skin freely movable over its surface; from its position interfering with the nasal duct, lacrymal sac, and canaliculus, causing the tears to accumulate, and the nasal passage of same side to feel dry. A short account of one of such cases was as follows: R. F., aet. 50, with a growth at root of nose on left side near to inner canthus, had been there for some weeks, and began so insidious that patient could not tell exact time of its appearance. It is quite hard, painless, and looks altogether as if it had been punched out from within. Has a feeling of fulness and stuffing of nose; eye of same side watery, and nasal passage dry. History of acquired syphilis so long ago, that patient had nearly forgot

Treatment.—A dessert spoonful thrice daily of—

℞ Potassii Iodi ℥iii.
Infus. Gent. ad. ℥viii.
misce.

and to wash out the nostril with a solution of chloride of ammonium X grs to the ℥i.

Under which treatment, for some time, all the conditions complained of improved rapidly, along with the disappearance of the nasal growth.

Hereditary Keratitis.— The most common of the congenital eye affections, usually shows itself in childhood. The features have in all cases some peculiarity to attract the observer's notice. The patient looks much older than in reality, due to the coarse skin which is dull and pasty-looking, and scars about the angles of the mouth, giving it a shrivelled appearance, while the nose is broad and flat contrasting much with the often prominent forehead.

Notching of the upper permanent incisors pretty constant, and of inestimable diagnostic value when present. In other cases in which this condition is not so marked, the teeth are scraggy and small. The special characters of the corneitis are, that both eyes become affected if the disease is not early arrested by prompt anti-syphilitic remedies. It always commences in one

eye, and from six weeks to six months afterwards the other eye becomes affected. In other and rarer cases from two to six weeks, depending on the severity of the attack.

Swollen and infiltrated or ground-glass appearance of cornea — the reflexion of window on its surface easily shows this — from the small nodular infiltrate into its tissues turning transparency into opacity, and unfortunately the pupillary region suffers most, resulting in severe and neglected cases to the formation of white opaque cicatricial tissue (leucoma) which has a tendency to bulge forwards from its own weakness, but no tendency to ulcerate.

Pink ciliary congestion, and vascularity of cornea invariably present, always in severe cases. Pain of an orbital and circum-orbital character with increasing dimness of vision are complained of. Pain, however, is not so prominent a feature as photophobia, which is always most marked and especially in the severer attacks.

<u>Treatment.</u> — It is a secondary indication of

syphilis and hence small doses of hydrargyrum cum creta and pulv. Doveri in powders, along with, or alternating with half tea-spoonful doses of syrupi ferri iodi twice daily. General health to be attended to; cod-liver oil. Eyes to be shaded, strong lights avoided.

Corneo Iritis. The extension of the disease to the iris will be found in not a few of the cases of corneitis; this is all the more likely where the corneitis has been of some duration, hence it is oftenest seen in grown-up persons. It is very insidious in its onset and slow in its progression — a chronic iritis. The intervening of acute symptoms seldom.

Discoloration and ciliary congestion often characteristically insignificant in comparison to the amount of lymph effusion and subsequent adhesions. The deposition, which is interstitial, gives to the iris a bluish-white appearance in blue irides, and a chocolate-brown

in darker irides. In no case have I seen anything approaching the rusty discoloration characteristic of the acquired. In some cases the adhesions were completely round the pupillary margin (iridoncosis) with iris bulging forwards and shallow anterior chamber. There was an iridectomy to the inner and upper aspect in a case of this kind.

In another case where both eyes were about equally affected an iridectomy to the outer and lower aspect, performed for its therapeutical effects, resulted beneficially, and there is no doubt of the importance of the operation in suitable cases, fulfilling as it does the doubly important indication of arresting the progress of the disease, and forming a pupill. The eyes, unfortunately, are a chosen media for the manifestations of the disease, as I have often noted the fairly good condition of the health in young adults suffering from corneo-

iritis; and the fluctuating character of the disease, shown by the abatement and sub-acute exacerbations in its progress, without any special reason to account for the one or the other.

Sub-acute exacerbations setting in quite suddenly where the conditions have been progressing favourably, and which often as quickly subside, depending probably on constitutional influences.

Treatment. - Besides the daily use of an eye lotion and ung. atropia here, as in corneitis, it is of the utmost importance that the general health be attended to in all cases.

Half ounce doses of cod liver oil twice or thrice daily, along with half-tea spoonful doses of syrupi ferri iodi twice daily.

The mercurial treatment does not seem to be so beneficial when the attack has delayed itself into adult age or beyond.

I have seen attacks of corneo iritis

occurring in married men, and with such severity as to render them in a few weeks only able to distinguish light from shade. Improvement in the general health is the first thing called for in cases of this kind, and when the eyes have subsided down a bit, an iridectomy will certainly be warranted.

Another variety of eye hereditary taint met with in the adult, namely, "chorido-retinitis", has atrophic appearances much more pronounced than that occurring in the acquired. Both eyes always suffer, but seldom equally; they are usually small and shrunken looking, tension minus; and when examined microscopically, large irregular patches of atrophied choroid will be found scattered over the fundus, with more or less atrophy of the disc, and consequent vascular destruction. Irides more or less fixed by adhesions. The changes in the coats of the eye re-

sulting in this general atrophy of the bulb — and probably having origin from the iris or corneo iris — are by no means sudden in appearance, or acute in progression, as the history of the cases clearly shows. The atrophy of the disc originates within the eye, consecutive to the changes in the choroido-retinal coats. It has not the pearly bluish-white appearance of that proceeding from beyond the eye, or the same degree of non-vascularity; but is rather of a dirty yellowish-white, with small shrunken blood-vessels twisted irregularly out of their course. The prognosis too is much more favourable, and considerable improvement may be expected.

In selecting the above as a subject for my thesis, I might venture to add, that I am not conveniently suiting myself to the subject so much as the subject is suiting itself to me.

Attending the Eye Infirmary, Charlotte St. as I have been regularly for some time, I am bound to say that the number of cases directly due to, or influenced by the conditions of health stands far and away the commonest, and most important factor in predisposing or proximating to disease.

Is not phlyctenular corneitis, the majority of corneal ulcers, rather a symptom than a disease, per se? Such is the state of matters undoubtedly; as - barring injuries - the cases which are secondary to, or symptomatic of the state of health, will form an extraordinary large proportion of the total number of all cases.

In fact, the number of cases coming under idiopathy, and outward influences

will be found few and exceptional, as under favourable conditions the eye has little or no tendency to inflamations of any kind.

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