Sturgis (F. R.)

SCLERITIS SYPHILITICA:

ITS

PATHOLOGY, COURSE AND TREATMENT.

BY

FRED. R. STURGIS, M. D.,

Lecturer on Venereal in the Medical Department of the University of New York; one of the Surgeons to Charity Hospital, Blackwell's Island, etc., etc

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THIS rare affection may, for convenience sake, be divided into three groups, viz.: Epi-or peri-scleritis, scleritis parenchymatosa, and scleritis gummosa, the main difference between the first two being that the former, epi-scleritis, is more limited and circumscribed than is the parenchymatous variety. The disease may occur alone, confined to the sclerotic and unattended by any complications of adjacent tissues; at other times it is associated with secondary changes in the cornea, the iris or in the ciliary body, when it becomes a matter of serious importance.

Primary lesions of the sclerotic are, so far as I am aware, unknown, the disease being usually associated with the stage of the so-called gummous formations, when it commences as a limited point of redness situated near the edge of the cornea, over or close to the insertion of the external rectus muscle and forms a slight elevation, sometimes quite circumscribed, at others shading gradually off into the surrounding tissues. This elevation, which varies much in size, is, at its apex, of a deeper and more livid hue than elsewhere, is smooth in its appearance, and is covered, during its earlier course, with a sound conjunctival membrane. With all this apparent growth there is very little if any functional disturbance, it is not associated with pain, with photophobia or photopsia, nor is there much peripheral inflammation. Indeed, the symptoms of the disease are cold, insidious and slow, and its course is chronic. As it progresses one of two things may take place; ulceration or resolution. When the former occurs the apex only breaks down, while the sides of the tumor retain their translucent color; this may go on until the entire swelling is converted into an ulcer. Where resolution takes place the swelling slowly sub-

sides, becomes flattened, gradually loses its livid look, assumes a pinker hue, and finally disappears, occasionally leaving behind it a depressed, greyish or slaty discoloration to mark its former site. Ulcerations of these tumors fortunately are not common, the disease yielding to a vigorous and well-directed treatment. M. Flärer, in the "*Medicinische Jahrb. d. Oesterreicheschen Staates*," is accredited by M. Lagneau in his "*Maladies Syph. du Systeme Nerveux*," with the following history, which, to say the least, is very extraordinary, and a summary of which I give here more as a medical curiosity than any thing else.

OBS. 1. A young man, in 1830, contracted a chancre, which was followed, in due course of time, by alopecia of the head and face, by ulcerations of the palate, gummous iritis and commencing amaurosis. In March, 1840 (ten years after the primary lesion), the following report is made of the condition of things in the left (the affected) eye: "The sight, and all perception of light, was lost, and outwards and upwards a tumor had formed in the sclerotic, the size of a hazel-nut. The swelling gave rise to an excavated callous ulcer, large enough to admit the end of the finger. Later, the tumor acquired the size of a fist,* and became so painful as to deprive the patient of sleep. Under treatment with the decoction of Pollini,† the ulcer closed, the cornea became transparent again; but the globe of the eye had atrophied." G. LAGNEAU, fils, op. cit. P. 417.

When discussing the objective symptoms of the disease, I mentioned, among various others this sign, that there was not much peripheral inflammation, and it will be seen, in the case I am about to present, how very poorly marked this symptom sometimes is. Occasionally, however, it is much more prominent; but even then it is not nearly so marked as in a conjunctivitis or even an iritis. The notes of the case were taken from a patient, at the Manhattan Eye and Ear Hospital, and are briefly thus:

OBS. 2. W. S., æt. 26, denies all knowledge of the primary lesion, but admits that two years ago (1872) he had iritis of both eyes, more especially of R. and some alopecia. The present trouble began two months ago (Jan'y, 1874), without any pain, photophobia or

* "Avait acquit le volume du poing."

† The principal ingredient is sulphuret of antimony in sarsaparilla; this "*tisane*" is not used in the U. S.

lachrymation, and presents the following symptoms: At the external border of the cornea, at lower edge of insertion of ex. rectus, beneath the conjunctiva bulbi, not adherent to this tissue, is a raised non-circumscribed tumor, seated apparently in the sclerotic, of a dusky red hue at the base and with a grey apex. Circumferential redness very slight and limited in extent. Conjunctival injection almost nothing. No pain, photophobia or lachrymation. The sclerotic vessels are red and enlarged. The tumor bears handling freely. There is at present no other affection of the eye. V.=1. Remains of old adhesions in R. E. None of L. No comcomitant symptoms of syphilis elsewhere.

As a contrast to this case, in the severity of the objective symptoms, I will present another; for permission to use which I am indebted to Dr. R. H. Derby, of the N. Y. Eye Infirmary, whose patient he is.

Obs. 3. J. T., æt. 33, gives the following history: Primary lesion was contracted in 1871, and was followed at various dates by cutaneous eruptions on the body, cranial alopecia, rheumatoid and osteoscopic pains and hemi-crania. He says his present trouble began sometime in January, 1874. He was seen by Dr. Derby, for the first time, on March 10, 1874, who kindly wrote me out the following notes of the case: "Downwards and outwards, in the region between the external and inferior recti (left eye) was a new growth. The anterior portion of this neoplasm was about 4 ‴ distant from the limbus, and by forced abduction of the eye (the patient at the same time looking upwards), its posterior portion was lost in the circumocular tissues. Over the tumor the conjunctiva was freely movable everywhere. The new growth presented a livid red color, could not be moved upon the eye, and was believed to spring from the sclerotic. It was exquisitely tender upon palpation. Over the region of the insertion of the lower rectus of this eye, and from this point to the region of insertion of the internal rectus, there was a dull bluish look (old scleritis?).

"The refracting media and fundus of this eye were normal. There had been circumorbital pain, and, as might have been expected, patient suffered especially whenever he attempted to look downwards and outwards to the left."

I saw the patient a month later in consultation with Dr. Derby, and the following condition of things was noted: Nocturnal hemicrania of left side of head. Impairment of motion of left eye outward and downward. No photophobia. No pain in eye-ball. V.= 1. About 4 ‴ from edge of cornea, in the sclerotic, at the lower border of external rectus is a flat, livid swelling, very slightly raised

above the ball, surrounded and covered by a leash of vessels. No cyclitis. A pretty broad, riband-like strip of injected vessels sweeps along lower border of cornea to near the insertion of the internal rectus muscle.

There was no ulceration of the tumor, nor was there any swelling over the insertion of the internal rectus where the congestion stopped abruptly.

The iris was free from synœchia, nor was there any iritis or gummous growths or exudation from the iris into the anterior chamber.

This case is one of interest in several ways. 1st. From the amount and peculiar shape of the congestion. 2d. From the absence of any complications, *i. e.*, iritis or cyclitis, and, 3d. From the lack of functional disturbance. There was no photophobia nor lachrymation, and his vision was normal. As compared with my own case (Obs. 2), there was more pain; but even this symptom was poorly marked; only in certain positions of the eye was it present, and then from constraint to the movements of the eye-ball.

As so few of these cases have been reported it will not be devoid of interest to review a very interesting case given by Estlander, of Helsingfors, in the *Klinische Monats-blätter für Augenheilkunde*, for 1870. It is headed "Gummy Tumor under the Conjunctiva bulbi," without any more precise definition; but, on carefully reading it over, it seems to me indubitably to have sprung from the sclerotic. The case is as follows:

Obs. 4. Helena Lagerblom, æt. 19, a servant from Tavastehus, came to my clinic July 5th, 1870. She stated that when two years old numerous persons in the house where she lived were affected with syphilis; among them her parents. At this time she also had a sore throat and mouth. About two years ago an ulcer formed on the left arm, below the olecranon; then a second came just above the internal condyle of the humerus, and finally a third one near the first. These ulcers, and the severe pain through the whole arm, induced the patient to come to the clinic.

At that time her condition was as follows: Appearance pale and anæmic, but well nourished; nothing abnormal in the internal organs; about the left elbow joint was an ulcer, whose irregular form and general appearance indicated that it was due to ulceration of syphilitic tubercles of the skin; below the right knee was a similar ulcer in process of healing, and several scars from similar ulcera-

tions. Nothing abnormal was seen in the eyes. Under treatment with iodide of potassium (first, gr. v, later, gr. x, three times daily) these ulcers began to heal.

On the 12th August the patient complained of pain in the left eye On the outer border of the cornea, in front of the tendon of the external rectus, in the sub-conjunctival cellular tissue, there was a smooth flat tumor, which measured horizontally 6 mm., vertically 3 mm., and about 2 mm. high. Over the middle of the tumor, the conjunctiva was grayish white, as though commencing to ulcerate, but on the margin the epithelium was still present, and at this part the tumor was translucent. The conjunctiva, just around it, was red from injection, and from the conjunctival fold a couple of distended blood vessels advanced towards the tumor. The adjacent portion of cornea was grayish and opaque. As the tumor was divided with a cataract knife a slight quantity of purulent fluid oozed up, and a yellowish tissue, extending to the sclerotic, appeared in the incision. With the object of watching this tumor further, the eye was treated expectantly, while the iodide of potassium was continued internally. During the next five days, however, the inflammatory symptoms increased, so that inunction treatment was resorted to. Until the 3d September, a half drachm of Ung. Hydrarg. was rubbed in daily, but then it had to be discontinued as the mouth was affected. From the commencement of this treatment the inflammatory symptoms began to subside, as did the tumor itself, and a week after the termination of the treatment only a deep grayish cicatrix was left. Of the opacity of the cornea only a fine line on the outer border remained.*

In this as well as in my other observations, cases No. 2 and 3, the tumor was circumscribed, and the inflammation localized in extent. One point, however, is noteworthy; the pain is much more marked here than in the other cases, perhaps due to her anæmia; this symptom of pain is not common; indeed, in syphilitic affections of the eye, the absence of this symptom is noteworthy, in contradistinction to those not due to specific causes.

Beside the pain, complications existed in the shape of ulceration of the conjunctival mucous membrane and opacity of the cornea. In the beginning of this paper, I spoke of the iris, conjunctiva, and even the cornea, sometimes participating in the disease, and this is not surprising when we reflect upon the intimate relations

* Translated by C. E. Hackley, M. D., in the Am. Journal of Syph. and Derm., April, 1871, p. 155.

which exist between the various structures of the eye; on the contrary, it is a wonder how the deeper portions ever escape.

The two next histories which I give are quoted from Barbar's Inaugural Dissertation, "*Ueber einige seltenere syphilitische Erkrankungen des Auges*," *Zurich*, 1873, and present a beautiful picture of this rare and interesting affection.

Obs. 5. The first case is that of a man, æt. 26, who had previous to his scleritis twice entered the ophthalmological clinic of Prof. Horner, at Zurich, for gumma iridis, associated with a syphilitic eruption of the skin. The syphilis dated back certainly one year and four months, perhaps longer, as the date of the primary lesion could not be ascertained, although on his first admission to the hospital it is mentioned that there was "a hard, somewhat elevated spot upon the glans penis."

An interval of nearly five months had elapsed between his second and third entrance into hospital, which was on February 3d, 1871. Here is Barbar's account of the case:

"His left eye had been attacked afresh. Two millim., from the upper and outer edge of the cornea, and covered over by the conjunctiva, was a reddish-yellow tumor, almost as large as a cherry stone. It is resistant; its contour is sharply defined; it pushes the sclerotic, with which, on its inner surface, it is connected, forward, while the conjunctiva, both at the sides and apex, is freely movable. Both the conjunctiva and the sclerotic are injected in the neighborhood of the swelling, and the adjacent portion of cornea is the seat of a slightly diffuse opacity. The tumor gives rise to no spontaneous pain, but patient reports a dull ache, if pressure be made over it. From his previous history, and for reasons which are presently to be given when discussing the differential diagnosis, there was no question of its being a gumma of the sclerotic.

The local treatment merely consisted in the instillation of atropine.

Internally, the iodide of potassium was renewed. Under this treatment the tumor gradually diminished in size, and at the same time the injection slowly disappeared. Without any change in the tension of the globe, the seat of the swelling became gradually transformed into a thin, bluish transparent depression.

Obs. 6. Was an anæmic woman, æt. 33, who came under observation the end of March, 1872. "The right eye had been painful for about fourteen days, and she thought there was a foreign body in it. Examination showed a decided injection of the ciliary region, an opaque cornea, pupil firmly bound down by synechiæ, discoloration of the iris; in short, the picture of a severe iritis. The history was extremely defective, the date of infection could not be obtained

with certainty, but the pharynx was very much congested, the tonsils were swollen, and the cervical lymphatics were infiltrated, in some places suppurating. The iritis progressed with extraordinary rapidity, the iris became more opaque without any pain, and the pupil was blocked up with a tough, purulent, fibrinous exudation.

On April 8th, an elevated point of redness on the sclerotic was noticed about 2 mm. from the edge of the cornea. It was resistant, perfectly circular and sharply defined. The injection of the conjunctiva was marked. An inflammation of the right knee-joint led to a thorough examination of the patient, when, for the first time, a skin affection was noticed, which, up to that time, had been concealed by the patient. This upon the arms and upon the thighs had a most characteristic appearance, consisting of small vesicles with clear contents and red base, larger pustules filled with pus, and more extended base and finally of circular crusts 1–1.5 cm. broad, surrounded with a red areola. These last, according to the patient, were of three weeks' duration. The inguinal glands were markedly indurated, the congestion of the pharynx had increased, and its mucous membrane showed in places a decidedly lardaceous appearance. * * * * * * *

Under mercurial treatment the eye quickly improved, the absorption of the purulent exudation taking place with unusual rapidity. The scleral swelling entirely subsided, leaving behind it a very decided greyish cicatrix, which when last seen (June, 1872) had become entirely white. The synechiæ were slight and only a few floating bodies were left in the vitreous. As the constitutional symptoms were severe and obstinate, the patient was transferred to the venereal division of the hospital towards the end of April.

* * * * * * * *

The patient died in October, 1872, of typhus, and at the autopsy the characteristic syphilitic atrophy of the liver was observed."

In these two cases, we notice, much the same train of symptoms are noticed as in my own cases, viz.: the circumscribed character of the swelling, the absence of severe pain or extensive inflammation, and the cold, insidious course of the disease.

The time at which this symptom appears it is hard to state absolutely, judging from these six cases; we may say in a general way that it is one of the late manifestations of syphilis, occurring from two to four years after infection, even later, perhaps. In Obs. 1, it appeared two years after the primary lesion; in Obs. 2, how much more than two years after it is impossible to say, but certainly more; in Obs. 3, about three years after the initial lesion;

in Obs. 4, fifteen years (?); in Obs. 5, sixteen months, probably longer; and in Obs. 6, no time could be assigned from a defective history.

I have gone thus fully into the description of these gummata of the sclerotic because of their rarity; but before concluding let me say a few words upon the two other varieties of the disease.

As I have already said both epi-scleritis and scleritis parenchymatosa, unassociated with gummous formations are very rare. Their existence is mentioned, but as I have never seen any cases, I cannot speak of them from personal knowledge.

Broadly speaking, S. parenchymatosa is a more diffuse form of epi-scleritis and, as the name denotes, has its seat in the interstitial layer of the sclera, in the same manner as the form we have just been describing; with this difference that instead of remaining localized it shows a tendency to become diffuse.

The various stages through which it goes are as follows:

1. Vascularity of the sclerotic, which at first circumscribed afterward becomes extended and irregular.

2. A slight salience of the tunic at this point; this however may readily escape notice as it is sometimes slight.

3. An increase in the appearance of the redness, which becomes almost purple; this changes later to a grayish color and slowly disappears to give place either to the normal condition or, what often occurs, a thinning of the sclerotic itself. There is but little pain associated with this affection and only during exacerbations, is there lachrymation. Photophobia is also absent, save in those cases where iritis, keratitis or choroiditis co-exist with the scleritis.

The treatment in these cases is two-fold, constitutional and local, nor is one less important than the other. The local treatment consists in the instillation of a solution of atropine (gr. ii,-iv, to Aq. 3 i.) twice or thrice daily, or until the pupil is fully dilated and this with a double object, to prevent synechiæ, should iritis supervene, or to break them up if they already exist, and to relieve the engorgement of the vessels. Applications of ice, leeches or warm water will only be necessary should severe in-

flammatory symptoms set in from participation of the iris, the cornea or the ciliary body in the disease.

The constitutional treatment is such as would be used for the relief of other syphilitic lesions; mercury alone or in combination with the iodide of potassium. But let me say that excellent as is the iodide of potassium in the treatment of syphilis, we must not rely too much upon it to the exclusion of mercury, which after all is the surer and more trustworthy agent.

Perhaps the best way of using it is by inunction in drachm doses to the soles of alternate feet every night, as long as the patient will tolerate it or until the disease yields. During the treatment bid the patient wear the same stockings night and day. But of course we must not be wedded to any one form of treatment, but be ready to adopt any method, external or internal, which our own sense of fitness may suggest or which the case may seem to require.

New York, *October*, 1874.