

**A probationary surgical essay on the syphilitic inflammation of the iris :
submitted, ... to the examination of the Royal College of Surgeons of
Edinburgh, ... / By Adam Hunter.**

Contributors

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A
PROBATIONARY
SURGICAL ESSAY
ON
THE SYPHILITIC INFLAMMATION
OF
THE IRIS.

SUBMITTED,
BY AUTHORITY OF THE PRESIDENT AND HIS COUNCIL,
TO THE EXAMINATION OF THE
Royal College of Surgeons of Edinburgh,
WHEN CANDIDATE
FOR ADMISSION INTO THEIR CORPORATION,
IN CONFORMITY
TO THEIR REGULATIONS RESPECTING THE ADMISSION
OF
ORDINARY MEMBERS.

By ADAM HUNTER, M.D.

“ Neque Hercule satis est, ipsas tantum febres medicum intueri,
sed etiam totius corporis habitum, et ad eum dirigere curationem;”—
CEL. lib. iii.

NOVEMBER 1815.

EDINBURGH:

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1815.

TO

THOMAS BLIZARD, Esq. F.R.S. Lond.

SURGEON TO THE LONDON HOSPITAL.

DEAR SIR,

THE hackneyed style of dedication, can but ill display the feelings of gratitude and esteem with which I now regard your instructions to me as a Preceptor, and attentions as a Friend. The former, I think, have contributed most materially to my professional advantage, and, when I forget the latter, may I be pointed at as an outcast from society.

Forgive the liberty I have taken, of attaching your name to a production, the merits of which are so far beneath your notice ; but as it is from necessity, and not from the vain desire of appear-

*ing in public, that I have arranged my ideas on
this disease, I with avidity seize so favourable
an opportunity of telling to the world how much
I am,*

Your obliged Pupil,

And sincerely attached Friend,

ADAM HUNTER.

*"Fateor equidem ea esse rudia, inchoata, et manca :
"cujus rei culpa, ut maximam partem in me recidat, par-
"tim tamen in ipsius artis conditionem erit rejicienda."*

COMMENT. GUL. HEBERDEN.

10

ESSAY

ON

THE SYPHILITIC INFLAMMATION

OF

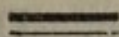
THE IRIS.

THE eye is an organ of such extensive and important use in the animal economy, and the delicacy of its structure known to be so susceptible of derangement, from causes (at least in other structures) apparently of trivial import, that the slightest reflection justifies and promotes that minute attention to its *anatomical* and *pathological* histories, which, in the present and in former periods, so much prevails.

To descant on the uses of this, or any other organ, would be foreign to the purport of such a paper as the present; and therefore, after a few words of general remark, I shall proceed to the description of the disease, which I have adopted as the subject of my Essay.

Almost every disease of which the eye is susceptible, has had an individual and careful observer, by whose laboured exertions and patient enquiry, the *symptoms*, *diagnosis*, *prognosis*, and *cure* of each, have been in a variety of cases accurately marked; and from those accumulated facts, by careful induction, they have reared so solid a superstructure to guide our practice, that little remains to be done by the present practitioner, but to follow the footsteps of his predecessors. With such a conviction on my mind, it would be highly presumptuous in me to lay claim to any originality of remark; and therefore, without hesitation, I acknowledge the assistance which I have derived from the perusal of the elegant and

accurate Chapter on the Simple Inflammation of the *Iris*, left us by Mr SAUNDERS, and from the conversation of men eminent in their profession in London; while I adopt that arrangement, which the progress and concurrence of the symptoms, in a variety of cases which I have seen, suggest as the more eligible.



SYMPTOMS.

MR SAUNDERS, in his valuable Chapter on the Simple Inflammation of the *Iris*, has given a very minute description of the symptoms and morbid actions going on in the organ affected; and at the close says, “ But this state of the *Iris* sometimes arises from *syphilis*,” without marking, in the symptoms of the disease, any one as *diagnostic*, and leaving our practice to be regulated by the presence of some unequivocal symptom of lues, or the more fallacious testimony of our patients, who, whether male

or female, generally assert that they never have been contaminated by the syphilitic virus. Such information must in all cases materially influence our practice, which, in a disease that so rapidly proceeds to the destruction of the eye, must either eventually crown our efforts with success, or make the patient suffer that punishment which the obstinacy of his conduct may entail upon him. Dr FARRE has, however, in a subsequent chapter of detached pieces, compiled from the note-book of Mr SAUNDERS, given that series of *diagnostic symptoms*, which the extended field of Mr SAUNDERS's observation enabled him so correctly to ascertain. Fortunate is it, then, that we have *diagnostics* occurring in the symptoms themselves, which lead us to the only rational and successful mode of treatment, without allowing our judgment to be too much biassed by the attestations of our patients. I insist upon this particularly, as I have seen one case in which the affection of the eye scarcely admitted of a doubt, but the decided account of

the patient concerning venereal contamination, forbade the use of mercury as an antivenereal ; yet, on his second visit, I found out that he had been using mercury under a disguised form, for pains in his bones and spots on his skin, on the disappearance of which, after a few doses of his medicine, he considered himself well, and renounced the use of the remedy. In a few days this affection of his eye appeared, which was cured by a decided mercurial course.

There appears to me to be much irregularity as to the occurrence of the symptoms ; but, from the concurring testimony of patients, I would give the priority to dimness of vision, in some cases almost total blindness. This alarms the patient, and he flies to the surgeon for relief, who, though he finds the eye much inflamed, observes that the *cornea* and *humors* are in a state of such perfect transparency, as to be totally incapable of accounting for the great loss of sight. More minute examination discovers, that the vessels which have tinged

the *sclerotic coat* of a vivid vermilion hue, do not pass over the *cornea*, but seem to terminate abruptly at its margin, as they dip through the tunics, and form that *zone* which Mr SAUNDERS considers as highly characteristic of an inflamed *Iris*.

As the disease is often of a few days standing ere the surgeon sees it, he, on examination, generally finds, that the iris is much altered in its appearance; that its colour and brilliancy are lost in a dusky greenish hue; that its pupillary margin is fimbriated, spongy, and irregular, either partially or round its whole circumference; that its radiated appearance is destroyed; its mobility impaired, either from the affection of its fibres, or from adhesions to the capsule of the *lens*; that clusters of vessels carrying red blood, pass in an irregular manner over its surface; and that lymph hangs pendulous from its margin, or drops into the anterior chamber of the eye. Now there is a slight sense of fulness in the socket, and slight pain of the eye, occasion-

ally pain of the head, and superficial pain along the distribution of the supra-orbital nerve of the eye affected. In this state of symptoms, the pain is certainly much less severe than we would be warranted in believing; in some cases, indeed, so trifling is it, as not to attract the patient's attention; and even the sudden and frequent exposure of the eye to a strong light, does not produce any marked aggravation of the patient's sufferings; thus contradicting our anticipations, which, from the appearance of the parts affected, would justify us in believing, that severe pain was a concomitant of the disease.

The day thus spent in a state of comparative ease, is in general followed by a night of excruciating torture; the disease, in this respect, imitating the example of every other *venereal affection*. In some cases of the syphilitic inflammation of the *Iris*, the exacerbations by night are so severe, as to deprive the patient of his sleep, harass him by the recur-

rence of two or three paroxysms of pain, and only at a late hour in the morning leave him to enjoy that repose which the severity of his sufferings render so very acceptable. The secretion of the lachrymal fluid is scarcely, if at all, increased; and, in none of the cases which I have seen, have I ever observed that sensation of a foreign body irritating the eye to be present, which so generally accompanies *pure* inflammation of the *conjunctiva*.

If the local irritation during the day falls thus far short of our suppositions, we are equally astonished to find, that very little sympathetic action takes place to indicate the existence of a disease, which in its progress is so rapid. During the night, the patient, from severity of pain, becomes restless and warm, which however entirely disappear by the morning, and leave him to pass the day in a state of comparative ease, his constitution betraying only so slight a degree of irritation, that I think it may with justice be referred to that state of

erethismus which Mr PEARSON, in his elegant work on the Effects of the various Remedies, &c. considers as indicative of the existence of some morbid poison in the constitution.

Such, I think, is the progress and state of the symptoms, from the third or fourth day, to the eighth or ninth, when, by the timely application of the patient for medical aid, and the prompt exhibition of remedies, the progress of the disease may be arrested, and an useful, though perhaps not perfect, degree of vision restored to the patient ; but if, from the neglect of the patient, the rapidity of the symptoms, or a misconception of the case, whereby it has been improperly treated, the disease has not been arrested, then the symptoms quickly assume a much more dreadful appearance, and for ever exclude any hope of saving the eye. The state of symptoms already related, I have drawn from a variety of cases : Of this more advanced period, I cannot speak with equal confidence, as I have only

seen one case in an advanced, I may say incurable, stage, and the subject of it not crediting the real nature of his complaint, grew impatient at the mode of treatment, and withdrew from the care of the gentleman whose patient he was. In this case, the lymph, which had dropt into the anterior chamber of the eye, had become organized, and formed a bond of union betwixt the *Iris* and *internal lamina* of the *cornea*. At the point of adhesion on the internal surface of the *cornea*, ulceration had commenced, which with great rapidity removed the whole thickness of this tunic, and left alone the delicate expansion of the *conjunctiva* to retain the contents of the eye in their situations. The whole surface of the eye was very highly inflamed; the patient suffered most exquisite pain of the eye and head; could not bear the slightest exposure to light, and was much incommoded by a copious discharge of scalding tears. Along with these symptoms, there was great excitement of the constitution, marked by quick sharp pulse,

flushing of the face, heat of skin, thirst, white and loaded tongue.—The great dissimilarity of the symptoms now described, from those stated in a former part of this paper, would induce the belief, that I was now delineating the characters of a new disease; but the history of the patient, the incipient state of a decided inflammation of the *Iris* of the other eye, and the presence of unequivocal venereal spots on his arms, shoulders, and legs, and nocturnal pains, all tended to convince me, that this disease was, in its commencement, inflammation of the *Iris*, originating from, and depending on, the venereal taint of his constitution. In this state of matters, did the patient withdraw himself, nor did he leave any trace where he might be found: I cannot doubt, however, that the conjunctiva at length gave way, and that total disorganization of the organ has been the consequence.

In the most favourable termination of cases, the structure of the eye is more or less deran-

ged, the pupil being formed into an *angular*, *oval*, or *irregular* aperture, according to the number of points of the *Iris* adhering to the *capsule* of the *lens*, which, with the opacity of the *capsule* from its circumference towards its centre, are referable to the quantity of lymph effused during the violence of the inflammatory symptoms.

CAUSES.

ON this part of my Essay, I cannot pretend to throw any light. What it is that determines the venereal virus in some rare cases to commence its specific action in this organ in so peculiar a manner, I have not been able to trace, either by my own enquiries into particular cases, or from the conversation of practitioners. I have seen it in three females, and four or five males; in two females, and one male, both eyes were affected; in these cases,

there were varieties of constitution, from the sanguine to the melancholic ; but in none could I observe any leading circumstance which could be placed under the present head.—Probably the scrofulous diathesis, conjoined with the nature of the profession in which the patient is engaged, may predispose to and excite an inflammation of the eye, to be thus peculiarly modified by the presence of the *syphilitic* taint of the constitution. Such was likely the case in one of the patients I saw, as the subject of it was a blacksmith, and had several of the constitutional marks of a scrofulous habit.

DIAGNOSIS.

To assume the prerogative of establishing a series of *diagnostics* between any two diseases, requires that the writer must previously have had frequent opportunities of contrast-

ing the progress and concurrence of the symptoms in each, and marking those minute shades of difference, which, though sometimes in themselves but very faint, yet, in establishing the mode of cure, make this very important difference—the *preservation or destruction of the organ affected*.—Such a person was Mr SAUNDERS;—to his well known ability, was added the great advantage of a widely extended practice, in which cases of *pure* as well as *syphilitic* inflammation of the *Iris* frequently occurring, enabled him to draw that accurate diagnosis of this disease, of which his posthumous work has put us in possession.—Never having seen any case of the *pure* inflammation of the *Iris*, I might here refer to his book for the necessary information, and thus exonerate myself of this part of my task. Rather, however, than leave any part in an imperfect state, I will here set down those *diagnostics* noticed by him, prefacing them with this observation, that the history which I have given in the preceding pages, drawn chiefly from the cases

which I have seen, would, if my mite was necessary, tend to corroborate their accuracy.

1st, The great dimness of vision, almost total blindness, attendant on the early stage of the complaint, and which is quite incompatible with the transparency of the *cornea* and *humours*.

2d, The slight degree of pain during the day.

3d, The nocturnal exacerbation of pain.

4th, The slight irritation on exposure to light.

5th, The *Iris* more thickened and puckered in the *syphilitic* than in the *pure* form of the disease.

6th, The pupil less contracted in the *syphilitic* than in the *simple* inflammation of the *iris*.

And,

7th, The vivid vermilion tinge of the eye.

On the first and last of these symptoms I may be permitted a few remarks.

From the great dimness of vision attendant on the early stage of this complaint, the opinion has originated, and is entertained by practitioners, that the retina is in some manner primarily and peculiarly affected by the action which has taken place, as explanatory of the patient's blindness, while the *cornea* and *humours* are apparently in a state of perfect transparency. That such may be the case is highly probable; but at present I am not aware of any parallel, where nervous structure is primarily and chiefly affected by the venereal virus in its secondary form; and that case which I have noticed, wherein the *cornea* became affected through the medium of the effused lymph, would seem to be rather adverse to such an explanation.

A gentleman of deserved eminence in his profession in London, has more than once told me, that he considered the bright vermilion tinge of the eye, in cases of inflammation, as highly characteristic of the presence of a vene-

real action. On this point, however, I am a little sceptical, and hesitate not in hazarding a different opinion, which, if correct, will place this out of the list of diagnostics. It is this :— That the brilliancy of the colour is not derived from any specific power which the venereal virus has of tinging the blood, but *from the distribution of the vessels of the part affected*. —The eye and its appendages are well known to be supplied with arterial blood, by a trunk given off from the *internal carotid* as soon almost as it has entered the cranium, the distribution of whose branches is chiefly intended for the nourishment of this organ. But here the return of the *venous* blood towards the source of the circulation, is effected by a different system of vessels from that which takes place in the structure of other parts; and, from their peculiar arrangement, have obtained the appropriate name of *vasa vorticosa*. These vessels receive the blood that has nourished the *sclerotic, choroid, ciliary processes, and iris*, and forming beneath the *sclerotic*, con-

centric wheels and circles, proceed towards the bottom of the orbit, empty themselves by the *ophthalmic vein* and *cavernous sinus* into the *internal jugular vein*, and leave the arteries in a great measure free from the intermixture of venous trunks. Thus those vessels which appear on the *sclerotic* in a highly increased state of action, are *purely arterial*; and the *vermilion colour* of their contents, remaining unchanged by the passage of the more *purple hue* of venous trunks, and even receiving additional brilliancy, I conceive, by shining through a highly polished and resplendent surface, give forth a *vivid vermilion tinge*; which, from being considered as a diagnostic between the *pure* and the *syphilitic* inflammation of the iris, excited the preceding speculation regarding its validity as such. As a speculation I have given it, and only in that light do I wish it to be considered.

CURE.

HAVING ascertained our indications of cure, we must be prompt in the exhibition of those remedies by which we can alone expect to combat the disease. These, in my own opinion, are copious depletion in the first instance, to be followed by a course of mercury, judiciously directed: Yet I have seen a practitioner, with the full conviction in his mind of the real nature of this disease, resort at once to a vigorous use of mercury, to the neglect of all other remedies, by which the patient was certainly ultimately cured; and yet, I think, few will forget the propriety of first lowering the action of the system by free depletion. An action incontestibly of an inflammatory nature has taken place, which will be sooner or later followed by an effusion of lymph, and probably attended with more serious consequences. The action *here* is the

same as in the *pure* inflammation, only modified by the specific cause from which it originated. Why not, then, employ those means which experience has placed in our power, to check the more immediate consequences of the inflammation, while at the same time we exhibit that peculiar remedy, by which we can only remove the cause of the complaint? I would, therefore, in an erect posture, and from a large orifice, withdraw as much blood as the patient will properly bear; apply leeches to the palpebræ and temples, or the scarificator and cupping glasses to the latter, and exhibit one or two smart cathartics. These means I would follow by a decided mercurial course, either by friction, internal administration, or both combined, according as the state of the bowels or absorbent system of the patient might indicate as the most proper, though in all cases I would give a preference to the former.

The last of the curative means to be mentioned, is the *belladonna*; the utility of which

medicine in this disease is well established. In this point of view, it is a valuable article of the *materia medica*, and ought, I think, to be used from the first appearance of the symptoms, to prevent, at that period, as much as possible, the formation of adhesions betwixt the *Iris* and *capsule* of the *lens*; and in the latter stages, to elongate the adhesions which have taken place, and thus allow the transit of a greater number of rays through the pupil. In the application of the *extract* of *belladonna*, I would avoid insinuating any portion of it beneath the palpebræ, preferring its application to the *supercilium*, and parts adjacent, by which its full effects will be as completely obtained.

“ *Per hæc enim sæpe instans gravis morbus discutitur.*”

CELSUS.

Thus, in as few words as the subject would admit of, have I performed my task, according to the original plan on which I set out, and present it to that tribunal which is to mark

its imperfections, and correct its faults. Should these be few, and, as a *task*, should it in any manner merit the approbation of its Censors, then I shall have no cause to regret the circumstance, which made me select Syphilitic Inflammation of the Iris as the subject.

FINIS.

A. Balfour, Printer.